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Message Framing, Source Credibility and Behavioural Intention: An Empirical Investigation of Exclusive Breastfeeding Intention in Indonesia

A thesis submitted in partial fulfilment of the requirements for the Degree of Doctor of Philosophy in Marketing at Lincoln University by Ananda Sabil Hussein

Lincoln University 2012
Abstract of a thesis submitted in partial fulfilment of the requirements for the Degree of Doctor of Philosophy

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by

Ananda Sabil Hussein

Health organizations and institutions (e.g. WHO, UNICEF and the Indonesian Ministry of Health) overwhelmingly recommend breastfeeding, ideally for a period of at least six months, since it benefits both a baby and its mother. Although the practice has been widely recommended, the rate of women who exclusively breastfeed for six months in Indonesia is lower compared to elsewhere.

This study empirically investigates the effects of framed-messages and source credibility on the intention to provide six months of exclusive breastfeeding in Indonesia. In building a model of these potential effects, Prospect Theory and the elaboration likelihood model (ELM) were relied on: Prospect Theory is the basis for explaining the effect of message framing; ELM is used as a framework for investigating the moderating effect of source credibility. Although the effects of framed-messages and source credibility on health behaviour in general have been assessed by scholars, no studies have investigated the effect on breastfeeding behaviour. To come to a more comprehensive understanding, the framework of the Theory of Planned Behaviour (TPB) was also used, enabling the relationship among relevant antecedents of behavioural intentions such as attitude, subjective norms, perceived behavioural control (PBC), and perceived value to be explored.

To test these effects, this study proposed 17 hypotheses. The manipulation of message framing and source credibility followed a 2x2 factorial design. Data was collected from 279 Indonesian pregnant women and analysed by using Partial Least Squares and Analysis of Variance.

Findings show that while message framing does not have a significant main effect on the variables under study, it does have significant effect when considered in conjunction with
source credibility. Specifically, a positively-framed message with a high credibility source is the most effective combination to influence perceived value, attitude, PBC and the intention to provide exclusive breastfeeding. This finding supports both Prospect Theory and ELM. In terms of the relationships among behavioural intention, attitudes, perceived value, PBC and subjective norms, this study has shown that only attitudes and perceived value are predictors of intention to breastfeed. Furthermore, it was shown that perceived value and subjective norms have a significant effect on attitudes. Moreover, this study indicates that attitudes and perceived value partially mediate the interaction effect of message framing and source credibility on intention.

**Keywords:** message framing, source credibility, attitude, perceived behavioural control, subjective norms, perceived value, intention, exclusive breastfeeding
Acknowledgements

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Chapter 1
INTRODUCTION

1.1 Background

Social marketing can be the basis of a strategy used by health practitioners, policy makers, and academics, amongst others, to change health behaviour. Donofrio (2000) considered social marketing to be useful in the context of health communication campaigns. In terms of influencing health behaviour, social marketers make use of several health communication strategies utilising mass media, interpersonal communication and other forms of promotion (Evans, 2006). Communication strategies generated by social marketers will often be more comprehensive than health education promotions, which may often fail to meet the aspirations, perceptions and values of individual members of the target market (McDermott, 2000).

In the context of a generic health education program, information might be provided in one way. However, in a social marketing program, health promotion is often more target market oriented. The social marketing program or promotion is designed to match with the target audience. For example, to promote detection behaviour such as breast self-examination and other cancer detection, a negatively-framed message will be used in the promotion while in promoting prevention behaviour such as doing regular exercise; a positively-framed message will be more effective. Hence, social marketing communication can be more beneficial than ordinary health education promotion in shaping behaviour (Alden et al., 2011).

To date, social marketing has been applied in efforts to influence change in several diverse health behaviour areas. The Centres for Disease Control and Prevention (CDC), the US Department of Agriculture (USDA) and the US Department of Health and Human Services have utilised social marketing to increase fruit and vegetable consumption, promote breastfeeding behaviour and promote physical activity, among other preventive health behaviours (Grier & Bryant, 2004). Outside of the United States, social marketing has been used in several countries. These efforts have included appeals to enhance the levels of infant immunization in Australia, elimination of leprosy in Sri Lanka (Williams et al., 1998), a Cameroon reproductive health campaign (Van Rossem & Meekers, 2000) and a hand washing with soap campaign in remote Australian Aboriginal communities (McDonald et al., 2011).
A range of techniques may be used by social marketers to promote a new behaviour as an alternative to other, risky health behaviours or to discourage a behaviour (Kotler & Lee, 2008). Rothman and Salovey (1997) suggested that the ways message creators frame their message will affect the outcomes of promotions. Hence, manipulating the frame of a message can be a technique used by social marketers to promote a new behaviour. In general, messages can be framed positively or negatively. A positive frame emphasizes the desirable consequences of complying with the action suggested by the message, while a negative frame stresses the undesirable consequences of not complying with the behavioural recommendations. To date, several studies have investigated the effect of message framing in health behaviour promotion; for example, the promotion of breast self-examination (Lalor & Hailey, 1989; Meyerowitz & Chaiken, 1987), the use of sunscreen (Detweiler et al., 1999), smoking cessation (Toll et al., 2008), vaccinations (Abhyankar et al., 2008; Ferguson & Gallagher, 2007; Gerend & Shepherd, 2007), mammography (Banks et al., 1995) and regular exercise (Jones et al., 2003).

Another ingredient of successful health behaviour promotions is credibility. Research findings indicate that information from a credible source is more persuasive than information from a non-credible source (Heesacker et al., 1983; Sternthal et al., 1978). In terms of promoting a new health behaviour, several studies support the view that there is significant interaction between message framing and source credibility, for example, from research recommending dental examinations (Arora, 2000) or engaging in exercise behaviour (Arora et al., 2006; Jones et al., 2003; Jones et al., 2004).

One issue which can be addressed by social marketers is breastfeeding behaviour. Breastfeeding practice has been declining in most developing countries, particularly in cities and peripheral urban areas, with a damaging impact on infant health (Joesoef et al., 1989). As a result, many developing countries where infant health and survival are major health problems have launched national programmes to promote breastfeeding, such as the Brazilian National Program (Ferreira Rea, 1990) and Tama Sapat at Eksklusibo in Philippines (abscbnNEWS, 2011).

### 1.2 Overview of Breastfeeding Behaviour in Indonesia

Reducing infant mortality is one of the Millennium Development Goals (MDG) proposed by the United Nations. However, in Indonesia, one of the countries which have ratified the MDG, the rate of child mortality is considered high compared with other countries.
Data published by UNICEF shows that the number of infant deaths per 1000 live births in Indonesia in 1990 was around 56. This figure dropped to 27 in 2010 (Inter-agency Group for Child Mortality Estimation, 2011). Despite that significant reduction, Indonesia’s infant mortality rate was still high compared with other countries, especially in the region of South East Asia. Table 1-1 provides infant mortality rates for several South East Asian countries in 2010.

Table 1-1 Infant Mortality Rates in South East Asian Countries (Deaths per 1000 live births)

<table>
<thead>
<tr>
<th></th>
<th>Brunei Darussalam</th>
<th>Philippines</th>
<th>Indonesia</th>
<th>Thailand</th>
<th>Malaysia</th>
<th>Singapore</th>
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<tr>
<td></td>
<td>6</td>
<td>23</td>
<td>27</td>
<td>11</td>
<td>5</td>
<td>2</td>
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(Inter-agency Group for Child Mortality Estimation, 2011)

Based on that data, it is clear that there is a need for the Indonesian Government to take action to reduce the infant mortality rate as specified by the MDG.

Malnutrition has been identified as a cause of infant mortality (Van den Broeck, 1995). Based on a recent WHO report (WHO, 2010), in Indonesia about 19.6% of children, especially the under-fives, suffer from malnutrition. This number is also considered high compared to other South East Asian countries like Thailand (7%) and Singapore (3%). Another problem identified as a cause of infant mortality is diarrhoea. A report published by the Indonesian Ministry of Health (2007) showed that diarrhoea and pneumonia were the main causes of infant mortality, the figures being 31.4% and 23.8% respectively.

In order to address these socio-demographic and health problems, breastfeeding is one possible solution. Currently, almost all health organizations and institutions (e.g. WHO, UNICEF and the Indonesian Ministry of Health) recommend breastfeeding for babies. Galson (2008) claims that breastfeeding provides benefits not only for a baby but also for its mother. Breast milk increases an infant’s level of antibodies and the mother also benefits from a reduced risk of developing breast or ovarian cancer.

The WHO and the Indonesian Ministry of Health both agree that exclusive breastfeeding should be the only way to feed infants up to six months of age. Although exclusive breastfeeding was recommended for an infant’s first six months, the Demographic Health Survey (DHS) claimed that the number of women globally who breastfeed exclusively for that
time period is relatively low, at around 32%. Figure 1-1 provides comparative percentages of women exclusively breastfeeding up to six months in different regions of the world.

![Bar Chart: Mean Percentage of Women Breastfeeding Exclusively (1996 - 2004)]

Adapted from UNICEF (2006)

Figure 1-1 Mean Percentage of Women Breastfeeding Exclusively (1996 - 2004)

The chart above shows that South Asia and the East Asia and Pacific regions have the highest percentage of women exclusively breastfeeding. Interestingly, it also illustrates that around 36% of women in developing countries breastfeed exclusively.

While the average figures for women exclusively breastfeeding up to six months in developing countries was 36%, the percentage of Indonesian mothers doing so was much lower. Statistics Indonesia and Macro International (2008) note that the percentage of Indonesian women who exclusively breastfeed their infants has fluctuated from less than 10% to under 20% at different times since 1991. Table 1-2 shows the percentage of Indonesian women breastfeeding exclusively for the period 1991 to 2007.

As an Asian country, Indonesia is influenced by Asian culture. Typically, Indonesian women stay at home taking care of children and family. However, in these days, there is a positive trend that women, especially in the urban area, are working outside the house. In some areas especially, outside Java Island where the local culture heavily influences the lifestyle, women must stay at home. This cultural diversity should be a concern by social marketers and health practitioners in promoting health behaviour such as breastfeeding behaviour. Before
launching the social marketing program, it is necessary for the social marketers to understand the cultural and norms of the target market.

Table 1-2 Exclusive Breastfeeding up to Six Months in Indonesia from 1991 - 2007

<table>
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<tbody>
<tr>
<td></td>
<td>12.8%</td>
<td>4.8%</td>
<td>7.9%</td>
<td>7.8%</td>
<td>17.8%</td>
</tr>
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</table>

Adapted from: Statistics Indonesia and Macro International (2008), Statistics Indonesia et al. (2004), Statistics Indonesia et al. (1995) and Statistics Indonesia et al. (1992)

The consistently lower proportion of Indonesian woman exclusively breastfeeding presents an opportunity to investigate the use social of marketing to influence women to exclusively breastfeed for six months duration. To promote exclusive breastfeeding in Indonesia, several promotions have been launched by government and NGOs (Aimiasi, 2011; Desantoro, 2012). Most of these promotions emphasized the benefits of breastfeeding adoption (positively-framed message). Theoretically, a health promotion can be formed as a positively or negatively framed message (Rothman & Salovey, 1997). However, to date, no studies have compared the effectiveness of positively and negatively-framed message in promoting WHO standards on exclusive breastfeeding, especially in an Asian country. For that reason, it is obvious that the study about the structure of health promotion message in Indonesia will contribute to both theoretical and practical stand points. Based on these observations, the research question to be addressed in this study is how might a message be structured to encourage the intention to breastfeed exclusively?

Thus the research proposed here will focus on the role of social marketing campaigns in changing behavioural intentions in the context of breastfeeding in Indonesia. Specifically, this study will carry out an in depth investigation of the role of message framing and its interaction with credibility regarding the intention to breastfeed exclusively.

### 1.3 Research Issues

The following research issues have arisen out of gaps in the literature, especially in the context of the promotion of breastfeeding behaviour. First, there is a need to evaluate the effect of message framing and its interaction with source credibility in respect to behavioural intention and its antecedents (i.e., attitude, perceived behavioural control and perceived value). Second, there is a need to evaluate the relationship among behavioural intention and
its predictors. Finally, there is a need to assess the mediating effect of perceived value, attitude and perceived behavioural control (PBC) on the relationship between message framing and behavioural intention, and on the relationship between the interaction of message framing with source credibility and intention. The detailed focus of this research is on the effect of persuasive communication on Indonesian women’s intention to provide exclusive breastfeeding. Each of these areas of research will be addressed in the following subsections.

Before presenting the research issues, some important constructs will be defined and explained in detail (Table 1-3).

Table 1-3 Concepts Definition

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Message Framing</td>
<td>The way information is presented (Rothman et al., 1993)</td>
</tr>
<tr>
<td>Source Credibility</td>
<td>The extent to which the source is perceived as possessing expertise relevant to the communication topic and can be trusted to give an objective opinion on the subject (Ohanian, 1990)</td>
</tr>
<tr>
<td>Attitude</td>
<td>An enduring pattern of evaluative responses towards a person, object, or issue (Colman, 2006) or a person’s overall evaluation of adopting the behaviour in question (Ajzen, 1991)</td>
</tr>
<tr>
<td>Perceived Behavioural Control (PBC)</td>
<td>The degree to which an individual feels capable of performing the behaviour (Francis et al., 2004)</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>Social pressure to perform or not to perform a behaviour (Ajzen, 1991). A force which comes from other people</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>A consequence of the evaluation of the relative benefits and sacrifices as seen by target audience (Zeithaml, 1988)</td>
</tr>
<tr>
<td>Intention</td>
<td>Motivational factor influences behaviour (Ajzen, 1991)</td>
</tr>
</tbody>
</table>

1.3.1 The Effect of Message Framing and Its Interaction with Source Credibility in Respect of Behavioural Intention and Its Antecedents

Message framing is one of several persuasive communication techniques which are commonly used to promote new health behaviour. Rothman and Salovey (1997) contended that a promotion’s results are influenced by the ways a message is framed. In terms of framing a promotional message, Prospect Theory (Kahneman & Tversky, 1979) can be used to more fully investigate the impact of framing on intentions. Prospect Theory would predict
that equal information about risk, when presented in different ways, will be likely to motivate a modification of an individual’s perspectives, preferences and actions to different degrees (Tversky & Kahneman, 1981). The concept of risk proposed by Prospect Theory does not refer specifically to the desirability or danger of an outcome, but rather suggests that a risky action is one where the results of an action are relatively uncertain. The important point to recognize with respect to this current study is that exclusive breastfeeding is conceptualized as the relatively non-risky behaviour. This is rooted in the numerous studies which all point to the understanding that breast milk is the best nutrition for infants (Banapurmath et al., 1996; Gilks et al., 2007; Spear, 2007) and the nature of breastfeeding being categorized as a preventative (and not detection-related) health behaviour.

The relevance of Prospect Theory is demonstrated in research conducted by Banks et al (1995), where a loss-framed message (e.g. encouraging the target to think about the losses that could be realized by not engaging in a particular behaviour) was more effective when persuading women to undergo mammography. In that study, a mammogram was considered a risky behaviour since, as a detection-related behaviour, the outcomes of this test cannot be predicted. On the other hand, in a study of dental flossing behaviour, a gain-framed message (e.g. encouraging the target to think about the benefits to be realized by engaging in a particular behaviour) tended to be more persuasive (Mann et al., 2004) since the result of regular dental flossing, as a preventative behaviour, is recognized to prevent oral decay.

Prospect Theory has been widely applied in a variety of fields with particular regard to health behaviour decision-making processes. Rothman et al. (1996) suggested that in order to influence individuals to engage in prevention behaviour – a behaviour which can help somebody avoid the onset of sickness, such as breastfeeding or smoking cessation – a positively-framed message is more effective than a negatively-framed message. Conversely, a negatively-framed message better influences people to detection actions, such as breast self-exam and mammography testing. However, empirical findings have been inconsistent regarding these effects (O'Keefe & Jensen, 2007; Rothman et al., 1993). Based on these examples, in terms of affecting people's tendency to behave in a particular way, social marketers should consider the way a message is framed.

The inconsistent findings reported from message framing studies also suggest that researchers may need to examine the role of previously excluded influences on behaviour. This should include considering the moderating impact of several variables (Readron et al., 2006). One such variable which can be used as a moderator is the credibility of message source (e.g.
company and spokesperson) (Goldsmith et al., 2000a). The credibility of the message source has been recognized as an important factor in persuasive communication (Goldsmith et al., 2000b; Kumkale et al., 2010; Lafferty & Goldsmith, 2004). However, although credibility has been acknowledged as having an important role in persuasive communication, only Jones et al. (2004) have assessed its role as a moderating variable, affecting the relationship between message framing and social cognitive variables such as PBC, attitudes and intention.

The Theory of Planned Behaviour (TPB) (Ajzen, 1991) is a well-established socio-cognitive model commonly used to investigate health-related behaviours. Several studies have confirmed the robustness of TPB in the prediction and understanding of a range of health behaviours, including breastfeeding behaviour (Dodgson et al., 2003; Duckett et al., 1998; Wambach, 1997). Although TPB has been acknowledged widely as a strong framework for predicting an individual’s behaviour, only the 2004 study by Jones et al. has integrated this framework with message framing and source credibility (in the prediction of exercise behaviour).

In the area of commercial marketing, few studies have predicted the effect of message framing on the perceived value of a behaviour (Daryanto et al., 2009; Daryanto et al., 2010). While no study has been found which has investigated the relationship of message framing on perceived value in the area of social marketing, perceived value has been documented in social marketing studies to have an important role in potentially changing behaviour (Martinasek et al., 2010; Wood et al., 2011; Zainuddin et al., 2009a; Zainuddin et al., 2011).

The last gap in the literature concerns the location and the nature of the behaviour being promoted. Most of the studies investigating the effects of message framing and source credibility as a social marketing tool for changing health behaviour are based on North America (Cesario et al., 2012; Coleman et al., 2011; Grady et al., 2011) and Europe settings (Hevey et al., 2010b; van't Riet et al., 2010). Although some studies have been done in the setting of North America and Europe, no study has been done in Indonesia. By conducting a study about persuasive communication (message framing and source credibility) in Indonesia, this study will contribute to both academic and practical perspective.

In addition, it has been widely acknowledged that breastfeeding does not provide benefits for only mothers but also for infants. Hence, the study of the effect of persuasive communication (i.e. message framing and source credibility) in motivating somebody to do something which benefits other people is valuable given the scope of health care behaviours in which one actor (e.g. a mother) would make decisions for another (e.g. a child).
These gaps provide the opportunity for research through the attempt to replicate and extend the results of prior studies in order to gain broader knowledge about using persuasive communication for social marketing promotion in alternative settings. This is especially so for investigating the effect of message framing and source credibility in the area of exclusive breastfeeding behaviour.

### 1.3.2 The Need to Evaluate the Relationships Amongst Behavioural Intention, Attitude, Subjective Norms, PBC and Perceived Value

Recent behavioural intention research largely follows frameworks provided by social cognitive models such as the Theory of Planned Behaviour (TPB) (Ajzen, 1991) and the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980). These theories suggest that the intention to behave in a particular way may be predicted by attitude, PBC and subjective norms. Several studies have discussed the application of TRA and TPB in terms of predicting behavioural intention in various research areas (Ben Natan et al., 2010; Hsu & Huang, 2012; Lawton et al., 2012; Norman, 2011). Although attitude, PBC and subjective norms have been widely accepted and tested as robust antecedents of behavioural intention, some scholars have suggested that introducing new variables and/or modifying existing frameworks could enhance the predictive power of the models (Oh & Parks, 1997).

In studies focussing on commercial marketing, perceived value is a construct recognized as playing an essential role in predicting purchase intention (Chen, 2008; Hu et al., 2009; Yang & Jolly, 2009). Acknowledged as a significant antecedent of behavioural intention in the context of commercial marketing, perceived value is also claimed to play an important role in respect to social marketing (Zainuddin et al., 2009a). Furthermore, although perceived value is thought to be an important antecedent of behavioural change, to date, no study has assessed its role in breastfeeding behaviour, with particular regard to the intention to breastfeed. Moreover, given that empirical studies claim that the perceived value of a behaviour significantly affects the attitude of individuals towards that behaviour (Ruiz-Molina & Gil-Saura, 2008; Swait & Sweeney, 2000), it is thought here that a study with the emphasis on the role of perceived value in shaping the intention to engage in a particular behaviour will make a useful contribution to both theory and practice.

While attitude, PBC, subjective norms, and perceived value are deemed important determinants of behavioural intention, the impact of those variables on behavioural intention in general, and intention to breastfeed in particular, remains confusing as no research has focussed specifically on those linkages, although a few studies have evaluated these linkages.
partially. For example, O’Connor et al. (2005) examined the effect of attitudes, subjective norms and PBC on male intention to use hormonal contraception. The finding found that all TPB variables and stress appraisal is the predictor of behavioural intention. In the context of retailing study, Ruiz-Moline & Gil-Saura (2008) found that customer perceived value has a significant effect on their attitudes to purchase retail products and their intention to purchase. Borland et al. (2009) in the study of non-smoking behaviour found that individual’s perception about the value of quitting smoking has a significant effect on their attitudes and intention to quit smoking. There is no single study which comprehensively investigate the interrelationships between TPB variables and perceived value in the domain of health behaviour especially in breastfeeding behaviour. Hence, a comprehensive assessment of the links among those constructs may help to provide a broader explanation of behavioural intention.

1.3.3 The Need to Assess the Mediating Effects of Perceived Value, Attitude and PBC on the Relationship between Message Framing and Intention, and on the relationship between the Interaction of Message Framing with Source Credibility and Intention

According to the Elaboration Likelihood Model (ELM), attitude has an important role in the context of persuasive communication (Petty & Cacioppo, 1986). In the theoretical tenets of TPB, attitude is recognized as a vigorous predictor of behavioural intention, which is seen as a key component of predicting an actual behaviour (Ajzen, 1991).

As elements of persuasive communications, message framing and source credibility have been investigated by scholars who focussed on socio-cognitive variables such as intention (Jones et al., 2003; Zhang & Buda, 1999), attitudes (Arora & Arora, 2004; Arora et al., 2006; Buda, 2003), PBC (Abhyankar et al., 2008; Jones et al., 2004) and value perception (Daryanto et al., 2009). Levin, Schneider, and Gaeth (1998) proposed that socio-cognitive variables might mediate the effect of a framed message on behavioural intention. However, there is little research evidence that these socio-cognitive variables mediate the effect of message framing and source credibility on behavioural intention in the study of health behaviour (Jones et al., 2004). This is particularly so in the area of exclusive breastfeeding behaviour.

Thus, a study testing social-cognitive mediation effects in the context of breastfeeding may significantly contribute to both theory and practice. Such a study can potentially contribute details to the theory of the mediating roles played by socio-cognitive variables, as well as yield insight into how women process persuasive communication relative to exclusive breastfeeding.
1.4 Research Objectives

This study has three primary purposes. The first is to assess the effect of message framing, and the interaction effect of framing and credibility on perceived value, attitude, perceived behavioural control, and intention. Second, this study aims to evaluate the comprehensive linkages among perceived value, attitude, perceived behavioural control, subjective norms, and behavioural intention. The last purpose is to evaluate the mediation role of social-cognitive variables and perceived value in the linkage between message framing and behavioural intention, and in the linkage between interaction of message framing with source credibility and intention.

An integrated conceptual framework will be developed to examine the potential relationship of all these constructs. In order to build the conceptual model, this study will adopt the TPB (Ajzen, 1991) referred to above. This theory is an ideal research framework because it provides a comprehensive view of behavioural change and allows the analysis of volitional behaviour (Wambach, 1997).

1.5 Research Contribution

Upon satisfying the three research objectives, this study will contribute to the social marketing literature from both an academic and a practical perspective. From academic perspective, this study will have contributions to both theoretical and empirical standpoint. In terms of theoretical contribution, this study will contribute to the literature by providing a comprehensive model explaining the effect of persuasive communication (message framing and source credibility) on behavioural intention and its antecedents namely attitudes, perceived behavioural control and perceived value. The theoretical model proposed in this study is comprehensive as this model integrates three robust theories namely prospect theory (PT), elaboration likelihood model (ELM) and Theory of Planned Behaviour (TPB) as well as an important marketing construct namely perceived value. Furthermore, for empirical contribution, this study tests the relationships among the important constructs in the area of social marketing. Particularly, the findings of this study validate as well as challenge the findings of previous studies.

From a practical perspective, it is hoped that this study will generate new insights for social marketers and health media professionals formulating messages to promote healthy behaviours and, with respect to social marketing campaigns, help provide guidance for crafting promotional messages that match the needs of target audiences. It will do this by
offering new insights into the relationship between message framing and women’s intention to provide exclusive breastfeeding. The findings of this study will be valuable because they may help to improve the overall understanding of the relationships of persuasive communication, perceived value, attitudes, PBC, subjective norms and behavioural intention in the context of health related behaviours in general, and exclusive breastfeeding behaviour in particular.

1.6 Thesis Plan

This thesis consists of six chapters, reporting on the investigation designed to meet the research objectives outlined in Section 1.4. The first chapter discusses the background of the study, research issues, objectives and potential contribution. Chapter Two reviews each construct related to message framing, source credibility, and behavioural intention and its antecedents: perceived value, attitudes, PBC and subjective norms. Chapter Three presents the conceptual model developed on the basis of the literature review undertaken in Chapter Two, and develops several hypotheses to satisfy the research objectives. Chapter Four details the methods used to test the hypotheses, whereas Chapter Five presents and discusses the results of the analysis undertaken in this study. Finally, Chapter Six offers a summary of the conclusions of this study, implications, limitations, and directions for future research.
Chapter 2

LITERATURE REVIEW

To better understand the effect of message framing and its interaction with source credibility on behavioural intention and its antecedents, relevant literature was drawn from various disciplines such as psychology, marketing, sociology, communication and health care. This literature was synthesized to support and give insight toward the model tested. In addition, this information was used to operationalize the constructs tested in this study.

2.1 Social Marketing and Behaviour Change

Social marketing is a means to influence behaviour (Evans, 2006) and, in terms of changing behaviour, the discipline does not stand alone. Other areas of knowledge such as psychology, sociology, anthropology and communication also contribute to the understanding of behavioural change (Gordon et al., 2006). Social marketing differs from these other areas in that the discipline applies traditional marketing principles and techniques to change individual behaviour in order to realise socially meaningful goals. For example, the traditional tools of having a customer orientation, conducting marketing research, selecting a target market, establishing clear objectives and goals, and positioning (Kotler & Lee, 2008) are utilised. Andreassen (1994, p. 110) has defined social marketing as “An adaptation of commercial marketing technologies to programs designed to influence the voluntary behaviour of target audiences to improve their personal welfare and that of the society of which they are a part.” Social marketing is based on the assumption that people will adopt a new behaviour if they see that the new behaviour is both beneficial and achievable for themselves and others (Futterman et al., 2001).

Although using commercial marketing principles and techniques to change an individual’s behaviour, social marketing can still be distinguished from commercial marketing (Kotler & Lee, 2008). Kotler (2004) has stated that traditional marketing aims to maximize an organization’s profit. In contrast, social marketing intends to develop individual and societal welfare (Gordon et al., 2006). Thus, it can be said that social marketing focuses on individual and societal gain while traditional marketing specifies financial gain for the business (Kotler & Lee, 2008).

Social marketing has been applied widely to change health behaviour. Grier and Bryant (2005) have indicated that the usage and popularity of social marketing has grown within the
public health community. While this strategy has been recognized extensively as a one able to change the individual’s behaviour, Suarez-Almazor (2011) explained that not all advertising or media campaigns can be regarded as social marketing. Only a campaign which makes an effort to modify long-term behaviour to achieve a social goal can be considered to be social marketing. Furthermore, Suarez-Almazor suggested that to change the behaviour, social marketing appeals to emotional and social domains like cultural sensibilities, desirable traits, group identity and social norms. These are influences that are not entirely rational or necessarily cognitive. With regard to individual behavioural change, the effect of these factors can be direct or indirect through social influence.

In order to adopt a particular behaviour, an individual needs to have motivation (Scott et al., 2008). The motivation of individuals to adopt behaviour can be explained by using Festinger's (1957) Theory of Cognition Dissonance. According to this theory, in the some circumstances, individuals will experience two different cognitions which contradict each other. Given that dissonance is perceived as unpleasant, individuals will be motivated to reduce this inconsistency.

Oshikawa (1969) contended that dissonance can be stimulated in three ways. Theoretically, an inconsistency will arise:

1. After making an important and difficult decision
2. After being forced to do and/or to say something that contradicts attitude, belief and/or opinion
3. After being exposed to discrepant information

While there are several factors triggering dissonance, Festinger (1957) proposed that it can be reduced in two ways.

1. By changing an existing cognition about both behaviour and environment
2. By adding a new cognition to generate consistency

Although dissonance can be reduced, Shultz and Lepper (1996) suggested that the reduction of dissonance perceived by individuals depends on their resistance to change in response to the relevant cognitions In other words, the disagreement diminution will be based on the individual’s willingness to accept the change.

In the context of social marketing, individuals are assumed as having insufficient or no motivation to change. Therefore, social marketing communication can increase the audience’s awareness and desires for the promoted change (Barach, 1984). In accordance
with Barach (1984), Strahan et al. (2002) suggested that a piece of health information can create cognitive dissonance, since an unpleasant situation will arise when the attitude of an individual conflicts with a behaviour or new information.

2.2 Social Marketing and Marketing Mix

Kotler and Lee (2008) contended that to influence target audiences, social marketers also use marketing’s “4Ps”; (social) product, (social) price, (social) place and (social) promotion. In both commercial marketing and social marketing, the “4Ps” are also called the marketing mix. These components are essential for social marketers to consider when planning and implementing the integrated marketing strategy (Grier & Bryant, 2005). This section discusses 4Ps in the social marketing context.

The first component of the social marketing mix is (social) product. Weinrich (1999) suggested that the product offered in social marketing practice is the behaviour or offering that should be adopted by the target market, separated along a continuum ranging from physical products (e.g., smoke detectors and influenza vaccines), to services (e.g., medical examinations), to practices (e.g., breastfeeding) and to more intangible ideas (e.g., environmental protection). However, Peattie and Peattie (2011) argued that the analogy is not suitable since behaviour is not something produced by social marketers or owned by them which will be transferred or consumed by the target audience. In accordance with their arguments, Peattie and Peattie (2011) proposed that “product” in the social marketing context is “a social proposition connecting the desired behaviour with the benefits that will accrue”. Furthermore, they suggested that the view of social product is the anticipated value of targeted individuals engaging in the desired behaviour.

Price is another marketing mix component. In the traditional commercial marketing context, Kotler and Zatman (1971) explained that price represents the costs that the individual must accept to purchase the product offered. For social products, the way in which the price function is defined differs with the concept of price in traditional commercial marketing. Rather than the amount of money exchanged, price needs to be considered from a behaviour investment standpoint. Hence, in social marketing price is related to the individual and social cost of behavioural change (Peattie & Peattie, 2011). Wood (2008) suggested that the price of social products can be divided into monetary and non-monetary cost(s). Monetary cost is related to payment for tangible objects and services, whereas non-monetary costs are related to time, effort and energy needed to perform the behaviour (for example, a change of lifestyle), and potentially a negative impact on social relations resulting from the changed
behaviour (2008). Although the term “price” is also used in the context of social marketing, Peattie and Peattie (2011) advised that assuming price for social behaviour as analogous to the price in traditional commercial marketing will be misguided and confusing. Hence, they proposed to use the term “social cost of involvement” to reflect the concept of price in social marketing concept.

In the realm of social marketing, place is where and when the target market will perform the desired behaviour (Kotler & Lee, 2008). In terms of distributing the product, it is suggested that social marketing is mainly concerned with the distribution of information about the behavioural change rather than a physical good such as emphasised in commercial marketing (Bloom & Novelli, 1981). Peattie and Peattie (2011) suggested that “place” can also be interpreted as accessibility. In detail, they explained that accessibility relates to the ease and chance of the target audience to gain access to the benefits offered by the proposed behaviour.

The last component of the marketing mix is social promotion. Kotler and Lee (2008) defined promotion as persuasive communication which is designed and delivered in order to inspire the target market. By this definition, the concept of promotion in social marketing is not different from the concept of promotion in the framework of traditional marketing (Peattie & Peattie, 2003). Kotler and Lee (2008) claimed that in order to create a social marketing promotion programme, the message should focus on benefits offered. Kelly et al (2006) proposed that a social marketing campaign should be customer-driven, to ensure that the target audience perceives the product offered as valuable. Therefore, by having a proper promotion strategy, promotion can be more acceptable to the public (Lefebvre & Flora, 1988).

