Challenging the planned behavior approach in social marketing: emotion and experience matter

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Abstract

Purpose – There is a dominance of cognitive models used by marketers when studying social phenomena, which denies the complexity of the behavior under investigation. Complex social behaviors are typically emotionally charged and require a different perspective. The purpose of this research is to challenge the planned behavior approach and reframe marketers' perspectives on how to study complex social phenomenon such as breastfeeding.

Design/methodology/approach – An online survey of 1,275 American and Australian women was undertaken to test the Model of Goal Behavior in a breastfeeding context. Structural equation modeling and multi-group analysis of novice (first-time mothers) and experienced mothers is used to test the hypotheses.

Findings – The findings demonstrate emotion and experience matter when understanding a complex social behavior such as breastfeeding. The emotional variables in the model had significant relationships, while the cognitive variables of instrumental and affective attitude did not. As women progress through their customer journey (from novice to experienced), the behavioral drivers change.

Practical implications – This research demonstrates an emotion, and experience-focused approach should guide the design of social marketing interventions aimed at changing complex social behaviors.

Originality/value – This research presents empirical evidence to challenge the pervasive use of planned behavior models and theories in marketing. Importantly, in social behavior models, emotion rather than attitudes have a larger role in determining intentions and behaviors.

Keywords Emotions, Experience, Social marketing, Model of goal-directed behavior, Breastfeeding, Complex social behavior

Paper type Research paper

Introduction

The study of the adoption of complex social behaviors has largely been studied using cognitive behavior theories (Rosenstock, 1974; Ajzen, 1991). The assumption underpinning such models is social marketers can "think consumers" into action by controlling cognitive factors. Recent evidence suggests being better informed does not necessarily mean consumers will "do the right thing" (Claudy *et al.*, 2013). There are factors outside of those that are "controllable", such as emotions (positive and negative) and cultural and social forces, that influence human desire and aspirations and also combine to influence consumers' social behaviors (Parkinson *et al.*,

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2016). This wider perspective of social behavior change is the one we undertake to study complex social behavior. We extend behavior change research by exploring the role of other factors, such as emotion and personal experience, to consider how experience with a complex behavior may vary between consumers. Specifically, we use an extended version of the theory of planned behavior (TPB) which incorporates emotions and past behaviors: the model of goal-directed behavior (MGB) (Perugini and Bagozzi, 2001).

Social marketing has been heavily influenced by psychosocial models of planned behavior which attempt to predict behavior change (Previte *et al.*, 2015). Since the 1980s, TPB (Ajzen, 1991) has dominated social marketers' exploration and explication of health and social behaviors (Luca and Suggs, 2013). This approach privileges intentions as the proximal cause of behavior and therefore implies any changes in behavior can be achieved by changing intentions. This has led to a substantial body of social marketing research where the dependent variable is *intentions*, as evidenced in research on alcohol use (Rundle-Thiele *et al.*, 2015) and exercise (Courneya *et al.*, 2000). The problem with this approach is the conflicting evidence reported on the relationship between intentions and behavior. Some studies show a strong positive relationship (Guo *et al.*, 2015) and others show little or no relationship (Holdershaw *et al.*, 2011). A meta-analytical review of 47 experimental tests showed medium–large changes in intentions lead to a small–medium change in behavior (Webb and Sheeran, 2006). Taken together, this indicates assuming intentions influence behaviors can be risky and in some cases incorrect.

The first step in identifying the boundaries of this approach involves testing a planned behavior model in a context where the planned approach is dominant despite the consumers' lived experiences. One such context within the domain of social marketing is breastfeeding. Governments have long recognized the value of breastfeeding and are increasingly turning to social marketing strategies to persuade consumers to adopt or extend their breastfeeding practices. Currently, few countries (if any) meet the World Health Organization's recommended level for breastfeeding rates, with many countries falling well below (World Health Organization, 2011). The evidence for the value of breastfeeding to children's *and* women's health is continually being affirmed by research showing links to decreased levels of infant mortality rates, childhood illnesses and reductions in chronic disease in later life (Strong and Lee, 2014; World Health Organization, 2012). Breastfeeding is a high-involvement, complex social behavior (Bai *et al.*, 2011; Guo *et al.*, 2015) and a rich context in which to explore social behavior change. Breastfeeding reveals the complexity in consumers' behavior that illustrates the "contradictions" between commitment to a desired behavior, and when for a range of reasons, a desired behavior becomes challenging to maintain. This insight has alignment with other complex social behaviors such as moderate drinking when consumers agree drinking less is better for their health and social relationships; and similarly, in the case of maintaining exercise routines, consumers want to participate in regular activity and know what to do, but because of a range factors and reasons do not maintain their desired behaviors.

