Scaring the bras off women: the role of threat appeal, brand congruence, and social support in health service recruitment coping strategies

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Scaring the bras off women: the role of threat appeal, brand congruence and social support in health service recruitment coping strategies

Abstract

Purpose: The purpose of this paper is to understand the role of perceived threat, brand congruence and social support on consumer coping strategies for a preventative health service.

Design/methodology/approach: An online survey of 570 women aged over 50 in one Australian state was conducted (users and non-users of the service). The data were analyzed using structural equation modeling (SEM).

Findings: A competing models approach reveals that threat on its own is associated with avoidance coping; however, when brand congruence is high, there is an association with active coping. Social support appears to have a buffering effect on threat and is associated positively with active coping and negatively with avoidance coping.

Originality/value: The study findings suggest that threat appeals should be used with caution in increasing participation in transformative preventative health services due to its double-edged sword effect (increasing both avoidance and active coping). When consumers have social support, this results in active coping and buffers avoidance coping. This research offers useful insights for social marketing and transformative service research.

Keywords: Health service, Breast screening, Brand congruence, Coping, Transformative service research, Preventative health services.

Paper type: Research paper

1. Introduction
Transformative services are those that influence the well-being of individuals, groups, and societies (Anderson et al., 2013). One of the dominant fields that constitute transformative services is health (Sweeney et al., 2015). The maintenance of positive health and well-being involves activities undertaken by individuals who believe themselves to be healthy in an attempt to prevent or detect disease in an asymptomatic state; that is, preventative health behaviors (Centre for Disease Control [CDC], 2017; Rosenstock, 2005; Kasl and Cobb, 1966). Multiple forms of prevention exist, including primary (e.g. eating a healthy diet), secondary (e.g. cancer screenings), and tertiary prevention (e.g. surgery) (Fuschs et al., 2012; Kirscht, 1983). Primary prevention focuses on the prevention of a condition occurring, secondary prevention focuses on detection and early treatment, while tertiary prevention focuses on alleviating the effects of a condition after its occurrence (Fielding, 1978). Many population preventative health programs involve secondary prevention, as these are focused on detection and early treatment (Fielding, 1978); it is the level of prevention that is the scope of this paper.

Population preventative health programs often rely on recruitment communication letters (for both users and non-users) to encourage and facilitate service use, and these letters typically use threat appeals in their messaging. The use of threat (fear) appeals to elicit perceived risk is a common approach in health prevention (Ruiter et al., 2014; Tannenbaum et al., 2015), largely due to the widespread acceptance of the Health Belief Model (HBM) (Rosenstock, 1974). The HBM posits that participation in health is the result of consumers perceiving a threat that is both severe and likely if they do not take action.

The popular use of threat appeals as a technique across multiple health contexts, including cancer-screening services, smoking prevention, alcohol use, and sexual health, remains despite conflicting evidence on the effectiveness of threat to elicit participation in preventative services. While some health studies have found threat to be effective in
generating desirable behavioral responses (see Peters et al., 2013; Sheeran et al., 2014), other studies show that threat appeals result in disengagement (see Albarracin et al., 2005; Kessels et al., 2010) and service avoidance.

Despite this growing field of evidence about the ineffectiveness of threat appeals, population preventative health programs continue to use threat appeals in the hope to “scare” people into using preventative health services to safeguard their health and well-being. Challenging the use of threat appeals approach is the number of population preventative health programs around the world that often fail to reach participation targets. For instance, in the United Kingdom (UK), the United States (US) and Australia, cancer screening rates are often below the national target and in some circumstances even decline (AIHW, 2017a; NHS, 2016; NIH, 2015).

One explanation for the negative reaction to threat appeals and perceived risk is that avoidance coping rather than approach coping is triggered. Indeed, marketing communications that use threat appeals create mixed coping responses amongst consumers (Dunkel-Schetter et al., 1992; Horowitz, 1986; Laubmeier and Zakowski, 2007; Millar and Millar, 1995), whereby some consumers may be sufficiently frightened into service use, while others disengage. The mixed coping responses to threat are indicative of a double-edged sword effect that is created by the use of this appeal. Therefore, alternative approaches that can consistently illicit approach coping responses must be explored.

Research has demonstrated that branding (Hastings and Domegan, 2013; Gordon et al., 2016) and social support (Thoits, 1986) can have a positive influence on coping responses. In particular, brand congruence has been suggested to be a useful approach in achieving participation in preventative health services (see Gordon et al., 2016), as a fit is perceived between a consumer’s personality and a brand’s personality (Asperin, 2007). Indeed, marketing recruitment communication letters for increasing participation in preventative
health programs typically include branding of the health service. Service branding is useful in communicating information and building expectations, helping to overcome consumer uncertainty surrounding services and reducing perceived risk (minimizing service avoidance), while increasing trust (and encouraging service use) (Haddock et al., 1971). While the current research on brand congruence has identified the outcomes of repeat patronage, emotional commitment, and positive attitudes (Kemp et al., 2014), there is a lack of evidence about whether consumers’ alignment with the transformative service brand is associated with active coping in response to a threat appeal in a recruitment letter. This represents a gap in the knowledge base, which this paper aims to address.

Social support has been shown to have a positive effect on coping with health problems (Parkinson et al., 2017; Moskowitz et al., 2012). Social support acts as a stress-buffer, whereby supportive individuals help the consumer to cope with the negative effects of stress (Cohen and Wills, 1985). While there is extensive research on the role of social support and coping for health and well-being (see Zeidner et al., 2016; Chao, 2011), and social support as a buffer for stressful events (Cohen and Wills, 1985; Chao, 2011), there is little understanding of the role of social support on coping in a transformative service preventative context.