2.3 Social Marketing and Health Promotion

Social marketing has been recognized as an important approach to formulating strategies regarding changing health behaviour (Secker et al., 1995). Evans (2006) advised that in order to influence people to practice a particular behaviour, social marketers use health communication practices such as interpersonal communication, mass media presentation, strategic message placement and sales promotion.

In terms of promoting new behaviour, marketing communications are an important component for social marketing (Alden et al., 2011). Furthermore, it was suggested that the focus of social marketing communication is more on pro-social behaviour change and actions rather than simply giving information (Alden et al., 2011). In the general context of social marketing promotion strategy, social communications play an important role in describing the
actions which the target audiences should do, and in telling them the benefits of adopting the desired behaviour (Keller & Thackeray, 2011).

Alden et al. (2011) suggested that social marketing is different from ordinary health education. Furthermore, they proposed that ordinary health communications are generally more effective in providing knowledge to the target audience than shaping behaviour. In the domain of breastfeeding behaviour, Parkinson et al (2011) argued that current breastfeeding promotions do not have any effect in motivating women to provide breastfeeding. In particular, they explained that people already had knowledge about breastfeeding and its consequences. Hence, ordinary health education is not enough to influence individuals, to carry out this particular behaviour. Alden et al (2011) contended that in promoting health behaviour, social marketing communication is more appropriate than other health education strategies since social marketing communication emphasizes shaping behaviour.

Several studies have noted the integration of social marketing into health-related promotions. McDonald et al. (2011) described how the conceptual framework of social marketing was used in the year-long social campaign for hand washing with soap in remote Australian Aboriginal communities. This programme was conducted by the Northern Territory Government in collaboration with the Menzies School of Health Research. In terms of campaigning for this new behaviour, several promotion and communication strategies were used, such as television advertising, posters, give-aways, and point-of-sale materials promoting the purchase of soap. The use of social marketing in health promotion was also notable in the Cameroonian reproductive health campaign (Van Rossem & Meekers, 2000), carried out by the Programme de Marketing Social au Cameroun (PMSC) between 1996 and 1997. The main purpose of this programme was to increase adolescents’ awareness and use of reproductive health products and services. Several promotion strategies, such as mass media advertising and provision of information, education and communication campaigns were employed. The intervention had a significant effect, increasing the target audience’s awareness of sexual risks, knowledge of birth control methods and the use of contraceptives. Wu et al. (2002) described the principles of social marketing used to design educational messages to prevent drug use among youth in Yunnan, China. Their study found that the social marketing program was successful in reducing the number of young people using drugs. In addition, young people’s knowledge, attitudes and recognition of the drug problem were significantly better than before the program was instigated.
These examples support the view that social marketing is an important element in health promotion programs. Hence, to gain broader knowledge about the effects of health promotion strategies, this study is rooted in the conceptual framework of social marketing.

### 2.4 Breastfeeding Behaviour

Currently, breastfeeding is a major concern among both scholars and health experts. The World Health Organization (WHO) recommends that, ideally, breastfeeding should be the only way to provide nutrition to infants up to six months of age. Several programmes have been used to promote breastfeeding behaviour. For example, a global campaign, "The Baby-Friendly Hospital Initiative", was launched in 1991 by UNICEF and the WHO to advocate breastfeeding (UNICEF, 2011). To promote ideal exclusive breastfeeding practice, the Department of Health in the Philippines launched the “Breastfeeding TSEK” (Tama, Sapat, Ekslusibo) program at the beginning of 2011 (abs-cbnNEWS, 2011). New Zealand’s Ministry of Health has also promoted breastfeeding, including the encouragement of exclusive breastfeeding for the first part of a baby’s life. Through its Healthy Eating-Health Action strategy (HEHA), the Ministry’s national campaign to promote breastfeeding set out to improve both breastfeeding rates and duration. In Indonesia, the Ministry of Health, several NGOs like the Indonesian Breastfeeding Mothers’ Association and the Indonesian Breastfeeding Centre have carried out similar campaigns.

In terms of its benefits, Galson (2008) noted that breastfeeding provides advantages not only for the baby but also the mother. Allen and Hector (2005) suggest that breastfeeding increases infant’s antibodies which is important for protection from infectious disease. In addition, providing breastfeeding for infants also appears to have the benefit of reducing the risk of obesity and decreasing the likelihood of developing allergies and asthma. Jason et al. (1984) contend that breastfeeding is strongly related to decreased childhood morbidity and mortality.

For mothers, breastfeeding reduces the risk of developing breast and ovarian cancer (Galson, 2008). In terms of the relationship between mother and infant, Rapley (2002) suggested that providing breastfeeding will enhance the bonding between mother and baby.

Whilst breastfeeding provides many benefits, the adoption of breastfeeding also has associated costs. Pappas (2012) contends that providing breastfeeding is related to a decrease in mothers’ incomes. Some women continue to think that the practice has an effect on breast
aesthetics. However, Rinker et al. (2008) suggested that breastfeeding does not have a significant effect on breast shape.

It has been suggested that exclusively breastfeeding for the duration of four to six months is ideal for infants (Chudasama et al., 2009). The Pan American Health Organization (PAHO) argues that the first two years of life are an especially critical time for children; breast milk provides irreplaceable nutrients and confers greater disease resistance for children (PAHO, 2004).

Exclusive breastfeeding is defined as providing only breast milk to the infants (other liquids and solid foods are excluded). Babies being exclusively breastfed are still able to be given additional vitamins, minerals, water or medicines when needed (WHO, 2008). In terms of an infants’ diet, breast milk is considered indispensable, and if supplied adequately, is the ideal food to meet the baby's entire nutritional needs. Moreover, the exclusive provision of human milk will also improve a young child’s motor and language skills in contrast with babies who are not breastfed (Jahangeer et al., 2009).

Several factors have been acknowledged as influencing women’s positive breastfeeding behaviour, including the practice of exclusive breastfeeding. Kong and Lee (2004) noted that knowledge, facilities and social factors affect women’s breastfeeding behaviour. Specifically, Kong and Lee (2004) explained that in deciding whether to provide breastfeeding or not a mother has to have a sufficient knowledge about breastfeeding. Empirically, it was found that a mother who does not have enough knowledge about breastfeeding tend to provide bottle-feeding. In addition, a mother would be shy if other people see her breastfeed the infant. Basically, this attitude is normal for some cultures as Indonesian culture. Therefore, the breastfeeding facilities such as parent’s room or breastfeeding room would increase the intention of mother to provide breastfeed. Apart from knowledge and facilities, social factors were also expected to be an essential factor in influencing breastfeeding decision. Kong and Lee (2004) contend that a mother whom gets support from her surrounding to breastfeed will have more motivation to breastfeed her baby. Therefore, to be success in providing breastfeeding, it is important to have supports from family and friends.

Experts have also noted that other people have a significant effect in influencing women to provide breastfeeding. Scholars such as Killien (2005), Meyerink and Marquis (2002) and Tarkka et al. (1998) have contended that the spouse has a significant role in persuading women to breastfeed. In addition, scholars have suggested that the mothers of new mother play an important role in motivating women to breastfeed (Arlotti et al., 1998; Di Mascio et
Apart from family members, best friends have also been an important influence in breastfeeding behaviour (Baranowski et al., 1983; Brown et al., 2001).

**2.5 Message Framing**

In order to promote new health behaviour, social marketers rely on promotion (Kotler & Lee, 2008). Specifically, promotion includes both the design and the delivery of persuasive communication in terms of inspiring the target market to take a particular action. Stubblefield (1997) identified two factors that seem to be particularly related to persuasive messages; characteristics of the source and of the message. Source factors relate to the person or organization responsible for the message and its distribution, while message factors relate to the characteristics of the information itself.

One technique widely used by social marketers to shape a message is manipulation of framing (Rothman & Salovey, 1997). Stanley and Maddux (1986) suggested that a message can be framed either in terms of potential gains (i.e., advantages or benefits) or in terms of losses (i.e., risks of not carrying out the behaviour). The effects of framing are observed when consumers who are faced with several options modify their choice in response to alterations in the frame of reference of these options (Berger & Smith, 1998). In terms of measuring the impact of message frames, Rothman and Salovey (1997) advised that Prospect Theory can be used as a theoretical framework.

Originally, Prospect Theory was a behavioural-economic theory relating to the decision between options containing risk where the probabilities of the results were known (Kahneman & Tversky, 1979). Based on Prospect Theory, a decision making process goes through two phases: the first phase is information editing, the second is information evaluation (Kahneman & Tversky, 1979). In the editing phase, individuals do an initial analysis of the prospects offered, which often yields a simpler representation of the prospects. In the second phase, the edited prospects are assessed and the prospect that has higher value is chosen.

Prospect Theory argues that individual preferences (as made manifest in the choices of which prospects/options are left in or edited out after further consideration) are sensitive to how information about those options is framed (Rothman et al., 2006). In the context of the individual’s reaction to the message created, the theory claimed that people will try to avoid risks when considering sure gains afforded by a decision (they are risk averse in their preferences). However, they are willing to take risks when considering sure losses afforded by the decision made (they are risk seeking in their preferences) (Rothman et al., 2006).
O’Keefe and Jensen (2007) explained that the concept of risk in Prospect Theory is not similar to the definition of risk in general. In that case, a risky behaviour is explained as a dangerous behaviour, while Prospect Theory explains that a risky behaviour is one where the outcomes of adopting the behaviour is not certain (Kahneman & Tversky, 1979). An example of a non-risky behaviour based on this theory is jumping out of an airplane at 10,000 feet without using a parachute (O’Keefe & Jensen, 2007).

Levin et al. (1998) suggested that three types of framing-related message manipulations are commonly used. The first is "risky choice". In this type of framing, the outcomes of potential options differing in level of risk are described in different ways. Kuvaas & Selart (2004) explained that the effects of risky choice framing occur when motivation to take a risk depends on whether the possible results are framed positively or negatively. While the initial Prospect Theory’s (Kahneman & Tversky, 1979) example “Asian Disease Problem” used risky choice approach to explain the effect of framing, this approach is not suitable for promoting health behaviour. In the risky framing approach, Levin et al. (1998) contend that the manipulation involves the sure thing option and risky option. Following Timmermans’s suggestion (2010), in some circumstances, the probabilities of the risky option will happen is unknown. For that reason, the risky framing approach is difficult to be applied in health behaviour promotion which the outcome of performing proposed behaviour is uncertain.

The second is “attribute framing”. The foremost focus of this technique is on the evaluation of the object’s attribute or characteristic (Levin et al., 1998), for example describing the meat of hamburger as 80% lean versus 20% fat. Goal framing is the third technique commonly used to generate a persuasive message. In this framing strategy, message manipulation stresses the results of performing or not performing the proposed behaviour (Levin et al., 1998). Krishnamurthy et al. (2001) suggested that the existence or absence of behaviours relating to the achievement or non-achievement of goals is the focus of goal framing.

In persuasive communication studies, goal framing has become a popular technique ( Krishnamurthy et al., 2001; Levin et al., 1998). Following Krishnamurthy et al. (2001) and Levin et al. (1998) the framing technique used by this study is goal framing. While scholars (Krishnamurthy et al., 2001; Levin et al., 1998) suggest that goal framing is suitable for promoting health behaviour, Pervan and Vocino (2008) suggest that attribute framing can be combined with goal framing in forming a health promotion. However, in consideration of the nature of target audience, this study chose to use goal framing only rather than confounding with attribute framing. Another reason for using goal framing is that the technique focuses on
the relationship between behaviour and goal achievement. Hence, it is suitable for the purposes of this study investigating the effect of message framing on women’s intention to exclusively breastfeed.

Although Prospect Theory has been recognized widely as a useful behavioural theory for predicting decision making under uncertainty, some criticisms have been offered for the theory. Timmermans (2010) contends that Prospect Theory assumes that decisions are made under conditions of risk and uncertainty where the individual knows the objective probabilities. However, in some circumstances an individual might not know the objective probabilities. For example, although breastfeeding has been recognized might increase infant’s antibody, some infants who got breastfeed still have a change infected by some diseases. Therefore, for mother, the objective probabilities of providing breastfeeding are not clearly known. Furthermore, Timmermans (2010) also argues that as a behavioural theory for predicting decision making, Prospect Theory lacks behavioural concepts and is too simple to avoid confounding the various effects which influence decision making. Another qualification of Prospect Theory was proposed by Nwogugu (2005), who stated that it defines risk in terms of standard deviations, variances, decision weights and covariance. However, the most prevalent definition of risk is terms of the potential magnitude of an unfavourable occurrence.

The effect of message framing has been documented by studies in marketing focusing on different types of outcomes. Gendall et al. (2006) noted that message framing has a significant effect on reactions to price discounting communications in New Zealand. In that study, the concept of message framing was used to express price discounting in terms of either a percentage or an actual dollar amount. The effect of message framing has also been investigated in a study of the price bundling strategy (Arora, 2008) in which message framing had a marginal main effect on attitude toward the product, but a significant main effect on intention to purchase. However, price bundling alone did not have a significant effect on either attitude or intention. Manipulation of message framing was also utilized by Daryanto, et al. (2009) to predict people’s intention to buy health insurance. Their study found that individual’s regulatory focus moderates the effect of framed-message on perceived value, which was found to be a significant predictor of buying intention. In particular, they found that individuals perceived a positively-framed message coupled with a discount-frame was the most effective combination in affecting an individual’s perceived value of health insurance.
As a communication technique, message framing is not only used to sell goods and services. Several studies have examined its use in attempting to change health-related behaviours. The following subsection discusses the use of message framing in this context.

2.5.1 Message Framing: Health Behaviour Approach

The influence of message framing on health behaviour is affected by the type of behaviour being promoted. Depending on its nature, health behaviour can be divided into three categories: prevention, detection and recuperation (Donovan & Jalleh, 2000; Rothman & Salovey, 1997). However, since the effects of framing for both prevention and recuperative behaviour are expected to be similar, studies simplify health behaviour by referring to just prevention and detection (Jones et al., 2003; Rothman & Salovey, 1997; Rothman et al., 2006).

Detection behaviours are performed to discover information about the existence or absence of a potential undesirable health condition or outcome (Rothman & Salovey, 1997). In other words, the emphasis is on the ability of the behaviour to inform people that they are exhibiting symptoms or are unwell (Rothman et al., 2006). Hence, people will perceive that adopting detection behaviour is risky. In accordance with Prospect Theory, which suggests that people are willing to consider taking risks to avoid potential losses, negatively framed messages should be the "best" framing technique to promote detection behaviour (Banks et al., 1995; Detweiler et al., 1999).

Some current studies have been oriented towards evaluating the impact of message framing on a range of detection behaviours. Schneider et al. (2001) found message framing had a significant effect on low-income women’s motivation to have mammography. Particularly, their study showed that a negatively-framed message was more effective in motivating subjects. The effectiveness of negative message framing was also shown in an earlier study by Meyerowitz and Chaiken (1987) where a negatively framed-message was found to be more effective than a positively framed-message in affecting the attitude of women towards breast self-examination (BSE) and their intention to carry out BSE. In a study involving 441 participants, negative message framing was also found to be a significant factor in motivating women to have pap tests (Rivers et al., 2005). In a study of message framing and cultural differences toward mammography in New Zealand, Brunton (2007) found that the New Zealand European and Asian subjects were more influenced by a positively framed message. However, Maori and Pacific people were more affected by a negatively-framed message.
Hence, this study suggested that providing general information is necessary, but may not be enough to have an impact on everyone. Framing simply must be taken into consideration.

Although negatively-framed messages appear to be more effective than positively-framed messages in motivating individuals to engage in cancer screening and related behaviour, other message framing studies have not shown significant differences between negative- or positive-framed messages in the area of detection behaviour (Lauver & Rubin, 1990; Lerman et al., 1992).

In contrast to detection behaviour, which informs people regarding their current health status, the primary function of prevention behaviour is to maintain a person’s current health status or to avoid the onset of sickness (Rothman et al., 2006). Therefore, adopting prevention behaviour provides people with a relatively “safe” behavioural option. In this study exclusive breastfeeding is considered to preventative, since the adoption of this behaviour will reduce the chance of developing various illnesses for both infants and mothers. In addition, the effects of breastfeeding have been clinically investigated and documented that the provision of exclusive breastfeeding is beneficial to both baby and mother (Galson, 2008). Therefore, the adoption of this behaviour is not risky.

Based on these explanations, the critical difference between prevention and detection behaviour is the perceived degree of proximal risk (Detweiler et al., 1999) which is when performing detection behaviour is riskier than prevention behaviour. Several studies have been conducted to assess the impact of message framing on prevention behaviour. Gerend et al. (2008) reported that message framing and the frequency of getting a required injection had a significant effect on the intention to get HPV vaccinations. Specifically, this study found that negatively-framed messages were more effective in affecting people’s intention to have HPV vaccinations. The effect of message framing on prevention behaviour was also studied in the context of dental hygiene behaviour. Arora (2000) found that message framing and credibility had a significant effect on the attitude and intention to obtain a dental examination. Based on that analysis, message framing was shown to have a significant main effect on intention and attitude; a positively-framed message was more effective than a negatively-framed one. The effect of the message on an individual’s intention was also investigated in the context of a measles, mumps, and rubella (MMR) vaccination promotion (Abhyankar et al., 2008). That study indicated that message framing had a significant main effect on parent’s intention to obtain MMR vaccinations for their children. In particular, a negatively-framed message was found to be more effective than a positively-framed message. In the
domain of sunscreen use, the effect of message framing was investigated by Hevey et al. (2010a). In that study, the interaction between message framing and body consciousness was shown to be significant in modifying the intention to use sunscreen. This finding suggested that the gain-framed messages had its strongest effect for the people who had high body consciousness.

The studies cited above show that the effect of message framing on prevention-related health behaviours is inconsistent. This conclusion is strengthened by the results of a meta-analytical study by O’Keefe and Jensen (2007), which showed the effects of message framing, especially positive framing, in the area of prevention behaviour to be exceptionally small and decidedly not general.

O’Keefe and Jensen (2007) suggested that an effect of message framing on preventative behaviour probably depends on the degree of certainty offered by the behaviour promoted. Relying on Prospect Theory, it has also been suggested that behaviour classified as low-risk will be a more suitable context for positively-framed messages while for riskier behaviour a negatively-framed message may be more persuasive. In this context, an action is categorized as risky if the outcomes have a high probability of occurring (Kahneman & Tversky, 1979).

Furthermore, several message framing studies have found that a framed-message can significantly affect behavioural change when moderated by another variable; for example, credibility (Arora & Arora, 2004), need for cognition (Zhang & Buda, 1999) and dispositional motivation (Mann et al., 2004). Considering these, the study of the interaction effects of message framing with the inclusion of a moderating variable in the context of exclusive breastfeeding may significantly contribute towards charting a path for effective message creation.

Two interesting points emerge from the literature reviewed thus far. First, although several scholars have claimed that message framing has a significant effect on prevention behaviour, with a positively-framed message considered more effective than a negatively-framed message in leading individuals to adopt a prevention behaviour, other studies yield inconsistent results. Second, to date no message framing study has focused on investigating the effect of a framed-message on breastfeeding behaviour. Therefore, the study of message framing with respect to the topic of breastfeeding behaviour promotion would contribute to both theory and practice.
2.6 Source Credibility

In order to change individual behaviour, social marketing programmes need to choose an *appropriate* persuasive communication strategy and technique (Kumkale et al., 2010). Given that there is no single most effective health communication strategy (Brunton, 2009). For that reason, in terms of designing effective communications, message designers should understand how the intended audiences might react to different ways of presenting message content or the message communicators themselves.

Source credibility has an important role in creating effective persuasive communication. When source credibility is perceived to be low, people discount the claims or arguments made in the message provided. Conversely, when source credibility is perceived to be high, people tend to counter-argue less and are therefore more easily influenced by the message (Zhang & Buda, 1999). Furthermore, when individuals perceive reporting or knowledge bias from the source, the persuasive impact of the message typically declines (Eagly et al., 1978).

Several issues related to credibility have been explored widely in the marketing literature. Some scholars see information credibility as having three major dimensions: source, message and media. Chung et al (2010) explained that credibility is a characteristic that is attributed to communicators by recipients of information. Credibility may be assumed by recipients to be based on the perceived competence and a perceived lack of bias of the source, as well as the judge’s perspective on the issue being communicated (Birnbaum & Stegner, 1979). Chaiken and Maheswaran (1994) suggested that the credibility of source information is determined by the recipient’s involvement in the issue, the importance of the task and the clarity of message’s content.

One well-researched aspect of credibility relates to source or spokesperson credibility (Arora, 2000). Assessing the credibility of external sources is particularly important when prior information about the issue is lacking (Kumkale et al., 2010). Poortinga and Pidgeon (2003) noted that since the early 1950s, scholars have identified source expertise and trustworthiness as pivotal characteristics of credible sources. From this perspective, spokesperson credibility is the extent to which the source is perceived as (1) possessing expertise relevant to the communication topic and (2) trusted to give an objective opinion on the subject (Ohanian, 1990). Erdogan (1999) defined expertise as the degree to which a communicator is perceived to be a source of convincing statements. In order to be convincing, the source of information should have knowledge, experience and skills. In the context of source expertise, Aaker and Myers (1987) claimed that information coming from a source having a higher degree of
expertise would be regarded as more persuasive and, in turn, would generate the intention to buy or adopt the proposed behaviour. In terms of trustworthiness, Erdogan (1999) defined "trustworthy" as “honesty, integrity and believability” of the source. Since trustworthiness is a main determinant of source credibility in terms of capitalising on the value of trustworthiness (Friedman et al., 1976), advertisers or social marketers select endorsers who are widely regarded as honest, credible and dependable (Shimp, 1997).

With regard to the relationship between trustworthiness and expertise, Arora and Arora (2004) proposed that the expertise dimension requires an ability to recognize truth. For that reason, expertise is derived from knowledge of the subject, whilst trustworthiness refers to the honesty and believability of the source (McGinnies & Ward, 1980). Hence, expertise and trustworthiness are regarded as important for conceptualizing credibility and have been shown to be influential in persuading consumers (Harmon & Coney, 1982; Moore et al., 1986).

In terms of information processing, credibility is considered to be an heuristic or peripheral signal (Chaiken & Maheswaran, 1994; Petty & Cacioppo, 1986). Hence, it is recognized as a peripheral route signal (Petty & Cacioppo, 1986). Morris et al. (2005) explained that peripheral route is more emphasized on message cues as colour use, people/lifestyle depiction and visuals. For that reason, the logo used in this study is an appropriate message cues which will be processed by individuals through peripheral route.

Whereas central route processing of messages occurs when motivation and the ability to scrutinize issue-relevant arguments (such as whether or not the source is truly credible) are relatively high, peripheral route processing takes place when motivation and/or ability are relatively low, and attitudes are verified by positive or negatives signals (Petty & Cacioppo, 1986). Furthermore, Elaboration Likelihood Model (ELM) would suggest that under low elaboration likelihood conditions, receiving information from a credible source will be likely to provide a positive impact on the acceptance of information (Chaiken & Maheswaran, 1994). When the issue involved is of more importance to the message receiver, credibility (as reflected in source competence and trustworthiness) becomes less important.

Whilst ELM has been used by scholars (Berry & Shields, 2013; Srivastava & Sharma, 2012; Zhou, 2012) to examine and predict attitude formation, the theory has not been without critics. Bitner and Obermiller (1985) noted that though ELM has clearly described the processing styles with regard to information, it does not incorporate differences in the classification of object cues (eg: credibility, presentation order and argument strength). Therefore, one individual might be motivated to process information centrally, while another individual
might process the same information peripherally. The ability to classify object cues is important since it can help the message sender in creating an effective (persuasive) message.

In addition, Morris et al. (2005) contended that emotion also plays an important role in changing individual attitudes. In the study of emotional aspect in communication, Morris et al. (2005) found that in the message cognitive processing, the cognition still has emotion core. Furthermore, it is explained that there is a possibility that emotional aspect in cognition will lead to longer-lasting change in attitudes. However, although emotion has been explained as an important aspect in attitudes formation, ELM does not state clearly in the model. Therefore, it is suggested to refine the model to include the role of emotions in the direct route to persuasion and the relationship of affect to behavioural intention.

In the study of persuasive communication, the interactive effect of message framing and source credibility has been examined widely in various studies of marketing, recruitment practice, political campaigns and health promotion. In the field of marketing, Arora (2007) investigated the effects of message framing and source credibility on people’s relationship with a mature product (teeth whitening), their intention to use the product and to recommend it to other people. Several findings were noted:

1. Message framing was the only factor which had a significant main effect on attitude.
2. Although source credibility did not have a significant main effect on attitude, it did significantly affect the relationship between message framing and attitude. There was a significant interaction effect between message framing and source credibility on attitude.
3. Message framing was the only factor affecting intention to use the product (teeth whitening).
4. Source credibility did not significantly moderate the effect of message framing on the intention to recommend the product. Instead, only significant main effects of message framing and source credibility were suggested by the results.

A product evaluation study similar to that of Arora (2007) conducted by Buda and Zhang (2000) investigated the effect of message framing and source credibility on individuals’ attitudes towards a product. To test their hypothesis, they employed a two by two (2x2) factorial design with the ANOVA test. While analysis found no main effects of source credibility on attitude, this study did suggest that it does moderate the effect of message framing on attitude.
In the domain of human resource management (recruitment practices), the interactive effect of message framing and source credibility was examined by Buda (2003). That study explored the effects of message framing, source credibility and presentation order on job attractiveness, willingness to accept a job and perceived future performance. Correlation test results led to combining the three dependent variables into "job attitude". Three-way ANOVA with a three-by-two (3x2) factorial design was used to test the hypotheses. Testing indicated that message framing and presentation order had a main significant effect on job attitude, while source credibility did not. Furthermore, that study found that source credibility did not have a moderating effect on message framing, but when presentation order was included in the analysis, both source credibility and presentation order significantly interacted with message framing. In order to explain this result, Buda (2003) contended that an individual’s attitudes were essentially based on the current positive information obtained. This explanation is in accord with the Serial Position Effect theory proposed by Ebbinghaus (1913) who argued that individuals tend to better recall things presented last in a list in contrast to those presented first or in the middle. Thus, the last information presented would more likely be remembered.

Message framing and source credibility have also been investigated in the area of political campaigning (Druckman, 2001). That study suggested that an effective political advertisement required a high degree of source credibility, as the target audience would be likely to defer to a credible leader.

With respect to health behaviour, three studies examining the interaction effect of message framing and source credibility have been identified. First, Arora et al. (2006) studied the effect of message framing, source credibility and their interaction on exercise behaviour, especially on the attitude toward exercising, intention to exercise and intention to recommend exercise. To investigate these effects, a two-by-two (2x2) factorial design was used with hypotheses tested by two-way ANOVAs. That study found interaction effects between message framing and source credibility on the attitude towards and intention to exercise. In terms of the interaction effect of message framing and source credibility, positively-framed messages with highly credible sources were considered the most effective way of effecting attitude and intention, compared to other combinations.

Another exercise behaviour study (Jones et al., 2003) explored the interaction effect of message framing and source credibility. Like Arora et al (2006), that study used a two-by-two factorial design and two way ANOVAs to investigate the effect of message framing, source credibility and their interaction on individuals' attitudes towards and intentions to
exercise. Statistical analysis revealed an interaction effect of message framing and source credibility on intention. However, in terms of attitudes and actual behaviour, there were no main or interaction effects. In explaining the insignificant effects of framing and credibility on attitude and actual exercise, behaviour, Jones et al (2003) argued that the perception of social pressure for doing exercise should be the factor that has an essential effect on attitudes and actual behaviour. However, in that study, the construct of the subjective norm, reflecting the pressure from another people, was not measured.

Finally, the moderating effect of source credibility on the linkage between message framing and health behaviour was examined in respect to dental services (Arora, 2000). That study of the effect of framing, credibility and their interaction on individuals’ attitudes towards and intention to have dental examinations showed that people’s attitudes were significantly affected by both message framing and source credibility. Likewise, the intention to have dental examinations was influenced by the main effect of message framing and source credibility, but an interaction effect was not significant in that context. Conversely, message framing, source credibility and its interaction did have a significant influence on the intention to recommend dental examinations.

The above review of the framing and credibility literature reveals several gaps. First, to date, no study has focused on the interaction effect of message framing and source credibility on the promotion of exclusive breastfeeding behaviour. Second, although message credibility has been suggested as having an important role in moderating the effect of message framing on individuals’ behaviour, the effect of this interaction is not found consistently. For these reasons, an examination of these effects on women’s intention to breastfeed exclusively for the first six months of a baby’s life would make a significant contribution to the literature and practice.

2.7 Behavioural Intention (BI)

Models of human behaviour are often utilised by social psychology, where their aim is to understand social behaviours (Godin et al., 2006). Several scholars suggest that a person’s intention to engage in a behaviour is a robust predictor of actual behaviour (Ajzen, 2005; Ajzen & Fishbein, 1980; Rogers, 1975; Triandis, 1979). Following this conceptual framework, several empirical studies also show that intention can be a strong predictor of behaviour.
A study of smoking cessation indicated that an individual’s intention to quit smoking is a strong predictor of the effort made to quit smoking (Norman et al., 1999). Furthermore, in the field of human resources, employees’ turnover intentions have been shown to be the best predictor of actual turnover behaviour (Van Breukelen et al., 2004). Heath and Gifford (2002), in a study of university students, found that the intention to use public transport was a strong predictor of the actual behaviour.

The stronger an individual’s intention to behave in a particular way, the more successful a prediction of that behaviour is likely to be. Intention thereby can indicate how hard people are willing to try and how much effort they plan to invest (Ajzen, 1991).

In terms of breastfeeding behaviour, intention has been defined as the degree of certainty one has for carrying out breastfeeding plans (Wambach, 1997). Several studies on breastfeeding indicate that intention to breastfeed is an essential antecedent of breastfeeding behaviour. For example, DiGirolamo et al. (2005) found that prenatal breastfeeding intention significantly affects the initiation and duration of women's breastfeeding of their infants. A study conducted by McMillan et al (2008) demonstrated that women's intention to breastfeed is a relatively strong predictor of their actual breastfeeding practice at birth, on discharge from hospital and ten days after their babies were born. In research similar to that of McMillan et al (2008), Wambach (1997) found that the intention to breastfeed significantly affected the duration of breastfeeding.

The behavioural intention conceptual framework and several empirical findings suggest that an individual’s intention to behave in a particular way is a valuable construct to be investigated. Hence, this study will be focused on the mother’s intention to breastfeed exclusively for the child’s first six months.

In terms of predicting behavioural intention, theories such as the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980), the Triandis’ Theory of Interpersonal Behaviour (TIB) (Triandis, 1979) and the Theory of Planned Behaviour (TPB) (Ajzen, 1991) have been developed. Given that the current study’s aim is to review the effect of behavioural intervention, i.e. message framing and source credibility, with respect to women’s intention to breastfeed exclusively for six months, this study will emphasise TPB. The use of TPB in a breastfeeding behaviour study is in accord with several previous studies (Dodgson et al., 2003; McMillan et al., 2008; Wambach, 1997) that have investigated the relationship of intentions to actual behaviour. The following section will discuss TPB in depth.
2.7.1 From TRA to TPB

In their Theory of Reasoned Action (TRA), Ajzen and Fishbein (1980) argue that social action is under volitional control of the individual. Hence, it is clear that any particular behaviour is based on an intention. Furthermore, TRA also clearly explained that attitude and subjective norms are two fundamental factors underlying a person’s intention to behave in a particular way (Ajzen & Fishbein, 1980). However, Ajzen (1991) argued that TRA has a limitation in predicting non-completely volitional behaviour. Therefore, he advised the addition of perceived behavioural control (PBC) component in the TRA framework. This change enhanced the theory’s ability to account for behaviour, and was renamed the Theory of Planned Behaviour (TPB) (Ajzen, 1991).

As a theory which can be used to predict an individual’s behaviour, TPB has been applied widely by scholars. In the field of marketing, George’s (2004) study on internet purchasing behaviour applied TPB as a framework. The findings of that study reported that American internet purchasing behaviour was significantly affected by the attitude towards internet purchasing. In addition, the study indicated that TPB variables, i.e. attitudes, subjective norms and perceived behavioural control, simultaneously explained around 24% ($R^2 = 0.244$) of internet purchasing behaviour. In a similar marketing study, TPB was applied in evaluating the intention of Finnish people to buy organic food (Tarkiainen & Sundqvist, 2005). That study illustrated that an individual’s intention to buy organic food was significantly influenced by attitudes, and that subjective norms were found to be strong predictors of attitudes. Alam and Sayuti (2011) used the TPB framework to analyse Malaysians’ purchases of Halal foods. Utilising multiple regression analysis, it was found that Malaysians’ intentions to consume Halal foods was significantly affected by their attitude toward Halal food, perceived behavioural control and subjective norms. These variables explained 29.1% of the variance in the intention to buy.