The emphasis in both practice and theory on planning for breastfeeding is challenged by alternative evidence showing the complexity of breastfeeding generates an intense emotional experience and creates situations where "the best laid plans go awry". For instance, Mozingo *et al.* (2000) found the incongruity between expectations related to breastfeeding and the reality of early breastfeeding experiences was a significant reason women stopped breastfeeding within the first two weeks of child birth. This highlights the important influence of emotive elements on consumer behavior. Emotional concepts have been shown to vary in their explanatory power based on the level of experience (Kim *et al.*, 1998; Russell-Bennett *et al.*, 2007). Whilst TPB has been augmented with emotional concepts in the form of MGB (Perugini and Conner, 2000; Perugini and Bagozzi, 2001, 2004), the model

is still missing one important aspect of consumer understanding: the level of experience itself; that is, novice versus experienced consumers.

The assumption all consumers are the same and can thus be influenced by a population approach is flawed, with significant evidence to the contrary from areas such as alcohol consumption to physical activity (Kubacki *et al.*, 2015, 2017) demonstrating the importance of segmentation in behavior change programs. Experience levels with a product or service have been shown to influence key marketing outcomes, such as satisfaction, trust, commitment and loyalty (Dagger and O'Brien, 2010). These experience levels equate to different stages of the customer journey where novices are at the start of their journey and experienced consumers are more advanced. As experience with a product or service increases, consumers rely more on their own internal personal sources of information and less on external sources of information (Dagger and O'Brien, 2010; Russell-Bennett *et al.*, 2005). Using breastfeeding as an example, internal sources of information may include feelings about the attainment or lack of attainment of breastfeeding goals. Additionally, if a mother has successfully breastfed previously, this may also be an important internal source of information. Despite this knowledge of consumers' experience levels and different psychological drivers of intentions and behaviors, social marketers persist in using attitudinal models that do not distinguish product or service experience levels. Our research therefore compares a proposed model for both experienced and new consumers of a social product to identify where a planned approach may be useful and where it is not.

The core objectives of this research are to challenge the planned behavior approach typically used in social marketing, and to identify how experience with breastfeeding influences sustainable behavior. We draw on women's breastfeeding experience to reframe marketing researchers' perspectives on how to study complex social phenomenon. In doing so, we address an over-arching research question:

RQ1. What is the role of emotions and experience on breastfeeding behavior?

This study makes three theoretical contributions. First, we challenge the planned behavior approach by establishing the importance of including emotions in models to provide improved explanations of complex social behaviors. Second, we demonstrate the importance of focusing on behavioral outcomes rather than intentions as mere proxies for understanding complex social behaviors. Finally, we extend and deepen previous planned behavior models by including experience levels, thus demonstrating the stage of the customer journey influences relationships in a model of complex social behavior.

The planned behavior approach

Numerous theoretical frameworks have been offered to explain health behavior, many of which are based on the rational approach originally described in the form of the Subjective Expected Utility model (SEU) (Savage, 1954). The Theory of Reasoned Action (Fishbein and Ajzen, 1975) and its extension, the TPB (Ajzen, 1991), are among the most highly cited SEU extensions. These models attempt to predict behavior by integrating the influence of informational and normative variables on behavior or on the antecedent behavioral intention of the participants. TPB posits behavioral attitude and subjective norm effect behavioral intention, which in turn effect actual behavior (Ajzen, 1991). Intention is also influenced by perceived behavioral control (PBC). TPB has been used to explain social behaviors such as blood donor loyalty (Masser *et al.*, 2009), recycling (Terry *et al.*, 1999), physical activity (Armitage, 2005) and breastfeeding (Guo *et al.*, 2015). A limitation of TPB is its cognitive focus through variables such as belief, attitude and intentions. For emotional social issues, such as breastfeeding, cognition alone may not explain why women sustain

breastfeeding or why they cease breastfeeding. Previous research indicates women's reasons for weaning their infants included affective, schematic reasons relating to the ways in which the behavior may reflect or affect the woman's emotions, values and self-concept (Dietrich Leurer and Misskey, 2015; Rempel, 2004). Thus, the TPB with its rational explanation of behavior is insufficient for a complex social behavior such as breastfeeding.

Role of emotions in complex social behaviors

Effective complex social behavior change programs and interventions must be realistic and acknowledge the uniqueness of the social behavior journey, including the very personal and emotional nature of the experience for many consumers (Parkinson *et al.*, 2016). Traditionally, research in the complex behavior of breastfeeding tend to be more cognitively focused (Guo *et al.*, 2015) and have identified factors such as self-efficacy (Dennis, 1999; Otsuka *et al.*, 2014), attitudes (Maycock *et al.*, 2015), beliefs (McMillan *et al.*, 2009) and subjective norms (Swanson and Power, 2005). However, breastfeeding is a powerfully intimate experience with emotional consequences for both mother and child (Burns *et al.*, 2010; Gallegos *et al.*, 2014). In deciding to breastfeed, mothers weigh the benefits and consequences that may result from the experience. These are likely to be based on the anticipation of particular physical and/or emotional states. Despite the practical and theoretical evidence for the emotionality of breastfeeding (Pentecost and Grassley, 2014), there has been little, if any, research investigating the impact of emotions on the mother's breastfeeding behaviors.