There are three gaps in transformative services research (TSR) that this research seeks to address. The first is that while threat is often used in transformative health services as a recruitment device to increase participation, there are mixed results for the relationship between perceived threat and coping responses. This gap is addressed by RQ1: What is the relationship of perceived threat and coping strategies in response to preventative health recruitment? The second gap is the lack of evidence for the relationship between two key factors influencing coping and participation with a transformative health service: brand congruence and social support. This gap is addressed by RQ2: What is the relationship
between brand congruence and social support and coping strategies in response to preventative health recruitment? The third gap is the limited of how the factors of perceived threat, brand congruence, and social support are collectively associated with coping in response to a transformative health preventative recruitment letter. As little research has combined these bodies of literature together (perceived threat, social support, brand congruence), there is limited understanding of how they interact (combine) to effect coping. This is important for example, as preventative health services may attempt to heightened brand congruence in combination with perceived threat as a way to encourage positive consumer coping strategies. We therefore seek to address this gap by addressing RQ3: What is the interaction of perceived threat, brand congruence, and social support with coping strategies in response to preventative health recruitment?

Thus, the purpose of this paper is to understand the role of perceived threat, brand congruence and social support on coping strategies in preventative health service recruitment. This understanding has managerial implications for transformative services, identifying if and how to develop effective recruitment letters that aim to increase participation in a transformative preventative health service.

This study empirically tests a conceptual model with relationships between three concepts perceived threat, social support, and brand congruence and coping strategies in preventative health service recruitment communication. First, a model empirically tests the individual direct relationship between perceived threat and coping strategies. In the literature there is an ongoing debate about the advantages and disadvantages of threat appeals, and this paper seeks to build upon this knowledge by examining threat’s impact on the use of a transformative service that assists consumer well-being. Second, this study adds brand congruence and social support to the first model to test the individual direct relationship with coping strategies. Third, it tests the interaction relationships between perceived threat and
brand congruence, and perceived threat and social support on coping strategies. In summary, this research brings together three streams of literature – threat appeal, brand congruence, and social support – to better understand coping strategies in transformative preventative health service recruitment.

The remainder of this paper is structured as follows. It commences with a literature review on transformative services, coping, perceived threat, brand congruence, and social support. Hypotheses are then presented about the relationships between perceived threat, brand congruence, and social support, as well as the proposed models for testing. The paper then presents an outline of the method and the results of the study and ends with the discussion and implications.

2. Background literature review

Transformative services are those that focus on creating “uplifting changes and improvements” for individual, group, and societal well-being through service delivery and use (Anderson et al., 2011). Transformative service research (TSR) is a growing area of interest to services marketers and, in particular, the health context in TSR is viewed as critical for the well-being of society (Anderson et al., 2013). Transformative services include those delivered by both commercial and non-commercial entities, and include examples such as financial services for sound financial health, or preventative health services for the maintenance of good health.

2.1 Consumer coping strategies in transformative preventative health services

Coping refers to “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding resources of the person” (Lazarus and Folkman, 1984, p. 141). Coping is a response that can lead to either
participation or non-participation with health services (Bowen et al., 2003). Previous research has found that breast cancer is associated with two coping responses: active and avoidance coping (Lancaster, 2005; Lostao et al., 2001). Hence, coping is a central concept of investigation for the purposes of encouraging participation in transformative preventative health services.

The type of coping response exhibited depends on how threat is perceived (Folkman et al., 1987). The situational perspective of coping positions this as a process that changes through the course of an event (Bouchard et al., 2004; Folkman and Lazarus, 1980; Holahan and Moos, 1987; Lazarus and Folkman, 1984). Coping has two higher-order responses: problem-focused and emotion-focused coping (Kahn et al., 1964; Lazarus and Folkman, 1984; Mechanic, 1978). These higher-order coping responses directly relate to behavior and cognitive process and are linked to individuals’ intentions to use a health service (Bowen et al., 2003; Lancaster, 2005).

Problem-focused coping responses are used to directly deal with the problem through a modification in behavior (Billings et al., 1983). This coping response typically reflects behaviors which are active, adaptive, and reality-oriented (Lancaster, 2005), and is characterized as active coping. The active coping response is a cognitive coping response, involving positive thinking with the intent to actively reduce the appraisal from a perceived threat (Billings and Moos, 1981). There are three subdimensions within active coping: action, rational thinking, and positive thinking.

In contrast, emotion-focused coping responses are used to regulate emotional reactions to perceived threat (Coyne and Lazarus, 1981; Folkman and Lazarus, 1980). Emotion-focused coping is a more passive approach, which typically involves altering the risk factors of a perceived threat by avoiding the health threat (Coyne and Lazarus, 1981; Lancaster, 2005). This is characterized as avoidance coping. The avoidance coping response is emotion-focused...
and involves the denying and avoiding of one’s perceived threat (Billings and Moos, 1981). There are two subdimensions within avoidance coping: avoidance and denial (Duhachek, 2005). Avoidance coping responses typically result in the blocking of health information from one’s attention, leading to disengagement with a health service (Burton et al., 1998). Avoidance coping has been shown as an emotional rather than cognitive response to a message and is considered a pre-attentional defense (see Brown and Locker, 2009). Denial coping is a cognitive response to a message, whereby the person rejects information through non-acceptance (Brown and Locker, 2009).

2.2 Threat appeals in preventative health recruitment

A threat appeal involves the communication of a negative outcome from a source, highlighting that this negative outcome is contingent on the message recipient’s behavior, therefore seeking to alter this contingent behavior (Donovan and Henley, 1997). For example, in the context of breastfeeding, advertising materials (Kaplan and Graff, 2008), such as posters displayed in maternity wards in hospitals, convey the threat of negative health implications for infants (negative outcome) if mothers choose not to breastfeed (contingent behavior). This seeks to encourage mothers to breastfeed in order to avoid the negative outcome of health issues for their child. Similarly, in the context of cancer screening, a screening invitation letter (source) highlights to the recipient the risk of cancer (negative outcome) if they choose not to screen (contingent behavior). This seeks to encourage individuals to screen in order to avoid the negative outcome of undetected cancer.