As well as in the domain of marketing, TPB also has been widely applied in the context of health behaviour. A study of the Hong Kong flu H1N1 vaccination during the 2009 pandemic applied a TPB research framework to investigate H1N1 vaccination behaviour (Lau et al., 2010). This study noted that except for perceived behavioural control, the TPB variables were good predictors of intention to have the vaccination. In predicting attendance behaviour at public dental services and the intention to visit public dental services, Luzzi and Spencer (2008) employed TPB’s attitude, perceived behavioural control and subjective norms components. Like other studies, that study found that these three variables were useful predictors of behavioural intention. O’Boyle et al. (2001), in their study of hand hygiene
behaviour used TPB to investigate nurses’ intentions to recommend hand washing. Their study found that TPB variables predicted intention to hand wash. The intention was, in turn, a predictor of self-reported hand hygiene.

Given that the present study addresses the effects of persuasive communication in a social marketing context, it also uses TPB as a conceptual framework. Wambach (1997) argued that TPB is a strong theory to analyse breastfeeding behaviour which is not under complete volitional control. The behaviour of interest may be categorized as such because there are many infant and maternal factors such as demographics, health care facilities and health status which can alter breastfeeding initiation and continuation. Hence, to facilitate the investigation of non-volitional behaviour, perceived behavioural control (PBC) is used as an additional variable.

Another reason to employ TPB as the framework of the current study is that TPB has been used in other breastfeeding behaviour studies. Duckett et al (1998) used TPB to analyse first time mothers’ breastfeeding behaviour. At the conclusion of the study, they suggested that TPB is a comprehensive model which can serve as a useful heuristic tool for understanding personal motivational elements in breastfeeding. Another breastfeeding study using TPB as a framework was conducted by McMillan et al (2008), who investigated the duration of breastfeeding during hospital stay, on discharge from hospital, ten days postpartum, and six weeks postpartum. In order to measure young people’s attitude toward breastfeeding, Giles et al. (2007) developed measures based on the concepts of TPB. Their findings suggested that TPB was a useful framework for developing and evaluating breastfeeding intervention in terms of increasing young people’s motivation to breastfeed. In another TPB study similar to Giles et al (2007), Zhang et al. (2009) examined the effectiveness of a rural Chinese infant feeding intervention programme, including a breastfeeding campaign.

Although TPB has been recognized widely as a robust theory for predicting human behaviour, some criticism of the theory has arisen among scholars. Morgan & Bachrach (2011) noted that TPB fails to accommodate a process in which individual’s intention can be made and remade over their life. In addition, while this theory can show an effect of the perceived views of others, this theory cannot explain the impacts of social contexts. Originally, the notion of subjective norms proposed by TPB is about individual’s perception about of the pressure from other people. Povey et al. (2000) contended that the concept of subjective norms is too narrow to explain the social context such as support from surrounding (family,
friends, government and organization). Therefore, to make the analysis more comprehensive, there is a need to integrate the construct of social support.

Fekadu & Kraft, (2002) have also argued that the exclusion of social learning components from the TPB model decreases the ability of it to predict behavioural intention. Following social learning theory proposed by Bandura (1986), observational learning has an important role in affecting individual’s behaviour. In breastfeeding behaviour, women might learn about breastfeeding from their surroundings such as their mother or peers. This learning process cannot be explained by TPB

Given the ability of TPB to facilitate the analysis of behaviour that is not completely volitional and that the studies noted above used TPB for investigating breastfeeding, TPB is also used in this study to analyse the effect of message framing and source credibility on Indonesian mothers’ intention to provide six months of exclusive breastfeeding to their infants. Here, TPB framework is integrated with other additional variables (message framing, source credibility and perceived value).

### 2.7.2 The Component of Behavioural Intention

From the TPB perspective, an intention to behave in a particular way is likely to be determined by the interaction of attitudes, subjective norms and perceived behavioural control. This section will discuss these constructs in detail.

#### 2.7.2.1 Attitude

Attitude is considered as an individual’s overall evaluation of and orientation toward adopting a particular behaviour (Ajzen, 1991). In addition, it can be conceptualised as a combination of motivational, emotional, perceptual, and cognitive processes, with perceptions of value related to some aspect of people’s surroundings (Quester et al., 2007). Although an attitude is an individual’s favourable or unfavourable inclination towards a particular behaviour, it can be changed in a variety of ways (Triandis, 1971). Kelman (1958) suggested that a change of attitude is influenced by three factors. The first of these factors is compliance, a response to influence, since the person hopes to achieve a favourable reaction from their surroundings. Hence, it can be said that the satisfaction derived from compliance is due to the social effect of succumbing to influence. The second factor influencing attitude change in individuals is identification, which comes into play when a person gives in to influence to establish and maintain a satisfying self-defining relationship with another person or a group. For that reason, it is obvious that the adoption of induced behaviour is associated with the desired
relationship. The last factor affecting attitude is internalization. Internalization can be said to occur when an individual responds to influence on an attitude and changes that attitude because of its contents or values.

According to TPB and other behavioural theories such as Technological Acceptance Model (TAM), Triandis’ Theory of Interpersonal Behaviour (TIB) and the Theory of Reasoned Action (TRA), the attitude is an important construct for predicting an individual’s intention to exhibit a particular behaviour. Several empirical studies have found a significant linkage between a person’s attitude and behavioural intention. For example, in one marketing study, Suh and Yi (2006) found that among South Korean customers’ loyalty was largely determined by their attitude towards the brand of product. When buying high involvement products, brand loyalty influenced consumer choice in 40.6% of cases. This figure dropped to 27.4% when buying low involvement products, reflecting a difference in attitude toward the brand. Their findings supported the study by Laroche et al. (1996) who found that an individual’s attitude towards and familiarity with a particular brand was a significant predictor of intention to buy. A strong linkage between attitude and purchase intention was also found in a study of bloggers’ and travel products (Huang et al., 2010). That study reported that blogger’s attitudes towards advertising and brand significantly affected their intention to purchase travel products. A similar linkage between attitudes and intention in the area of online purchasing was also found by Mosavi et al. (2012). Their study found that attitude and other behavioural components such as subjective norms and PBC significantly affected Iranians’ internet purchase intention. Hartmann and Apoalaza-Ibanez (2011), in their study of the intention of purchasing a green energy brand, found that the attitudes toward brand affected individuals’ intentions, to purchase green energy. In addition, the study found that attitude mediates the effect of psychological brand benefits on purchasing intention.

In the context of breastfeeding behaviour, the intention to breastfeed is significantly affected by attitudes (Parkinson et al., 2011; Tarrant & Dodgson, 2007; Wambach, 1997). For that reason, it is obvious that attitude towards breastfeeding is likely to be a trigger for individuals to form the intention to provide breast milk for their infants (Duckett et al.1998).

2.7.2.2 Subjective Norms
Socio-cognitive models of behaviour such as the TRA (Ajzen & Fishbein, 1980) and TPB (Ajzen, 1991) suggest that the influence of other people plays a crucial role in terms of predicting intention. Within the framework of TRA and TPB, the term subjective norms refers to the perceived social pressure to perform or to not exhibit a particular behaviour
(Ajzen, 1991). In terms of forming subjective norms, an individual will take into account the normative expectations of various others in his/her environment (Ajzen & Fishbein, 1980).

Although several studies have suggested that behavioural intention is affected by subjective norms (Ajzen, 1991; Ajzen & Fishbein, 1980), Povey et al (2000) remarked that numerous empirical studies using the TPB as a research framework show that subjective norms rarely have a strong relationship with intention. For example, a study conducted by Ajzen and Driver (1992), on leisure choice shows that subjective norms did not contribute significantly to the intention to engage in a particular leisure activity. In another study, Mahon, Cowan, and McCarthy (2006) found that subjective norms have a significant effect on the intention to consume ready-to-eat meals but their effect was insignificant with respect to a slightly different behaviour in the consumption of takeaway meals. One possible reason for the weak relationship between subjective norms and behavioural intention has been advanced by Conner et al. (1996), who claimed that the concept of subjective norms employed by the TPB framework is too narrow to predict behavioural intention. It is then worth noting that the approval of other people may not be enough to create behavioural intention.

While the effect of subjective norms on intention seems equivocal, several studies on breastfeeding behaviour found that this construct had a significant effect. Giles et al (2010) found that the intention of Irish female adolescents to breastfeed and Irish male adolescents to support breastfeeding was significantly affected by subjective norms. Subjective norms and attitudes were also found to be strong predictors of intention to breastfeed in other cultural contexts, with non-Hispanic, African-American and white American mothers’ all indicating a significant level of influence by others on their decision making (Bai et al., 2011). Goksen (2002) noted that the effect of women’s intention to breastfeed operated under the conditions of high social embeddedness and positive perceived norms. Thus, women who perceived support and expectation from their surroundings may develop a stronger intention to breastfeed.

While subjective norms have been recognized as an antecedent of intention, several studies also noted their effect on attitudes. In a South Korean study (Kim et al., 2009), it was found that subjective norms significantly affected customers’ attitudes on the use of e-commerce websites. In their study of Finnish consumers and organic food, Tarkiainen and Sundqvist (2005) also indicated that subjective norms were strongly predictive of attitude. In a study of organic food purchasing in Austria, subjective norms were found to have a significant relationship with attitude toward and self-reported shopping behaviour for organic products.
(Gotschi et al., 2009). In a study of breastfeeding behaviour, Duckett et al (1998) discovered that the effect of subjective norms on women’s intention to breastfeed was mediated by their attitude. These studies document that subjective norms can have a significant effect on attitude.

As an important component of TPB, subjective norms were also identified as predictors of perceived value. Campbell-Meiklejohn et al. (2010) suggested that the influence of other people would contribute to the rapid learning and the quick spread of values throughout a population. A study of wireless short messaging services (SMS) by Turel et al. (2007) provided evidence that social approval and desirability affected a person’s overall value assessment of SMS usage. Another study, of online shopping behaviour in China, found that subjective norms were a significant factor affecting people’s perceived value of online shopping (Cheng et al., 2011). Although the linkage between subjective norms and perceived value has been noted in general marketing studies, to date there has been no study assessing their relationship in the area of breastfeeding behaviour.

2.7.2.3 Perceived Behavioural Control

The third construct associated with the Theory of Planned Behaviour is perceived behavioural control (PBC), a concept distinguishing the Theory of Planned Behaviour from the Theory of Reasoned Action. In general, PBC refers to the level of an individual’s perceived control to behave in particular way. It is also assumed to be a reflection of past experience as well as anticipated impediments and obstacles. Conner and Armitage (1998) see control as a continuous concept with easily executed behaviours at one end and behaviours demanding resources, opportunities and particular skills at the other. PBC is thought to have two components (Chiou, 1998). The first relates to accessibility of resources (such as time and money) needed to adopt a behaviour. The second component is the self-confidence of the person with respect to the ability to adopt a proposed behaviour.

In terms of predicting intention to engage in a particular behaviour and actual behaviour, PBC is analogous to Bandura’s concept of perceived self-efficacy, which is a judgement of how well a required action can be executed to deal with a particular situation (Ajzen, 1991). Chiou (1998) proposed that the Theory of Planned Behaviour locates the construct of self-efficacy within a more general outline of the relationship between attitude, subjective norms and behavioural intention.

Since TPB claimed that PBC was a strong antecedent of both behavioural intention and actual behaviour (Ajzen, 1991), several diverse studies have investigated the effect of this
construct on intention and behaviour. One study (Casaló et al., 2010) has shown that PBC can significantly affect people’s intention to join online travel communities; the greater people’s PBC, the greater their intention to join. Research by Delafrooz et al. (2011) indicated that PBC significantly influenced Malaysian online buyers’ intentions. Furthermore, the significant effect of PBC was also found in research on Americans’ behaviour regarding visiting spas (Kim et al., 2010). In that study, PBC was found to have a dominant effect on behavioural intention, greater than that of attitude and subjective norms. In a study of purchasing organic personal care in USA (Kim & Chung, 2011), PBC was found to be a significant predictor of the intention to purchase.

A significant effect of PBC has also been shown in the context of health behaviour. Bonziolelos and Bennet (1999), in a study of exercise, found that PBC was a good predictor of both intention and actual exercise behaviour. In Pawlak et al. (2009), all of TPB’s components i.e. attitude, subjective norms and PBC, were shown to have significant effects on predicting baseball players’ intention to eat healthy diets, with these three variables explaining 72% of the variance in the intention. A US study of physical activity and healthy diet documented that PBC and other TPB components were strong predictors of an intention to be physically active and to eat a healthy diet (Blue, 2007). PBC was considered the construct with the biggest influence on person’s intention.

PBC’s importance in predicting behavioural intention has also been shown in the context of breastfeeding behaviour. McMillan et al. (2008) noted that attitudes, subjective norms and PBC simultaneously affected US women’s intention to breastfeed. These three variables explained the 78.7% of the variance in intention. Individually, it was also noted that each variable had a significant and positive effect on intention. Therefore, it can be claimed that the higher women’s PBC, the more likely their intention to breastfeed. In a study on predicting the intention of women from different ethnic groups to continue with exclusive breastfeeding for six months, PBC was found to have a significant impact when predicting the intention of Hispanic mothers to breastfeed exclusively for six months. Although PBC was not the dominant factor, it was also found to be a reliable predictor of intention on the part of African and Caucasian American mothers (Bai et al., 2011). In terms of predicting factors affecting women’s decisions to wean at various periods of time, Avery et al (1998) applied the TPB components -- attitude, PBC and subjective norms. It was found that these variables were significant antecedents of women’s intention to stop breastfeeding.
While several studies have shown the significant effect of PBC on an individual’s intention to engage in a particular behaviour, other studies have not found a significant effect of PBC on intention. In a study of pirated software usage in the Klang Valley of Malaysia, which applied TPB as a research framework, it was found that attitudes and subjective norms were the only TPB components which significantly influenced student’s intention to use pirated software, PBC did not have a significant effect (Alam et al., 2011). In a study on restaurant managers' beliefs about food safety training, PBC was not found to have a significant effect on the intention to conduct training (Roberts & Barret, 2011). An insignificant effect of PBC on intention was also found in the study of agriculture technology adoption in Indonesia (Sambodo & Nuthall, 2010). In that study, farmers’ intention to adopt a new technology was influenced by attitudes and subjective norms, but not PBC. In a breastfeeding study, Khoury et al. (2005) identified that attitudes towards breastfeeding and subjective norms were factors which significantly affected breastfeeding initiation, while perceived control and social constraint barriers were not found to be significant.

Several explanations have been offered for a situation where there is an insignificant relationship between PBC and behavioural intention. Alam et al (2011) contended that the insignificant effect of PBC on the student intention to use pirated software was caused by their knowledge and experience about using pirated software. Hence, whether or not they have an actual ability to buy pirated software, they may still have an intention to purchase.

Robert and Barret (2011) offer another possible explanation for the situation where there is an insignificant relationship between PBC and intention; the intention of restaurant management to carry out food safety training was influenced by their belief that they had control over their operations and also the food safety knowledge to train employees on the job. For that reason, they do not need to have PBC for conducting food safety training classes, to have the intention to do so. Therefore, it can be concluded that in a particular case, PBC alone is not enough to motivate people to engage in a particular behaviour.

2.8 Perceived Value

Perceived value has been identified as a factor affecting behavioural intention (Grewal et al., 1998; Patterson & Spreng, 1997). Hewitt and Hewitt (1986) defined value as a “standard of judgement by which people decide on desirable goals and outcomes”. In addition, they suggested that it signifies the overall principles on which individual’s life can be judged. In accord with the general value definition, perceived value in the realm of commercial marketing is defined as a “customer’s perceived preference for and evaluation of those
product attributes, attribute performances and consequences arising from use which facilitate (or block) achieving the customer’s goal and purposes in use situations” (Woodruff, 1997, p. 142). This definition uses the idea of more than one level of evaluation of products by customers and links it to customers' goal fulfilment in usage situations (Bhattacharya & Singh, 2008). Thus it is associated with the worth that individuals in a market segment or in the mass market place on the result of using a product or service (Hunt & Morgan, 1995). Similar with that idea, it has been proposed that perceived value stems from perceived or expected performance in pleasing the functional and psychic needs of individuals (Sheth et al., 1991).

The concept of value is crucial for marketing studies. Gallarze and Gill-Saura (2006) proposed three reasons to justify the importance of value in marketing studies. First, the concept has arisen from the development of two fundamental dimensions of consumer behaviour, i.e. price and psychology. Second, the construct of value is able to help explain different domains of consumer behaviour such as product choice, buying intention and loyalty. Finally the construct of value is inextricably linked to other essential consumer behaviour constructs such as perception of quality and satisfaction.

The discussion regarding perceived value has been largely conducted in the framework of commercial marketing rather than social marketing (Zainuddin et al., 2009a). Since marketing activity is recognized as a form of social exchange between parties (Kotler & Armstrong, 2004), the personal and social values that motivate customers to act constitute an essential concern for marketing activities (Holbrook, 1994). In the marketing of a tangible good, this implies that the success of companies or organizations will depend on how much superior monetary value is provided relative to competitors. Given that the concept of commercial marketing is analogous to the idea of consumer supremacy, Sirgy et al. (1985) contended that the neoclassical economic theory used as the basis of traditional commercial marketing is not directly relevant in the realm of social marketing because of a number of factors, most notably that the price system is not involved in the social marketing context. Hence, in the area of social marketing, perceived value does not emphasize economic value as is done in traditional commercial marketing.

While traditional commercial marketing defines perceived value as the evaluation of a product or service’s “get” and “give” elements (Zeithaml, 1988, p. 14), social marketing recognizes value as an inducement for consumers to carry out a desirable behaviour. Furthermore, given that the concept of social marketing does not usually include monetary
exchange, it diminishes the economic element of value which is a central concern of commercial exchange and replaces this element with psychological and emotional features (Zainuddin et al., 2009a). Woodruff (1997) suggested that gaining consumer value is important in traditional commercial marketing to achieve competitive advantage. On the other hand, for social marketing the objective of having consumer value is for socially desirable ends resulting from the presentation and maintenance of desirable behaviours (Donovan & Henley, 2003). Since the concept of perceived value in social marketing is not similar to that of traditional commercial marketing and it a first step and an important element in creating social marketing interventions that can effectively be used to change individual behaviour (Zainuddin et al., 2011), the understanding of perceived value in social marketing is essential.

In order to understand the concept of perceived value in social marketing, there is a need to identify the source of value (Zainuddin et al., 2009b). With regard to general marketing concepts, Smith and Colgate (2007) identified five sources of value: information, product, interaction between producer and consumer, purchase environment and ownership transfer. In the social marketing area, Zainuddin et al (2009b) suggested individuals themselves are an additional source of value since they are actively involved in performing the proposed behaviour.

To date, the effect of perceived value with respect to several consumer behaviour variables such as purchase intention, loyalty and satisfaction has been investigated widely in various areas of marketing. For example, a study of heritage tourism in Taiwan found that perceived value had a significant effect on both satisfaction and intention (Chen & Chen, 2010). Another study exploring antecedents of trust, satisfaction and loyalty (Chen, 2011) supports the view that an individual’s perception of the value of green marketing drives green marketing loyalty. In the study of Taiwan mobile service, Kuo et al. (2009) found that perceived value was a strong predictor of mobile service post-purchase intention. Another significant effect of perceived value on intention was found by Choi et al. (2004) in the study of health care service in South Korea.

Perceived value also affects individual attitudes. Ducoffe (1996) suggested that individuals’ perception of the value of advertising would affect their attitude towards advertising. In the light of the explanation by Rokeach (1966) cited in Teo et al. (2003) of the formation of attitudes by perceived value, the internalisation of value would become a standard for developing and maintaining a person’s attitude towards other relevant objects and situations.
The effect of perceived value on retail customers’ attitude and loyalty was investigated by Ruiz-Molina and Gil-Saura (2008) who reported that customers’ perceived value, especially in terms of quality and the emotional dimension, was a strong predictor of their attitude and loyalty.

The important role of the perceived value construct has also been investigated in the area of health behaviour studies. Several such studies demonstrate that perceived value is a clear antecedent of the intention to adopt a particular health behaviour. Ball and Crawford (2006) showed that the perceived value of avoiding weight gain significantly affects women’s body measurement index scores. In a similar study regarding smoking behaviour (Borland et al., 2009; Klosky et al., 2007; Zbikowski et al., 2002) the perceived value of smoking was a predictor of intention regarding future tobacco use. The significant effect of perceived value was also found in relation to people’s intention to consume organic food in Malaysia. The study by Shaharudin et al. (2010) on the Kedah people’s intention to consume organic food indicated that people’s perceived value associated with organic food and health consciousness had a significant effect on intention. In addition, among the research variables (perceived value, health consciousness, religious matters and food safety concern) perceived value was claimed to be one which had the largest impact toward intention.

Previous research shows that perceived value is a worthwhile variable to consider when attempting to predict intention. While the investigation of perceived value has been useful in commercial marketing, the body of marketing knowledge could be improved by further investigation of this construct within the realm of social marketing. The integration of the perceived value construct with TPB’s components adds a new theoretical layer in social marketing with health promotion practice being informed by an application of this model to promoting exclusive breastfeeding for the first six months of a child’s life.
Chapter 3

THE MODEL: CONCEPTUAL DEVELOPMENT AND HYPOTHESES

Message framing has been found to be a robust persuasive communication tool for influencing socio-cognitive variables such as perceived value, attitudes, PBC and intentions. It is necessary to understand the relationships among these variables, especially in the context of breastfeeding behaviour, since further insight will contribute to both the practical and theoretical fields. Since the effects of message framing on these variables have been investigated widely, scholars feel justified in proposing that source credibility can be used to alter the effect of message framing on these variables. In this chapter, a conceptual model is developed to identify the linkages among these constructs and hypotheses are formulated to test these relationships.

3.1 Model Development

Several contemporary behavioural theories attempt to explain the changes of behaviour. The research model proposed for this study is built on the Theory of Planned Behaviour (TPB), Prospect Theory and the Elaboration Likelihood Model (ELM). The TPB (Ajzen, 1991) is used to explain the links between behavioural intention, attitude, subjective norms and perceived behavioural control (PBC). There are several reasons that underlie the use of the TPB in this study. First and foremost, this theory is a widely applied expectancy-value model of attitude-behaviour relationships, which has met with some degree of success in predicting a variety of behaviours (Ajzen, 1991; Conner & Sparks, 1996; Godin & Kok, 1996). Second, TPB specifies the determinants of the decision of an individual to carry out a particular behaviour (Conner & Armitage, 1998). Finally, since this theory incorporates the construct of PBC, it can be used to analyse a behaviour which is not completely under volitional control, such as breastfeeding behaviour (Wambach, 1997).

In terms of perceived value, Maibach (2003) explained that application of social marketing can increase perceived benefits, reduce perceived barriers or in other ways enhance the perceived value of the recommended behaviour, thereby increasing the likelihood of adopting the recommended behaviour. In this study, perceived value is integrated into the variable set suggested by the TPB, as perceived value has been found to be an antecedent of attitude as well as intention (Chen, 2008; Hu et al., 2009).
For this study, Prospect Theory and the ELM are used to help explain how an individual processes the information received. Specifically, Prospect Theory (Kahneman & Tversky, 1979), which describes how individuals evaluate potential losses and gains, is used as a basis to predict the influence of message framing on behavioural intentions. The ELM (Petty et al., 1983) is employed to explain the interaction effect between message framing and source credibility.

In the model developed for this study, message framing, source credibility and subjective norms are exogenous variables. Hair et al. (2010) explained that an exogenous variable is one which is not determined by another variable in the model. On the other hand, perceived value, attitude, PBC and intention are endogenous variables – variables which are determined by other variables within the model. Regarding construct formation, both reflective and formative measurements are used in this study. Devinney et al. (2008) described a reflective measurement construct as one where the causal influence is from the constructs to the indicators/items. With formative indicators, causality flows from indicators/items to the construct.

For this study, message framing and source credibility are conceptualised as formative indicators, which are drawn as rectangles in the model (Figure 3-1, page 45). These manipulations are conceptualised as formative indicators. For reflective scales, the direction of causality flows from the construct to the items, high correlations are found among items due to the fact that they reflect the same principal construct, and error is related to individual items rather than with the constructs as a whole (MacKenzie et al., 2005). None of these properties of reflective scales is appropriate with either message framing being constructed as being positive or negative or source credibility being constructed as being high or low. In cases like these, that which is observed determines the latent variables, hence the conceptualization as formative indicators is appropriate. While message framing and source credibility are formative constructs, perceived value, attitude, subjective norms, PBC and intention are reflective constructs. In this study, these constructs were depicted in ovals.

Based on the proposed research model, there are seventeen hypotheses to be tested. Figure 3-1 shows the research model and hypotheses tested in this study.
Figure 3-1 Research Model and Hypotheses
3.2 Development of Hypotheses

Following the three study objectives 1) assessing the effect of message framing and the interaction effect of framing and credibility on behavioural intention, attitude, perceived behavioural control, and perceived value, 2) evaluating the comprehensive linkages among attitude, perceived behavioural control, subjective norms, perceived value and behavioural intention, and 3) evaluating the potentially mediating role of social-cognitive variables in the linkage between message framing and behavioural intention, and the interaction of message framing with source credibility and intention, hypotheses development was managed in three stages:

1. The effect of message framing and its interaction with source credibility on the behavioural intention and its components (i.e., perceived value, attitude, perceived behavioural control);
2. The relationships among perceived value, attitude, perceived behavioural control, subjective norms and intentions;
3. The mediating effects of perceived value, attitudes and perceived behavioural control on the relationship between message framing and intention, and on the relationship between the interaction of message framing with source credibility and intention.

The following subsections detail each part of the hypothesis development.

3.2.1 The Effect of Message Framing, and the Interaction between Message Framing and Source Credibility on Behavioural Intention and Its Components

Several researchers have hypothesized that message framing as a persuasive communication tool has an impact on perceived value, attitudes, PBC and behavioural intention. The effect of message framing on these variables happens since an individual’s likelihood to engage in certain behaviour is susceptible to how the information is presented (Kahneman & Tversky, 1979). Furthermore there are likely to be both cognitive and motivational consequences of coding a message either positively or negatively.

Previous studies have assessed the relationship between message framing and perceived value (Daryanto et al., 2009; Daryanto et al., 2010). These studies found that an individual’s perceived value is significantly influenced by the way a message is framed. Apart from perceived value, scholars also claimed that there is a significant effect of message framing on individual’s attitudes. Several studies have investigated this relationship for various types of behaviour (Arora, 2000; Arora & Arora, 2004; Arora et al., 2006; Banks et al., 1995;
Meyerowitz & Chaiken, 1987). However, no study has attempted to explore this relationship in the context of breastfeeding behaviour. Furthermore, as a social cognitive variable, PBC has been shown to be influenced by the way a message is framed. Scholars have proposed that there is a significant effect of message framing on individual’s PBC (Abhyankar et al., 2008; Jones et al., 2004; O’Connor et al., 2005). This significant effect means an individual’s perception of their control over a particular behaviour is depend on the types of message provided. As a robust predictor of actual behaviour (Ajzen, 1991), intention plays an essential role in changing behaviour. In the context of persuasive communication, previous studies have investigated the effect of message framing on individual’s intention (Arora et al., 2006; Jones et al., 2003; Rothman et al., 1993). Based on these rationales, four hypotheses are proposed:

H1: Message framing has an impact on perceived value.
H2: Message framing has an impact on attitudes.
H3: Message framing has an impact on perceived behavioural control.
H4: Message framing has an impact on intention.

It is widely recognized that the credibility of information presented is an essential component of a persuasive message (Heesacker et al., 1983). Studies have shown that a message coming from a highly credible source is likely to be more persuasive than a message coming from a source with low credibility (Hovland & Weiss, 1951; Kelman & Hovland, 1953). Albright and Levy (1995) suggested the source credibility affects the reaction of an individual. Furthermore, they also suggested that information that comes from a more credible source would be evaluated more favourably than information from a less credible source. There are many marketing articles documenting that communicators with relatively positive characteristics are considered to be more persuasive than communicators with less positive attributes (Goldberg & Hartwick, 1990; Goldsmith et al., 2000a, 2000b; Lafferty & Goldsmith, 2004). In the study of persuasive messages, source credibility is recognized as a moderator of message framing (Buda, 2003). Zhang and Buda (1999) argued that a message receiver who is presented with a framed message will attempt to evaluate the source of the message and the trustworthiness of the source. Several studies have shown that the interaction between message framing and source credibility has a significant effect on health related behaviour (Arora & Arora, 2004; Arora et al., 2006; Harmon & Coney, 1982; Jones et al., 2003; Jones et al., 2004).

For that reason, this study proposes that source credibility will affect the nature of the relationship between message framing and socio-cognitive variables i.e. perceived value,
attitudes, PBC and intention. In order to predict the interaction effect between message framing and source credibility, this study refers to the Prospect Theory proposed by Tversky and Kahneman (1981) and the ELM model proposed by Petty and Cacioppo (1986).

Since this study predicts that there is a significant interaction effect between message framing and source credibility on the socio-cognitive variables, these interaction effects will also be explored in this study. For this study, breastfeeding is considered to be prevention behaviour. Rothman et al. (2006) explained that prevention behaviour is one that can prevent the onset of an illness and maintain a person's current health status. Since breastfeeding can be classed as a preventative behaviour, Prospect Theory would propose that a positively-framed message will provide a greater effect because people will be focusing on gains rather than losses from engaging in the behaviour (Banks et al., 1995; Detweiler et al., 1999; Rothman et al., 1993). Furthermore, in the context of processing the source of information, a highly credible source should be more effective in affecting behaviour rather than a less credible source of information (Arora & Arora, 2004; Lafferty & Goldsmith, 2004). Following the ELM model (Petty & Cacioppo, 1986), source credibility is arguably more effective in promotion presenting low elaboration information. As a behaviour which has been recognized widely, the information about breastfeeding will be considered as low elaboration information. Hence, a highly credible source will be more effective in promoting breastfeeding behaviour. For that reason, this study argues that a positively framed message with a high credibility source will have a greater effect on an individual’s perceived value, attitudes, PBC and intention to provide six months exclusive breastfeeding rather than another message combination.

The goal of exploring the moderating role of source credibility on the relationship between message framing and socio-cognitive variables thus requires an examination of the impact of hypothesised interaction between message framing and source credibility. This study is therefore focussed on whether this potential interaction has an effect on perceived value, attitude, PBC and intention – a direct effect of source credibility is thus not hypothesised\(^1\).

Based on these arguments, four hypotheses are porposed:

H5: There is an interaction effect between message framing and message credibility on perceived value (specifically, a positively-framed message with a high credibility source is expected to have greater effect than other framing and credibility combinations).

\(^1\) This potential link was tested though: the coefficient was both very small and not significant (SC → attitude: $\beta = -0.008$, p > 0.05 and SC → Intention: $\beta = -0.052$, p>0.05)
H6: There is an interaction effect between message framing and message credibility on attitudes (specifically, a positively-framed message with a high credibility source is expected to have greater effect than other framing and credibility combinations).

H7: There is an interaction effect between message framing and message credibility on perceived behavioural control (specifically, a positively-framed message with a high credibility source is expected to have greater effect than other framing and credibility combinations).

H8: There is an interaction effect between message framing and message credibility on intention (specifically, a positively-framed message with a high credibility source is expected to have greater effect than other framing and credibility combinations).

3.2.2 Relationship among Attitude, Perceived Value, Subjective Norms, PBC, and Intention

Though attitudes are relatively enduring, they can be changed (Chaiken & Stangor, 1987). Several variables can affect an individual’s attitudes regarding a particular behaviour (Triandis, 1971). A number of studies have shown that perceived value has a significant positive impact on an individual’s attitude (Ruiz-Molina & Gil-Saura, 2008; Swait & Sweeney, 2000). Such a value is a component in the development and maintenance of an attitude (Teo et al., 2003). The perceived value of a particular behaviour will likely have an impact on one’s attitude.

In marketing studies, perceived value has an important role in predicting intention (Parasuraman & Grewal, 2000). The link between perceived value and intention is based on the value-intention framework proposed by Dodds and Monroe (1985). The reason for the linkage appears to be that an individual's intention to perform a particular behaviour is directly affected by the value the individual assigns to the behaviour's consequences (Dodds & Monroe, 1985).