An alternative approach: the model of goal-directed behavior

Social science researchers interested in complex social behaviors, such as health and well-being, have extended planned behavior models to be inclusive of emotional factors (Perugini and Bagozzi, 2001). One such model is the MGB, which is an extension of the TPB, which modifies and deepens exploration of behavioral influences. The contribution of the model lies in its ability to identify both cognitive and affective factors that motivate desires, intentions and subsequent behavior. This model has been applied to relatively few health-related consumption issues, including body weight (Perugini and Bagozzi, 2001), exercise (Abraham and Sheeran, 2003), smoking behavior (Perugini, 2005) and, more recently, alcohol consumption (Fry *et al.*, 2014) and mental health (Schuster *et al.*, 2013). For the purpose of this study, we adopt the MGB as the underpinning theoretical framework to test the research question.

Intention to perform a behavior in the MGB is posed to be motivated by the desire to carry out the behavior, and this behavioral desire mediates the effects of attitude, subjective norms, PBC and anticipated emotions on intention and behavior (Perugini and Bagozzi, 2001). Anticipated emotions are a key driver of behavior and can be an influential variable in the decision-making processes, particularly in the absence of prior experience (Conner and Armitage, 1998). In particular, expecting psychological benefits by performing a specific behavior causes positive anticipated emotions, whereas expecting psychological damages by failing to perform the behavior leads to negative anticipated emotions (Bagozzi *et al.*, 2000; Baumgartner *et al.*, 2008). This means anticipated affective pre-responses to the performance of a behavior can be important determinants of behavioral intention (Song *et al.*, 2012). The conceptual model is shown in Figure 1. The hypothesized influence of experience on the relationships in this model is outlined in the next section.

Role of experience in complex social behavior

In services, production and consumption often unfold over a series of consumption episodes across a customer journey (Dagger and Sweeney, 2007). Services such as hairdressing, personal training and education, among others, require consumers to engage in multiple

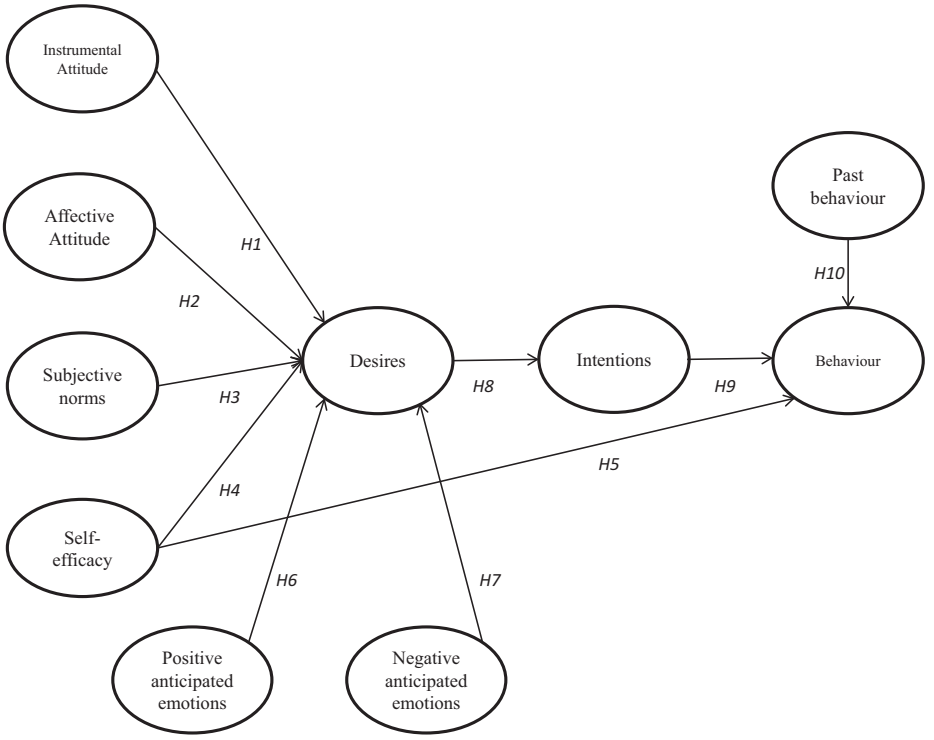

Figure 1. Conceptual MGB model

service encounters over an extended period of time. Dagger and Sweeney (2007) argue in these instances the service experience is dynamic and managers need to understand how consumer needs change as the consumption progresses. Understanding the nature of this change is important, given the emphasis placed on customer retention and loyalty (Zeithaml, 2000) and building long-term customer relationships (Verhoef, 2003). This services-thinking could also be applied to social behaviors, where there is a bias in social marketing research of social product adoption, rather than the maintenance of behavior (Andreasen, 2003), and indicates it is appropriate, if not necessary, to apply this services-thinking to the sustained use of social behaviors such as breastfeeding.