Research has shown negative emotional/threat appeals using fear, guilt, and shame are over-used in health promotion and social marketing, and often have weaker effects and unintended deleterious effects such as heightened anxiety (Hastings et al., 2004; Brennan and Binney, 2010). Studies provide evidence for the use of positive emotions, such as humor,
pride, and joy, in improving effects of communication on recall and behavior (Argawal et al., 2007; Previte et al., 2015). Emotional appeals can be defined as use of affective motivation – positive or negative – to achieve change. The use of emotional appeals in marketing and advertising for commercial and social purposes is not new (Donovan and Henley, 1997). Yet, there appears to be different schools of thought as to when and what type of emotional appeals (positive or negative) should be used.

2.2.1 Negative threat appeals in transformative services

Negative threat appeals are a type of emotional appeal and are those that aim to elicit fear through perceived risk to trigger behaviors that will result in positive health outcomes, such as quitting smoking or early detection of cancer. The use of this type of appeal reflects the HBM. The HBM was originally developed to explain the lack of public participation in health screening and prevention programs (Becker and Rosenstock, 1984). One of the constructs of the HBM is perceived threat, which is the combination of perceived susceptibility and perceived seriousness of a disease (Becker and Rosenstock, 1984). Threat appeals highlight a perceived threat to people, eliciting either a “fight” or “flight” response, where individuals are either motivated to act in a health-promoting manner (fight), or not (flight) (Janz and Becker, 1984). These responses reflect active (fight) and avoidance (flight) coping responses.

In early emotional appeal health research, studies focused on the use of negative emotions, such as guilt, shame, and fear (Coulter and Pinto, 1995). For example, Coulter and Pinto’s (1995) study found negative emotional states, such as anger and guilt, elicited from an advertising stimuli had a positive influence on behavior outcomes. However, scholars in social marketing debate the effectiveness of negative appeals in comparison to positive emotional approaches. Hastings and colleagues (2004), for example, critique the external
validity of many fear appeal studies due to their overuse of laboratory experiments with student samples, as well as their weak effects on behavioral outcomes. They also raise ethical concerns for negative emotional appeals leading to unintended consequences, such as heightened levels of anxiety, complacency among consumers not directly targeted, and increased social inequity. In support of Hastings and colleagues (2004), Brennan and Binney’s (2010) study of fear, guilt, and shame in social marketing reports the potential for backlash or weakened influence of negative emotional appeals due to their overuse and consumers reaching a point of emotional saturation. Likewise, Previte and colleagues (2015) found that positive rather than negative emotional appeals have a significant effect on alcohol behavior.

Despite critiques of negative emotional appeals, practical application and research continues. For example, Amonini and colleagues (2015) report on the investigation and development of a shame message appeal for smoking cessation. Another study by Duhachek and colleagues (2012) lends support for the use of guilt and shame in influencing intentions to drink alcohol responsibly. Soscia and colleagues (2012) report that negative emotional appeals via fear have a stronger effect than positive emotional appeals through humor for HIV prevention. Thus, whilst there are critiques of negative emotional appeals (Hastings et al., 2004; Brennan and Binney, 2010), their practical use still appears in health messages. The review of the emotional appeal literature identifies a long-ranging debate regarding the effectiveness of negative and positive emotional appeals to improve health and well-being.

### 2.3 Brand congruence in preventative health recruitment

Hastings (2007) argues for the use of branding as a relevant strategy for improving population health and informing a more rounded public health strategy. Indeed, Evans and Hastings (2008) argue that using branding in public health offers the potential to embody
multiple behaviors and behavior-change messages, offering a greater reach than traditional communications campaigns that focus on more specific, limited messages. Furthermore, using branding is more likely to be more effective, given that multiple behaviors need to be changed and maintained for lasting health outcome benefits (Evans and Hastings, 2008). Health mass media campaigns are ill-placed to achieve such outcomes, as they tend to be more appropriate in changing simpler, rather than more complex, behaviors that require only limited changes (Snyder and Hamilton, 2002; Evans, 2006).

Brand congruence occurs when a person is able to relate to a brand or is able to perceive similarities between themselves and the brand. The extant literature forwards two views of brand congruence. The first conceptualizes brand congruence as the congruence between self-image and the brand image (Chon and Olsen, 1991; Sirgy and Samli, 1985). The second conceptualizes brand congruence as a match between an individual’s (i.e. consumer’s) personality and the brand’s personality (Asperin, 2007).

The current study adopts the second perspective, as personality is considered to be a more accurate measure of congruence. Indeed, brand and self-image are typically considered to be short-term and tactical associations, whilst consumer and brand personality tend to be more enduring, stable, memorable, meaningful, and emotionally powerful (Asperin, 2007). Further, consumer and brand personality reflect consumer feelings about a brand and define emotions that can be experienced upon the consumption of brands (Batra et al., 1993). This is unlike self and brand image, which represent consumer expectations of the brand and what it will do (Keller, 1998). In addition, consumers are more likely to prefer brands with personalities that relate closely to their own (Sirgy, 1982).

Brand congruence occurs when a brand and consumer personality match; this psychological comparison of the brand personality and consumer personality can be categorized as high or low brand congruity (Sirgy et al., 1997). High brand congruity occurs
when consumers perceive the brand personality to match their own (Sirgy et al., 1997). Low brand congruity is experienced when the consumer perceives little or no match between the brand personality and their personality. The level of congruence a consumer perceives can influence their purchasing decisions. High brand congruence leads to a favorable preference for that brand and higher purchase intentions (Jamal and Goode, 2001; Kressmann et al., 2006). In contrast, low brand congruence is likely to lead to a less favorable preference for that brand and decreased purchase intentions (Onkvisit and Shaw, 1993).