In accordance with the value-intention framework, several studies in commercial marketing (Chen et al., 2009; Jen et al., 2011; Kuo et al., 2009; Petrick & Backman, 2002) as well as those in the social marketing and health behaviour disciplines address the relationship between perceived value and intention. Zainuddin (2009b) suggested that in the area of social marketing, perceived value was one of the most important factors in affecting individual behaviour. Furthermore, several health behaviour studies indicated that the higher a value about a particular behaviour was held by people, the higher the intention to adopt that behaviour (Borland et al., 2009; Klosky et al., 2007; Zbikowski et al., 2002).
Apart from perceived value, TPB suggested that socio-cognitive variables such as attitude, perceived behavioural control and subjective norms have been demonstrated to be robust predictors of behavioural intention. Several studies have assessed the linkages among these constructs and behavioural intention in various individual’s behaviour (Ajzen & Driver, 1992; Alam & Sayuti, 2011; Alam et al., 2011; Phetvaroon, 2006).

More specific to the current study, a review of the Theory of Planned Behaviour also showed that attitude, subjective norms and perceived control behaviour could be used to predict intention to breastfeed (Duckett et al., 1998; Parkinson et al., 2011; Wambach, 1997).

While subjective norms have been acknowledged as a strong antecedent of intention, few studies address the relationship between subjective norms and perceived value. Both Turel et al. (2007) and Cheng et al. (2011) suggested that the individual’s perception of value is affected by the approval from other people. In addition, Ozaki (2009) suggested that the social environment is important in the formation of perceived value. Hence, based on this explanation, this study also proposed that there is a significant relationship between subjective norms and the perceived value of giving six months exclusive breastfeeding.

Some studies explain that subjective norms also affect attitudes (Bock et al., 2005; Chang, 1998; Tarkiainen & Sundqvist, 2005). Explicitly, the effect of subjective norms on attitudes is manifested via the psychological pathways of internalization and identification where compelling messages received from referent sources are likely to affect an individual’s cognition regarding the expected outcomes associated with engaging in behaviour.

This discussion leads to the following hypotheses:

H9: Perceived value affects attitudes.
H10: Perceived value has an impact on intention.
H11: Attitude has an impact on intention.
H12: Perceived behavioural control has an impact on intention.
H13: Subjective norms have an impact of perceived value.
H14: Subjective norms affect attitudes.
H15: Subjective norms affect intention.

3.2.3 The Mediation Hypotheses

Several studies have shown that an individual’s intention to perform a particular behaviour is affected by socio-cognitive variables such as attitude (Duckett et al., 1998; Patel, 2007),
perceived behavioural control (Bandura, 1977; Conner & Armitage, 1998) and perceived value (Chen, 2008). In studies of message framing effects, several scholars have found that a framed-message has a significant effect on socio-cognitive variables (Apanovitch et al., 2003; Banks et al., 1995; Daryanto et al., 2009; Donovan & Jalleh, 2000; Jones et al., 2003). Hence, several researchers and scholars have assumed that socio-cognitive variables have the potential to mediate the effect of message framing on intention (Abhyankar et al., 2008; Levin et al., 1998). In this study, perceived value, PBC and attitudes are variables that potentially mediate the effect of message framing and the interaction of message framing and source credibility on intention. Hence, this study proposed:

H16 : Framing has an indirect effect on intention. Specifically:
   H16a : Perceived value mediates the effect of message framing on intention.
   H16b : Attitude mediates the effect of message framing on intention.
   H16c : PBC mediates the effect of message framing on intention.

H17 : The interaction between framing and source credibility has an indirect effect on intention. Specifically:
   H17a: Perceived value mediates the interaction effect between message framing and source credibility on intention.
   H17b: Attitude mediates the interaction effect between message framing and source credibility on intention.
   H17c: PBC mediates the interaction effect between message framing and source credibility on intention.
Three research objectives are proposed in this study: 1) measuring the effect of message framing and its interaction with source credibility on socio-cognitive variables, 2) investigating the relationships among perceived value, attitude, PBC, subjective norms, and intention, and 3) exploring the mediating effect of perceived value, attitude, and PBC on the relationship between message framing and intention, and on the relationship between the interaction of message framing with source credibility and intention. To address these objectives, a field experiment with a convenience sampling approach was employed. The relationships among variables are tested by Partial Least Square (PLS) technique since this technique might be able to handle a complex model. The following sections discuss the research design and method used to answer the proposed research objectives.

4.1 Research Design

In order to measure the effects of message framing and source credibility on women’s intention to provide six months of exclusive breastfeeding and its antecedents, an experiment with a 2x2 factorial design was employed. This method was chosen as it is able to assess two factors (independent variables). The first factor comprises negatively- and positively-framed messages and the second factor comprises high and low credibility sources.

Patzer (1996) suggested that a factorial design experiment provides dependent variable data for every possible combination of independent variables and their values. In addition, Shaw et al. (2002) proposed that such an experimental design can identify the most important factors and levels of the factors determining the output. For these reasons, a factorial design is appropriate to answer the objectives of this study.

This study relies on a field experiment to test the effect of message framing and its interaction with source credibility on socio-cognitive variables. A field experiment is one conducted in as natural a setting as possible (Patzer, 1996). Reiley and List (2008) note that the basic intent behind field experiments is to make use of randomization in an environment capturing important characteristics of reality. Furthermore, Levitt and List (2009) suggested that field experiments bridge the gap between laboratory and naturally-occurring data in that they characterize a combination of control and realism which commonly cannot be reached either
in the laboratory nor with uncontrolled data. The present study was designed with these strengths in mind.

4.2 Stimulus Design and Procedures

A total of four stimulus articles were designed to present a range of combinations of positively and negatively framed messages with high and low sources of credibility. The articles were designed as a newsletter. Palmer (2009) noted that a newsletter is a simple and cost-effective way to inform people about particular information. In order to test the impact of these four articles, several procedures were followed. The following subsection explains the detail of the stimulus design and procedures.

4.2.1 Stimulus Design

In this study, framing was manipulated by positively and negatively worded texts. The main point of framing was to clearly identify the consequence of providing or not providing six months of exclusive breastfeeding. Positive framing presented the potential behavioural outcomes as gains. These statements stressed that by providing six months of exclusive breastfeeding, both the baby and the mother would gain benefits.

While the positively framed message outlined the benefits of exclusive breastfeeding, the negatively framed message exposed the cost of not doing so. These statements noted that by not following the suggested guidelines, the target audience would experience some harm and lose the benefits offered. Table 4-1 below outlines the differences between the positively and negatively framed messages.
Table 4-1 A Comparison of the Messages Used in the Experiment

<table>
<thead>
<tr>
<th>Positively Framed Message</th>
<th>Negatively Framed Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>...that <strong>giving exclusive breastfeeding</strong> for the first six months – with continued breastfeeding for the first year, <strong>provides several benefits</strong> for both baby and mother.</td>
<td>...reported that <strong>not giving exclusive breastfeeding</strong> for the first six months with continued breastfeeding for the first year could potentially <strong>result in several disadvantages</strong> for both baby and mother</td>
</tr>
</tbody>
</table>

For baby:
- **Potentially save** 1.3 million lives
- **Containing** all the vitamins and minerals needed by a young baby
- **Increasing** the level of antibodies
- **Reducing** the chance of infection
- **Build** a health digestion system

For baby:
- **Potentially lead to** 1.3 million **deaths** every year
- **Less chance** to receive complete nutrition, vitamins and minerals
- **Less effective** antibodies
- **Increasing the chance** of getting infection
- **Weakening** the digestive system

For mother:
- **Spacing** pregnancies
- **Decreasing** the risk of breast cancer
- **Reducing** the chance to get ovarian cancer
- Economically **cheaper** than bottle feeding

For mother:
- **Less chance** to space pregnancies
- **Having more potency** to get ovarian cancer
- **More likely** to get breast cancer
- Economically **more expensive** than breastfeeding

...a baby will **have more chance** of being healthy and strong and the **mother will have more** chance of avoiding many health problems

...a baby will **have less chance** of being healthy and strong and the **mother will have less ability** to avoid many health problems

Six months exclusive breastfeeding **provides many health benefits** compared with providing bottle-feeding or other solid and liquid food

Providing bottle-feeding or other solid and liquid food potentially will **not provide** as many benefits as six months exclusive breastfeeding.

In order to manipulate source credibility, two kinds of attributes were presented. The highly credible source was described as a paediatrician and depicted a logo of a breastfeeding organization. The low credibility source was described as a university student, without depicting any organisation’s logo. This manipulation follows Ohanian’s suggestion (1990) stated that source credibility is related to expertise and trust. Therefore having one of the
sources having degrees listed after her name and coming from a breastfeeding organization was the manipulation for high credibility. Both the name and logos are fictitious, created for the purpose of this study. Table 4-2 outlines the differences between the high and low credibility sources.

Table 4-2 A Comparison of the Source Credibility Manipulation of the Messages

<table>
<thead>
<tr>
<th>High Credibility Source</th>
<th>Low Credibility Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>By: Dr Ana Sofiyanti, M.Kes., Ph.D., SPA (Kons)</td>
<td>By: Ana Sofiyanti</td>
</tr>
<tr>
<td>Undergraduate Student</td>
<td>Faculty of Economics</td>
</tr>
<tr>
<td></td>
<td>Jaya Manggala University Jakarta</td>
</tr>
</tbody>
</table>

4.2.2 Participants and Experimental Procedures

Since the objective of this research is to examine the effect of framed messages and the moderating effects of source credibility on women’s intention to exclusively breastfeed, attitudes toward exclusive breastfeeding, perceived behavioural control and perceived value, the participants in this experiment were pregnant women. Both primipara and multipara were included. The selection of the group of pregnant women was based on the argument stating that the decision to start breastfeeding is usually made during pregnancy (Kramer et al., 2001; Martens & Young, 1997). Furthermore, prior studies have shown that interventions during pregnancy will increase the likelihood of providing breastfeeding (Dyson et al., 2005; Ryan, 1997).

The primary data were collected in the Malang region, East Java Province, Indonesia, from December 1, 2010, to February 28, 2011. In order to reach the target audience, the experiments were conducted in three maternity hospitals, two obstetricians’ clinics and a breastfeeding workshop. These sites were asked to provide access to their patients and gave permission to distribute the survey. Whilst the locations of these sites were in Malang region, patients came from both urban and rural areas in the vicinity. The number of patients in the
maternity hospitals and obstetricians’ clinics waiting rooms varied from one patient to complete occupation.

Participants were restricted to pregnant women over 18 years of age since they are considered responsible, mature adults, according to Indonesian law (Nasution, 2008). It was also reasoned that pregnant women over 18 years of age would be relatively unlikely (as compared to younger women) to encounter difficulties in interpreting the stimulus message and survey questions (Suhartanto, 2011).

Data was collected only on week days. The duration for each collection effort was planned to be two to three hours per site. However, when the response rate was high, with many women willing to participate, the duration of visit was extended.

To begin the experiment, an information sheet (see Appendix 1) was distributed when the potential participants enrolled with the reception desk at the various offices. In some cases which the potential respondent was not accompanied by the spouse, to counteract the bias because of the cultural norms, the initial approach was done by a female assistant. After reading the information sheet and agreeing to participate (see Appendix 2), the participants were given brief instructions, asking them to read the article (see Appendix 3) and complete the attached questionnaire (see Appendix 4). The participants were given one of the four randomly selected stimulus messages. Reading the article and completing the questionnaire took participants from 15 to 20 minutes. During the experimental session, participants were allowed to stop at any time. In addition, participants were allowed to ask the experimenter for assistance if they had any difficulties in reading and understanding either the message stimulus or the questionnaire. A craft pencil case was given as a reward for participating in this study.

4.3 Sampling

Sekaran (2005) suggested that sample size and sample design are essential factors which should be considered by researchers. The concern in determining the sample size and sampling design are discussed in the following sections.

4.3.1 Sample Size

Given the analytical technique to be utilised, a robust sample size was essential to test numerous the hypotheses proposed by the research model (Kumar, 2005). Flynn and Pearcy (2001) noted that there has been extensive debate among scholars regarding what constitutes
an acceptable sample size, with no straightforward rule to calculate an appropriate figure. Different scholars have proposed different sample sizes as appropriate. Generally, most scholars believe that larger samples would be more representative than smaller ones. However, the benefits of larger samples may be outweighed by their increased cost (Ruane, 2004).

For studies applying Partial Least Squares (PLS) to address the hypotheses, Chin and Newsted (1999) proposed that the minimum sample size should be 10 times either the largest number of formative indicators of a latent variable or 10 times of the largest number of relations between exogenous and endogenous variables, whichever is higher. Although this “10 times rule” has been applied widely, Goodhue et al. (2006) cautioned that this rule should not be used if using either PLS or regression for anything apart from data which has strong effect sizes coupled with high reliability. Therefore, they proposed that a sample size of over 200 would be needed to ensure sufficient power for the data analysis using PLS procedures. Empirically, Schumacker and Lomax (2004) found that many studies used sample sizes from 250 to 500 respondents. Given these arguments and a limited research budget, it was decided that a sample of around 200 would maximise power and serve the needs of this project well. Since the typical response rate for this type of research range from a 60% to 90% (Humphreys et al., 1998; Khoury et al., 2005; Wambach, 1997) centering on around 70%, 320 potential respondents were invited to participate in this study.

4.3.2 Sampling Design

The research sample was selected using a convenience sampling approach. The convenience sampling method was used because there were a larger number of pregnant women attending all the clinics, ob-gyn units, maternity hospitals and breastfeeding workshops who could participate in this study. Fink and Kosecoff (1998) proposed that the convenience sampling approach is a simple process that can save time, funds and effort, attractive characteristics for this project. In addition, Patzer (1996) contended that a convenience sample is acceptable in experimental studies where the subjects and target market are similar in terms of the conceptual relationship under study. This was certainly the case in this project.

4.4 Questionnaire Development

The questionnaire consisted of nine sections containing items designed to test the stimulus, to capture the endogenous and exogenous variables proposed in the model (Figure 3-1) and to measure demographic information. Before the first question, a short introduction was
provided to ensure that all respondents had the same preliminary information about exclusive breastfeeding.

**4.4.1 Demographic and Control Variables**

The first section measured the respondents’ demographic characteristics. Details of age, education and occupation were asked via closed questions. Number of children and breastfeeding experience were asked in open-ended questions.

Based on some demographic questions in the questionnaire, several potential control variables might be tested. However, this study focussed testing on the difference between primi and multi-para. Although, the difference between primi and multi-para was tested, and following Morgan and Bachrach (2011) conclusion that a woman can make and remake the intention to breastfeed, it is logical for these two groups (multi and primi-para) to be combined for analysis purposes.

Another demographic variable which can be used as a control variable is experience to breastfeed. However, this study did not measure the differences between an experienced and non-experienced mother because there is a possibility that a mother provided breast milk for the first baby but not for the second and third baby. This situation will potentially create a bias for the respondents in recalling their experiences.

**4.4.2 Manipulation Checks**

The second section assessed the perceptions of the respondents of the stimulus provided. In this study, there were three tests to measure whether the manipulation had an effect. The first test was to measure the respondents’ perceptions of the credibility of the source. The second test was to investigate the manipulation of message framing and the third test was to measure the argument strength. For these three measurements, this study employed a 7-point semantic differential scale.

**4.4.3 Operationalization of Research Variables**

This section outlines the operationalization of variables used in this study; perceived value, attitudes, perceived behavioural control (PBC), subjective norms and intention.

**4.4.3.1 Attitude**

By definition, an attitude is a person’s overall evaluation of carrying out the behaviour in question (Ajzen, 1991). Colman (2006) suggested that it is an enduring pattern of evaluative responses toward a person, object, or issue. This study focussed on the attitude toward
exclusive breastfeeding. To measure this attitude, seven point semantic differential scales were designed. These measurements were adapted from Ajzen and Fishbein (1980), Duckett et al. (1998) and Manstead et al. (1984). These scales appear as Table 4-3.

Table 4-3 Attitude Scale Items

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>“For me giving six months exclusive breastfeeding is...”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Atd_1</td>
<td>Unpleasant 1 2 3 4 5 6 7 Pleasant</td>
</tr>
<tr>
<td>2</td>
<td>Atd_2</td>
<td>Embarrassing 1 2 3 4 5 6 7 Not Embarrassing</td>
</tr>
<tr>
<td>3</td>
<td>Atd_3</td>
<td>Unhealthy 1 2 3 4 5 6 7 Healthy</td>
</tr>
<tr>
<td>4</td>
<td>Atd_4</td>
<td>Repulsive 1 2 3 4 5 6 7 Appealing</td>
</tr>
<tr>
<td>5</td>
<td>Atd_5</td>
<td>Inconvenient 1 2 3 4 5 6 7 Convenient</td>
</tr>
<tr>
<td>6</td>
<td>Atd_6</td>
<td>Unnatural 1 2 3 4 5 6 7 Natural</td>
</tr>
</tbody>
</table>

4.4.3.2 Perceived Value

In brief, perceived value was defined as the evaluation of the benefits and costs to the individual of carrying out a particular behaviour. This study adapted this construct as an evaluation of the benefits given by providing six months of exclusive breastfeeding and the efforts to carry out this behaviour. Three items with a 7-point Likert scale were applied to measure this construct. These were adapted from Daryanto et al. (2009) and Yi and Jeon (2003), and are presented as Table 4-4 below.

Table 4-4 Perceived Value Scale Items

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Scale Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PV_1</td>
<td>The benefits of six months exclusive breastfeeding would be worth the sacrifices involved.</td>
</tr>
<tr>
<td>2</td>
<td>PV_2</td>
<td>The idea of six months exclusive breastfeeding is attractive.</td>
</tr>
<tr>
<td>3</td>
<td>PV_3</td>
<td>Six months exclusive breastfeeding is what I have wanted.</td>
</tr>
</tbody>
</table>

4.4.3.3 Perceived Behavioural Control (PBC)

This construct measured the degree of an individual’s capability to perform a particular behaviour, defined here as the capability to provide six months exclusive breastfeeding. In order to measure PBC, two dimensions were employed in this construct; they are
controllability and confidence. To operationalize this construct, five 7-point Likert scales were used. These five items appear in Table 4-5 below.

Table 4-5 Perceived Behavioural Control Scale Items

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Scale Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PBC_1</td>
<td>I am confident that I could provide my baby six months exclusive breastfeeding</td>
</tr>
<tr>
<td>2</td>
<td>PBC_2</td>
<td>For me, to provide my baby six months exclusive breastfeeding is easy</td>
</tr>
<tr>
<td>3</td>
<td>PBC_3</td>
<td>The decision to provide six months exclusive breastfeeding is in my control</td>
</tr>
<tr>
<td>4</td>
<td>PBC_4</td>
<td>Whether I provide my baby six months exclusive breastfeeding or not is entirely up to me</td>
</tr>
<tr>
<td>5</td>
<td>PBC_5</td>
<td>I feel quite knowledgeable about the way to give 6 months exclusive breastfeeding</td>
</tr>
</tbody>
</table>

4.4.3.4 Intention

Intention to breastfeed is defined here as mother’s agreement with the goal of providing exclusive breastfeeding for the duration of six months. To measure this construct, three variables were used: individual expectation, individual willingness and personal intention. However, the construct is seen as multi-dimensional. In order to operationalize these variables, three 7-point Likert scale were used. These were adapted from Duckett (1998) and Patel (2007). Table 4-6 summarizes the operationalization of intention to provide six months exclusive breastfeeding construct.

Table 4-6 Intention Scale Items

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Scale Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Int_1</td>
<td>I expect to provide my baby with six months exclusive breastfeeding</td>
</tr>
<tr>
<td>2</td>
<td>Int_2</td>
<td>I want to provide my baby with breastfeeding exclusively for six months</td>
</tr>
<tr>
<td>3</td>
<td>Int_3</td>
<td>I intend to provide my baby with six months exclusive breastfeeding</td>
</tr>
</tbody>
</table>
4.4.3.5 Subjective Norms

Ajzen (1991) suggested that subjective norms reflect pressure from surroundings with regard to performing or not performing a particular behaviour. In other words, it is as a force that comes from other people. In this study, the construct of subjective norms was measured by three variables. These are: what other people think, other people’s expectations, and other people’s opinions. This construct presented “other people” in terms of husband, mother and peers. Twelve 7-point Likert scales were used to measure this construct, mainly adapted from Ajzen (2003), Duckett et al. (1998) and Patel (2007). The operationalization of subjective norms is summarized by Table 4-7.

Table 4-7 Subjective Norms Scale Items

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Scale Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SN 1</td>
<td>My husband thinks that I should provide six months exclusive breastfeeding</td>
</tr>
<tr>
<td>2</td>
<td>SN 2</td>
<td>My husband will be grateful, if I give my baby six months exclusive breastfeed</td>
</tr>
<tr>
<td>3</td>
<td>SN 3</td>
<td>My husband thinks that I am a better mother if I exclusively breastfeed my child</td>
</tr>
<tr>
<td>4</td>
<td>SN 4</td>
<td>My husband expects me to provide six months exclusive breastfeeding</td>
</tr>
<tr>
<td>5</td>
<td>SN 5</td>
<td>My mother thinks that I should provide six months exclusive breastfeeding</td>
</tr>
<tr>
<td>6</td>
<td>SN 6</td>
<td>My mother will be grateful, if I provide my baby six months exclusive breastfeeding</td>
</tr>
<tr>
<td>7</td>
<td>SN 7</td>
<td>My mother thinks that I am a better mother if I exclusively breastfeed my child</td>
</tr>
<tr>
<td>8</td>
<td>SN 8</td>
<td>My mother expects me to provide six months exclusive breastfeeding</td>
</tr>
<tr>
<td>9</td>
<td>SN 9</td>
<td>My best friends think that I should provide six months exclusive breastfeeding</td>
</tr>
<tr>
<td>10</td>
<td>SN 10</td>
<td>My best friends will be grateful, if I provide my baby six months exclusive breastfeed</td>
</tr>
<tr>
<td>11</td>
<td>SN 11</td>
<td>My best friends think that I am a better mother if I exclusively breastfeed my child</td>
</tr>
<tr>
<td>12</td>
<td>SN 12</td>
<td>My best friends expect me to provide six months exclusive breastfeeding</td>
</tr>
</tbody>
</table>
Table 4-8 summarizes prior points made regarding the operationalization of the research variable.

**Table 4-8 Item Map**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Variable</th>
<th>No of Items</th>
<th>Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td>Individual expectation, individual willingness, personal intention</td>
<td>3</td>
<td>Adapted from Duckett et al. (1998) and Patel (2007)</td>
</tr>
<tr>
<td>Attitude</td>
<td>Individual’s evaluation towards six months exclusive breastfeeding</td>
<td>6</td>
<td>Adapted from Ajzen (1980), Duckett (1998) and Manstead et al. (1984)</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>Other people (i.e husband, mother and peers) think, Other people’s (i.e husband, mother and peers) expectations, Other people’s (i.e husband, mother and peers) opinions</td>
<td>12</td>
<td>Adapted from Ajzen (2003), Patel (2007) and Duckett et al. (1998)</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>The proposed behaviour has great value, the proposed behaviour is attractive, the proposed behaviour is the behaviour I want</td>
<td>3</td>
<td>Adapted from Daryanto et al. (2009), Yi and Jeon (2003)</td>
</tr>
</tbody>
</table>
4.5 Questionnaire Translation and Back Translation

The original questionnaire was developed in English. However, given that the data was collected in Indonesia, this study required an Indonesian version. For this reason, in order to ensure equivalency between the two versions, a translation and back translation were completed. Andriesen (2008) explained that the aim of back translation is to verify whether the translation process cover all elements of the original document. Brace (2004) contended that the translation must be conducted with sensitivity; hence meaning, shades of meaning and the nuances would be maintained as accurately as possible.

To ensure such subtleties were maintained, three native Indonesians fluent in both English and Bahasa Indonesia, and also familiar with these two cultures, were asked to translate the original version of the stimulus materials and questionnaire into Bahasa Indonesia. Malhotra (2004) claimed that fluency in both languages and familiarity with the two cultures are important since a direct translation of certain words and phrases may be erroneous. Following the translation process, a back translation was conducted by another group of three native Indonesians fluent in both Bahasa Indonesia and English. Other translators were asked to do the back translation in order to avoid bias. Based on the process of translation and back translation, there were some minor adjustments to both stimulus messages and the questionnaires were necessary to ensure equivalency.

4.6 Pre-testing Procedures

A pre-test was conducted in order to improve both the face and content validity of the primary experimental instruments. The evaluation of face and content validity for the first version of the instrument was performed through a two-step process. The first step was focus group sessions consisting of nine female participants who had experience with breastfeeding and who were currently doing so. The participants were asked to review both the stimulus messages and the questionnaire, and were encouraged to comment on both content and wording. They were also encouraged to add information that had not been provided in the message stimulus. It was hoped that the focus group would provide additional insights into the phenomenon which had not been covered by the stimuli and questionnaire. It was also hoped that they would provide information about how potential participants might think or feel about the stimulus and questionnaire. Furthermore, the focus group was used to evaluate the stimulus provided before the main data collection effort. The second step involved asking two marketing and communication experts and one marketing communication practitioner to review and freely comment on the both stimulus messages and questionnaire. Minor
modifications of the stimulus messages and questionnaire, such as clarifying sentences and using appropriate words and altering question order, were made after the pre-test.

### 4.7 Ethical Considerations

In the context of marketing research, there are at least four stakeholders involved (Malhotra, 2004): (1) the researcher, (2) the client, (3) the respondent, and (4) the public. These four are interconnected and sometimes have different interests in relation to the research. Ethical issues very often become a problem between these stakeholders (Kumar et al., 1999). Since this research has the potential to raise ethical issues, in order to protect all of the stakeholders a number of actions were taken. First, this study was designed to ensure that there were no potential risks related to the experimental procedures, analysis or presentation of the results. Secondly, formal permission letters to carry out the research were sent to the hospitals, obstetrics clinics, maternity hospitals and breastfeeding organizations where the research would be conducted. In addition, information sheet and consent forms were provided. The information sheet explained the objectives of study, the right of subjects to stop at any time and a guarantee of confidentiality for both the research participants and the institutions where data was collected. In addition, the information sheet also noted that if subjects wanted further details of the study, they could contact the researcher’s supervisors.

To follow Lincoln University’s research procedures, Lincoln University Human Ethics Committee (HEC) approval was sought. Permission to proceed was granted after review with few modifications of the process required. To comply with the approval given by HEC, the collected consent forms and questionnaires were stored in the researcher workspace. These documents will be shredded when the project has done.

### 4.8 Preliminary Data Analysis: Data Screening

The collected data was carefully screened in an effort to uncover inaccuracies. Several tests were conducted in this study including outlier detection, normality and multicollinearity tests. In addition, torn, damaged or otherwise compromised questionnaires were not used in the analysis. The finding and further discussion about the preliminary data analysis is presented in chapter five.

### 4.9 Data Analysis

Today, the development of causal modelling techniques makes it possible for researchers to simultaneously investigate theory and measures. These techniques are considered superior to
more traditional techniques such as multidimensional scaling and factor analysis since they allow the inclusion of measurement error and are able to incorporate abstract and unobservable constructs (Hulland, 1999). In addition, causal modelling techniques are claimed to provide four key benefits (Bagozzi, 1980). First, they make the assumptions, constructs and hypothesized relationships in a theory explicit. Second, given that these techniques need appropriate definitions of constructs, operationalizations and functional relationships, the precision of measurements can be guaranteed. Third, both constructing and testing theories and measures can be done because these techniques provide a formal framework, and, finally, they allow for a more complete representation of complex theories.

With regard to the causal modelling technique, this study uses Partial Least Squares (PLS) which is variance based Structural Equation Modelling (SEM). There are several reasons for selecting PLS as the analytic technique.

First of all, PLS is distribution-free, which does not require or exclude any distributional form for the measured variables (Wold, 1982). Hence, this technique is suitable to analyse data from non-normal distributions (Falk & Miller, 1992). Aibinu and Al-Lawati (2010) suggested measuring individuals’ perceptions using Likert scales will likely yield non-normally distributed responses. Bontis et al. (2007) proposed that the use of bootstrapping is the reason PLS works well with non-normal data. For that reason, since this study relied on Likert scales to measure individuals’ behavioural intentions, and its antecedents, PLS is a suitable technique.

Another reason of using PLS was Abdi’s suggestion (2007) stating that the aim of PLS is to predict the effects of a set of independent variables on a set of dependent variables. He explained that PLS is a multivariate technique to compare multiple response variables and multiple explanatory variables. Though it is similar to principal components analysis (PCA), PLS is believed to be a better option than multiple linear regression and PCA regression techniques since it presents more vigorous model parameters that do not change with new calibration samples from the population (Falk & Miller, 1992; Geladi & Kowalski, 1986). Moreover, as a SEM technique with a variance base that has the ability to control for measurement error and provide for enhanced testing of nomological webs among multiple dependent variables, PLS is a suitable tool for improving experimental analysis in social sciences (Streukens et al., 2010). McIntosh et al. (2004) claimed that as an improvement of PCA, the output of PLS is constrained to the part of the covariance matrix that is directly related to the experimental manipulation. Given that the model proposed in this study has seven constructs (two exogenous variables and five endogenous) and tests mediating and
moderating effects, the model must be considered complex (Hulland et al., 1996). Hence, PLS is appropriate for investigating the research model. A third reason for using PLS for this study are the formative and reflective issues. PLS is able to handle formative and reflective indicators (Hair et al., 2010). Both reflective and formative indicators are used in this study. Framing and credibility were developed as formative indicators, since by manipulation they do not have the typical properties of a reflective scale. In addition, the manipulation is measured without error whereas modelling it as a reflective indicator implies that the programme calculates an error term at the item level. While framing and source credibility were formed as formative indicators, the rest of the latent variables; perceived value, attitudes, PBC, subjective norms and intention, were formed as reflective variables.

In terms of analysis, the first stage was testing the manipulation used (i.e. framing manipulation, credibility manipulation and argument strength). The second stage is PLS analysis for the overall model. For PLS analysis two approaches were used by this study. The first approach is the evaluation of the outer model. The second approach is the assessment of the structural model, also called inner model in the literature.

4.9.1 Evaluation of the Outer Model

A conceptual and a research model cannot be tested within a prediction framework for both causal and relational features before passing a stage of purification of the model and the measurement of its constructs. The outer model measurement is used to test the validity of constructs and the model’s reliability. Hair et al. (2010) stated that the validity test is to determine the ability of measurement to accurately signify what it is supposed to and the reliability test is to assess the consistency of measurement used (Cooper & Schindler, 2006).

For this study, the outer model evaluations for reflective indicators are evaluated by convergent and discriminant validity. The unidimensionality evaluations are examined by Cronbach’s alpha and composite reliability.

4.9.1.1 Convergent Validity

Convergent validity evaluates the “degree to which two measures of the same concept are correlated” (Hair et al., 2006). To measure convergent validity, two statistics are used; factor loadings and average variance extracted (AVE).
Factor loading - represents the correlation between factors and the variables they are composed of (Kim & Mueller, 1978). Larger factor loadings specify a higher degree of connection between the variables and the factors. For that reason, the larger the absolute value of the factor loadings, the more important the factor loadings are in interpreting the factor (Brace et al., 2006). To assess the significance of factor loadings, Hair et al. (2006) provided three guidelines:

1. Factor loadings in the range of ±0.30 to ±0.40 are considered to meet the minimal level for interpretation of structure
2. Loadings ±0.50 or greater are considered practically significant
3. Loadings exceeding ±0.70 are considered indicative of a well-defined structure and are the goal of any factor analysis

Average Variance Extracted (AVE) - is another parameter to measure convergent validity, and is calculated by the PLS software. In this study, the cut-off value for good convergent validity was set as 0.50 or higher. The score of 0.50 indicates that at least 50% of the measurement variance is accounted for. This cut off value is suggested by Fornell and Larcker (1981) and is the standard adopted for this study.

4.9.1.2 Discriminant Validity
The discriminant validity index indicates “the degree to which two conceptually similar concepts are distinct” (Hair et al., 2006). Discriminant validity was examined by determining if the indicators loaded more strongly on their own constructs than on other constructs in the model, and that the constructs shared more variance with their own measures than they shared with the other constructs in the model (Bassellier & Benbasat, 2004). The percentage variance captured by a construct is given by its AVE. In order to show discriminant validity, the square root of the AVE for each construct has to be larger than its correlation with other factors (Gefen et al., 2000). In addition, to determine discriminant validity, the cross loading index was also used by this study. Chin (1998) suggested that the value of the factor loading should be higher than the cross loadings.

4.9.1.3 Unidimensionality
Before analysing the structural model, the unidimensionality of each construct was checked. Türkyilmaz and Özkan (2007) claimed that the unidimensionality test is essential when the manifest variables are connected to their latent variables in a reflective way. Schmitt (1996)
explained that unidimensionality is the continuation of one fundamental measurement construct that accounts for variation in examinee responses.