Longer-term customers may have information on which they can base their evaluations not available to novice customers early in the consumption experience (Voeth *et al.*, 2005). For example, first-time (novice) mothers as opposed to multiparous mothers (parents of more than one child), or parents of a week-old baby as compared to parents of a three-month-old baby. The information economic theory of search, experience and credence qualities (Darby and Karni, 1973) thus suggests easy-to-evaluate service quality attributes, such as a sleeping baby, are more likely to be relevant to novice mothers early in the consumption experience because of their search-based classification. Whereas other attributes such as long-term health benefits for the infant are more likely to be relevant to experienced mothers later in the consumption process because of their credence-based classification. In social marketing, there has been limited research examining the effect of experience, particularly in a breastfeeding context.

Hypotheses development

The central hypothesis in our study is the relationship between the modifiable breastfeeding variables of attitudes, self-efficacy, emotions and breastfeeding behaviors will vary depending on the level of the mother's breastfeeding experience (Figure 1).

Attitudes

Previously in the use of the TPB or MGB, attitudes have been treated as one construct; however, given positive and negative anticipated emotions are included in the MGB, it may also be important to distinguish between instrumental and affective attitudes. Moreover, recent research has suggested attitudes might be better expressed in a two-component variable (Rundle-Thiele *et al.*, 2015). Fishbein and Ajzen (2005) argue when measuring attitudes in the TPB, researchers should tap into both instrumental (thoughts about the costs and benefits of breastfeeding) and affective (thoughts about the emotional consequences of breastfeeding behavior) attitudes and there is strong evidence emerging that affective attitudes (Lawton *et al.*, 2009) are more powerful predictors of a variety of health behaviors. In social marketing, the differences in the influence of attitude dimensions on consumer decision-making have important theoretical and practical implications.

In breastfeeding research, there have been mixed results when examining the relationship between breastfeeding attitudes, intentions and behavior, for example, Lawton *et al.* (2012) found both affective and instrumental attitudes were important predictors of breastfeeding intentions, whereas Parkinson *et al.* (2012b) found attitudes did not predict breastfeeding intentions. Furthermore, research on novice mothers found those with higher levels of attitudes toward breastfeeding had higher levels of breastfeeding behavior (Mossman *et al.*, 2008). This indicates breastfeeding attitudes are likely to be important to novice mothers. Thus, the following moderation hypotheses are proposed:

H1. The influence of instrumental breastfeeding attitudes on desires to breastfeed will be stronger for novice mothers than for experienced mothers.

H2. The influence of affective breastfeeding attitudes on desires to breastfeed will be stronger for novice mothers than for experienced mothers.

Subjective norms

Subjective norm refers to the individual's perceptions of social pressure to perform or not perform a given behavior and is determined by normative beliefs which assess the social pressures on the individual about a particular behavior (Perugini and Bagozzi, 2001). Prior research on social factors such as subjective norms reveal they have a mixed influence on breastfeeding, for example, Lawton *et al.* (2012) found a moderate negative relationship between descriptive norms and breastfeeding intentions, while other researchers found subjective norms did not predict breastfeeding intentions (Parkinson *et al.*, 2012b; Wambach, 1997). Conversely, Guo *et al.* (2015) found subjective norms did have a strong relationship with breastfeeding behavior. Where a woman has not previously had children, subjective norms may be important, as she may be more likely to seek or consider others' opinions in making her initial choice and may lack confidence in her decision to continue breastfeeding, in comparison with women who have already experienced breast- or bottle-feeding (Swanson and Power, 2005). Manstead *et al.* (1983) suggest subjective norms are more important for novice mothers than experienced mothers. Thus, the following hypothesis is proposed:

H3. The influence of subjective norms on the desire to breastfeed will be stronger for novice mothers than for experienced mothers.

Experience and self-efficacy

Self-efficacy. Self-efficacy is the perceived ease or difficulty of performing behavior (Parkinson *et al.*, 2017). Mothers who believe they lack the necessary skills to breastfeed and do not have a sense of control are less likely to breastfeed (Dennis and Faux, 1999). Confident mothers are more likely to choose to breastfeed, persist when confronted with difficulties, use self-encouraging thoughts and perceive difficulties as a positive challenge (Gregory *et al.*, 2008). Furthermore, previous research indicates experienced mothers had higher breastfeeding self-efficacy than novice mothers (Koskinen *et al.*, 2014). The longer the mother had breastfed previously and the more positive the earlier breastfeeding experience was, the higher her breastfeeding self-efficacy (Koskinen *et al.*, 2014). Thus, the following hypotheses are proposed:

H4. The influence of self-efficacy on the desire to breastfeed will be stronger for experienced mothers than for novice mothers.