Previous research has demonstrated links between congruence and positive outcomes, although these have focused on specific concepts of self-congruity and store loyalty (see Sirgy and Samli, 1985) or self-congruity and brand loyalty (see Kressman et al., 2006). There is limited understanding as to how brand congruence influences participation. A study by Kuo and Rice (2015), in the context of cause-related marketing, found that congruence can have a positive impact on intentions to participate in cause-related marketing activities; however, their study measured conceptual and perceptual congruence between a firm and a cause, rather than brand congruence between a firm and an individual. Many organizations seek to achieve brand awareness amongst target consumers, as exposure to a brand initiates consumers’ evaluation processes of that brand (Ghosh et al., 1995). These evaluation processes shape consumers’ attitudes and perceptions of a brand, influencing brand familiarity and promoting these brands to consumers – subsequently influencing brand choice (Ghosh et al., 1995). These evaluation processes include determining brand congruence between the brand’s personality and the individual’s personality. For example, individuals who identify as being responsible will find resonance with brands that encompass similar personality characteristics such as stability and reliability, therefore increasing the likelihood of positive evaluations of the brand, leading to brand choice. This demonstrates how exposure to a brand can create brand congruence.
Many services evoke heightened risk perceptions of service use, which is a form of pre-purchase uncertainty, due to the intangible and variable nature of services (Murray and Schlacter, 1990). Furthermore, in the context of health-screening services, these perceived risks are heightened further as health-screening service users risk the detection of cancer, which creates an emotional risk perception which can deter participation (see Zainuddin et al., 2011). This causes individuals to avoid service use in order to avoid the associated risks. Indeed, many individuals avoid service use, despite knowing their health benefits (Zainuddin et al., 2013), because of unpleasant associations with service use such as embarrassment, discomfort, perceived stigma (Leo and Zainuddin, 2017) as well as associated stress and perceived risk. However, these perceived risks can be diminished when more or better quality information about the service is provided (Murray and Schlacter, 1990). This includes information communicated through the service brand; therefore, if brand congruence is achieved this can help alleviate perceived risk and encourage service use. This is particularly relevant for transformative preventative health services, given the importance of service use in relation to morbidity, mortality, and quality of life.

Brand congruence can be useful to provide motivation for a consumer to continue a relationship with a brand as well as to motivate a non-user to buy the brand through the eliciting of bonds and likeability (Gordon et al., 2016). In the current study of cancer screening, BreastScreen Queensland (BSQ) undertook a rebrand whereby the brand changed its look and feel, for example, from red and blue to more feminine colors of purple and pink to enhance personality appeal traits congruent with the target market of women over the age of 45. Almost all women over the age of 45 are exposed to the BSQ brand through their general practitioners, the receipt of an invitation letter that is sent to all women by the government, and through mass media advertising in mainstream channels such as television,
magazine ads, and billboards. Thus, it would be expected that brand congruence would be a relevant concept for this context.

Prior research on brand congruence is dominated by commercial goods and services, with little research on transformative services. One of the few to examine brand congruence in health services is a study by Gordon and colleagues (2016), who found that services should extend their branding strategies beyond developing appropriate brand personalities by also assessing the appeal of these personalities to service users. However, their study did not directly measure brand congruence and, instead, focused on measuring brand personality appeal. These constructs, although similar, differ from one another, as brand congruence refers to the fit between a consumer’s personality and a brand’s personality (Asperin, 2007), while brand personality appeal is the ability of a brand to appeal to consumers through its personality (Freling et al. 2011). This distinction is important, as consumers may find certain brand characteristics appealing but not necessarily fitting in with their own personalities, and therefore will find incongruence. This represents a gap that this current study seeks to address.

2.4 Social support in preventative health recruitment

Social support has been well investigated across a range of health and well-being contexts in the health, psychology, and social marketing fields, across online and offline contexts, by support type (emotional, informational, instrumental, tangible) and by supporter type (peer or professional). For example, Sarason et al. (1990) examined the relationship between types of support and social support tendencies, while Stewart Loane et al. (2014) and Parkinson et al. (2017) examined types of social support in an online community context.

There is emerging research on the role of social support from a transformative service perspective. Examples are social support of online communities for vulnerable consumers
(Parkinson et al., 2017), the use of cancer centers to provide social support (Rosenbaum and Smallwood, 2013), child helplines and types of support for children (van Dolen and Weinberg 2017), and human trafficking (Loomba 2017). This evidence-base of the importance of social support for health and the growing body of research on social support in transformative services provides a platform for understanding other health and transformative service practices, such as recruitment of consumers.

So, how might social support assist a consumer when they receive a recruitment letter to make an appointment for a breast screen? Prior research shows that social support can minimize stress (Cohen and Wills 1986). Given that any perceived risk arising from the letter may induce stress, the ability to manage this stress is important. Likewise, social support has been shown to enhance patient compliance or adherence to a health regimen (Oschsner et al., 2015); thus, a consumer is more likely to enact participation behavior if they receive social support that reinforces that behavior. Social support also affects the endocrine system and reduces the neurotransmitters linked to depression (Rueger et al., 2014). So, a consumer who receives a recruitment letter and who receives social support may experience less stress, be more likely to comply with the letter, and have reduced negative physical reactions.