To test the unidimensionality of constructs proposed in the research mode, this study relies on two indicators; Cronbach’s alpha and Dillon-Goldstein’s rho or composite reliability. For Cronbach’s alpha, the cut off value indicates a block is judged homogenous when alpha is larger than 0.70 (Hair et al. 2006). However, for psychological constructs the value of Cronbach’s alpha around 0.60 is acceptable because of the diversity of the constructs being measured (Kline, 1999). As well as Cronbach’s alpha, Dillon-Goldstein’s rho also requires a score index above 0.70 to indicate a homogenous block (Nunnally, 1978).

Table 4-9 summarises the parameters and its cut of value in testing convergent validity, discriminant validity and unidimensionality.

Table 4-9 Outer Model Indicators

<table>
<thead>
<tr>
<th>Outer Model Evaluation</th>
<th>Parameters</th>
<th>Rules of Thumb</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convergent Validity</td>
<td>Factor loadings</td>
<td>Above 0.70</td>
<td>Hair et al. (2006)</td>
</tr>
<tr>
<td></td>
<td>Average variance extracted</td>
<td>Above 0.50</td>
<td>Fornell and Larcker (1981)</td>
</tr>
<tr>
<td>Discriminant Validity</td>
<td>Square-root of AVE and latent variable correlation</td>
<td>Square-root of AVE bigger than latent variable correlation</td>
<td>Gefen et al. (2000)</td>
</tr>
<tr>
<td></td>
<td>Cross loading</td>
<td>The index of factor loading should be higher than its cross loading</td>
<td>Hair et al. (2010)</td>
</tr>
<tr>
<td>Unidimensionality</td>
<td>Cronbach’s alpha</td>
<td>Above 0.70</td>
<td>Hair et al. (2010)</td>
</tr>
<tr>
<td></td>
<td>Composite reliability</td>
<td>Above 0.70</td>
<td>Nunnally (1978)</td>
</tr>
</tbody>
</table>
4.9.2 Evaluation of the Structural Model

After evaluating the measurement used, the second step is to assess the structural model proposed in this study. Sellin (1995) explained that a structural model evaluates the relationships between latent variables and their associated observed or manifest variables. In the PLS estimation, the structural equation model is determined by four indexes: the coefficient of determination ($R^2$), effect size ($f^2$), the Stone-Geisser test ($Q^2$) and goodness of fit (GoF) (Chin, 2010).

**Coefficient of Determination** ($R^2$) – reflects the share of the latent construct’s clarified variance and hence determines the regression function’s goodness of fit against the empirically obtained manifest items (Gotz et al., 2010). The coefficient can vary between 0 and 1. In addition, it is suggested that the higher the value of $R^2$, the greater the explanatory power of the regression equation, and therefore the better the prediction of the dependent variable (Hair et al., 2006).

**Effect size ($f^2$)** – Hair et al. (2006) suggested that the probability of achieving statistical significance is not only based on statistical considerations but also on the actual degree of the effect of the relationship among variables. Effect size determines the ability of theory to describe or predict the empirical observations (Baraoudi & Orlikowski, 1989). It represents an estimate of the level of the investigated trend in the population. Cohen (1992) proposed three classifications for effect size. They are small (index 0.02), medium (index 0.15) and larger (index 0.35).

Chin (2010) proposed the formula for effect size as:

$$f^2 = \frac{R^2_{\text{included}} - R^2_{\text{excluded}}}{1 - R^2_{\text{included}}}$$

**Stone-Geisser test ($Q^2$)** – The Stone-Geisser criterion assumes that the model must be able to predict the endogenous latent variable’s indicators (attitudes, perceived value, perceived behavioural control and intention) (Henseler et al., 2009). The general design for this technique is to omit one case at a time, to re-estimate the model parameters on the basis of the remaining cases, and to reconstruct or determine the omitted case values using the re-estimated parameters (Sellin, 1995). This index can be interpreted as the higher the $Q^2$ the higher the predictive relevance of the tested model equation (Chin, 2010).
Goodness of Fit Criterion (GoF) - Since PLS is a variance based SEM and it is based on a prediction, this technique does not have a well-established global optimization criterion. Consequently, PLS does not have a global fitting function that can be used to assess the goodness of fit of the model (Esposito-Vinzi et al., 2010). In order to validate the proposed model Tenenhaus et al. (2004) suggested use of GoF index which refers the geometric mean of the average communality and average $R^2$. This index is similar to $x^2$ applied in LISREL/AMOS. This study will use this index to validate the global measurement since it is a compromise between communality and redundancy. The score of GoF ranges between 0 and 1 ($0 \leq GoF \leq 1$) (Daryanto et al., 2009).

The GoF index is calculated as (Tenenhaus et al., 2004):

$$GoF = \sqrt{Communality \times R^2}$$

In order to set up the baseline for GoF, this study refers into the technique used by Daryanto et al. (2009). First of all, the cut-off value for communality was set at 0.5 (Fornell & Larcker, 1981). In addition, referring to the effect sizes for $R^2$ (i.e. 0.02 for small, 0.13 for medium and 0.26 for large) (Cohen, 1988), the baseline values for the GoF index in this study are:

$GoF$ small = 0.1, $GoF$ medium = 0.25 and $GoF$ large = 0.36.

In sum, these four indexes are used by this study to indicate the robustness of model tested. By having a strong model, the relationships among constructs can be measured and investigated further.

4.9.3 Hypotheses Testing

To test the hypotheses, a bootstrapping technique with 500 resampled was used by this study. Scholars suggest that the bootstrap method is appropriate to test hypotheses for the data which is not normally distributed (Blunch, 2008; Byrne, 2010; Ferdinand, 2002). Tenenhaus et al. (2005) contended that the number of resamples has to be specified with a higher number resulting in more reasonable standard error terms. Hence, a bootstrap with 500 resampled was selected to test the hypotheses.

In addition, Analysis of Variance (ANOVA) is used to depict the interaction effect of message framing and source credibility. Hair et al. (2006) explained that ANOVA can be used to analyse both the main effect and interaction effects. The main effect is suggested as the significant difference between two or more groups, whereas an interaction effect represents
the combined effects of factors on the dependent measure. Interactions are therefore sometimes considered as “residual” effects, or the effects lasting after lower order effects (the main effects of the independent variables) are eliminated (Graham, 2000). For the present study, ANOVA is used to explore the most effective combination effect between message framing and source credibility on perceived value, attitude, PBC and intention. These most effective combined effects were indicated by the highest value of estimated marginal means and also the interaction graphs.

4.9.4 Mediation Analysis

The steps proposed by Baron and Kenny (1986) were used to test hypotheses about mediating effects although Krause et al. (2010) stated that there are flaws for this technique. The first critique is about the requirement that a significant effect of predictor on criterion is demonstrated before proceeding to test for mediation. The second critique is relating to the requirement that mediation is demonstrated if the significant relationship between predictor and criterion is no longer significant when mediator is inserted in the model. While the traditional Baron and Kenny’s (1986) suggestion has flaws, this technique is still suitable to be applied in Structural Equation Modelling such as PLS or CB-SEM (Zhao et al., 2010).

The main benefit of using this technique is the ability of this model to determine the nature of mediating effect (fully mediating or partially mediating effect).

The steps proposed by Baron and Kenny (1986) were used to test hypotheses about mediating effects. The first step is to test the effect of the predictor variable (P) on the criterion variable (C). For this study, the first step was therefore testing the effect of message framing on intention and the interaction effect between message framing and source credibility on intention. The second step was testing the effect of the predictor on the potential mediators (M). The effect of message framing as well as the interaction effect of message framing and source credibility were tested on the potential mediating variables of perceived value, attitudes and PBC. The last step was to test the effect of the potential mediating variable on the criterion.

In terms of testing mediating effects, Baron and Kenny (1986) suggest that such an effect can be divided into full and partial mediation. A fully mediating effect occurs if the inclusion of the mediator drops the coefficient of relationship between predictor and criterion to near zero. Partial mediation results in the mediator accounting for some, but not all, of the relationship between predictor and criterion - the coefficient is reduced, but does not fall to zero. This partial mediating effect implies that there is not only a significant relationship between
predictor and criterion, but also some level of direct relationship between predictor and criterion. Figure 4–1 illustrates the steps of testing mediating effect used in this study.

Step 1

Step 2 and 3

Figure 4-1 Mediating Effect Test
Chapter 5

ANALYSIS and RESULTS

5.1 Response Rate

Three hundred and twenty booklets, each consisting of a message stimulus and questionnaire, were prepared for this study. Potential participants were told that they could quit the study at any time and 29 participants did so, meaning that their incomplete questionnaires could not be used. The most common reason cited for quitting was that the respondent was called by the nurse to meet the doctor.

Aaker et al. (2005) suggested the researcher should examine the raw data to ensure that the information has been correctly entered and is free from transcription and input errors. In this study, the process of cleaning and confirming the data collected took place in two phases. For the first, the input data were double checked and identified errors were corrected. In the second phase, frequency tests were done to make certain that all values were within the response ranges allowed by the questionnaire.

In addition, identifying omissions, and confirming legibility and consistency of the data classification was done to ensure that the data is clean and ready to be analysed. Aaker et al. (2005) contended that the ideal approach to solving the problem of omissions, legibility and consistency of the data would be to re-contact participants to verify and correct their responses. However, since the participants in this study were anonymous, such a process was not possible. For that reason, and following Sekaran’s (2005) suggestion, questionnaires which were more than 25% incomplete were eliminated from the analysis. This meant that 12 questionnaires were excluded from the analysis, which resulted in 279 complete questionnaires (Negative-high = 71, Negative-Low = 72, Positive – Low = 69, Positive-high = 67), thus yielding a response rate of 87%.

5.2 Participant Profiles

Table 5-1 exhibits the demographic profiles of the participants. Variables include age, education level, occupation, number of children and breastfeeding experience. Table 5-1 documents that most participants were between 21 and 40 years old (267 respondents, representing 95.7% of the sample). Fully two-thirds were 21 to 30 years of age. Such an age range is common in breastfeeding studies; for example, Chen et al. (2006) and Hernandez and
Callahan (2008) had samples that were predominantly aged from 21 to 30 years. In terms of education, the participants were mostly well educated; 60.1% of them had completed a tertiary qualification, which varied from diplomas to postgraduate degrees. The table shows that the number of working participants (153) was higher than those not working (120), representing percentages of 54.8% and 45.2%, respectively. While most participants (53.8%) had two or more children, for 46% this was their first pregnancy. With respect to having experience with breastfeeding, whether exclusive or not, 51.6% of the participants had such experience whereas 46.2% of respondents had not.

Table 5-1 Demographics of the Sample Population

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Up to 20</td>
<td>8</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>21 – 30</td>
<td>190</td>
<td>68.1</td>
</tr>
<tr>
<td></td>
<td>31 - 40</td>
<td>77</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>41 - 50</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Education</td>
<td>High school or lower</td>
<td>103</td>
<td>36.9</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>47</td>
<td>16.8</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>112</td>
<td>40.1</td>
</tr>
<tr>
<td></td>
<td>Master</td>
<td>9</td>
<td>3.2</td>
</tr>
<tr>
<td>Job</td>
<td>Working</td>
<td>153</td>
<td>54.8</td>
</tr>
<tr>
<td></td>
<td>Not Working</td>
<td>120</td>
<td>43.0</td>
</tr>
<tr>
<td>Number of Children</td>
<td>1</td>
<td>128</td>
<td>46.0</td>
</tr>
<tr>
<td>(including in utero)</td>
<td>2</td>
<td>109</td>
<td>39.1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>35</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Over 5</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Breastfeeding Experience</td>
<td>Yes</td>
<td>144</td>
<td>51.6</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>129</td>
<td>46.2</td>
</tr>
</tbody>
</table>

5.3 Preliminary Analysis

Aaker et al. (2005) note that how well the data are organised and transferred into a form suitable for analysis affects the quality of the analysis. Before the testing of hypotheses, preliminary data analysis was conducted to investigate missing data, outliers, normality and to
check for multicollinearity. In addition, descriptive analysis was done on the construct variables. The following subsections describe this preliminary set of assessments.

### 5.3.1 Missing Data

The systematic error resulting from missing data could influence the results of statistical analysis. Two steps were taken to handle missing data. The first step follows Churchill (1979) who suggested that the maximum acceptable level of missing data is 5%. SPSS software was used to screen the data. This showed that no variable had more than 5% missing. In addition, the screening process also indicated that there were only infrequent, random occurrences of missing data. Since less than 5% of the data was missing and no systematic random pattern was present in the missing data, the problem was not considered to be serious (see Appendix 5).

The second step involves replacing the missing data. Tabachnick and Fidell (1989) proposed that in the absence of all other information, the overall mean is the “best guess” regarding the value of a missing variable. Furthermore, Malhotra (2004) claimed that replacing missing data with mean variables would not affect the statistical analysis. For that reason, this study substituted mean values for missing data.

### 5.3.2 Outliers, Normality and Multicollinearity

For studies employing SEM, normality, outliers and multicollinearity are general issues that should be addressed before testing the hypotheses (Suhartanto, 2011). By testing the standardized values of observed variables, a few outliers were recognized in the data set. These were identified and checked against the raw questionnaires. In all cases, these were recorded correctly and represented valid elements in the data set. Anderson et al. (2009) suggested that if outliers corresponded to an element of the population, these outliers should be retained in order to ensure generalizability to the whole population. For that reason, the outliers found in this study were kept in the data set.

Kurtosis and skewness were used to assess the normality of the data. Tabachnick and Fidell (1989) suggested that data are normal if the critical ratios of skewness and kurtosis are in the range ± 2.580 for p = 1% and ± 1.960 for p = 5%. Here, alpha was set at p = 5%. The outcome of normality assessment showed that most of the data were not normally distributed since their skewness and kurtosis values were not in the suggested range (see appendix 6A). Given that the data were not normally distributed, Partial Least Squares (PLS), as a variance-
based SEM which does not require particular distributional assumptions for testing the model (Chin et al., 2003) is the appropriate technique for analysis.

Multicollinearity was assessed for each regression equation. The initial test of the Pearson Correlation Matrix showed that for each of regression models, the correlation between the independent variables did not exceed 0.80. In addition, the Variance Inflation Factor (VIF) values for each independent variable were below 10 (see appendix 6B). These results indicate no multicollinearity with the independent variables.

5.4 Descriptive Analysis

Descriptive analyses were conducted on all indicators of attitude, perceived value, perceived behaviour control, subjective norms and intention. Means and standard deviations were calculated for each of the research constructs.

5.4.1 Attitudes

Table 5-2 presents a summary of the means and standard deviations of the six semantic differential scales used to measure attitude. Recall that these differentials were scored on 7 point scale.

Table 5-2 Means and Standard Deviations for Attitudes

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atd_1</td>
<td>Unpleasant 1 2 3 4 5 6 7 Pleasant</td>
<td>5.68</td>
<td>0.60</td>
</tr>
<tr>
<td>Atd_2</td>
<td>Embarrassing 1 2 3 4 5 6 7 Not embarrassing</td>
<td>5.51</td>
<td>0.66</td>
</tr>
<tr>
<td>Atd_3</td>
<td>Unhealthy 1 2 3 4 5 6 7 Healthy</td>
<td>5.30</td>
<td>0.77</td>
</tr>
<tr>
<td>Atd_4</td>
<td>Repulsive 1 2 3 4 5 6 7 Appealing</td>
<td>4.98</td>
<td>0.71</td>
</tr>
<tr>
<td>Atd_5</td>
<td>Inconvenient 1 2 3 4 5 6 7 Convenient</td>
<td>5.42</td>
<td>0.67</td>
</tr>
<tr>
<td>Atd_6</td>
<td>Unnatural 1 2 3 4 5 6 7 Natural</td>
<td>5.82</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>Attitude</td>
<td>5.45</td>
<td>0.67</td>
</tr>
</tbody>
</table>

The mean and standard deviation of the construct of attitudes were 5.45 and 0.67 respectively. This finding suggests that the participants of this study have a positive attitude toward providing six months exclusive breastfeeding. In addition, since the value of standard deviation indicates a generally small spread, the dispersion of attitudes among participants was not big.
5.4.2 Perceived Value

Whereas attitude was measured by using semantic differential scales, perceived value was measured by using seven-point Likert scales. The mean derived from the three perceived value items (Table 5-3) was greater than the midpoint (mean = 5.39, standard deviation = 0.66) suggesting that participants placed high value on six months exclusive breastfeeding.

Table 5-3 Means and Standard Deviations for Perceived Value

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV_1</td>
<td>The benefits of proposed idea of six months exclusive breastfeeding would be worth the sacrifices involved</td>
<td>5.60</td>
<td>0.64</td>
</tr>
<tr>
<td>PV_2</td>
<td>The proposed idea of six months exclusive breastfeeding is attractive</td>
<td>5.20</td>
<td>0.65</td>
</tr>
<tr>
<td>PV_3</td>
<td>The proposed idea of six months exclusive breastfeeding is what I have wanted</td>
<td>5.38</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>Perceived Value</td>
<td>5.39</td>
<td>0.66</td>
</tr>
</tbody>
</table>

5.4.3 Perceived Behavioural Control

The construct of perceived behavioural control was also measured using seven-point Likert scales. Table 5-4 shows that all perceived behaviour control measurement items have means above the midpoint (mean = 5.66, standard deviation = 0.74) suggesting that the participants perceived they had a large degree of control over whether they exclusively breastfed their baby or not, and were confident that they could engage in the behaviour should they choose to so.
Table 5-4 Means and Standard Deviations for Perceived Behavioural Control

<table>
<thead>
<tr>
<th>Code</th>
<th>Item</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBC_1</td>
<td>I am confident that I could provide my baby six months exclusive breastfeeding</td>
<td>5.23</td>
<td>0.69</td>
</tr>
<tr>
<td>PBC_2</td>
<td>For me, to provide my baby six months exclusive breastfeeding is easy</td>
<td>5.99</td>
<td>0.75</td>
</tr>
<tr>
<td>PBC_3</td>
<td>The decision to provide six months exclusive breastfeeding is in my control</td>
<td>6.01</td>
<td>0.79</td>
</tr>
<tr>
<td>PBC_4</td>
<td>Whether I provide my baby six months exclusive breastfeeding or not is entirely up to me</td>
<td>5.16</td>
<td>0.68</td>
</tr>
<tr>
<td>PBC_5</td>
<td>I feel quite knowledgeable about the way to give 6 months exclusive breastfeeding</td>
<td>5.94</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>Perceived Behavioural Control</td>
<td>5.66</td>
<td>0.74</td>
</tr>
</tbody>
</table>

5.4.4 Subjective Norms

Table 5-5 presents the means and standard deviations of the measurements of subjective norms. All means and standard deviations of the subjective norms were above the midpoint (mean = 5.71, standard deviation = 0.62), indicating that participants perceived other people to be exerting some level of pressure on them to breastfeed.

Table 5-5 Means and Standard Deviations for Subjective Norms

<table>
<thead>
<tr>
<th>Code</th>
<th>Items</th>
<th>Means</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN_1</td>
<td>My husband thinks that I should provide six months exclusive breastfeeding</td>
<td>5.83</td>
<td>0.61</td>
</tr>
<tr>
<td>SN_2</td>
<td>My husband will be grateful, if I provide my baby six months exclusive breastfeeding</td>
<td>5.38</td>
<td>0.61</td>
</tr>
<tr>
<td>SN_3</td>
<td>My husband thinks that I am a better mother if I exclusively breastfeed my child</td>
<td>5.70</td>
<td>0.64</td>
</tr>
<tr>
<td>SN_4</td>
<td>My husband expects me to provide six months exclusive breastfeeding</td>
<td>5.54</td>
<td>0.63</td>
</tr>
</tbody>
</table>
### Table 5-5 Means and Standard Deviations for Subjective Norms (Continued)

<table>
<thead>
<tr>
<th>Code</th>
<th>Items</th>
<th>Means</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SN_5</td>
<td>My mother thinks that I should provide six months exclusive breastfeeding</td>
<td>6.25</td>
<td>0.62</td>
</tr>
<tr>
<td>SN_6</td>
<td>My mother will be grateful, if I give my baby six months exclusive breastfeeding</td>
<td>5.46</td>
<td>0.59</td>
</tr>
<tr>
<td>SN_7</td>
<td>My mother thinks that I am a better mother if I exclusively breastfeed my child</td>
<td>6.15</td>
<td>0.63</td>
</tr>
<tr>
<td>SN_8</td>
<td>My mother expects me to provide six months exclusive breastfeeding</td>
<td>5.79</td>
<td>0.68</td>
</tr>
<tr>
<td>SN_9</td>
<td>My best friends think that I should provide six months exclusive breastfeeding</td>
<td>5.87</td>
<td>0.64</td>
</tr>
<tr>
<td>SN_10</td>
<td>My best friends will be grateful, if I give my baby six months exclusive breastfeeding</td>
<td>5.31</td>
<td>0.54</td>
</tr>
<tr>
<td>SN_11</td>
<td>My best friends think that I am a better mother if I exclusively breastfeed my child</td>
<td>5.75</td>
<td>0.65</td>
</tr>
<tr>
<td>SN_12</td>
<td>My best friends expect me to give six months exclusive breastfeeding</td>
<td>5.51</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>Subjective Norms</td>
<td>5.71</td>
<td>0.62</td>
</tr>
</tbody>
</table>

### 5.4.5 Intention

Seven-point Likert scales were used to measure the construct of intention. The descriptive analysis indicates that the means of the intention construct is 5.64, suggesting that the participants have a strong intention to provide six months exclusive breastfeeding. Since the value of standard deviation is 0.62, the dispersion of intention among the participants is not big. Table 5-6 presents the means and standard deviation of the construct and its items.
Table 5-6 Means and Standard Deviations for Intention

<table>
<thead>
<tr>
<th>Code</th>
<th>Items</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Int_1</td>
<td>I expect to provide my baby with six months exclusive breastfeeding</td>
<td>5.79</td>
<td>0.65</td>
</tr>
<tr>
<td>Int_2</td>
<td>I want to provide my baby with breastfeeding exclusively for six months</td>
<td>5.56</td>
<td>0.70</td>
</tr>
<tr>
<td>Int_3</td>
<td>I intend to provide my baby with six months exclusive breastfeeding</td>
<td>5.58</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td>5.64</td>
<td>0.62</td>
</tr>
</tbody>
</table>

In summary, participants have a:

- generally positive attitude toward providing exclusive breastfeeding
- high perceived value placed on exclusive breastfeeding
- large degree of perceived control over whether they will exclusively breastfeed their baby
- high degree of confidence that they can provide exclusive breastfeeding for their infant
- strong intention to provide six months exclusive breastfeeding

5.5 Manipulation Checks

Checks were performed on three aspects of the manipulations to test whether the stimulus worked as expected. First, the perceived level of argument strength for the positively-framed and negatively-framed messages was compared. Second, the framing of each manipulation was tested to ascertain whether the desired tone of the message (being positive or negative) was, in fact, perceived as such. Finally, a test was done to investigate whether participants ascribed differences in credibility to those presented in the stimuli.

5.5.1 Argument Strength

Table 5-7 shows that the means of the measurement for participants who read a positively-framed message and a negatively-framed message were 5.932 and 5.901, respectively. Statistically, there is no difference between the participants’ perception relating to the argument’s strength ($t = 0.295, p \geq 0.05$). Therefore, since the strengths of the arguments are equal, there is no issue relating to unbalanced level of the persuasiveness between the messages used.
Table 5-7 Means and Standard Deviations for Argument Strength

<table>
<thead>
<tr>
<th>Framing</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positively-framed message</td>
<td>5.932</td>
<td>0.806</td>
</tr>
<tr>
<td>Negatively-framed message</td>
<td>5.901</td>
<td>0.700</td>
</tr>
</tbody>
</table>

\[ t = 0.295, \ p = 0.768 \]

5.5.2 Framing Manipulation

In order to check that participants could perceive the different types of framing, a manipulation check was performed. Table 5-8 shows that the mean of the positively-framed manipulation test was 6.710 suggesting that participants who read a positively-framed message perceived that the ads had a positive tone. On the other hand, the mean of negatively-framed manipulation test was 3.620, which is interpreted to indicate that a negatively-framed message was perceived as having a negative tone. The score of the t-test (21.160, \( p < 0.01 \)) indicates that there was a significant difference in perceptions between the positively-framed message and negatively-framed message. This significant difference indicates the framing manipulation worked as expected.

Table 5-8 Means and Standard Deviations for Framing Manipulation

<table>
<thead>
<tr>
<th>Framing</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positively-framed message</td>
<td>6.710</td>
<td>0.063</td>
</tr>
<tr>
<td>Negatively-framed message</td>
<td>3.620</td>
<td>0.132</td>
</tr>
</tbody>
</table>

\[ t = 21.160, \ p < 0.01 \]

5.5.3 Source Credibility Manipulation

Table 5-9 illustrates the participants’ perception of the relative credibility of the manipulated message sources. The table shows that the means of the high credibility and the low credibility source were 6.111 and 4.595, respectively. These values indicate that subjects perceived the ads featuring a highly credible spoke person as having high credibility, while the message presented by a low credibility spokesperson had low credibility. The score of the t-test value of 11.302 (\( p < 0.01 \)) explained that there is a significant difference between participants’ perception of credibility of the different message sources.
### Table 5-9 Means and Standard Deviations for Source Credibility Manipulation

<table>
<thead>
<tr>
<th>Framing</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High credibility source</td>
<td>6.111</td>
<td>0.949</td>
</tr>
<tr>
<td>Low credibility source</td>
<td>4.595</td>
<td>1.269</td>
</tr>
</tbody>
</table>

\( t = 11.302 \), \( p < 0.01 \)

### 5.6 Evaluation of the Outer Model

The assessment of the outer model was accomplished in three steps: examination of convergent validity, discriminant validity and unidimensionality. The investigations of these problems are essential, since these problems have the potential to affect the outcome of statistical testing.

#### 5.6.1 Convergent Validity

To investigate the model’s convergent validity, this study relied on the factor loadings and average variance extracted (AVE). Table 5-10 shows that the loadings for each indicator ranged from 0.614 to 0.837, which were above the recommended threshold of 0.50 as proposed by Fornell and Larcker (1981). Exceeding 0.50, the loading score indicates that all measurement indicators had sufficient convergent validity; that is each indicator has a high level of connection with its corresponding variable.

Table 5-10 illustrates that the value of AVE for the constructs ranges from 0.513 to 0.676. Fornell and Larcker (1981) suggest that a score of 0.50 for AVE indicates an acceptable level of validity for the measures. Therefore, all of the constructs used in this study can be used to explain measurement variance. Table 5-10 presents the results of convergent validity analysis.
Table 5-10 Convergent Validity

<table>
<thead>
<tr>
<th>Constructs and Item</th>
<th>Outer Loading</th>
<th>AVE</th>
<th>Constructs and Item</th>
<th>Outer Loading</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atd_1</td>
<td>0.752</td>
<td></td>
<td>SN_1</td>
<td>0.786</td>
<td></td>
</tr>
<tr>
<td>Atd_2</td>
<td>0.819</td>
<td></td>
<td>SN_2</td>
<td>0.699</td>
<td></td>
</tr>
<tr>
<td>Atd_3</td>
<td>0.798</td>
<td>0.612</td>
<td>SN_3</td>
<td>0.684</td>
<td></td>
</tr>
<tr>
<td>Atd_4</td>
<td>0.764</td>
<td></td>
<td>SN_4</td>
<td>0.760</td>
<td></td>
</tr>
<tr>
<td>Atd_5</td>
<td>0.801</td>
<td></td>
<td>SN_5</td>
<td>0.698</td>
<td></td>
</tr>
<tr>
<td>Atd_6</td>
<td>0.756</td>
<td></td>
<td>SN_6</td>
<td>0.614</td>
<td></td>
</tr>
<tr>
<td>PV_1</td>
<td>0.821</td>
<td>0.676</td>
<td>SN_7</td>
<td>0.689</td>
<td></td>
</tr>
<tr>
<td>PV_2</td>
<td>0.808</td>
<td></td>
<td>SN_8</td>
<td>0.632</td>
<td></td>
</tr>
<tr>
<td>PV_3</td>
<td>0.837</td>
<td></td>
<td>SN_9</td>
<td>0.812</td>
<td></td>
</tr>
<tr>
<td>PBC_1</td>
<td>0.786</td>
<td></td>
<td>SN_10</td>
<td>0.717</td>
<td></td>
</tr>
<tr>
<td>PBC_2</td>
<td>0.740</td>
<td></td>
<td>SN_11</td>
<td>0.728</td>
<td></td>
</tr>
<tr>
<td>PBC_3</td>
<td>0.761</td>
<td>0.575</td>
<td>SN_12</td>
<td>0.745</td>
<td></td>
</tr>
<tr>
<td>PBC_4</td>
<td>0.711</td>
<td></td>
<td>Int_1</td>
<td>0.750</td>
<td>0.572</td>
</tr>
<tr>
<td>PBC_5</td>
<td>0.789</td>
<td></td>
<td>Int_2</td>
<td>0.798</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Int_3</td>
<td>0.719</td>
<td></td>
</tr>
</tbody>
</table>

5.6.2 Discriminant Validity

Discriminant validity was assessed using two approaches proposed by Chin (1998). First, the square root of the average variance extracted ($\sqrt{AVE}$) for each construct was examined; this should be larger than the inter-construct correlations. Second, none of the items should load more highly on another construct than it does on the construct it intends to measure. In other words, the value of the factor loading should be higher than the cross loadings.
The estimation of $\sqrt{AVE}$ for attitudes, intention, PBC, perceived value and subjective norms are 0.782, 0.756, 0.758, 0.822 and 0.716 respectively. Table 5-11 shows that these values are larger than the associated inter-construct correlations.

Table 5-11 Discriminant Validity Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Attitudes</th>
<th>Intention</th>
<th>PBC</th>
<th>Perceived Value</th>
<th>Subjective Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>0.782</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention</td>
<td>0.697</td>
<td>0.756</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>0.218</td>
<td>0.159</td>
<td>0.758</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.456</td>
<td>0.432</td>
<td>0.051</td>
<td>0.822</td>
<td></td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>0.581</td>
<td>0.439</td>
<td>0.231</td>
<td>0.307</td>
<td>0.716</td>
</tr>
</tbody>
</table>

Furthermore, with regard to cross loading analysis, Table 5-12 indicates that the value of the factor loading for each construct is higher than the cross loading.

Table 5-12 Factor Cross Loading

<table>
<thead>
<tr>
<th></th>
<th>Attitudes</th>
<th>Intention</th>
<th>PBC</th>
<th>Perceived Value</th>
<th>Subjective Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atd_1</td>
<td>0.752</td>
<td>0.509</td>
<td>0.110</td>
<td>0.361</td>
<td>0.414</td>
</tr>
<tr>
<td>Atd_2</td>
<td>0.819</td>
<td>0.566</td>
<td>0.123</td>
<td>0.402</td>
<td>0.466</td>
</tr>
<tr>
<td>Atd_3</td>
<td>0.798</td>
<td>0.636</td>
<td>0.211</td>
<td>0.390</td>
<td>0.503</td>
</tr>
<tr>
<td>Atd_4</td>
<td>0.764</td>
<td>0.491</td>
<td>0.222</td>
<td>0.275</td>
<td>0.464</td>
</tr>
<tr>
<td>Atd_5</td>
<td>0.801</td>
<td>0.540</td>
<td>0.209</td>
<td>0.322</td>
<td>0.486</td>
</tr>
<tr>
<td>Atd_6</td>
<td>0.756</td>
<td>0.503</td>
<td>0.147</td>
<td>0.378</td>
<td>0.385</td>
</tr>
<tr>
<td>Int_1</td>
<td>0.453</td>
<td></td>
<td>0.167</td>
<td>0.285</td>
<td>0.286</td>
</tr>
<tr>
<td>Int_2</td>
<td>0.615</td>
<td>0.798</td>
<td>0.102</td>
<td>0.379</td>
<td>0.427</td>
</tr>
<tr>
<td>Int_3</td>
<td>0.493</td>
<td></td>
<td>0.099</td>
<td>0.306</td>
<td>0.263</td>
</tr>
<tr>
<td>PBC_1</td>
<td>0.207</td>
<td>0.149</td>
<td>0.787</td>
<td>0.021</td>
<td>0.198</td>
</tr>
<tr>
<td>PBC_2</td>
<td>0.127</td>
<td>0.106</td>
<td>0.740</td>
<td>0.062</td>
<td>0.101</td>
</tr>
<tr>
<td>PBC_3</td>
<td>0.173</td>
<td>0.110</td>
<td>0.761</td>
<td>0.040</td>
<td>0.138</td>
</tr>
<tr>
<td>PBC_4</td>
<td>0.157</td>
<td>0.106</td>
<td>0.711</td>
<td>0.067</td>
<td>0.200</td>
</tr>
<tr>
<td>PBC_5</td>
<td>0.158</td>
<td>0.129</td>
<td>0.789</td>
<td>0.013</td>
<td>0.238</td>
</tr>
</tbody>
</table>
Based on the value of the square root of AVE and the analysis of cross loading factor, the discriminant validity of the measure was supported.