H5. The influence of self-efficacy on breastfeeding behavior will be stronger for experienced mothers than for novice mothers.

Anticipated positive and negative emotions. One of the limitations of TPB is that it does not consider emotional aspects of behavioral intention (Perugini and Bagozzi, 2001); people may have forward-looking emotions toward uncertain future behaviors (Triandis, 1977). In the MGB, positive and negative anticipated emotions predict desire with the original variables of the TPB; these anticipated emotions lead to the dynamic self-regulatory process implied by the appraisal of success or failure for performing behaviors (Carver and Scheier, 2004). Previous breastfeeding research reveals the importance of positive emotions on breastfeeding behavior, for example, Dietrich Leurer and Misskey (2015) found emotions were significant influencers of breastfeeding intentions for novice mothers. Furthermore, previous research also reveals the avoidance of negative emotions as being important to experienced mothers, such as guilt, disappointment, frustration and sadness (Dietrich Leurer and Misskey, 2015; Pontes *et al.*, 2008). Thus, the following hypotheses are proposed:

H6. The influence of positive anticipated emotions on the desire to breastfeed will be stronger for novice mothers than for experienced mothers.

H7. The influence of avoidance of negative anticipated emotions on the desire to breastfeed will be stronger for experienced mothers than for novice mothers.

Predictors of behavior

The MGB purports desires will influence behavioral intentions, and both behavioral intentions and past behavior will predict current behavior. The relationship between these variables is expected to be positive and significant for both experienced and novice mothers; thus, the hypotheses have direct, rather than moderated, effects.

Desires. Sodian *et al.* (2016) argue desires are core components of psychological reasoning, and as such desires have corresponding intentions and are decision-related (Miller *et al.*, 2004). The difference between desires and intentions is akin to the difference between what one would like to do given no situational constraints and what one actually plans to do given the reality within which one ordinarily operates (Miller *et al.*, 2004). Perugini and Bagozzi (2001) argue desires have a particular type of relationship with attitudinal intentions from the perspective that once a person accepts their desire to act this will motivate them to form an intention. An intention is the result of a reflection process,

pondering through different desires and perspectives, being a step closer to real action than a desire (de AR Gonçalves *et al.*, 2015). In the MGB, the target behavior is instrumental to goal achievement. Therefore, the requirement of the desire is relative to the performance of the given behavior (Perugini and Bagozzi, 2001) – in this context, breastfeeding behavior. This means when a woman desires to breastfeed, she is more likely to carry out her intentions to breastfeed. Desire thus represents the motivational force of the decision-making process and serves to integrate a series of emotional, cognitive, self-perception and social appraisals of the decision maker prior to the formation of the intention (Bagozzi *et al.*, 2003). Thus, the following hypothesis is proposed:

H8. The desire to breastfeed will have a positive influence on intentions to breastfeed.

Intentions. Intentions are indicators; however, while they may give an indication of what someone intends to do, they do not tell us why. Previous studies using theories such as TPB and MGB to predict behaviors have frequently not incorporated a behavior measure in the model, with the dependent variable in these studies being intentions (Fry *et al.*, 2014; Rundle-Thiele *et al.*, 2015). For example, Lawton *et al.* (2012) found only seven prospective breastfeeding interventions measured actual behavior. Thus, many examples of behavior prediction research include behavioral intentions rather than actual behavior (Courneya *et al.*, 2000; Hansen *et al.*, 2004). Given a gap often occurs between intentions and behaviors (Holdershaw *et al.*, 2011), the omission of behavior measurements in social marketing research limits the understanding of behavioral performance and intervention effectiveness. In this study, behavior is used, including an intensity of behavior measure as a proxy for breastfeeding behavior given we are asking about intentions and desires in the next four weeks, as well as recency of past behavior. Previous research indicates women who intend to breastfeed prior to birth are more likely to breastfeed (Chezem *et al.*, 2003; Parkinson *et al.*, 2012a). Thus, the following hypothesis is proposed:

H9. Intentions will have a positive influence on breastfeeding behavior.

Past behavior. When examining the direct effects of past behavior on desires, it is a reasonable assumption that not all desires or intentions are explicitly formed consciously, or that they are well-formed (Bagozzi and Yi, 1989; Greenwald and Banaji, 1995). Although seemingly related, frequency and recency effects are conceptually distinct and therefore might carry independent information. For instance, one may have a long history of performing a given behavior without having performed it recently (e.g. a person who long ago gave up purchasing lottery tickets after experiencing a string of frustrated hopes), or one may have recently taken up an activity with no prior experience of it (e.g. a first-time skier). Breastfeeding behavior is unlike other behaviors such as exercise, where an individual may resume exercising after several weeks or months of not exercising; breastfeeding must either be continued or ceased. Once breastfeeding has ceased, it is almost impossible to restart; for breastfeeding to be done, it must have been done both recently and frequently. Furthermore, as an infant grows, the frequency of breastfeeding decreases, which is also likely to influence breastfeeding behavior. Thus, only the *recency of past behavior* variable has been included in the MGB model in this research and "baby age" is controlled for. Thus, the following hypothesis is proposed:

H10. Recency of past behavior will have a positive influence on breastfeeding behavior and be strongly influenced by baby age.