3. Hypotheses development

3.1 Perceived threat and coping

Threat research has suggested links between threat appeals and coping through the elicitation of perceived risk. A key response to threat or fear is avoidance (Smith and Ellsworth, 1985) – a “flight” response – as threatening information can increase anxiety and lead to avoidance of taking preventative health measures (Dunkel-Schetter et al., 1992; Horowitz, 1986; Laubmeier and Zakowski, 2007; Millar and Millar, 1995). Breast cancer is an emotionally charged illness, which is commonly associated with a high degree of perceived threat and
produces significant anxiety and worry (Dunkel-Schetter et al., 1992; Lancaster, 2005). This leads to a “flight” response through cognitive and behavioral distancing from the threat of the disease (Dunkel-Schetter et al., 1992), describing an avoidance coping strategy. Therefore, it is hypothesized that:

\[ H1a: \text{Perceived threat will be positively associated with avoidance coping.} \]

However, there are also studies to show that perceived threat can lead to active coping responses. One study that used threat to stimulate the use of condoms found that consumers were more likely to evaluate the use of condoms when the threat level was moderate rather than high or weak (Hill, 1988). Likewise, research on college students exposed to threat appeals related to skin cancer showed an impact on intentions to engage in preventative health behaviors (e.g. using sunscreen) (Shi and Smith, 2016). Other research has found that social rather than physical threat was a greater motivator for behavior, perhaps due to the more immediate consequence of social threat compared to a longer-term physical problems that may result (Schoenbachler and Whittler, 1996). Despite some evidence for the efficacy of using threat appeals in eliciting a “fight” response, describing active coping, the authors’ believe that perceived threat would be unable to generate this response given the unique nature of breast cancer and instead would elicit a “flight” response. Previous research has identified that women believe breast cancer to be one cancer type that is not preventable and, therefore, is something that they have no control over avoiding or minimizing (see Brennan and Binney, 2010; Zainuddin et al., 2011). Unlike preventable cancers, such as lung cancer, which can be prevented or minimized by staying smoke-free, breast cancer is perceived by those at risk (i.e. in the target age group) as something that is unavoidable, therefore lowering the perceived benefit of taking preventive action and impacting the likelihood of taking preventive action (Rosenstock, 1974) through active coping responses. Further supporting our
position of threat increasing a flight response is the findings of Brennan and Binney (2010) which suggest that negative threat appeals are more likely to invoke self-protection and inaction rather than an active response. Hence, using threat appeals may generate perceptions of futility in taking actions towards preventing breast cancer (i.e. using cancer screening services), since breast cancer cannot be prevented, only detected early. Indeed, scholars have posited that avoiding the use of such services can be attributed to a variety of unpleasant associations with service use (see Leo & Zainuddin, 2017), and this can include the perceived risk of finding out if one has cancer. This is supported by evidence in the field, which show that screening rates around the world are below national targets, or even in decline (see AIHW, 2017a; NHS, 2016; NIH, 2015), suggesting that there are proportions of populations that are purposefully avoiding screening. This lends support for our hypothesis that perceived threat of cancer will be negatively associated with active coping:

\[ H1b: \text{Perceived threat will be negatively associated with active coping.} \]

3.2 Brand congruence and coping

While research demonstrates that threat can be an effective appeal to encourage the use of preventative health services, the literature also suggests that brand-related concepts may also encourage participation in health services. Comparison between a brand’s personality and an individual’s personality is a cognitive process that can lead to both positive and negative feelings for the brand. A positive feeling leads to motivation to act, whilst a negative feeling acts as an inhibitor (Hirschman and Holbrook, 1982).

It is therefore expected that individuals who perceive similarities between themselves and a preventative health service brand will find the brand attractive and more appealing, leading to higher intentions to engage with the service. The importance of branding in preventative health strategies has been highlighted in the US social marketing physical
activity program VERB™, whereby the brand was designed to create an affinity between the children and the campaign (brand congruence) (Asbury et al., 2008). A two-year tracking study indicated that the brand not only generated high brand awareness with children, it was also perceived as cool and fun. The program’s success in changing the physical activity of thousands of children was attributed largely to the ability of the brand to create a bond with the children (Asbury et al., 2008). Perceived similarities between a consumer and a brand result in positive associations with the brand, and can be seen as positive thinking, which is a characteristic of active coping (Duhachek, 2005). Active coping, like brand congruence, is also linked to higher intentions to participate (Lancaster, 2005). Therefore, we propose that brand congruence will have a positive association with active coping and that subsequently the opposite will occur for avoidance coping. Formally, it is hypothesized that:

\[ H2a. \text{ Brand congruence will be negatively associated with avoidance coping.} \]

\[ H2b. \text{ Brand congruence will be positively associated with active coping.} \]

### 3.3 Social support and coping

Social support influences coping through the mechanism of buffering. Buffering refers to a protection function that is provided by social support against stress (Cohen and Wills, 1985). The buffering hypothesis of social support is an alternative explanation of stress reduction to a direct effects hypothesis. The buffering effect of social support typically occurs in situations where the support is available (Cohen and Wills, 1985). The buffering hypothesis of social support states that when social support is available and accessed by a consumer, this protects the consumer and prevents a stress appraisal. When consumers experience stress, this leads to feelings of helplessness, negative emotions, and disrupts the neuroendocrine system and immune system (Cohen and Wills, 1985). Stress appraisals lead to coping responses that are not action-oriented, such as avoidance coping (Lazarus and Folkman, 1984).
Prior research has found that social support is positively related to problem-focused coping and negatively related to avoidance coping in college students (Chao, 2011); however, external factors such as drug and alcohol use can ameliorate the buffering effect of social support. Likewise, Zeinder et al. (2016) found that social support was positively related with active coping and negatively associated with avoidance coping. Importantly, in this study avoidance copying was found to reduce overall well-being.

Thus, social support is likely to reduce the stress generated by the recruitment letter through reappraisal, inhibition of the neuroendocrine system, or facilitation of behaviors such as making an appointment for screening (Cohen and Wills, 1985). The following is therefore hypothesized:

*H3a.* Social support will be negatively associated with avoidance coping.

*H3b.* Social support will be positively associated with active coping.