### 5.6.3 Unidimensionality

Internal consistency was measured by two parameters namely; Cronbach’s alpha and composite reliability. Table 5-13 reports these two parameters.

#### Table 5-13 Internal Consistency

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Composite Reliability</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>0.904</td>
<td>0.873</td>
</tr>
<tr>
<td>Intention</td>
<td>0.800</td>
<td>0.629</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>0.871</td>
<td>0.816</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.862</td>
<td>0.761</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>0.926</td>
<td>0.913</td>
</tr>
</tbody>
</table>
Cronbach’s alpha scores ranged from 0.629 to 0.913. All but one are above the standard threshold value of 0.70 and the Cronbach’s alpha value for intention is still above the 0.60 boundary which, according to Kline (1999), is acceptable for psychological measurements. In addition, the composite reliability score for each construct ranged from 0.800 to 0.926, all of which are beyond the cut-off value (0.70) (Nunnally, 1978). Based on these unidimensionality tests, all constructs used in this study have an acceptable degree of consistency and are thus considered reliable.

5.7 Structural Model Evaluation

After determining the robustness of the measures, a further phase is to provide confirmation that supports the theoretical model as demonstrated by the structural model (Chin, 2010). Here, the structural model was evaluated through four indicators; $R^2$, effect size ($f^2$), predictive relevance ($Q^2$) and goodness of fit (GoF) (Chin, 2010). The following sub section discusses the investigation of the structural model.

5.7.1 $R^2$ - Values

Similar to OLS regression, the value of $R^2$ in PLS represents the amount of variance explained by the model (Chin, 2010). Falk and Miller (1992) suggest that the variance explained for endogenous variables should exceed 0.10. Figure 5-1 shows the outcome of evaluating the structural model in these terms.
Based on the analysis of structural model, the $R^2$ value of the endogenous variables proposed by the model ranged from 0.147 to 0.519. Specifically, this model shows that:

- Approximately 48% of the variance in attitudes toward providing exclusive breastfeeding was explained by message framing, the interaction effect between message framing and source credibility, the perceived value of exclusive breastfeeding and subjective norms.
- Message framing and the effect of its interaction with source credibility was found to influence perceived behavioural control by nearly 15%.
- The socio-cognitive variables used in this study (i.e. attitudes, PBC, subjective norms and perceived value) explain approximately 52% of the variance in intention to exclusively breastfeed.

---

2 Testing for differences between primipara and multipara was conducted. Results did not indicate any difference between the two with respect to the constructs proposed in the theoretical model (See Appendix 7).
Finally, the effect of message framing, the interaction effects between message framing and source credibility and subjective norms explained roughly 20% of the variance of perceived value of providing exclusive breastfeeding.

The values of $R^2$ for all endogenous variables are above the threshold, documenting that all four endogenous variables were contributors to the explained variation.

5.7.2 Effect Size ($f^2$)

The estimation of effect size is one of the techniques employed in this study to confirm the theoretical model. The result of effect size testing indicates the strength of the relationship between two variables. Testing was done for each of the latent exogenous variables, and included the moderating variable. The interpretations proposed by Cohen (1992) were adopted, with 0.02 indicating a small effect, 0.15 a medium one and 0.35 meaning a larger effect was discovered.

The proposed model stipulates that message framing has effects on attitudes, PBC, perceived value and intention. The estimation of effect size indicates that message framing has the biggest main effect on PBC ($f^2 = 0.171$). Although this effect was the largest, this score can be interpreted as having only a moderate effect based on the effect size cut-off values noted above. Furthermore, the effect size estimation shows that the effects of message framing on attitudes and perceived value are 0.109 and 0.132 respectively which are classified as medium, whilst the impact of message framing on intention is very weak ($f^2 = 0.031$).

In terms of the interaction between message framing and source credibility, effect size analysis demonstrates that the interaction of message framing and source credibility has the biggest effect on perceived value ($f^2 = 0.131$) yet is classified as small. Similar to perceived value, source credibility also has a small moderating effect on attitudes ($f^2 = 0.108$), and nearly no effect on PBC ($f^2 = 0.020$) and intention ($f^2 = 0.029$). This analysis indicates that source credibility has only a weak moderating effect on the relationship between message framing and the endogenous variables (i.e. perceived value, attitudes, PBC and intention).

As proposed in the research model, subjective norms, as an exogenous variable, affects three endogenous variables; namely attitude, perceived value and intention. The result of effect size analysis indicates that the impact of subjective norms on attitude is 0.297. While the relationship magnitude between subjective norms and attitude is medium, effect size estimation shows that its effects on perceived value and intention are 0.040 and 0.002 respectively, which must be considered weak to non-existent.
Effect size estimation shows that attitude was affected by subjective norms around 30% ($f^2 = 0.297$). In addition, this construct was also influenced by perceived value (7.3%). Based on the Cohen’s suggestion (1992), the effect of perceived value on attitude is weak. Similar to the effect of perceived value on attitude, the magnitude effect of perceived value on intention is also weak. The calculation shows the effect size is 1.8% ($f^2 = 0.018$).

Both PBC and attitude affect intention. The effect size calculation indicates that PBC has a very weak effect on intention (approximately zero). While PBC has a weak influence on intention, the effect of attitude on intention is considered medium ($f^2 = 0.337$). Among other intention predictors (message framing, perceived value, attitude, PBC and subjective norms) attitude has the biggest effect.

Table 5-14 summarises the estimation of effect size.

Table 5-14 Summary of Effect Size Estimation

<table>
<thead>
<tr>
<th>Exogenous Variables</th>
<th>Endogenous Variables</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message Framing</td>
<td>Attitudes</td>
<td>0.109*</td>
</tr>
<tr>
<td></td>
<td>PBC</td>
<td>0.171**</td>
</tr>
<tr>
<td></td>
<td>Perceived Value</td>
<td>0.132*</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td>0.031*</td>
</tr>
<tr>
<td>MF x SC</td>
<td>Attitudes</td>
<td>0.108*</td>
</tr>
<tr>
<td></td>
<td>PBC</td>
<td>0.020*</td>
</tr>
<tr>
<td></td>
<td>Perceived Value</td>
<td>0.131*</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td>0.029*</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>Attitudes</td>
<td>0.297</td>
</tr>
<tr>
<td></td>
<td>Perceived Value</td>
<td>0.040</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td>0.002</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>Attitudes</td>
<td>0.073*</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td>0.018*</td>
</tr>
<tr>
<td>PBC</td>
<td>Intention</td>
<td>Approximately zero</td>
</tr>
<tr>
<td>Attitude</td>
<td>Intention</td>
<td>0.337**</td>
</tr>
</tbody>
</table>

*small effect size  
**medium effect size
5.7.3 Predictive Relevance

Chin (2010) has argued that to measure predictive relevance, the PLS technique should use a "blindfold procedure" to exclude a part of the data for a particular block of indicators during parameter estimations, and then to estimate the excluded data using the estimated parameters. Table 5-15 summarizes the outcomes of this predictive relevance strategy, using the blindfold procedure.

Table 5-15 Predictive Relevance Measurement

<table>
<thead>
<tr>
<th>Total</th>
<th>SSO</th>
<th>SSE</th>
<th>Predictive Relevance ($Q^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atds</td>
<td>1674</td>
<td>1197.856</td>
<td>0.284</td>
</tr>
<tr>
<td>Int</td>
<td>837</td>
<td>596.889</td>
<td>0.286</td>
</tr>
<tr>
<td>PBC</td>
<td>1395</td>
<td>1279.170</td>
<td>0.083</td>
</tr>
<tr>
<td>Per Value</td>
<td>837</td>
<td>724.066</td>
<td>0.134</td>
</tr>
</tbody>
</table>

Chin (2010) argued that a model where all variables have $Q^2$ values larger than zero implies that it has predictive relevance. All of the coefficients presented in Table 5-15 are larger than zero ($Q^2 > 0$). Hence, if that rule of thumb is applied, the research model used in this study has an appropriate level of predictive relevance. These values of predictive relevance indicate that the proposed model can provide robust prediction of the endogenous variables. Therefore, the next step, hypotheses testing, can be conducted.

5.7.4 Goodness of Fit (GoF)

Daryanto et al. (2009) proposed that the baselines for GoF are small = 0.1, medium = 0.25 and large = 0.36. The calculation of GoF yields a score of 0.404. Since GoF index for the model tested in this study exceeds 0.36, the model proposed in this study should be considered robust. Ferdinand (2002) contended that the robust model would be more able to represent the data as it is reflected underlying theory. Table 5-16 shows the calculation of GoF index.
Table 5-16 Goodness of Fit Measurement

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Communality</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective Norms</td>
<td>0.513</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>0.612</td>
<td>0.479</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.676</td>
<td>0.201</td>
</tr>
<tr>
<td>PBC</td>
<td>0.575</td>
<td>0.147</td>
</tr>
<tr>
<td>Intention</td>
<td>0.572</td>
<td>0.519</td>
</tr>
<tr>
<td>Average</td>
<td>0.486</td>
<td>0.336</td>
</tr>
</tbody>
</table>

GoF = \sqrt{0.486 \times 0.336} = 0.404

5.7.5 Summary of Outer and Structural Model Evaluation

The results of outer model evaluation indicate that the constructs used in this study are valid and reliable. By having valid and reliable constructs, the evaluations of structural model can be performed. The outcomes of structural model evaluation also explained that the model proposed is fit. Having established measures and a robust model, the hypothesis testing can proceed.

5.8 Hypotheses Testing: Research Objective One

Research Objective One (RO1) was to assess the effect of message framing and its interaction with source credibility on behavioural intention and its components. This section presents the discussion relating to RO1 covering hypotheses one to eight. Hypotheses 1, 2, 3 and 4 were proposed to test the main effects of message framing. Hypotheses 5, 6, 7 and 8 were designed to test for interaction effects between message framing and source credibility on perceived value, attitude, PBC and intention.

H1: Hypothesis 1 proposed that there is a significant effect of message framing on perceived value; testing indicated that such a significant effect did not exist. The value of the t-statistic was 0.680, with p > 0.05. Therefore Hypothesis 1 was not supported.

H2: A significant effect of perceived value on attitude was proposed by Hypothesis 2. Like the relationship between message framing and perceived value, hypothesis testing did not find a significant main effect for the linkage between message framing and perceived attitudes (t = 0.084, with p > 0.05). This insignificant main effect means hypothesis 2 was therefore rejected.

H3: Hypothesis 3 stated that PBC was significantly affected by message framing. Hypothesis testing indicates that there was a significant main effect of message framing on PBC (β =
0.359, t = 7.223, p < 0.01). Hence hypothesis 3 was supported. Since the value of coefficient beta indicated a positive slope, the positively-framed message is more effective in affecting perceived behavioural control.

H4: The significant effect of message framing on intention was proposed by Hypothesis 4. Based on the hypothesis testing there was no significant effect of message framing on intention (t = 1.199, p > 0.05), therefore hypothesis 4 was not accepted.

Hypotheses 5, 6, 7 and 8 all examine how the combination of a message’s frame and the credibility of the message’s source interact to possibly influence perceived value, attitude, PBC and, ultimately intention. In order to test these hypotheses, a series of moderating tests were performed following the suggestion of Streukens et al. (2010).

H5: Hypothesis 5 proposed that source credibility moderates the relationship between message framing and perceived value. The moderating test indicates that there is a significant interaction effect between message framing and source credibility on perceived value (β = 0.343, t = 7.240, p < 0.01). Hence, hypothesis 5 was supported. Since there is a significant interaction effect between message framing and source credibility, the investigation of the nature of its interaction is done.

The Analysis of Variance (ANOVA) indicates that marginal means (EMM) of the interaction between a positively-framed message and relatively highly credible source with respect to perceived value (EMM= 5.662) is larger than the interaction between a negatively-framed and a low credibility source (EMM= 5.572), a positively-framed message coming from a low credibility source (EMM = 5.212) or a negatively-framed message coming from a high credibility source (EMM= 5.148). Figure 5-2 depicts these interaction effects.
H6: Hypothesis 6 proposes a significant interaction effect between message framing and source credibility on attitudes. The interaction effect test found that the interaction between message framing and source credibility has a significant effect on attitudes ($\beta = 0.265$, $t = 5.883$, $p < 0.01$). Hypothesis 6 was therefore accepted.

The outcome of ANOVA indicates that the estimated marginal means of the interaction between a positively-framed message and a high credibility source with respect to attitude is the largest (EMM = 5.756) of all framing and source credibility combinations (positively-framed message and low credibility source EMM = 5.236, negatively-framed message and high credibility source EMM = 5.155 and negatively-framed message and low credibility source EMM = 5.671). Figure 5-3 illustrates the interaction effect between message framing and source credibility on attitudes.
H7: Hypothesis 7 posited that source credibility moderates the effect of message framing on PBC. In other words, there is an interaction effect between message framing and source credibility on PBC. Hypothesis testing showed that the value of t-statistic is 2.343 (p < 0.05) which means hypothesis 7 was accepted.

The outcome of a two-way ANOVA showed that the estimated marginal means of PBC are the largest (EMM= 5.973) when the participants read a positively-framed message from high credibility source (compared to a positively-framed message and low credibility source EMM= 5.771, negatively-framed message and high credibility source EMM = 5.428 and negatively-framed message and low credibility source EMM = 5.510). Figure 5-4 illustrates the interaction between framing and source credibility with respect to PBC.
H8: The moderating effect of source credibility on the relationship between message framing and intention was proposed by Hypothesis 8. The moderating test indicates that there is a significant interaction effect between message framing and source credibility on intention ($\beta = 0.127$, $t = 2.638$, $p < 0.05$). This provides support for Hypothesis 8.

Figure 5-5 illustrates that the estimated marginal means of intention with respect to the interaction between positively-framed message and high credibility source is around six which is largest value of all the combinations. This finding means a positively-framed message from a highly credible source was an effective combination in influencing intention.
Figure 5-5 Estimated Marginal Means of Intention

The hypotheses testing pertaining to RO1 shows that message framing only has a main effect on PBC. However, these tests found that source credibility significantly moderates the effect of message framing on perceived value, attitude, PBC and intention. A positively-framed message from a highly credible source was found to be the most effective combination in influencing these socio-cognitive variables. Table 5-17 summarises the hypotheses testing relating to RO1.
Table 5-17 Hypotheses Relating to RO1

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Path</th>
<th>Path Coefficient</th>
<th>T-statistic</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Framing → Perceived Value</td>
<td>0.036</td>
<td>0.680</td>
<td>Not supported</td>
</tr>
<tr>
<td>H2</td>
<td>Framing → Attitudes</td>
<td>-0.004</td>
<td>0.084</td>
<td>Not supported</td>
</tr>
<tr>
<td>H3</td>
<td>Framing → PBC</td>
<td>0.359</td>
<td>7.228*</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>Framing → Intention</td>
<td>0.058</td>
<td>1.199</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5</td>
<td>Framing x Credibility → Perceived Value</td>
<td>0.343</td>
<td>7.240*</td>
<td>Supported</td>
</tr>
<tr>
<td>H6</td>
<td>Framing x Credibility → attitudes</td>
<td>0.265</td>
<td>5.883*</td>
<td>Supported</td>
</tr>
<tr>
<td>H7</td>
<td>Framing x Credibility → PBC</td>
<td>0.125</td>
<td>2.343**</td>
<td>Supported</td>
</tr>
<tr>
<td>H8</td>
<td>Framing x Credibility → Intention</td>
<td>0.127</td>
<td>2.638*</td>
<td>Supported</td>
</tr>
</tbody>
</table>

*significant at p < 0.01
**significant at p<0.05

### 5.9 Hypotheses Testing: Research Objective Two

Research Objective Two (RO2) is to test the relationship between women’s intention to provide exclusive breastfeeding and its antecedents, namely perceived value, attitudes, PBC and subjective norms. Hypotheses 9 through 15 were designed to examine these possible relationships in detail.

H9: Hypothesis 9 proposed a significant effect of perceived value on attitudes. Testing yielded a t-statistic value of 3.387 (p < 0.01) and, since the path coefficient showed a positive slope (β = 0.217), a positive effect was found for the relationship between perceived value and attitude. This finding supports Hypothesis 9.

H10: A significant effect of perceived value on intention was proposed by Hypothesis 10. Similar to the effect of perceived value on attitudes, hypothesis testing also found a significant effect of perceived value on intention (β = 0.111, t = 1.991, p < 0.05). The path coefficient indicated a positive relationship between these constructs. Given a significant t-statistic, Hypothesis 10 was supported.
H11: Hypothesis 11 states that intention was significantly affected by attitudes. As was the case for Hypotheses 9 and 10, the test for Hypothesis 11 yielded a significant t value \( t = 8.847, \ p < 0.01 \). Furthermore, a positive relationship was found for the linkage between attitude and intention \( \beta = 0.562 \). This means the more positive women’s attitudes towards providing exclusive breastfeeding are, the higher the level of their intention to provide exclusive breastfeeding. This confirms Hypothesis 11.

H12: A significant relationship between PBC and intention was proposed by Hypothesis 12. While attitudes and perceived value were found to be significant antecedents of intention, hypothesis testing indicated that PBC did not significantly affect intention \( \beta = -0.010, \ t = 0.228, \ p > 0.05 \). Thus Hypothesis 12 was not supported.

H13: Hypothesis 13 proposed that subjective norms have a significant effect on perceived value. Hypothesis testing demonstrated a positive, significant effect of subjective norms on perceived value \( \beta = 0.193, \ t = 3.051, \ p < 0.01 \). Therefore, Hypothesis 13 was supported.

H14: A significant effect of subjective norms on attitudes was proposed by Hypothesis 14. Hypothesis testing found that subjective norms have a significant effect on attitudes \( t = 8.919, \ p < 0.01 \). This finding suggested that Hypothesis 14 was accepted. Since the path coefficient indicated a positive slope \( \beta = 0.431 \), the higher the pressure from other people to exclusively breastfeed, the more positive the attitude of women to provide exclusive breastfeeding.

H15: A significant effect of subjective norms on intention was proposed by Hypothesis 15. However, hypothesis testing showed that subjective norms do not significantly influence intention \( \beta = 0.032, \ t = 0.533, \ p > 0.05 \). As a result, Hypothesis 15 was not supported.

The hypotheses testing RO 2 indicates that perceived value has a significant effect on both attitude and intention. Similarly, this study also found that attitude is the significant predictor of intention. However, this study did not find a significant effect of PBC on intention. As an exogenous variable, subjective norms were found to significantly influence perceived value and attitude. However, there was no significant relationship between subjective norms and intention. Table 5-18 summarises the hypotheses testing relating RO 2.
Table 5-18 Hypotheses Testing Relating RO 2

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Path</th>
<th>Path Coefficient</th>
<th>T-statistic</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H9</td>
<td>Perceived Value ➔</td>
<td>0.217</td>
<td>3.386*</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H10</td>
<td>Perceived Value ➔</td>
<td>0.111</td>
<td>1.991</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H11</td>
<td>Attitudes ➔ Intention</td>
<td>0.562</td>
<td>8.847*</td>
<td>Supported</td>
</tr>
<tr>
<td>H12</td>
<td>PBC ➔ Intention</td>
<td>-0.011</td>
<td>0.228</td>
<td>Not supported</td>
</tr>
<tr>
<td>H13</td>
<td>Subjective Norms ➔</td>
<td>0.193</td>
<td>3.051*</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Perceived Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H14</td>
<td>Subjective Norms ➔</td>
<td>0.431</td>
<td>8.919*</td>
<td>Supported</td>
</tr>
<tr>
<td></td>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H15</td>
<td>Subjective Norms ➔</td>
<td>0.032</td>
<td>0.533</td>
<td>Not supported</td>
</tr>
<tr>
<td></td>
<td>Intention</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*significant at p < 0.01

5.10 Hypotheses Testing: Research Objective Three

The research model (Figure 5-1) proposes three potential mediating variables between message framing and intention: perceived value, attitudes and PBC. In addition, these variables also potentially mediate the relationships between the interaction effect of message framing with source credibility and the intention to exclusively breastfeed.

To test the mediating effect between message framing and behavioural intention, the procedure proposed by Baron and Kenny (1986) was used.

1. The effect of message framing was tested with respect to women’s intention to provide exclusive breastfeeding. The student’s t-test indicated that there is no significant relationship between message framing and behavioural intention (t = 1.199, p > 0.05, β = 0.058).

2. The effect of message framing was tested with respect to the proposed mediating variables: perceived value, attitudes and PBC. Testing showed that message framing does not have a significant effect on perceived value (t = 0.680, p > 0.05, β = 0.036) or attitudes (t = 0.084, p > 0.05, β = -0.004). However, it does have a significant effect
on PBC ($t = 7.228, p < 0.01, \beta = 0.359$). Based on this estimation, PBC is the only construct in the model which should be considered further as a mediating variable.

3. In testing the effect of PBC on behavioural intention, the estimation indicated that PBC does not have a significant effect on behavioural intention ($t = 0.028, p > 0.05, \beta = -0.011$).

These steps confirm that perceived value, attitudes and PBC do not have any mediating effect in the relationship between message framing and behavioural intention thus implying that hypothesis 16a, 16b and 16c were not supported.

Baron and Kenny’s mediating analysis strategy (1986) was also used to examine the potential mediating effect of perceived value, attitudes and PBC on the interaction between message framing and source credibility on behavioural intention.

1. First, the interaction effect of message framing and source credibility was tested with respect to women’s intention to provide exclusive breastfeeding. The student’s t indicated that there is a significant relationship between the interaction of message framing and source credibility with behavioural intention ($t = 2.638, p < 0.01, \beta = 0.127$).

2. Next, evaluating the interaction effect of message framing and source credibility on perceived value, attitudes and PBC was done. The estimations indicated that this interaction effect has a significant effect on perceived value ($t = 7.240, p < 0.01, \beta = 0.343$), attitudes ($t = 5.883, p < 0.01, \beta = 0.265$) and PBC ($t = 2.343, p < 0.05, \beta = 0.125$).

3. The last test involves testing the effect of mediating variables (i.e. perceived value, attitudes and PBC) on the criterion variable which is intention. The statistical test shows that both perceived value ($t = 1.991, p < 0.05, \beta = 0.111$) and attitudes ($t = 8.847, p < 0.01, \beta = 0.562$) have a significant effect on intention. However, PBC does not have a significant effect ($t = 0.228, p > 0.05, \beta = -0.011$).

Figure 5-6 and 5-7 depicts the steps in analysing the mediating effect of perceived value and attitude which respect to the interaction effect of message framing and source credibility on behavioural intention.
Step 1

![Diagram of Step 1]

Step 2 and 3

![Diagram of Step 2 and 3]

Figure 5-6 The Mediating Effect of Perceived Value

Step 1

![Diagram of Step 1]

Step 2 and 3

![Diagram of Step 2 and 3]

Figure 5-7 The Mediating Effect of Attitudes

This mediating analysis documents that perceived value and attitudes are constructs mediating the interaction of message framing and source credibility on intention. This supports hypothesis 17a and 17b. Given that the path coefficient of message framing on intention was
not zero, perceived value and attitudes partially mediate the interaction effect of message framing and source credibility on intention. Table 5-19 summarizes the analysis of mediating testing.

Table 5-19 A Summary of Mediation Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path</th>
<th>Insignificant Path</th>
<th>Mediation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H16a</td>
<td>MF -&gt; Atd -&gt; Int</td>
<td>MF -&gt; Atd</td>
<td>Not mediated</td>
<td>Not-Supported</td>
</tr>
<tr>
<td>H16b</td>
<td>MF -&gt; PV -&gt; Int</td>
<td>MF -&gt; PV</td>
<td>Not mediated</td>
<td>Not-Supported</td>
</tr>
<tr>
<td>H16c</td>
<td>MF -&gt; PBC -&gt; Int</td>
<td>PBC -&gt; Int</td>
<td>Not mediated</td>
<td>Not-supported</td>
</tr>
<tr>
<td>H17a</td>
<td>MF*SC -&gt; Atd -&gt; Int</td>
<td>-</td>
<td>Partially</td>
<td>Supported</td>
</tr>
<tr>
<td>H17b</td>
<td>MF*SC -&gt; PV -&gt; Int</td>
<td>-</td>
<td>Partially</td>
<td>Supported</td>
</tr>
<tr>
<td>H17c</td>
<td>MF*SC -&gt; PBC -&gt; Int</td>
<td>PBC -&gt; Int</td>
<td>Not mediated</td>
<td>Not-Supported</td>
</tr>
</tbody>
</table>
Chapter 6
DISCUSSION and CONCLUSIONS

The previous chapters have discussed the background of this study, the literature and research gaps relating to a set of three research objectives, the research process, the analytic strategy and results of data analysis. The general aim of this chapter is to evaluate the study results and discuss the contribution they make to academic theory and managerial practice.

This study investigates and characterises the effects that message framing and source credibility may have over a women’s intention to exclusively breastfeed her infant. Three research objectives were addressed:

1. First, this study assesses the effect of message framing, and the interaction effect of framing and credibility on perceived value, attitude, perceived behavioural control, and behavioural intention.

2. Second, this study evaluates the comprehensive linkages among perceived value attitude, perceived behavioural control (PBC), subjective norms, and behavioural intention.

3. Finally, the mediating effects of the attitudes towards, and perceived value of, exclusive breastfeeding and PBC on the relationship between message framing and intention, and on the relationship between the interactions of message framing with source credibility and intention to provide exclusive breastfeeding were evaluated.

In addressing these research objectives, this study developed 17 hypotheses. Partial Least Squares (PLS) and Analysis of Variance (ANOVA) were used to test the hypotheses.

6.1 Research Objective 1: The Effect of Message Framing and Its Interaction with Source Credibility on Behavioural Intention and Its Components

Following previous researchers who had investigated the effects of message framing (Abhyankar et al., 2008; Arora et al., 2006; Daryanto et al., 2009; Grady et al., 2009; Jones et al., 2003; O'Connor et al., 2005; Rivers et al., 2005), this study postulated that message framing would have a significant effect on perceived value, attitudes, perceived behavioural control and the intention to breastfeed exclusively (Hypotheses 1, 2, 3 and 4). Furthermore, several academics have proposed that source credibility is one of the factors moderating the
effects of message framing on intention, attitudes, PBC and perceived value (Arora, 2007; Arora & Arora, 2004; Jones et al., 2003). Thus, this study also proposed that there is a significant interaction between message framing and source credibility on behavioural intention and its antecedents (i.e. perceived value, attitudes and PBC) (Hypotheses 5, 6, 7 and 8). Based on the propositions advanced by Prospect Theory (Kahneman & Tversky, 1979) and the ELM (Petty & Cacioppo, 1986), in the study’s context, a positively-framed message which comes from a high credibility source is likely to be the most effective combination for influencing women's intentions to exclusively breastfeed.

6.1.1 The Effect of Message Framing on Perceived Value (Hypothesis 1)

This study proposed that message framing had a significant effect on perceived value. Despite that proposal, this study did not find a significant effect of this relationship (t = 0.680, p > 0.05), meaning that women’s perceived value of exclusive breastfeeding did not differ after exposure to negatively-framed or positively-framed messages. This is a curious result, suggesting that perceived value might resist change.

To date, no specific reason has been advanced by researchers that might explain an insignificant main effect of message framing on value perception. However, in light of the definition of perceived value, e.g., a general evaluation of consumers regarding the utility of products based on their perception of what is given (cost) and what is received (benefit) (Zeithaml, 1988), a possible explanation is that the messages had insufficient information for subjects to justify the value of breastfeeding. In other words, the respondents are not perceiving the trade-off between benefits and costs when the message is phrased only in the positive (focussed on benefits) or when it is phrased only in negatives (costs or risks).

There is another possible explanation of this finding. Initiating breastfeeding is a common practice for even a short period of time, with well-publicized benefits. The demographic data documents that almost 60% of this study’s the participants had level of education at tertiary level and around 52% of them have experience in breastfeeding. Hence, although breastfeeding behaviour for the period of time suggested by WHO is not being done, breastfeeding is not a new idea for the participants. Hence breastfeeding is not a new idea for the participants. Since breastfeeding is a relatively common practice and its benefits and the efforts needed to perform this behaviour have been acknowledged widely, women may have been relying on their existing knowledge, as opposed to whatever additional knowledge the framing of the message stimulating provided.
6.1.2 The Effect of Message Framing on Attitudes (Hypothesis 2)

Similar to its lack of effect on perceived value, message framing did not have a significant influence on women’s attitudes toward providing exclusive breastfeeding (t = 0.084, p > 0.05). This finding is different to that presented by Arora (2000) and Arora (2007), who found a significant effect of message framing on attitudes.

The first possible argument to explain this non-significant effect is derived from the nature of breastfeeding behaviour. To date, many campaigns have been launched to promote exclusive breastfeeding behaviour in Indonesia. It is possible thereby that the participants of this study have already recognized the benefits of breastfeeding and therefore may have had a positive attitude toward exclusive breastfeeding practice. There is thus a possibility that any framing stimulus provided in this experiment would not have any significant additive effect.

The perception of participants of the certainty of breastfeeding outcomes is another possible way to explain the insignificant effect of message framing on women’s attitude toward providing exclusive breastfeeding. Prospect Theory (Kahneman & Tversky, 1979) explained that for relatively low risk behaviour, gain-framed or positively-framed messages will be more persuasive than loss-framed and negatively-framed messages. However, for riskier behaviours, Prospect Theory argues that loss-framed appeals will be more persuasive. In accordance with this proposition, and although clinically breast milk has been shown to be complete nutrition for infants, it is possible that participants still consider breastfeeding behaviour risky, since the outcomes of the adoption of this behaviour could vary between infants. Even if the benefits do not vary, they may not be explicitly seen, and therefore, are questioned at the individual level.

Based on this finding, to overcome this problem in promoting a particular behaviour, social marketers would need to evaluate the target audience’s level of perceived risk of the behaviour recommended. This finding implies that before designing the social advertising campaign, it is essential for social marketers to conduct a preliminary study. The study would be useful measuring the degree of risk perceived by target audience. By recognizing the level of target audience perceived risk, social marketers might frame the message more effectively.

The Serial Position Effect theory proposed by Ebbinghaus (1913) can also be used to explain the non-significant effect of message framing on attitudes. This theory suggested that in recalling a list of items freely, an individual would begin by recalling the elements at the end of a list and give more detailed attention to the first item on a list rather than those in the
middle. Referring to Serial Position Effect theory, it is possible that participants of the current study did not pay detailed attention to the framing manipulation, since the positive or negative aspects of the messages were emphasized in the body of the messages. Hence, given that there may have been no detailed attention given to the framing manipulation given, the attitude of women toward exclusive breastfeeding is not different for women who read a positively- or negatively-framed message.

6.1.3 The Effect of Message Framing on PBC (Hypothesis 3)

As predicted by Hypothesis 3, message framing was significantly related to the individual’s PBC. The significant relationship between message framing and PBC ($t = 7.228, p < .05$), with effect size 17.1%, is consistent with previous studies (Parrott et al., 2008; Purewal & van den Akker, 2009) that also found a significant relationship between message framing and PBC. However, these studies did not examine PBC with a focus on breastfeeding behaviour and the analytical techniques used were not similar to these in the present study. In this present study, PLS was used to test the effect of message framing on PBC. As a structural equation modelling technique, PLS can provide more comprehensive outcome than the other techniques. Although this present study used PLS, the previous studies used traditional ANOVA and multiple regressions to test the effect of message framing in PBC. The PLS analysis indicates a positive path coefficient between message framing and PBC ($\beta = 0.359$). This path coefficient documents that the PBC of women who read a positive message is higher than for the women who read a negative one. This implies that the positively-framed message is more effective than the negatively-framed message in influencing women’s PBC with regard to exclusive breastfeeding. It is possible that, in the positively-framed situation, perceived barriers were reduced while the perception about the ability to provide exclusive breastfeeding was enhanced, thereby improving PBC.

Given that the findings of this study indicate that women’s PBC over providing exclusive breastfeeding was significantly affected by the way a message is framed, social marketers should be concerned about the way a promotional message is formulated. An appropriate promotional message will be able to increase the level of an individual’s PBC, which is important in enhancing their intention to engage in a particular behaviour. Further study to address this relationship is warranted.