Method

Data collection and measures

Data were collected using a cross-sectional online survey. To compare women from two similar Western countries, Australia and the USA were chosen. Women were recruited via online advertising on Australian and US parenting-focused websites, for example, BubHub.com in Australia and Kellymom.com in the USA, which provided an invitation to participate and a link to the online survey. Only women with a child under the age of 18 months were eligible to participate in this study to minimize recall bias. As such, 43 women were excluded. Ethical clearance to undertake the study was granted by the author's university.

Measures

All measures were taken from previously validated scales, using multiple items to more accurately represent constructs and ensure internal reliability (Klein *et al.*, 2005). Instrumental and affective attitudes were measured using semantic differential items as outlined in Table I on seven-point scales (Ajzen, 1991). Subjective norms, PBC and behavioral intentions were measured using items as outlined in Table I on a seven-point Likert scale (Ajzen, 1991). Desires were measured using items as outlined in Table I on a seven-point Likert scale (Perugini and Bagozzi, 2001). As suggested by Perugini and Bagozzi (2001), anticipated positive emotions and negative emotions were measured on seven-point scales, with response alternatives ranging from "not at all" to "very much". For the positive emotions, participants were asked to express the felt intensity of each emotion expressed in the subjunctive conditional: "Please indicate the level of your feelings if you succeed in achieving your breastfeeding goals in the next four weeks" [glad, happy, proud and satisfied]. The wording for the negative emotions was "Please indicate the level of your feelings if you do not succeed in achieving your breastfeeding goals in the next four weeks" [guilty, disappointed, frustrated and sad]. Recency of past behavior was measured using one item as recommended by Perugini and Bagozzi (2001): "How long ago did you last give your baby breastmilk?" [measured in hours from less than 1 h to more than 24 h].

To measure whether women were primiparous (single child) or multiparous (multiple children), a single item was used "Is this your first baby?" with a yes/no response. To measure actual behavior, a behavioral intensity measure was employed which has previously been used to measure breastfeeding behavior (Parkinson *et al.*, 2012b). The measure for behavioral intensity was a single-item measure and required participants to indicate on a sliding scale from 0 to 100 per cent, how much of the milk their child consumed in the past 24 h was breast milk? This measure is used as a proxy for behavior, given the nature of breastfeeding.

Results

Women consented to participate by submitting the survey, and a total of 1,275 completed surveys were included in the analysis (USA, n = 796; Australia, n = 479). In total, 342 women from the USA and 246 from Australia were novice mothers, and all were currently supplying breastmilk to their child, with 55.1 per cent of novice mothers currently exclusively breastfeeding and 58.4 per cent of experienced mothers currently exclusively breastfeeding. There were significant differences between countries for education, with more women in the US sample (72 per cent) reporting they had a university education, while only 57.2 per cent of Australians reported having a university education. However, there were no significant differences in university education for novice mothers (50.3 per cent) or experienced mothers (49.7 per cent). There were also no significant differences between countries for age (USA m = 30.54, SD = 4.43, Australia m = 31.06, SD = 4.87). As to be expected, there were significant differences in age for novice mothers (m = 29.96, SD = 4.54)

Construct/items	Standardized solution	S.E.	C.R. (*t*-value)	Composite reliability	AVE
Attitudes					
Instrumental				0.91	0.77
Harmful/beneficial	0.93				
Bad/good	0.81	0.028	39.004		
Worthless/valuable	0.90	0.023	46.844		
Affective				0.86	0.67
Unpleasant/pleasant	0.85				
Unenjoyable/enjoyable	0.94	0.033	37.221		
Unexciting/exciting	0.64	0.057	25.025		
Subjective norms				0.81	0.68
Most people who are important to me think that I should breastfeed my baby	0.91				
The people in my life whose opinion I value would approve of my breastfeeding my child	0.73	0.062	10.121		
PBC				0.89	0.73
When breastfeeding becomes difficult I am certain I can overcome these difficulties	0.82				
I am confident I can breastfeed successfully	0.85	0.029	33.966		
Even when breastfeeding becomes tough I can breastfeed quite well	0.88	0.025	34.869		
Positive anticipated emotions				0.92	0.74
Glad	0.94				
Happy	0.83	0.024	37.172		
Satisfied	0.76	0.019	32.450		
Proud	0.64	0.027	25.152		
Negative anticipated emotions				0.92	0.73
Frustrated	0.80				
Guilty	0.72	0.030	33.014		
Sad	0.93	0.029	39.908		
Disappointed	0.95	0.028	40.562		
Intentions				0.91	0.77
I intend to breastfeed my child each day for the coming four weeks	0.91				
I plan to breastfeed my child each day for the coming four weeks	0.94	0.018	53.218		
I am committed to breastfeeding my child for the next four weeks	0.79	0.024	37.984		
Desires				0.85	0.73
I desire to breastfeed my child each day for the coming 4 weeks	0.83				
I want to breastfeed my child each day in the next 4 weeks	0.88	0.028	35.918		
My desire to breastfeed my child in the next 4 weeks can be described as . . .	0.72	0.028	28.066		