### 3.4 Interaction effects and coping

Given the strong evidence of threat and its engrained use in practice, it is unlikely that brand congruence and social support would be used on their own. This study therefore also predicts a significant interaction relationship between threat and brand congruence on coping, and threat and social support on coping. As previously mentioned, prior studies show that the use of both threat (Coulter and Pinto, 1985) and brand congruence (Kressman *et al.*, 2006) are related to positive outcomes. It is therefore plausible that practitioners could use threat in combination with brand congruence to improve the effectiveness of recruitment materials for preventative health services. For example, recruitment materials could attempt to pair brand congruency with the perceived threat of recruitment materials in attempt to make the communication more personally relevant and engaging for the target market. Thus, in combining the threat and brand congruence streams of literature, if the levels of threat and
brand congruence are both high in health service recruitment, this should have a positive relationship with encouraging active coping while at the same time reducing negative coping. This is similarly the case for combining the findings from the threat (Soscia et al., 2012) and social support (Duhachek and Iacobucci, 2005) literature, which both suggest that their heightened presence leads to increases in positive outcomes (in the case of this research, active coping) and reductions in negative outcomes (in the case of this research, avoidance coping). Thus, by combining the bodies of literature and evidence from threat, brand congruence, and social support studies, this study hypothesizes that:

\( H4a. \) brand congruence will negatively moderate the perceived threat and avoidance coping relationship.

\( H4b. \) Brand congruence will positively moderate the perceived threat and active coping relationship.

\( H5a. \) Social support will negatively moderate the perceived threat and avoidance coping relationship.

\( H5b. \) Social support will positively moderate the perceived threat and active coping relationship.

3.5 Conceptual models

To illustrate the different practical and theoretical perspectives of factors which influence coping, this paper seeks to test the proposed hypotheses in a series of models as shown in Figure 1. Model 1 assumes that threat is the predominate approach used in practice, and previous evidence appears to support its implementation. Model 2 introduces the variables of brand congruence and social support, which is consistent with the marketing communication and transformative service literature. Finally, Model 3 seeks to examine whether threat used in combination with brand congruence and social support has a relationship with coping.
4. Method

4.1 Research context

Cancer-screening services represent a health service delivered as part of a program intended to engender social good. In Australia, there are three national population-based screening programs (breast screening, bowel screening, and cervical screening). The objective of this initiative is early detection, which is a form of secondary prevention. Breast-screening services, which are delivered at a state-level, are the most widely-researched service context in the social marketing area, while some research into bowel screening is emerging. In July 2013, BreastScreen Australia changed its target age group from 50–69 years to 50–74 years (AIHW, 2017b), although women in their 40s or 75 years and over are accepted in the program (BSQ, 2017). In Queensland the target age group was lowered to include women aged 45 and over. The current study is operationalized using the public breast cancer screening service, BSQ, which uses an invitation to screening letter – a cue to action that conveys the perceived threat of breast cancer to its recipient (“health is an important issue at any age but did you know that women 50 and over are at increased risk of developing breast cancer?”)

4.2 Data collection and sample

The data for this study were collected using an online survey recruited through a consumer panel provider. An invitation to participate was sent to women living in Queensland aged 50–69 (users and non-users of breast screening services) with 570 responses. Both users and non-users were selected to reflect the managerial relevance of the study as health practice
does not distinguish between these user groups when recruiting (a population mass marketing rather than segmented approach is typical). User status was a covariate in the analysis to control for any effect. The proportion of users in the sample was 79% (21% were non-users).

An online design was selected as it allowed a representative sample to be collected within the cost and time limitations of the study and allowed for data to be automatically entered into an SPSS file. Women were first shown the standard reminder letter issued every two years by BSQ and were then asked to complete the survey. An overview of the sample can be seen in Table 1.

[Insert Table 1 about here]

4.3 Instrument development
The dependent variable, coping, was assessed based on two sub-types: active and avoidance coping. Coping is an effective indicator of behavioral breast-screening intentions (Bowen et al., 2003). Coping was measured using the scale by Duhacheck (2005), with active coping measured via seven items and three items measuring avoidance coping. Perceived threat was measured via five items adapted from Noorzi et al. (2011), on a 5-point Likert scale anchored by *strongly disagree* and *strongly agree*. Brand congruence with the BSQ brand was measured via 12 items on a 7-point Likert scale developed by Geuens et al. (2009). This scale was used for both respondent personality and BSQ brand personality. As per prior studies in congruence, an absolute difference score was used to determine the congruence between the BSQ brand and participants’ perceived personality (see Choi and Rifson, 2012). Social support was measured using two items adapted from Zimet et al.’s (1988) scale. The interaction variables Brand Congruence x Threat and Threat x Social Support were developed by standardizing the mean of variables and then computing them together (Iacobucci, 2010).
4.4 Control (covariate) variables

A number of control (covariate) variables deemed to be important determinants of avoidance and active coping were also included in the model. These variables were: family history of cancer, prior diagnosis, and current status of usage (e.g. user or non-user). These variables were added into the model for the purpose of controlling for their effect on active and avoidance coping and to prevent these factors from interfering in the analysis and interpretation of the relationships proposed in the hypotheses.

5. Results

5.1 Instrument measurement and validation

Prior to testing the research hypotheses, the constructs were assessed for validity via confirmatory factor analysis (CFA) in AMOS 24.0. The measurement model had a reasonably good fit (CFI=.95, RMSEA=.06, CMIN/DF=3.47). The CFI was equal to the recommended threshold of .95 by Iacobucci (2010). The RMSEA was also equal to the recommended threshold of .06 or below (Iacobucci, 2010). The CMIN/DF score was slightly above the recommended threshold of below 3 by Fornell and Larcker (1981). However, the CMIN/DF is known to be highly sensitive to sample size. Thus, based upon these results, it was deemed that the measurement model was fit to proceed with the remainder of the validity and reliability testing.

Convergent validity of the items was confirmed, with the factor loadings and t-values associated with the parameter estimates being significantly positive (Fornell and Larcker, 1981). In Table 2, the reliability of the measures was also confirmed, with the composite reliability index above the recommended level of .60 and the average variance explained (AVE) scores being above .50 (Bagozzi and Yi, 1988). Discriminant validity was also
assessed by comparing the AVE scores extracted by each construct to the shared variance between the construct and all other variables (Fornell and Larcker, 1981). As shown in Table 2, for each comparison the AVE exceeded average shared variances, confirming discriminant validity (Fornell and Larcker, 1981).