6.1.4 The Effect of Message Framing on Intention (Hypothesis 4)

Intention is a variable which is accepted as a robust predictor of actual behaviour (Ajzen, 1989; Ajzen, 1991). Several studies have investigated factors affecting intention both in the
area of commercial marketing (Chen et al., 2009; Delafrooz et al., 2011; George, 2004) and social marketing (Arora, 2000; Jones et al., 2003; Moorman & van den Putte, 2008). Despite the proposal to the contrary, this study shows that message framing alone does not have a significant effect on the intention to breastfeed exclusively \((t = 1.199, p > 0.05)\). It implies that the intention of women to provide six months exclusive breastfeeding does not change as a result of reading a positively or negatively-framed message.

A possible explanation of the insignificant effect of message framing on the intention to provide six months of exclusive breastfeeding is related to the familiarity women have of the practice and the advantages of providing breastfeeding. Similar to the previous explanation, breastfeeding practice is not new knowledge for Indonesian women. The benefits of breastfeeding has been recognized and publicised widely. Thus, it is possible that neither a positively- or negatively-framed message alone has any effect on the intention to provide exclusive breastfeeding.

Furthermore, this empirical finding indicates that message framing only has around a 3% effect on intention, which is considered weak. To enhance this effect, there is a need to add a moderating variable such as source credibility. The discussion regarding the interaction effect between message framing and source credibility on intention will be further discussed below in the moderating effect section.

Furthermore, with respect to the participants’ demographics, around 52% of participants have experience in breastfeeding and more than 55% of the sample has more than one child. Moreover, the descriptive analysis also indicated that the participants have a strong intention to provide exclusive breastfeeding. The ANOVA results document no significant difference between primipara and multipara women in their intention to provide exclusive breastfeeding. Hence, women have the same level of intention to provide exclusive breastfeeding, whether they have had children or not.

It appears the participants of this study have already understood and considered the practice of six months exclusive breastfeeding. In this situation, it is possible that actually there is only a small capacity for changing individual’s intention. Therefore, the stimulus cannot rely on only message framing. Additional factors must be in included in formulating the promotional message in order to be more effective.
6.1.5 The Moderating Effect of Source Credibility on the Relationship between Message Framing and Perceived Value (Hypothesis 5)

Source credibility has been recognized as a variable to moderate the effect of message framing on behavioural intention and its antecedents. Although message framing did not have a significant effect on the perceived value of exclusive breastfeeding, hypothesis testing found that there is a significant interaction effect between message framing and source credibility on perceived value ($t = 7.240, p < 0.01$). Thus source credibility significantly moderates the effect of message framing on perceived value. Interaction effect testing indicated that a positively-framed message presented by a highly credible source was found to be most effective in terms of affecting women’s perception of exclusive breastfeeding’s value.

The significant moderating effect of source credibility on the relationship between message framing and perceived value of exclusive breastfeeding implies that social marketers cannot rely solely on message framing to create a persuasive message. This inclusion of high source credibility enhances the effect of message framing on women’s perception of the value of exclusive breastfeeding.

ELM (Petty & Cacioppo, 1986) contended that a highly credible source is going to have more effect on a decision involving relatively low elaboration (because the message is coming from a source with expertise, the audience is more willing to accept a message). Since there is already a relatively high amount of support for breastfeeding, there is a possibility that there is no high level of internal debate as to whether this practice should be performed or not. For that reason, it is possible that the combination of a positively-framed message and a high credibility source is what takes a generally supportive feeling to a more solidly supportive feeling.

Furthermore, the significant moderating effect of source credibility toward the relationship between message framing and perceived value possibly occurs since participants perceived that the highly credible source is understand the underlying worth of a practice the best, whereas participants will perceive that a low credibility source is likely to tell them what they already know. For that reason, the combination of a positively-framed message which outlines the positive effect of adopting six months exclusive breastfeeding behaviour with highly credible source which is more trusted will result in higher perceived value than other framing and credibility combinations.
6.1.6 The Moderating Effect of Source Credibility on the Relationship between Message Framing and Attitudes (Hypothesis 6)

While message framing does not have a significant main effect on women’s attitude toward providing exclusive breastfeeding, this study indicated that there is a significant interaction, or moderating, effect between message framing and source credibility on attitudes (t = 5.883, p < 0.01). This significant interaction effect supported Hypothesis 6. This finding is similar to several other studies, such as Arora, (2007), Arora et al. (2006) and Buda and Zhang (2000) who also found a significant interaction effect between message framing and source credibility on attitude.

The interaction effect test showed that a positively-framed message which comes from a highly credible source is the most effective combination for influencing women’s attitude toward providing six months exclusive breastfeeding. The success of the combined effect of message framing and source credibility in influencing women’s attitudes found in the current study may be result because breastfeeding behaviour is a common practice and its benefits have been clinically demonstrated. Given that breastfeeding practice is not new to the participants and they had already well understood breastfeeding practice, there is a possibility that participants did not process the stimulus provided information carefully (low elaboration). Olson and Zanna (1993) suggested that a positively-framed message with a highly credible source will be the most effective combination in influencing an individual’s attitudes when the elaboration is minimal.

Considering that an attitude is an enduring pattern of the individual’s overall evaluation toward a particular object or behaviour (Ajzen, 1991), the effort invested in changing an attitude cannot rely on a single attempt. Social marketers or health practitioners should keep reminding the target audience about the importance of six months exclusive breastfeeding. Reflecting to the result of this study shows that a positively-framed message from a high credibility source will likely be the most effective promotional message for shaping a positive attitude toward providing exclusive breastfeeding.

6.1.7 The Moderating Effect of Source Credibility on the Relationship between Message Framing and PBC (Hypothesis 7)

This study found a significant interaction effect of message framing and source credibility on women’s perceived behavioural control (t= 2.343, p < 0.05) as postulated by Hypothesis 7. The interaction test explained that a positively-framed message coming from a highly credible source has strongest combined effect on PBC.
The significant finding with respect to the relationship between message framing and PBC is especially interesting. While message framing has a significant effect on attitudes and perceived value when it is moderated by source credibility, message framing has a significant effect on PBC both with and without moderation by source credibility. This finding challenges a previous study result reported by Jones et al. (2004). That study focussed on exercise behaviour and indicated that there was no significant interaction effect between message framing and source credibility on PBC. Since there has been only limited study of the interaction effect of message framing and source credibility on PBC and these have yielded contradictory result, this linkage should be investigated further.

Theoretically, PBC is the individual’s perception of their control over or capability of performing a desired behaviour. In this study, PBC is defined as the degree to which women perceived they had control over their decision to provide exclusive breastfeeding for the duration of six months. To enhance their perception of their capability to provide exclusive breastfeeding, women should be presented with an intervention which describes breastfeeding as a common practice and gives many benefits, and therefore create a positive mood among the target audience. Scholars (Elsbach & Barr, 1999; Fishbach & Labroo, 2007) contended that a positive mood plays an important role in creating a high degree of perceived behavioural control/self-efficacy. Since the positively-framed message created in this study outlines breastfeeding as natural and providing many advantages, it will help participants to have more confidence in providing exclusive breastfeeding.

Van Beuningnen et al. (2009) suggested that the source of information also plays an important role in increasing the feeling of self-efficacy. Specifically, they suggested that the agreement between information received and personal capabilities would be translated into self-efficacy. Based on that rationale, a message from a highly credible source would be more convincing and would translate more easily into self-efficacy/PBC. Therefore, a highly credible source will enhance the effect of a positively-framed message on women’s PBC over providing exclusive breastfeeding.

6.1.8 The Moderating Effect of Source Credibility on the Relationship between Message Framing and Intention (Hypothesis 8)

As proposed by the TPB and recognized widely, intention is a predictor of actual behaviour. Several studies have shown that the higher an individual’s intention to adopt a desired behaviour, the greater the likelihood that they will adopt the proposed behaviour. Since
intention has an essential role in influencing actual behaviour, there is a need to investigate promotional strategies which can significantly affect intention.

The way a message is framed has been acknowledged as a tool to influence individual’s intention. While this study found that there was no significant effect, the insertion of source credibility as a moderating variable was found to be significant in the relationship between message framing and women’s intention to exclusively breastfeed ($t = 2.638, p < 0.05$). This result means there is a significant interaction effect between message framing and source credibility on intention, as proposed by Hypothesis 8. This significant interaction effect is consistent with several previous studies, such as Arora et al. (2006) and Jones et al. (2003) in the study of exercise behaviour, Arora (2000) in the domain of dental examination behaviour, Buda (2003) in the study of recruitment practice and Buda and Zhang (2000) in a product evaluation study. These previous studies were not, however, conducted in the area of breastfeeding behaviour.

Since source credibility significantly moderates the effect of framing on intention, this study also investigates the nature of its interaction effect. Testing for interaction indicated that the combined effect of a positively-framed message and a highly credible source is the most effective combination for influencing women’s intention to provide exclusive breastfeeding.

The significant impact of the interaction between message framing and source credibility on intention indicates that source credibility plays an essential role in enhancing the effect of message framing on intention. A highly credible source relates to the expertise and trustworthiness of the source of information. The previous section outlined that women’s intention to provide exclusive breastfeeding does not differ regardless of reading positively- or negatively-framed messages. The insertion of the source credibility factor affects the nature of the relationship between message framing and intention. There is a possibility that target audiences who have been familiar with breastfeeding issues are attracted by the message provided since the message was presented by an expert. This situation is in accord with ELM’s suggestion that under low elaboration condition, high source credibility is more effective than low source credibility in persuading an individual to do something. Therefore, it is possible that participants who were exposed to a positively-framed message with a highly credible source will have higher intention than other participants who read other framing and credibility combinations.
6.2 Research Objective 2: The Relationships among Perceived Value, Attitudes, PBC, Subjective Norms and Intention

In Research Objective One, the effect of message framing and its interaction with source credibility was tested with respect to behavioural intention and its antecedents (perceived value, attitudes and PBC). While several studies have demonstrated significant effects of perceived value, attitudes, PBC and subjective norms on behavioural intention (Ajzen & Driver, 1992; Alam & Sayuti, 2011; Zeithaml, 1988), no study has addressed the relationships among these constructs comprehensively. This section discusses the relationships among these constructs as proposed by Hypotheses 9, 10, 11, 12, 13, 14 and 15. The investigation of these hypotheses had several important outcomes that warrant further discussion.

6.2.1 The Effect of Perceived Value on Attitudes (Hypothesis 9)

This study proposed that the perceived value of exclusive breastfeeding has a significant effect on attitudes. The Hypothesis testing indicates that women’s attitude toward providing six months exclusive breastfeeding is significantly influenced by perceived value (t = 3.386, p < 0.01) in support of Hypothesis 9. In addition, this study also found a positive relationship between these constructs. Hence, the higher the perceived value of exclusive breastfeeding, the more positive the attitude.

The finding of a significant effect of perceived value on attitudes supports several previous studies in the area of foodservice (Kwun, 2011), retailing (Ruiz-Molina & Gil-Saura, 2008; Swait & Sweeney, 2000), management information systems (Tzeng, 2011) and mobile data service (Yang & Jolly, 2009). In the social marketing context, this finding supports the study by Zainuddin et al. (2011), who found that the value perceived about a particular behaviour will alter their attitude toward that behaviour. Therefore, by having a high perceived value, an individual would also have a positive attitude, which leads to the “continuity” of performing behaviours.

In the context of six months exclusive breastfeeding, the concept of “continuity” is important. When a woman stops breastfeeding, the process of re-lactation – building a breast milk supply that has diminished or ceased after a substantial period of time of not breastfeeding (North Central District Health Department, 2012) - is not simple and sometimes may not work. Hence, it is essential for the mother to continuously provide breastfeeding for at least six months.
As used here, an attitude is an enduring pattern of evaluative responses towards a person, object, or issue (Colman, 2006) or a person’s overall evaluation of adopting the behaviour in question (Ajzen, 1991). In many cases, women may plan to have another baby. Assuming they breastfeed their previous child, “an enduring pattern” implies that they would like to provide exclusive breastfeeding for the next baby. Hence, it is important to generate the perception of the high value of breastfeeding which can maintain their positive attitudes toward providing six months exclusive breastfeeding.

This study finding implies that to have a positive attitude toward a particular behaviour, especially exclusive breastfeeding, an individual needs to have a positive value perception about the behaviour proposed. The value perceived by individuals would be a basis for them in the formation of attitudes. Specifically, a perception of the greater value of the behaviour serves a standard to develop and maintain attitudes.

6.2.2 The Effect of Perceived Value on Intention (Hypothesis 10)

While value perception relates to monetary benefits in the area of traditional commercial marketing, social marketing emphasizes value as an inducement to carry out a desirable behaviour. As well as in commercial marketing, the construct of perceived value also plays an essential role in predicting an individual’s intention. This study proposed that women’s perceived value of exclusive breastfeeding significantly influences the intention to provide exclusive breastfeeding for six months. Hypothesis testing confirmed that perceived value has a significant effect on intention ($t = 1.991, p< 0.05$) which supports Hypothesis 10. Particularly, the PLS modelling provides evidence of a positive relationship between these constructs, which means the higher women’s perception toward the value of exclusive breastfeeding, the higher their intention to exclusively breastfeed.

The significant effect of perceived value on intention provides support for previous studies which also found that individuals’ perception of value significantly affected their intention. For example, studies by Chen and Chen (2010) regarding tourists’ intention to revisit Taiwan, Caruana and Ewing (2010) on South Africans’ and Australians’ intention to engage in online transactions, Shaharudin et al. (2010) on the intention of Kedah’s people to consume organic food, Jen et al. (2011) on passengers’ behavioural intentions and Chen et al. (2009) on individuals’ intention to download music in a peer-to-peer environment strongly support the notion of a relationship between value and intention.
The findings of this study are similar to those of Borland et al. (2009), Klosky et al. (2007), and Zbikowski et al. (2002) in the area of health behaviour who found that individuals’ perception of smoking’s value significantly influenced their intention to smoke. Hence, if an individual perceived a lower value of smoking, their intention to smoke was also lower. As well as with the smoking behaviour studies, the significant effect of women’s value perception of breastfeeding influences their intention to breastfeed. In the situation that women think that the benefits of engaging in breastfeeding relative to the effort and other costs are great enough, they will have a greater intention to breastfeed.

Since women’s perception of the value of exclusive breastfeeding significantly influences the intention to exclusively breastfeed, social marketers should be able to create programmes that reinforce the high value of exclusive breastfeeding. Based on the nature of perceived value, that is the gap between what is given and what benefits are received, there are at least three ways that social marketers and health practitioners can influence perceived value. First, social marketers can initialize the perception that providing breast milk exclusively for the duration of six months will give more benefits not only to the infants but also to the mothers. Second, perceived value can be enhanced by reducing the perception that great effort needs to be invested in order to perform the desired behaviour. Thus, in the breastfeeding case, social marketers could create a programme emphasizing that providing breastfeeding is simple. The third means is to tie the previous two points together by presenting the argument that although there is some level of effort needed, providing six months exclusive breastfeeding is easy, natural, and that the adoption of this behaviour will also give many benefits to both mother and baby.

6.2.3 The Effects of Attitudes on Intention (Hypothesis 11)

Peoples’ attitudes have been recognized as robust predictors of intention, as suggested by TPB (Ajzen, 1991). This study found that women’s attitudes towards exclusive breastfeeding significantly influenced their intention (t = 8.847, p < 0.01). Furthermore, a positive path coefficient was found in this relationship. This positive coefficient means those women who have a more favourable attitude toward providing exclusive breastfeeding are more likely to form the intention to provide breast milk exclusively to their infants.

Compared to other predictors of intention included in this study, attitudes have the greatest effect on intention. This finding agrees with several previous studies, such as Alam and Sayuti (2011), Arvola et al. (2008), Chen (2007) and Michaelidou and Hassan (2008). In breastfeeding behaviour studies, the significant effect of attitudes on behavioural intention
validates the result of previous studies such by Bai et al. (2011), Giles et al. (2010), Parkinson et al. (2011) and Wambach (1997), who all found a significant effect of attitude on intention to provide breastfeeding.

Scholars claim that attitudes can be changed. Giving trustworthy information via promotion is one of the ways to change an individual’s attitude. An intervention (message) can be given which makes the target audience aware of gaps in their own knowledge and offers them a means to fill those gaps in order to ensure the enhanced of well-being both mother and child. While this study found that there is an essential effect of promotion on individual’s attitude, social marketers should remember that promotion is a small piece of social marketing campaign. To be successful, social marketers and health practitioners should find other social marketing components to be integrated with the promotion.

As also found by this study, the value perception of a particular behaviour will affect an individual’s attitude. Therefore, a positive attitude toward a particular behaviour can be gained in a situation where people perceive a behaviour to have high value. To change women’s attitudes toward breastfeeding behaviour which is then expected to influence their intention to breastfeed, social marketers should be able to present exclusive breastfeeding as a valued behaviour.

6.2.4 The Effect of PBC on Behavioural Intention (Hypothesis 12)

As an extension of the Theory of Reasoned Action (TRA), the Theory of Planned Behaviour (TPB) adds perceived behavioural control (PBC) as a predictor of intention and actual behaviour. Although several studies have found that PBC has a significant effect on intention (Alam & Sayuti, 2011; George, 2004; Pawlak et al., 2009), this study found that women’s PBC does not have a significant effect on their intention to breastfeed exclusively (t = 0.228, p >0.05), thus not supporting Hypothesis 12.

The finding of a non-significant relationship between PBC and intention implies that without having a perception whether or not they might provide six months exclusive breastfeeding, it is still possible for women to have an intention to exclusively breastfeed. This non-significant relationship is possibly because women already had enough information about breastfeeding. By having good information and sufficient knowledge, there is a possibility for an individual to have a high level of intention to carry out a particular behaviour without considering their ability and capability to perform that behaviour. Thus, although persuasive communication
intervention (i.e. message framing and source credibility) has a significant effect on PBC, it does not really attribute to influencing intention through the strengthening of women’s PBC.

Another possibility to explain the non-significant effect of PBC on intention is the adequacy of PBC construct in predicting behavioural intention. Originally, Ajzen (1991) argued that the PBC was synonymous with self-efficacy. However, several studies have empirically distinguished a difference between self-efficacy and PBC. In predicting behavioural intention, the concept of PBC was reflective of the extent to which people recognize their behaviour to be within their control. Self-efficacy was described as the degree to which an individual perceived that the desirable behaviour was easy or difficult to do (Povey et al., 2000). Hence, in any future study of breastfeeding behaviour, both the self-efficacy and PBC construct should be integrated in TPB model to estimate intention.

The insignificant effect of PBC on behavioural intention does not lead to the assumption that PBC is not an important variable in behavioural change in the domain of breastfeeding behaviour. The TPB framework (Ajzen, 1991) explains that PBC is likely to be a robust predictor of actual behaviour. However, since this study did not measure actual behaviour, the role of PBC in predicting actual breastfeeding behaviour should be considered a limitation. To get the more comprehensive finding, future study should also integrate the measure of actual behaviour.

6.2.5 The Effect of Subjective Norms on Perceived Value, Attitudes and Intention (Hypotheses 13, 14 and 15)

Based on one of the tenets of TPB (Ajzen, 1991), subjective norms are one of the essential predictors of behavioural intention. While the effect of subjective norms on intention has been acknowledged in much of the literature, few studies have investigated its effect on individuals’ perceived values and attitudes.

This study tested the effect of subjective norms on women’s perceived value of exclusive breastfeeding and found a significant relationship between these constructs (t = 3.051, p < 0.01) supporting Hypothesis 13. In addition, this study indicates that subjective norms have a positive effect on perceived value. It denotes that the higher an individual’s perceptions of social pressure from other people, the higher the value they place on exclusive breastfeeding.

The significant relationship between subjective norms and perceived value has been supported by few studies. For example, Cheng et al. (2011) in the study of online business and Turel et al. (2007) in the telecommunication industry have confirmed this linkage. However, previous
research has not specified the source of pressure perceived by people. Since this study defined the construct of subjective norms as the participants’ perception of the pressure from husband/partner, mother and friend this finding extends previous studies. This study also contributes to the literature by authenticating the significant role of husband/partner, mother and friend in the perceived value of exclusive breastfeeding.

Similar to the effect on perceived value, this study also found a significant effect of subjective norms on women’s attitude to provide exclusive breastfeeding, as proposed by Hypothesis 14. The path coefficient indicates a positive relationship between these variables. Hence, it can be interpreted that women will have positive attitudes under conditions of high subjective norms.

This study also reinforces the findings of previous studies; for example, Duckett et al. (1998), Gotschi et al. (2009), Kim et al. (2009) and Tarkiainen and Sundqvist (2005) which also found that individuals’ perception of pressure from other people affects their attitudes towards a particular behaviour. This finding implies that in terms of having the intention to provide exclusive breastfeeding, a woman is likely to consider the closest person surrounding to them (husband, mother and peers).

The concept of collectivism and individualism proposed by Hofstede (2001) can explain this finding. As an Asian country, Indonesian culture tends to be more collective than individual (Geert Hofstede, 2012). In a collectivist culture, the feeling of involvement, responsibility and loyalty toward other people live is relatively strong. Hence, social and subjective norms have essential roles in shaping individual’s attitude. Because of the important function of subjective norms in influencing individual’s attitude, especially in the country where is the dimension of collectivism is relatively high, social marketers should prepare a promotional message emphasizing collective value for the target audience.

Although documented as having a significant effect on attitudes in the literature, this study did not find a significant effect of subjective norms on behavioural intention (t = 0.533, p > 0.05). Hypothesis 15 was thereby not supported. This insignificant effect means the women’s intentions to breastfeed exclusively is not influenced by the social pressure coming from husband, mother or friends. To explain the non-significant effect of subjective norms on behavioural intention, there is a need to look back on the concept of subjective norms. As stated earlier, the concept of subjective norms used in this study adopted the concept of subjective norms proposed by TPB (Ajzen, 1991), which explained that a subjective norm is
individual’s perception of the pressure from other people about whether to carry out a desired behaviour.

In breastfeeding studies, social support is regarded as one of the essential factors in influencing women to breastfeed. The concepts of social support and subjective norms are different in that the concept of subjective norms is more narrowly defined than social support (Povey et al., 2000). Therefore, to get a holistic understanding of the effect of external factors, the role of subjective norms might be examined along with social support. Furthermore, another possible explanation is the indirect effect of subjective norms on intention. In this study, subjective norms have a significant effect on perceived value and attitude, and these variables have significant effects on intention. Therefore, it is possible that subjective norms should affect perceived value and attitude first, before affecting behavioural intention.

6.3 Research Objective 3: The Mediating Effect of the Attitudes, Perceived Value and PBC on the Relationship between Message Framing and Intention, and on the Relationship between the Interaction of Message Framing with Source Credibility and Intention (Hypotheses 16a, 16b, 16c, 17a, 17b and 17c)

In the proposed model, message framing was expected to have a significant effect on perceived value, attitudes and PBC. In addition, these three variables were also proposed to have a significant effect on behavioural intention. While, it was possible that perceived value, attitudes and PBC play a mediating role in this relationship, testing found that these three variables do not do so; meaning Hypotheses 16a, 16b and 16c were not supported.

In this study, perceived value and attitude do not have a mediating effect on the relationship between message framing and intention, since message framing does not significantly influence either of these constructs. Kenny and Baron (1986) contended that to have a mediating effect, predictor variables (e.g. message framing) must have a significant effect on the mediator (e.g. perceived value or attitudes). While message framing does not have a significant effect on either perceived value or attitudes, this manipulation intervention has a significant effect on PBC. However, given that PBC does not significantly influence intention, it also does not have any mediating effect.

While perceived value and attitude do not have a significant mediating effect in the relationship between message framing and intention, these variables do significantly mediate the interaction effect of message framing and source credibility on intention (Hypotheses 17a
and 17b were supported). This significant mediating effect implies that the promotional strategy (i.e. the combination of message framing and source credibility) will not only directly influence women’s intention to exclusively breastfeed, but that it also has an indirect effect through individual’s perceived value and attitudes.

Relating to the mediating effect of PBC, there should be further investigations of this effect. Main effect analysis showed that message framing has a significant effect on PBC. Similar to the main effect of message framing on intention, empirical findings also indicated a significant interaction effect between message framing and source credibility on PBC. However, although this persuasive communication strategy significantly influenced PBC, this study found that PBC is not a robust predictor of intention. Following the tenets of TPB, PBC should also have an effect on actual behaviour. However, since this study did not measure the actual behaviour, the mediating effect of PBC in the relationship between persuasive communication strategy and actual behaviour should be explored deeper by the further study.

6.4 Theoretical and Empirical Contributions

For academic perspective, this study provides both theoretical and empirical contributions. This following section will discuss the contribution in the academic perspective.

The most significant theoretical contribution of this research is extension of the body of knowledge by providing a comprehensive model in explaining the effect of persuasive communication (message framing and source credibility) on behavioural intention in the area of social marketing study. The conceptual model tested by this study is comprehensive because this model integrates three robust social marketing theories namely Prospect Theory, ELM and TPB. In addition, to make this study more comprehensive, the construct of perceived value was also included in the research model. Because of its comprehensiveness, this model can explain both direct and indirect effect of persuasive communication on behavioural intention as well as the effect of perceived value as an important social marketing construct. In addition, since this study used TPB as a research framework, the notion of social norms is also explained by the research model.

The second theoretical contribution offered by this study is about the validation of existing theories. Since this study found a positively-framed message coming from highly credible source is the most effective combination in influencing behavioural intention and its antecedents (perceived value, attitudes, and PBC), this study supports Prospect Theory and ELM. The combination of these theories suggested that a positively-framed message with a
high credibility source is an effective combination in promoting non-risky behaviour (Olson & Zanna, 1993). In addition, the finding of this study also contributes to the literature by validating social marketing theory suggesting that a social marketing program should be target market oriented (Kotler & Lee, 2008). The message provided by social marketers should be framed based on the type of behaviour promoted (social product) as well the target audiences.

Apart from theoretical contribution, this study also provides several empirical contributions. Since this study did not find a significant effect of message framing on behavioural intention, this study validates previous studies that stated message framing does not have a significant effect on behavioural intention and its antecedents such as Abhyankar et al. (2008), Jones et al. (2004) and O’Connor et al. (2005), who found that message framing does not have a significant effect on behavioural intention, attitudes or PBC. Furthermore, empirically this study indicates that there is a significant interaction effect between message framing and source credibility on behavioural intention and its antecedents. This finding support previous study who also found a significant interaction effect between message framing and source credibility.

Other important empirical contribution of this study is the authentication of previous social marketing studies’ findings that noted the significant relationship among behavioural intention, attitudes, perceived value, PBC and subjective norms. Particularly, this study found that perceived value and attitudes are vigorous predictors of behavioural intention. This study supports several previous studies in the domain of social marketing which found a significant effect of perceived value (Borland et al., 2009; Jen et al., 2011; Zbikowski et al., 2002) and attitudes (Bai et al., 2011; Giles et al., 2010; Wambach, 1997) on intention. Furthermore, the outcomes of statistical testing showed perceived value and subjective norms to be strong predictors of individual’s attitudes toward a desirable behaviour. This supports prior studies which proposed the relationships between perceived value and attitude (Zainuddin et al., 2011) and between subjective norms and attitudes (Duckett et al., 1998; Gotschi et al., 2009; Kim et al., 2009; Tarkiainen & Sundqvist, 2005). It supports the findings of previous studies (Gallarza & Gil Saura, 2006; Kuo et al., 2009; Petrick & Backman, 2002), which found that perceived value is a robust antecedent of behavioural intention.

A further empirical contribution relates to the statistical method used. To date, the current research is the first which attempts to investigate the effect of message framing and source credibility on behavioural intention and its antecedents using Variance based Structural
Equation Modelling (SEM). Analysis of variance (ANOVA), multivariate analysis of variance (MANOVA) and multiple regression have been the common statistical methods used by academic researchers (Arora, 2000; Arora & Arora, 2004; Arora et al., 2006; Banks et al., 1995; Detweiler et al., 1999; Jones et al., 2003; Jones et al., 2004; Zhang & Buda, 1999). Streukens et.al (2010) suggest that Structural Equation Modelling (SEM) is a potent tool for improving experimental research. Therefore, since this study employed the Partial Least Squares technique – variance based SEM – to test the relationship between constructs; this study was able to control measurement error and supported enhanced testing of nomological webs among various dependent constructs.

6.5 Practical Implications

From a practical perspective, the findings of the current research have several important implications. First and foremost, this research indicates that the manipulation of message framing alone does not have any significant effect on women’s intention to exclusively breastfeed or its antecedents. Thus, in promoting exclusive breastfeeding social marketers cannot rely only on the manipulation of framing. However, the manipulation of framing works significantly by interaction with source credibility. This study showed that positively-framed messages endorsed by high credibility sources have greater influence on women’s intention to breastfeed and its antecedents such as the perceived value of exclusive breastfeeding, attitudes towards exclusive breastfeeding and PBC. To enhance the target audience’s perception about the high credibility of source, social marketers can use the endorser who is relevant with the behaviour promoted. The endorser used can be a spokesperson or an organization as far as relevant with the behaviour promoted.

For example, in promoting breastfeeding behaviour, a nutritionist or a paediatrician can be the effective endorser to create highly credible source. This suggestion is in accordance to Ohanian’s (1990) suggestion stated that highly credible spokesperson must have a relevant expertise and trusted. With respect to the finding of this study, having an appropriate message combination, social marketers and health practitioners would be able to promote exclusive breastfeeding effectively. For social marketers and health practitioners who have already designed the promotional message emphasized on positively-framed message and high credibility source, the existing promotion can be enhanced by giving concern to other social marketing components such as more target market oriented and the support from community.

Second, this study shows that attitudes and perceived value are predictors of women’s intention to breastfeed exclusively. In addition, it was found that perceived value and
subjective norms are antecedents of attitudes toward exclusive breastfeeding. These findings suggest that in affecting an individual’s intention in general and intention to provide exclusive breastfeeding in particular, social marketers should be able to create ads which can convince the target audience that the behaviour recommended has a range of benefits which are worthwhile. In other words, there was high value in carrying out the behaviour offered. Furthermore, by perceiving the behaviour as having a higher value, an individual would have a positive evaluation of the behaviour proposed, which would lead to a positive attitude. Given that pressure from other people, especially husbands, mothers and friends, is recognized as expressing a subjective norm which has an important role in influencing an individual’s attitude, social marketers should also educate people in the target audience with regard to the importance of the proposed behaviour. In sum, this study implied that in promoting six months exclusive breastfeeding, social marketers and health practitioners cannot solely consider behavioural intention. They also need to give concern to the predictors of behavioural intention such as perceived behavioural control, attitudes and subjective norms.

The third practical contribution of this study is its explanation of how perceived value and attitudes mediated the effect of persuasive communication on women intention to provide six months exclusive breastfeeding. Therefore, in the effort to promote a new behaviour, especially six months of exclusive breastfeeding, the health message promotion created by social marketers and health practitioners should also be able to affect perceived value and attitudes since the effectiveness of promotional message which affects perceived value and attitudes should ultimately lead to a change in behavioural intention. Furthermore, since attitudes is an enduring pattern of the individual’s overall evaluation, to change individual’s behaviour, social marketers and health practitioners should create a continuous social marketing programme.

The last practical contribution of this study is generation of the visual “road map” of the effect of persuasive communication on women’s intentions to breastfeed exclusively. This visual would be important for social marketers in learning the effect of message framing and source credibility in persuasive communication on behavioural intention and its antecedents. By recognizing the significant paths in the relationships among the constructs, social marketers could design effective health interventions. Figure 6-1 shows the visual “road map” created by this study.
One of the obligations of any study is to identify its limitations. Although this study makes a contribution to the body of the social marketing literature, it has several limitations that need to be acknowledged.

The first relates to the sample. Although this study obtained a relatively large sample (n = 279), respondents were pregnant mothers recruited during a brief time span from several hospitals, maternity clinics and breastfeeding workshops in Malang, Indonesia. Furthermore, since a convenience sampling approach was used to recruit the participants, the sample does not represent the population of pregnant Indonesians and the findings thus may not be generalized to either non-pregnant mothers or pregnant women in other places.

The second limitation is about the self-administered questionnaire used in the data collection process. The lack of researcher control in such a situation may lead to misinterpretation by participants, which could create validity problems. Moreover, the self-administered method
may also present limitations since participants may sometimes give expected answers (social response bias) or patterned responses to questions. Although the problem of common method bias cannot totally be avoided, steps were taken to reduce the effect. To handle common method bias, Podsakoff et al. (2003)’s suggestions were followed. The first of these was to protect the anonymity of respondents and assure them that there were no right or wrong answers. The second step involved improving scale items. This was done by keeping the questions simple, concise and specific. The strategy of avoiding double negative questions and double-barrelled questions (combining two or more issues in a single question) was also utilised in the development of the questionnaire.