Table I.
Results of overall measurement model

and experienced mothers (m = 31.39, SD = 4.57). There were significant differences in the mean age for the child, with 10.44 (SD = 4.62) months for novice mothers and 9.53 (4.96) for experienced mothers (df = 1,273, t, 3.36; p = 0.001).

The study followed the two-step approach of structural equation modeling (SEM) to analyze the data (Anderson and Gerbing, 1988) using AMOS software. Scale reliability and validity were first examined using confirmatory factor analysis (CFA). The second step involved estimating a structural model using the Maximum Likelihood Bootstrap method to examine the theoretical hypotheses.

The study's initial measurement model had eight multi-item constructs with 29 items (as shown in Table I). Items with low loadings (<0.60) were removed from the measurement model (two from attitudes, one from subjective norms and one from negative anticipated emotions), resulting in eight multi-item constructs with 25 items. These modifications did not violate the original theoretical considerations and improved the model fit. Despite the chi-square being significant for the final CFA, due to it being overly sensitive to small deviations in the model fit in large samples (Hu and Bentler, 1999) (χ^2 = 1,079.74, df = 276, χ^2/df = 3.91, p = 0.000), the other indices suggested an adequate model fit (Root mean square error of approximation (RMSEA) = 0.05, Tucker Lewis Index (TLI) = 0.94, confirmatory fit index (CFI) = 0.96 and standardized root mean square residual (RMR) = 0.050) (Byrne, 2001). The study tested convergent and discriminant validity of the measures for each sample individually using CFA, and the measures and reliabilities for all constructs appear in Table I. The correlations between some variables were weak to moderate; however, this was consistent with previous studies using TPB (Lam and Hsu, 2004; Norman *et al.*, 2005). Furthermore, discriminant validity is the degree to which measures of different constructs are distinct, meaning if two or more variables are unique, then valid measures of each should not correlate too highly (Bagozzi, 1991, p. 425). The measurement model was assessed separately for the overall group and for the sub-groups of novice and experienced mothers. The individual item reliabilities, composite reliabilities and average variance (AVE) by each construct for novice and experienced mothers indicate that all constructs used in the model satisfy the requirements of reliability (i.e. a composite reliability greater than 0.7), discriminant validity (i.e. an AVE greater than 0.5) and convergent validity (Kuan and Bock, 2007). Convergent validity occurs when the factor loadings and AVEs for items by their respective constructs are greater than 0.50 and factor composite reliability is equal to or higher than 0.70 (Fornell and Larcker, 1981). All factor loadings were over 0.50 (p < 0.001). The AVEs of all variables were over the 0.50 threshold and higher than the squared correlations of all pairs involving focal variables which are the first indication of discriminant validity (Table II). To test for discriminant validity, a paired constructs test (Anderson and Gerbing, 1988) with the parameter estimate for two factors was constrained to 1.0 (constrained model) and compared to a model where this parameter was freely estimated (unconstrained model). This test was run for every possible pairing of constructs in the study. The unconstrained model, with the drop of one degree of freedom, returned a chi-square value that was at least 3.84 lower than the constrained model, indicating a two-factor solution provides a better fit to the data, and discriminant validity between each of the constructs in the study is supported (Farrell, 2010).

The internal reliability estimates were over the threshold of 0.70 (Hair *et al.*, 2010). Thus, this study's measurement model demonstrates evidence of convergent and discriminant validities and held across both samples. The mean levels of all constructs were above 5 out of 7 (Table III).

Comparing TPB and MGB models

First, the basic TPB model was compared with the MGB model to confirm the conclusion the MGB model improved upon the basic TPB model for each sample. The comparison was

Table II.
Correlations, convergent and discriminant validity

Construct	CR	AVE	AA	IA	NAE	SN	PAE	DES	INT	PBC	RPB
Affective attitudes (AA)	0.86	0.67	*0.67*								
Instrumental attitudes (IA)	0.91	0.77	0.57**	*0.77*							
Negative anticipated emotions (NAE)	0.92	0.73	0.22**	0.24**	*0.73*						
Subjective norms (SN)	0.81	0.68	0.22**	0.10**	0.07*	*0.68*					
Positive anticipated emotions (PAE)	0.92	0.74	0.40**	0.32*	0.25**	0.17**	*0.74*				
Desire (DES)	0.84	0.64	0.22**	0.13	0.26**	0.19**	0.31**	*0.73*			
Intentions (INT)	0.91	0.77	0.11**	0.06*	0.19**	0.19**	0.22**	0.76**	*0.77*		
Perceived behavioral control (PBC)	0.89	0.73	0.44**	0.26**	0.16	0.23**	0.34**	0.20**	0.24**	*0.73*	
Recency of past behavior (RPB)											
Mean			6.30	6.93	5.45	5.80	6.55	6.79	6.87	6.62	3.66
SD			0.95	0.39	1.79	1.38	0.77	0.71	0.61	0.81	0.63