5.2 Model and relationship testing

Three models were then analyzed to assess the predictive contribution of the focal variables and to test the hypotheses. Model 1, which examines the direct relationships between threat and coping, was tested first. This was followed by Model 2, which introduces the variables of brand congruence and social support. Finally, Model 3, which incorporates interactions between threat and brand congruence, and threat and social support, was tested.

5.2.1 Model 1 (threat and coping): H1

Model 1 posited that perceived threat would have a direct association with avoidance coping (H1a) and active coping (H1b). As indicated in Table 3, perceived threat had a positive direct association with avoidance coping ($\beta=.16, p<.01$), as hypothesized. In Model 1, perceived threat was also found to have a non-significant relationship with active coping ($\beta=.09, \text{ns}$). Thus, the results from Model 1 appear to conclude that threat used in isolation encourages avoidance rather than active coping behaviors.
5.2.2 Model 2 (threat, brand congruence, social support and coping): H1–H3

Model 2 introduced brand congruence and social support and posited that they would have relationships with avoidance and active coping, along with threat, as per Model 1. Consistent with Model 1, threat was shown to have a significant direct association with avoidance coping ($\beta=.15^{**}, p<.01$). However, in contrast to Model 1, perceived threat also had a significant direct association with active coping ($\beta=.12, p<.05$). Brand congruence was found to have a significant association with active coping ($\beta=.26, p<.000$) but not avoidance coping ($\beta=.00, \text{ns}$). Social support was shown to have a significant relationship with avoidance ($\beta=-.10, p<.05$) and active coping ($\beta=.16, p<.000$) in the directions predicted. The model produced an $R^2$ of .08 for avoidance coping and .16 for active coping.

5.2.3 Model 3 (threat, brand congruence, social support, interaction effects and coping): H1–H4

Model 3 built upon Model 2 by introducing interaction effects (Threat x Brand Congruence and Threat x Social Support). Results for Model 3 show that threat has no direct relationship with active or avoidance coping; however, there is an interaction effect with brand congruence, as shown in Figure 2 and Table 3, avoidance coping ($\beta=.18, p<.01$) and active coping ($\beta=.17, p<.01$), which was a similar pattern of relationships as Model 2. Brand congruence was found to have a significant association with active coping ($\beta=.25, p<.000$) but not avoidance coping ($\beta=.00, \text{ns}$), which was consistent with the results from Model 2. Further, as per Model 2, social support had a significant relationship with avoidance ($\beta=-.11, p<.05$) and active coping ($\beta=.16, p<.01$) in Model 3 and no interaction effects with threat. The testing revealed the model produced an $R^2$ of .08 for avoidance coping and .18 for active coping.
5.3 Model comparison

Finally, after the conclusion of the hypotheses testing, the study also compared the models to determine which best fitted the data. This was conducted by calculating a series of chi-square ($\chi^2$) scores. In the case of testing competing models, if the chi-square score is significant, the “larger” model (e.g. Model 2 or 3) is deemed to fit the data better than the “smaller” model (e.g. Model 1). As shown in Table 4, when comparing Model 1 and Model 2, the chi-square score is significant ($\chi^2=94.88$, $df=68$, $p<.01$). Thus, it can be determined that Model 2 is a better fit to the data than Model 1. When comparing Model 2 and Model 3, the chi-square is again significant ($\chi^2=81.18$, $df=28$, $p<.000$), suggesting Model 3 has a superior fit to Model 2. Finally, for thoroughness, the authors also compared Model 1 and Model 3, with the results confirming Model 3 was superior (refer to Table 4). Thus, from the testing, it can be determined that Model 3 was the best fit to the data. Figure 3 presents the model and hypotheses testing results.

[Insert Table 4 and Figure 3 about here]

6. Discussion

The purpose of this paper is to understand the role of perceived threat, brand congruence, and social support with coping in preventative health service recruitment. The first research question about the relationship of perceived threat and coping has been addressed, with the finding that, when used on its own, threat is associated with avoidance coping rather than active coping. This contradicts the basic premise of the use of threat appeal (Rosenstock, 1974); the belief that when presented with the threat (the risk of getting cancer) people will
be motivated to take action, such as booking a cancer-screening appointment. The second research question about the relationship of brand congruence and social support with coping has been addressed, with the finding that while brand congruence is associated with active coping it is social support that has the double effect of being associated with active coping (positively) and avoidance coping (negatively). The mechanism for this finding is the buffering effect of social support on coping, whereby positive coping is accentuated and avoidance coping is decreased (Cohen and Wills, 1985).

The third research question about the interaction of threat, brand congruence, and social support on coping strategies has been addressed, with the finding that when consumers have access to social support and have congruence with the health brand, the threat appeal is associated positively with active coping and negatively with avoidance coping. This effect may be explained by the protection motivation theory (an extension of the health belief model) (Tanner et al., 1989: Rogers, 1975), which indicates that when people have high self-efficacy in enacting a behavior (in this case from having social support and brand congruence) a threat appeal elicits a positive coping response.

6.1 Threat as a double-edged sword

The findings indicate that the use of threat appeals in preventative health can be a double-edged sword – it can cut both ways. On its own, threat drives people away (avoidance coping); however, when perceived threat is high and brand congruence is high, then active coping occurs. There is great deal of debate in the literature as to the role threat should play in preventive health service recruitment and retention, with some researchers following the HBM (Rosenstock 1974) and others following a denial of personal relevance approach (Hastings et al., 2004). In the latter approach, the threat appeals drive avoidance rather than active coping through the elicitation of helplessness or arousing anxiety. As the
transformative service field matures, an awareness of the role of threat is important to
categorical development in the literature. In the health literature and in health practice, threat
is often used to encourage positive outcomes, such as seeking help or engaging with
preventative health. These results provide a cautionary note about the effects and unintended
effects of such appeals and offer support for social marketing research that questions the
effectiveness of fear and threat appeals (see Hastings et al., 2004). In particular, research that
indicates that consumers with high self-efficacy respond well to threat (see Tanner et al.,
1989) raises alarm bells for vulnerable consumers who may not have the cognitive resources
to deal with the feelings of distress and helplessness raised by the threat (Hastings et al.,
2004). Much is being written by transformative service researchers about vulnerable
consumers, and thus the use of threat may hold unintended effects for these consumers.