Third, this study was focused on the factors influencing the intention to provide exclusive breastfeeding. However, this study did not measure the relationship between behavioural intention and the actual behaviour. This limitation is common to all studies that utilise intention as a dependant construct.

Fourth, since the aim of this study is emphasized to measure the difference effect of framing message, this study did not measure participant’s behaviour before the intervention. Especially, this study did not measure whether the participants have been exposed by other social marketing campaign.

The last limitation relates to the translation of the questionnaire and manipulation materials used; the questionnaire and experimental stimuli were designed in English and translated into Bahasa Indonesia. Ervin and Bower (1952) claim that distortion may arise from translation, since there are differences in the meanings of words, syntactical contexts and the cultural context of the readers or hearers. This study has attempted to mitigate this possible problem by requesting six Bahasa Indonesia native speakers who have a high competency in English to translate and back translate the questionnaire and manipulation materials.

6.7 Directions for Future Study

Several directions for future research can be suggested as a result of this study.

First, the limitation with regard to data collection provides opportunities for future study. De Wulf et al. (2001) suggested a need to certify research models in one setting with examinations in other settings. Hence, it is essential to investigate further whether the theoretical relationships identified in this study, especially the effect of message framing and its interaction with source credibility, can be generalized to all women, both pregnant and non-pregnant, in other regions or countries.
Second, future research could replicate the model proposed and apply it to predict other behaviours. The replication of this study in respect of other behaviours would enhance the understanding of the effect of interaction in persuasive communication, especially between message framing and source credibility, on behavioural change.

Third, future studies may extend the current study and investigate the relationship that may exist among message framing, source credibility, the interaction between message framing and source credibility, attitudes, perceived value, PBC, subjective norms and intention apart from the linkages identified in this study. For example, the direct main effect of source credibility on behavioural intention and other socio-cognitive variables, and the effect of PBC on attitude as well as its indirect effect on intention, would be worthy of exploration.

Fourth, since breastfeeding behaviour not only provides benefits for the mother, future study can address the multiple sources of mother’s motivations for providing breastfeeding. Specifically, future study might explore whether a mother was motivated by self-care or care for infants.

Fifth, since social marketing promotion goes beyond advertising, there is a need for further study to test the effect of persuasive communication (message framing and source credibility) with other medium. For this study, the persuasive communication manipulation was written in a newsletter format. Future study might use other media such as verbal communication, radio and television advertising.

Finally, future study should also include measurement of the actual practice of exclusive breastfeeding for six months as the outcome of PBC and intention to breastfeed exclusively. By including that measurement, the model would be more comprehensively validated.
References


Goodhue, D., Lewis, W., & Thompson, R. (2006). *PLS, small sample size, and statistical power in MIS research*.


PAHO. (2004). *The Importance of Exclusively Breastfeeding for the First Six Months*


BPS and Macro International.


APPENDICES

Appendix 1 – Information Sheet

A. English Version

Lincoln University

Lincoln, 04 October 2010

Dear Madam

I am a PhD candidate in the Faculty of Commerce at Lincoln University, New Zealand. The message stimulus and questionnaire attached are part of my dissertation research project, designed to study the effect of message framing and source credibility on intention to give exclusive breastfeeding.

I invite you to read the message stimulus and respond the questionnaire enclosed. Your participation is voluntary. Your participation in this project will involve reading an article and answering a questionnaire. If you choose to complete the survey, it will be understood that you have consented to participate in the research project and to publication of the results of the research project.

The questionnaire is anonymous. The results of this study will be published as part of my PhD thesis and will be made available to social marketers and health practitioners. However, those publications and results for the practitioners will not lead to participant identification. In order to be eligible to participate in this research, you must be a pregnant women and 18 years or older so that you full understand the information about the research and the questions. Please tell the researcher if you are not. Reading the message stimulus and completing the questionnaire should not require more than 20 minutes of your time. Please note that we are not testing you! We are testing the impact of message framing and source credibility on individual intention to give exclusive breastfeeding. In terms of doing this experiment, you might stop at any time you want.

Please hand it back to the researcher when you have completed it. Upon completion of the experiment you will be given a small souvenir as compensation. If you have any questions or concerns, please do not hesitate to contact me at +62-811-555-654321 or email me at ananda.hussein@lincolnuni.ac.nz. Otherwise, you might contact my research supervisors, Dr. Valerie Manna : Valerie.manna@lincoln.ac.nz and Dr David Cohen:cohendi@lincoln.ac.nz.

As the information that you provide is very important for the success of this research, I request you to respond frankly and honestly. Thank you for your time and cooperation; I greatly appreciate your help in furthering this research endeavour.

Best Regards,
Ananda Sabil Hussein
PhD Candidate

This research project has been reviewed and approved by the Lincoln University Human Ethics Committee.
B. Bahasa Indonesia Version

Lincoln, 2010

Undangan Untuk Mengikuti Survei

YTH Para Ibu,

Saya adalah kandidat Doktor pada Faculty of Commerce – Lincoln University Selandia Baru. Pesan layanan masyarakat dan kuisiner terlampir adalah bagian dari disertasi penelitian saya, yang didasari untuk menguji efek dari frame pesan dan kredibilitas sumber pada niat untuk membeli A5I ekslusif.


Silakan kembali lembar jawaban kepada peneliti jika anda sudah selesai mengisi kana. Setelah anda kembali, peneliti akan menguji anda akan menerima surat. Jika anda memerlukan pertanyaan silakan hubungi saya pada 081 553 654 321 atau email saya: ananda.hussein@lincoln.ac.nz. Anda juga dapat menghubungi pembimbing penelitian saya Dr. Valerie Mann : Valerie.mann@lincoln.ac.nz dan Dr. David Cohen : david.cohen@Lincoln.ac.nz.

Terima kasih untuk waktu dan kerja sama anda pada penelitian ini. Mohon dijawab secara jujur dan jelas. Saya sangat menghargai bantuan anda.

Salam,

Ananda Sabit Hussein
Kandidat Doktor
Appendix 2 – Consent Form

A. English Version

CONSENT FORM

Name of Project
Massage Framing, Source Credibility and Behavioural Intention: An empirical investigation of exclusive breastfeeding behaviour in Indonesia.

I have read and understood the description of the above-named project. On this basis I agree to participate as a subject in the project, and I consent to publication of the results of the project with the understanding that anonymity will be preserved. I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided.

Signature:
B. Bahasa Indonesia Version

LEMBAR PERSETUJUAN MENGIKUTI SURVEY

Nama Proyek:

Message Framing, Source Credibility and Behavioural Intention: An empirical investigation of exclusive breastfeeding in Indonesia (Framing Pesan, Kualitas Sumber dan Niat: Sebuah investigasi empiris pada Exclusive Breastfeeding Behaviour di Indonesia)

Saya yang bertanda tangan dibawah ini, memahami secara penuh penjelasan dari proyek penelitian ini. Oleh karena itu, secara sadar dan tanpa tekanan saya bersedia berpartisipasi dalam proyek penelitian ini dan saya menyetujui untuk dipublikasikannya hasil penelitian ini dimana identitas partisipan bersifat anonyim. Lebih lanjut saya juga mengerti bahwa dalam proyek penelitian ini saya berhak untuk menarik informasi keterangannya yang saya benarkan.

Tanda tangan:
Appendix 3 – Stimulus Materials

A. English Version

Positively framed message with high credibility source

**Breast Milk for The Bright Future**

Babies are born to breastfeed. Ideally, exclusive breastfeeding is the only way to give complete nutrition to infants up to six months of age. World Health Organization defined exclusive breastfeeding as a breastfeeding practice whereby infants received only breast milk from his/her mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines when needed.

Several researches reported that giving exclusive breastfeeding for the first six months—with continued breastfeeding for the first year provide several benefits both for baby and mother:

For baby:
- **Potentially save** 1.3 million lives every year
- **Containing** all the vitamins and minerals needed by a young baby
- **Reducing** the level of antibodies
- **Build** a health digestion system

For mother:
- **Spacing** pregnancies
- **Decreasing** the risk of breast cancer
- **Reducing** the chance to get ovarian cancers
- **Economically cheaper** than bottle feeding

As can be seen, if six months of exclusive breastfeeding is provided, a baby will have more chance of being healthy and strong and the mother will have more chance of avoiding many health problems. Six months exclusive breastfeeding provides many health benefits compare with providing bottle-feeding or other solid and liquid food.

By

Ana Sofiyanti
President Indonesian Breastfeeding Mother Club
Breast Milk for The Bright Future

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By

Ana Sofiyanti
Undergraduate student Faculty of Economic
Jaya Menggala University Jakarta
Breast Milk for Bright Future

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Several researches reported that not giving exclusive breastfeeding for the first six months with continued breastfeeding for the first year could potentially result several disadvantages for both baby and mother.

For baby:
- Potentially lead into 1.3 million deaths every year
- Less chance to receive complete nutrition, vitamins and minerals needed by a young baby
- Less effective antibodies
- Increasing the chance of getting infection
- Weakening the digestive system

For mother:
- Less chance to space pregnancies
- Having more potency to get ovarian cancer
- More likely to get breast cancer
- Economically more expensive than breastfeeding

As can be seen, if six months of exclusive breastfeeding is not provided, baby will have less chance of being healthy and strong; mother will have less ability to avoid many health problems. Providing bottle feeding or other solid and liquid food potentially will not provide as many benefits as six months exclusive breastfeeding.

by
Ana Sofiyanti
Undergraduate Student Faculty of Economics
Jaya Manggala University Jakarta
Breast Milk for Bright Future

Babies are born to breastfeed. Ideally exclusive breastfeeding is the only way to give complete nutrition to infants up to six months of age. World Health Organization defined exclusive breast-feeding as a breastfeeding practice whereby infants received only breast milk from his/her mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines when needed.

Several researches reported that not giving exclusive breastfeeding for the first six months with continued breastfeeding for the first year could potentially result several disadvantages for both baby and mother.

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by
Ana Sofiyanti
President of Indonesian Breastfeeding Mother Club
**ASI UNTUK MASA DEPAN**

Setiap bayi dilahirkan untuk disusui. Ideanya, ASI ekslusif adalah satu-satunya cara untuk memberikan nutrisi secara lengkap kepada bayi hingga berumur enam bulan. Badan kesehatan dunia (WHO) mendefinisikan ASI ekslusif sebagai suatu cara untuk memberikan ASI dimana bayi hanya menerima ASI dari ibu mereka atau ibu susu atau ASI perah tanpa adanya makanan tambahan lain dengan pengecualian cairan tetes, sirup yang mengandung vitamin dan mineral dan obat-obatan ketika dibutuhkan.

Beberapa penelitian menunjukkan bahwa memberikan ASI ekslusif selama enam bulan pertama dengan dilanjutkan ASI hingga berumur satu tahun memberikan banyak keuntungan:

**Bagi bayi:**
- Dapat **menyelamatkan** kematian 1.3 juta bayi tiap tahunnya
- **Mengandung** semua vitamin dan mineral yang dibutuhkan bayi
- **Meningkatkan** daya tahan tubuh
- **Mengurangi** kemungkinan terkena infeksi
- **Membangun** sistem percemaan yang baik

**Bagi ibu:**
- menjarangkan kehamilan
- menurunkan risiko terkena kanker rahim
- Mengurangi kemungkinan terkena kanker payudara
- Murah/miliki nilai ekonomis yang tinggi

Seperti telah diuraikan, jelas nampak bahwa jika ASI ekslusif diberikan selama enam bulan maka bayi akan memiliki kemungkinan lebih besar untuk hidup sehat dan kuat dan ibu pun akan memiliki kesempatan untuk meng hindari berbagai macam masalah kesehatan. Sehingga dapat dikatakan bahwa ASI ekslusif memberikan lebih banyak keuntungan dibandingkan memberikan susu formula.

*Pesan layanan masyarakat ini ditulis oleh:*

Ana Sofiyanti  
Ketua Indonesian Breastfeeding Mother Club
ASI UNTUK MASA DEPAN

Setiap bayi dilahirkan untuk disusui. Idealnya, ASI eksklusif adalah satu-satunya cara untuk memberikan nutrisi lengkap kepada bayi hingga berumur enam bulan. Badan kesehatan dunia (WHO) mendefinisikan ASI eksklusif sebagai suatu cara pemberian ASI dimana bayi hanya menerima ASI dari ibu mereka atau ibu susu atau ASI perah tanpa adanya makanan tambahan lain dengan pengecualian cairan tetes, sirup yang mengandung vitamin dan mineral dan obat-obatan ketika dibutuhkan.

Beberapa penelitian menunjukkan bahwa tidak memberikan ASI eksklusif selama enam bulan pertama dengan dilanjutkan ASI hingga berumur satu tahun memberikan banyak kerugian:

Bagi bayi:
- berpotensi menyebabkan kematian 1,3 juta jiwa pertahun
- kehilangan peluang untuk mendapatkan vitamin dan mineral secara lengkap yang dibutuhkan bayi
- mengurangi daya tahan tubuh
- memperbesar kemungkinan terkena infeksi
- melemahkan sistem pencernaan

Seperti telah diuraikan, jelas nampak bahwa jika ASI eksklusif tidak diberikan selama enam bulan maka bayi akan memiliki kemungkinan lebih kecil untuk hidup sehat dan kuat dan ibu pun akan memiliki peluang lebih besar untuk terkena berbagai macam masalah kesehatan. Sehingga dapat dikatakan bahwa memberikan susu botol atau makanan padat atau cair selain ASI, berpotensi untuk tidak memberikan banyak keuntungan seperti halnya ASI eksklusif selama enam bulan

Bagi ibu:
- mengurangi kesempatan untuk menjarangkan kehamilan
- berpotensi lebih besar untuk terkena kanker rahim
- berpeluang lebih besar terkena kanker payudara
- Lebih mahal karena harus memberikan makanan tambahan

Pesan layanan masyarakat ini ditulis oleh:
Ana Sofiyanti
Mahasiswa Fakultas Ekonomi
Universitas Jaya Manggala Jakarta
ASI UNTUK MASA DEPAN

Setiap bayi dilahirkan untuk disusui. Idealnya, ASI ekslusif adalah satu-satunya cara untuk memberikan nutrisi secara lengkap kepada bayi hingga berumur enam bulan. Badan kesehatan dunia (WHO) mendefinisikan ASI ekslusif sebagai suatu cara untuk memberikan ASI dimana bayi hanya menerima ASI dari ibu mereka atau ibu susu atau ASI perah tanpa adanya makanan tambahan lain dengan pengecualian cairan tetes, sirup yang mengandung vitamin dan mineral dan obat-obatan ketika dibutuhkan.

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Seperti telah diuraikan, jelas nampak bahwa jika ASI ekslusif diberikan selama enam bulan maka bayi akan memiliki kemungkinan lebih besar untuk hidup sehat dan kuat dan ibu pun akan memiliki kesempatan untuk menghindari berbagai macam masalah kesehatan. Sehingga dapat dikatakan bahwa ASI ekslusif memberikan lebih banyak keuntungan dibandingkan memberikan susu formula.

Pesan layanan masyarakat ini ditulis oleh:

Ana Sofiyanti
Mahasiswa Semester 7 Fakultas Ekonomi
Universitas Jaya Manggala - Jakarta
Negatively framed message with high credibility source

ASI UNTUK MASA DEPAN

Setiap bayi dilahirkan untuk disusui. Ideanya, ASI eksklusif adalah satu-satunya cara untuk memberikan nutrisi lengkap kepada bayi hingga berumur enam bulan. Badan Kesehatan Dunia (WHO) mendefinisikan ASI eksklusif sebagai suatu cara pemberian ASI dimana bayi hanya menerima ASI dari ibu mereka atau ibu susu atau ASI perah tanpa adanya makanan tambahan lain dengan pengecualian cairan tetes, sirup yang mengandung vitamin dan mineral dan obat-obatan ketika dibutuhkan.

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**Bagi bayi:**
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- **mengurangi** daya tahan tubuh
- memperbesar kemungkinan **terkena infeksi**
- **melemahkan** system pencernaan

Seperti telah diuraikan, jelas nampak bahwa jika ASI eksklusif tidak diberikan selama enam bulan maka bayi akan memiliki kemungkinan lebih kecil untuk hidup sehat dan kuat dan ibu pun akan memiliki peluang lebih besar untuk terkena berbagai masalah kesehatan. Sehingga dapat dikatakan bahwa memberikan susu botol atau makanan padat atau cair selain ASI, berpotensi untuk tidak memberikan banyak keuntungan seperti halnya ASI eksklusif selama enam bulan

**Pesan layanan masyarakat ini ditulis oleh:**

 Ana Sofiyanti
 Ketua Indonesian Breastfeeding Mother Club
Thank you for participating in this experimental research. This experimental research will measure the effects of message framing and source credibility on individual’s intention to provide 6 months exclusive breastfeeding. WHO defined exclusive breastfeeding as a breastfeeding practice whereas infants received only breast milk from his/her mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines when needed.

There will be four parts include in this booklet. The first part consists of a message stimuli regarding 6 months exclusive breastfeeding. The second part is about demographic questions. Third part is a manipulation checks and the final part covers questions about, attitude, subjective norms, perceived behavioural control, perceived value and behavioural intention.
**PART 2**
**DEMOGRAPHIC QUESTIONS**

Your age of group :  
- ☐ under 20  
- ☐ 21 - 30  
- ☐ 31 - 40  
- ☐ 41 - 50  
- ☐ over 50  

Your higher education level :  
- ☐ High  
- ☐ diploma degree  
- ☐ Bachelor degree  
- ☐ Master  
- ☐ PhD degree  

Are you working? :  
- ☐ Yes  
- ☐ No  

Number of children :  

Have you breastfed before :  

**PART 3**
**MANIPULATION CHECKS**

**Section 1 (Argument Strength)**
This section measures the perceived arguments strength. It consists of seven semantic-scale questions. Please circle the number based on your perception

“*I think the message provided is...:***

<table>
<thead>
<tr>
<th>Strong</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persuasive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Unpersuasive</td>
</tr>
<tr>
<td>Important</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Unimportant</td>
</tr>
<tr>
<td>Believable</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Unbelievable</td>
</tr>
<tr>
<td>Informative</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Uninformative</td>
</tr>
<tr>
<td>Convincing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Not Convincing</td>
</tr>
<tr>
<td>Good Argument</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Bad Argument</td>
</tr>
</tbody>
</table>
Section 2
Framing Checks
This section measures the tone of message. It consists of a seven semantic-scale question

The tone that the message I just read was

<table>
<thead>
<tr>
<th>Positive</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Negative</th>
</tr>
</thead>
</table>

Section 3
Source Credibility Checks
This section measures the perceived credibility of spokesperson. It consists of six semantic-scale questions. Please circle the number based on your perception

“For me the source of this message is:.....”

<table>
<thead>
<tr>
<th>Trustworthy</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Not trustworthy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Minded</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Not Open Minded</td>
</tr>
<tr>
<td>Good</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Bad</td>
</tr>
<tr>
<td>Expert</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Not Expert</td>
</tr>
<tr>
<td>Experienced</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Not Experienced</td>
</tr>
<tr>
<td>Trained</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Not Trained</td>
</tr>
</tbody>
</table>

PART 4
QUESTIONNAIRES

Section 1
This section is measuring individual’s attitude toward six months exclusive breastfeeding. Please respond to every statement below by giving a circle on the score representing your perception.

“For me giving six months exclusive breastfeeding is...”

<table>
<thead>
<tr>
<th>Unpleasant</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Pleasant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embarrassing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Not Embarrassing</td>
</tr>
<tr>
<td>Unhealthy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Healthy</td>
</tr>
<tr>
<td>Repulsive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Appealing</td>
</tr>
<tr>
<td>Inconvenient</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Convenient</td>
</tr>
<tr>
<td>Unnatural</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Natural</td>
</tr>
</tbody>
</table>
**Section 2**
This section measures a social pressure to perform or not perform six months exclusive breastfeeding. Please respond to every statements below by ticking (✔) on the scale of 1 (strongly disagree) to 7 (strongly agree) which most suitable to you.

<table>
<thead>
<tr>
<th></th>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My husband thinks that I should provide six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>My husband will appreciate if I provide my baby six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>My husband thinks that I am a better mother if I exclusively breastfeed my child</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>My husband expects me to provide six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>My mother thinks that I should provide six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>My mother will appreciate if I provide my baby six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>My mother thinks that I am a better mother if I exclusively breastfeed my child</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>My mother expects me to provide six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>My best friends thinks that I should provide six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>My best friends will appreciate if I provide my baby six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>My best friends thinks that I am a better mother if I exclusively breastfeed my child</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>My best friends expects me to provide six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
### Section 3
This section measures the degree of individual’s capability to perform six months exclusive breastfeeding. Please respond to every statements below by ticking (✔️) on the scale of 1 (strongly disagree) to 7 (strongly agree) which most suitable to you.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I am confident that I could provide my baby six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2 For me, to provide my baby six months exclusive breastfeeding is easy</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3 The decision to provide six months exclusive breastfeeding is in my control</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4 Whether I provide my baby six months exclusive breastfeeding or not is entirely up to me</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5 I feel quite knowledgeable about the way of providing six months exclusive breastfeeding</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

### Section 4
This section measures the consequence of the evaluation between benefits and sacrifices of performing six months exclusive breastfeeding. Please respond to every statements below by ticking (✔️) on the scale of 1 (strongly disagree) to 7 (strongly agree) which most suitable to you.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The benefits of proposed idea of six months exclusive breastfeeding would be worth the sacrifices involved</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2 The proposed idea of six months exclusive breastfeeding is attractive</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3 The proposed idea of six months exclusive breastfeeding is what I have wanted</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
**Section 5**
This section measures individual’s willingness to try and how much their efforts to provide six months exclusive breastfeeding. Please respond to every statements below by ticking (✓) on the scale of 1 (strongly disagree) to 7 (strongly agree) which most suitable to you.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  I expect to provide my baby six months exclusive breastfeeding</td>
<td>1  2  3  4  5  6  7</td>
<td></td>
</tr>
<tr>
<td>2  I want to provide my baby breastfeeding exclusively for six months</td>
<td>1  2  3  4  5  6  7</td>
<td></td>
</tr>
<tr>
<td>3  I intend to provide my baby six months exclusive breastfeeding</td>
<td>1  2  3  4  5  6  7</td>
<td></td>
</tr>
</tbody>
</table>

-= THANK YOU =-
Terima kasih untuk berpartisipasi dalam penelitian ini. Penelitian ini akan mengukur pengaruh dari bentuk pesan dan kredibilitas sumber terhadap niat individu untuk memberikan ASI ekslusif selama enam bulan. WHO mendefinisikan ASI ekslusif sebagai praktik pemberian ASI dimana bayi hanya mendapatkan ASI dari ibunya, ibu susu dan ASI perah. Dimana bayi tidak mendapatkan makanan tambahan dalam bentuk cairan atau padat dengan pengecualian dari obat tetes atau sirup yang mengandung vitamin, mineral atau obat-obatan ketika dibutuhkan.

BAGIAN 2
DEMOGRAFI

Umur : ☐ <20 ☐ 21 - 30 ☐ 31 - 40 ☐ 41 - 50 ☐ over 50

Pendidikan terakhir : ☐ <SMA ☐ Diploma ☐ Sarjana (S1) ☐ Magister (S2) ☐ Doktoral(S3)

Anda bekerja? : ☐ Ya ☐ Tidak

Jumlah anak :

Pernahkan anda menyusui secara ekslusif

sebelumnya?

BAGIAN 3
PENGUJIAN STIMULUS

Section 1 (Kekuatan Argumen)
Bagian ini mengukur kekuatan dari argument dari artikel yang disediakan. Terdiri dari 7 pertanyaan semantic. Silakan lingkari angka berdasarkan persepsi anda

"Saya rasa pesan yang di sajikan.."

<table>
<thead>
<tr>
<th>Berargumen lemah</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Berargumen kuat</th>
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</thead>
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<td>7</td>
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<td>Penting</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Dapat dipercaya</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Informatif</td>
</tr>
<tr>
<td>Tidak meyakinkan</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Meyakinkan</td>
</tr>
<tr>
<td>Argumen yang buruk</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Argumen yang baik</td>
</tr>
</tbody>
</table>
Section 2
Pengujian Frame
Bagian ini menguji nuansa dari pesan. Terdiri dari sebuah pertanyaan dengan skala semantik

“Nuansa dari artikel yang saya baca…..”

<table>
<thead>
<tr>
<th>Negative</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Positive</th>
</tr>
</thead>
</table>

Section 3
Pengujian Kedibilitas Sumber
Bagian ini mengukur persepsi anda tentang kredibilitas dari penulis artikel. Terdiri enam pertanyaan skala semantik. Silakan anda lingkari nomer berdasarkan persepsi anda

“Bagi saya penulis artikel tersebut…..”

<table>
<thead>
<tr>
<th>Tidak dapat dipercaya</th>
<th>1</th>
<th>2</th>
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<th>6</th>
<th>7</th>
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</thead>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Berpikiran Luas</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Baik</td>
</tr>
<tr>
<td>Tidak ahli</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Ahli</td>
</tr>
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<td>Tidak berpengalaman</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Berpengalaman</td>
</tr>
<tr>
<td>Tidak terlatih</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Terlatih</td>
</tr>
</tbody>
</table>

BAGIAN 4
KUISIONER
Section 1
Section ini mengukur sikap individu terhadap pemberian enam bulan ASI ekslusif. Silakan jawab tiap-tiap pertanyaan dibawah ini dengan memberikan lingkaran pada angka yang mewakili persepsi anda

“Bagi saya memberikan enam bulan ASI Ekslusif..”

<table>
<thead>
<tr>
<th>Tidak menyenangkan</th>
<th>1</th>
<th>2</th>
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<th>7</th>
<th>Menyenangkan</th>
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</thead>
<tbody>
<tr>
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<td>6</td>
<td>7</td>
<td>Tidak memalukan</td>
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<td>Tidak sehat</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Sehat</td>
</tr>
<tr>
<td>Menjijikkan</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Menarik</td>
</tr>
<tr>
<td>Tidak nyaman</td>
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<td>2</td>
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<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Nyaman</td>
</tr>
<tr>
<td>Tidak alamiah</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>Alamiah</td>
</tr>
</tbody>
</table>
**Section 2**
Bagian ini mengukur tekanan sosial untuk memberikan atau tidak enam bulan ASI ekslusif. Silakan jawab masing-masing pernyataan dibawah ini dengan memberikan tanda (√) pada skala 1 (sangat tidak setuju) hingga 7 (sangat setuju)

<table>
<thead>
<tr>
<th>Pernyataan</th>
<th>Sangat tidak setuju</th>
<th>Sangat setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Suami saya berpendapat bahwa saya sebaiknya memberikan enam bulan ASI Ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2  Suami saya akan menghargai jika saya memberikan bayi saya enam bulan ASI ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3  Suami saya berpikir bahwa saya adalah ibu yang lebih baik jika saya menyusui bayi saya secara ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4  Suami saya mengharapkan saya untuk memberikan enam bulan ASI Ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5  Ibu saya berpendapat bahwa saya sebaiknya memberikan enam bulan ASI Ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6  Ibu saya akan menghargai jika saya memberikan bayi saya enam bulan ASI ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7  Ibu saya berpikir bahwa saya adalah ibu yang lebih baik jika saya menyusui anak saya secara ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8  Ibu saya mengharapkan saya untuk memberikan enam bulan ASI Ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>9  Teman-teman terdekat saya berpendapat bahwa saya sebaiknya memberikan enam bulan ASI Ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>10  Teman-teman terdekat saya akan menghargai jika saya memberikan bayi saya enam bulan ASI ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11  Teman-teman terdekat saya berpikir bahwa saya adalah ibu yang lebih baik jika saya menyusui anak saya secara ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>12  Teman-teman terdekat saya mengharapkan saya untuk memberikan enam bulan ASI Ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Section 3
Bagian ini mengukur tingkat kemampuan individu untuk memberikan enam bulan ASI ekslusif. Silakan jawab tiap-tiap pertanyaan dengan memberikan tanda (✓) pada angka 1 (sangat tidak setuju) hingga 7 (sangat setuju) yang sesuai dengan anda.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Sangat tidak setuju</th>
<th>Sangat setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Saya yakin dapat memberikan bayi saya enam bulan ASI ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2  Bagi saya, memberikan ASI ekslusif itu mudah</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3  Keputusan untuk memberikan enam bulan ASI ekslusif berada dalam kendali saya</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4  Memberikan atau tidak ASI ekslusif sepenuh nya terserah saya</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5  Saya merasa memiliki pengetahuan yang cukup mengenai tata cara pemberian ASI Ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Section 4
Bagian ini mengukur hasil dari evaluasi antara keuntungan dan pengorbanan dari memberikan enam bulan ASI Ekslusif. Silakan jawab masing-masing pertanyaan dengan memberikan tanda (✓) pada angka 1 (sangat tidak setuju) hingga 7 (sangat setuju) yang sesuai dengan anda.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Sangat tidak setuju</th>
<th>Sangat setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Keuntungan dari memberikan ASI Ekslusif selama enam bulan lebih bernilai daripada pengorbanan yang dilakukan</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2  Gagasan untuk memberikan enam bulan ASI ekslusif adalah menarik</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3  Gagasan memberikan ASI ekslusif adalah hal yang saya inginkan sejak dulu</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
**Section 5**
Section ini mengukur keinginan individu untuk mencoba dan sejauh mana usaha yang akan diberikan untuk memberikan enam bulan ASI eklusif. Silakan jawab masing-masing pertanyaan dengan memberikan tanda (✔) pada angka 1 (sangat tidak setuju) hingga 7 (sangat setuju)

<table>
<thead>
<tr>
<th>Statements</th>
<th>Sangat tidak setuju</th>
<th>Sangat setuju</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Saya berharap untuk memberi bayi saya enam bulan ASI ekslusif</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2  Saya menginginkan untuk memberikan ASI ekslusif selama enam bulan</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3  Saya bertekad untuk memberikan ASI ekslusif selama enam bulan</td>
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</table>

-= TERIMA KASIH =-
## Appendix 5 – Missing Data

<table>
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<td>277</td>
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<tr>
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<tr>
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<td>0.7</td>
</tr>
<tr>
<td>3.3</td>
<td>278</td>
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<td>0.4</td>
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</table>
Appendix 6 – Normality and Multicollinearity Test

A. Normality Assessment

**Attitudes**

<table>
<thead>
<tr>
<th></th>
<th>Z Kurtosis</th>
<th>Z Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attd_1</td>
<td>-0.97706</td>
<td>0.02783323</td>
</tr>
<tr>
<td>Attd_2</td>
<td>-0.7411</td>
<td>1.52312422</td>
</tr>
<tr>
<td>Attd_3</td>
<td>0.140162</td>
<td>1.84721705</td>
</tr>
<tr>
<td>Attd_4</td>
<td>0.9815</td>
<td>1.81122939</td>
</tr>
<tr>
<td>Attd_5</td>
<td>-0.1987</td>
<td>2.10807555</td>
</tr>
<tr>
<td>Attd_6</td>
<td>-0.25444</td>
<td>-0.5875778</td>
</tr>
</tbody>
</table>

**Perceived Value**

<table>
<thead>
<tr>
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<th>Z Kurtosis</th>
<th>Z Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV_1</td>
<td>1.490064</td>
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</tr>
<tr>
<td>PV_2</td>
<td>2.110364</td>
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<tr>
<td>PV_3</td>
<td>0.441153</td>
<td>0.0603</td>
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</table>
**Perceived Behavioural Control**

<table>
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<th>Z Kurtosis</th>
<th>Z Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBC_1</td>
<td>-1.53383</td>
<td>-0.43898</td>
</tr>
<tr>
<td>PBC_2</td>
<td>-2.92237</td>
<td>-0.91169</td>
</tr>
<tr>
<td>PBC_3</td>
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<td>-2.55989</td>
</tr>
<tr>
<td>PBC_4</td>
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</tr>
<tr>
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<td>-1.52798</td>
</tr>
</tbody>
</table>

**Subjective Norms**

<table>
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<th>Z Skewness</th>
</tr>
</thead>
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</tr>
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<td>5.848431</td>
</tr>
<tr>
<td>SN_3</td>
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<td>0.7878</td>
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<td>SN_5</td>
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**Intention**

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B. Multicollinierity Assessment

The value of VIF

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Correlations among constructs

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** Correlation is significant at the 0.01 level (2-tailed).
Appendix 7 – The Difference between Primipara and Multipara

Means among group

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1 = Primipara
2 = Multipara

ANOVA Test for primipara and multipara

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