6.2 The buffering effect of social support

Social support appears to provide a buffer for the effect of threat on coping. This effect refers
to social support reducing or negating negative outcomes, such as avoidance coping (Cohen
and Wills, 1985). This paper shows that social support has a dual purpose in a transformative
service where there is potential risk for avoiding the service, such as undetected cancer. First,
social support encourages the positive behavior of active coping, whereby a consumer makes
a booking for a cancer-screening appointment and, secondly, provides a protection function
against avoidance coping. Therefore, in line with previous transformative studies on social
support (see Parkinson et al., 2017), this study not only demonstrate the importance of social
support it also demonstrates that the role and purpose can be multi-faceted. This provides
additional insight into how social support is theorized to assist the improvement of consumer
health and well-being.
6.3 The asymmetrical nature of brand congruence

Brand congruence had no relationship with avoidance coping, yet it had a positive relationship with active coping. This means that when consumers perceive similarity between their personality and the brand’s personality they are more likely to take positive action, such as making a booking for cancer screening. Likewise, when they perceive dissimilarity this is likely to inhibit active coping. This is consistent with Duhacheck (2005). Interestingly, there was no direct association with avoidance coping as hypothesized, which means that brand congruence has no unintended effects, rather it can only help consumers take positive action. When threat is added to the mix a different effect is found. The interaction effects for brand congruence and threat are associated with both active and avoidance coping, while the direct effect of brand congruence was only for active coping. This may indicate that threat appeals have a powerful influence, which can change the positive effect of brand congruence on coping to a negative effect for some consumers. The importance of brand congruence for loyalty and the consumer–brand relationship (see Park and Lee, 2005) in transformative services may be a fruitful pathway to understanding participation rates and, in particular, the interactions with other key factors that affect participation.

6.4 Managerial contributions

This study assists managers in transformative services that use or are considering the use of threat appeals for transformative services in the field of preventative health. Specifically, this study provides insight that aids the development of effective recruitment letters to increase participation in the service. The study results indicate that the use of threat should be used with caution by preventative health service providers. The interaction effects demonstrate that combining threat with additional factors, such as brand congruence, can still elicit the
unintended effect of avoidance coping. Threat appeals have been shown to trigger risky behaviors in consumers as well as maladaptive behaviors, such as alcohol use, smoking, and drug-taking (Hastings et al., 2004). Therefore, the authors suggest careful consideration must be taken by health service providers that consider the use of threat appeals.

Instead, it is recommended health service recruitment strategies consider the ways in which their brands reflect the personality of their target market segments. Combining insight from this study and from previous work by Gordon et al. (2016), it is suggested that health service organizations focus on developing brand personalities that not only appeal to target segments but that are also congruent with their personalities. This would involve utilizing market research to understand target market segments more meaningfully, specifically based on their personality profiles and characteristics, and using more sophisticated segmentation approaches beyond demographic characteristics – an approach that dominates population health programs. Specifically, an understanding of the personality of the consumers for whom the service is designed may trigger a need to examine the service organization’s brand strategy. For example, in 2009, BSQ changed the organization’s logo from the colors of the state government (which were perceived as masculine and corporate) to pink and purple along with a new brand symbol of two ovals (resembling breasts) (see Appendix for example). The rationale for this change was to be more appealing to women and to increase participation.

It is also suggested that health service managers consider the use of empathy appeals rather than threat appeals (Hastings et al., 2004) and leverage social support. Considering significant others of the consumers as influential stakeholder groups has the potential to more effectively encourage participation amongst the primary target segment of the preventative health service. Managers of transformative health services can consider approaches similar to those used in anti-bullying campaigns, for example, which focus on encouraging bystanders
to intervene when witnessing bullying, rather than solely focusing on victims to speak out (see Bullying. No Way! campaign). This insight provides support and extends research findings by Zainuddin et al. (2015, p. 157), who identify “third parties” as having an influential effect on women’s individual decisions to participate in health screening. Alternatively, transformative health prevention services could consider migrating to digital platforms by sending eligible service users digital recruitment letters via email, rather than paper-based letters by post and timing the delivery of these emails for the weekend, when recipients are more likely to be around friends or family. Receiving these emails when in the company of significant others might enable immediate social support at this important point of contact.

7. Conclusion, limitations and further research

This research study is one of the first to bring together the interrelated concepts of perceived threat, brand congruence, social support, and coping in as a recruitment device in preventative health services. This study is limited to a single preventative health context (women’s cancer screening) and a single recruitment device. Further research should consider other contexts in health and other transformative services as well as other stages of the customer journey. The study also examined brand congruence and social support in concert with threat appeals; further research could investigate other factors that may interact with threat appeals and in contexts with more conspicuous brands. It has theorized a series of models to reflect real-world practice, whereby threat was used in isolation (Model 1) and other strategies (concepts) such as social support and brand congruence were introduced. While our results are suggestive of the relationships between perceived threat, brand congruence, social support and coping, future research could extend upon the findings through a series of experiments which to tease apart the causality of the relationships
identified. Overall, this study is one of the first to bridge together the literatures of perceived threat, brand congruence and social support to gain a deeper understanding of factors which can be leveraged to effect consumers’ coping strategies.

Notes
1. We wish to thank the anonymous reviewer for their comment which led to us controlling for these factors within our model.
2. We thank the editor for the suggestion of comparing the models.

References