Notes: **Correlation significant at the 0.01 level; *correlation significant at the 0.05 level, AVE on diagonal in italics

Construct	First Mean	First SD	Experienced Mean	Experienced SD	Significance
Affective attitudes	5.05	0.42	5.03	0.387	NS
Instrumental attitudes	6.53	0.849	6.60	0.79	NS
Negative anticipated emotions	5.36	1.83	5.54	1.75	0.07*
Subjective norms	5.74	1.40	5.85	1.36	NS
Positive anticipated emotions	6.70	0.67	6.75	0.62	NS
Desire	6.77	0.75	6.82	0.68	NS
Intentions	6.84	0.66	6.89	0.57	NS
PBC	6.54	0.84	6.69	0.77	0.002**
Recency of past behavior	3.62	0.66	3.70	0.60	0.02**
Behavior	87.93	23.78	88.62	22.25	NS

Notes: **Significant at the 0.01 level; *significant at the 0.05 level

Table III.
T-tests for mean differences

achieved by specifying the TPB model and MGB model separately for each sample. TPB model-Novice mothers: $\chi^2 = 332.15$, $df = 93$, $\chi^2/df = 3.57$, $p = 0.000$, RMSEA = 0.07, TLI = 0.93, CFI = 0.94 and standardized RMR = 0.050; Experienced mothers: $\chi^2 = 540.64$, $df = 93$, $\chi^2/df = 5.81$, $p = 0.000$, RMSEA = 0.08, TLI = 0.93, CFI = 0.94 and standardized RMR = 0.050; MGB model-Novice mothers: $\chi^2 = 867.94$, $df = 313$, $\chi^2/df = 2.77$, $p = 0.000$, RMSEA = 0.05, TLI = 0.94, CFI = 0.95 and standardized RMR = 0.050; Experienced mothers: $\chi^2 = 1{,}428.36$, $df = 313$, $\chi^2/df = 4.56$, $p = 0.000$, RMSEA = 0.07, TLI = 0.94, CFI = 0.95 and standardized RMR = 0.050. Goodness-of-fit test results for both of the tested models indicated the MGB model provided an improved fit to the data, compared to the basic TPB model in both groups.

To examine the explanatory power of both TPB and MGB, we then compared the paths and estimates between models for both novice and experienced mothers (Figures 2-5). First, we see instrumental attitudes and affective attitudes do not predict intentions in the TPB or desires in the MGB models for either group. Subjective norms only predict intentions in TPB ($\beta = 0.15$, $p < 0.001$) and desires in MGB ($\beta = 0.14$, $p < 0.01$) for novice mothers. Self-efficacy predicts intentions for both novice ($\beta = 0.19$, $p < 0.001$) and experienced mothers in TPB ($\beta = 0.27$, $p < 0.001$) and only predicts desires in MGB ($\beta = 0.24$, $p < 0.001$) for experienced mothers. Self-efficacy predicts breastfeeding behavior in both TPB and MGB for both novice ($\beta = 0.14$, $p < 0.001$; $\beta = 0.14$, $p < 0.001$) and experienced ($\beta = 0.16$, $p < 0.001$; $\beta = 0.15$, $p < 0.001$) mothers. Intentions predict breastfeeding behavior in both TPB and MGB for both novice ($\beta = 0.30$, $p < 0.001$; $\beta = 0.27$, $p < 0.001$) and experienced ($\beta = 0.13$, $p < 0.01$; $\beta = 0.11$, $p < 0.01$) mothers. While the same constructs in both models predict intentions and behavior, the MGB model provides superior model fit and additional explanation of the important predictors of behavior by including desires, emotions and recency of past behavior in the model.

The TPB model accounted for 6 per cent of the variance in intentions for novice mothers and 7 per cent for experienced mothers, compared to the MGB model, where 57 per cent of the variance in intention for novice mothers and 85 per cent for experienced mothers. TPB accounted for 13 per cent of the variance in behavior in novice mothers and 7 per cent for experienced mothers, whereas the MGB model accounted for 15 per cent of the variance in behavior for novice mothers and 10 per cent for experienced mothers. Finally, the MGB model accounted for 10 per cent of the variance in desires for both novice and experienced mothers. Therefore, the MGB explains more variance than the TPB model for both intentions and behaviors. Model parsimony rather than explanatory power is often emphasized (Bagozzi, 1992) when evaluating goodness of fit for SEM models by the many

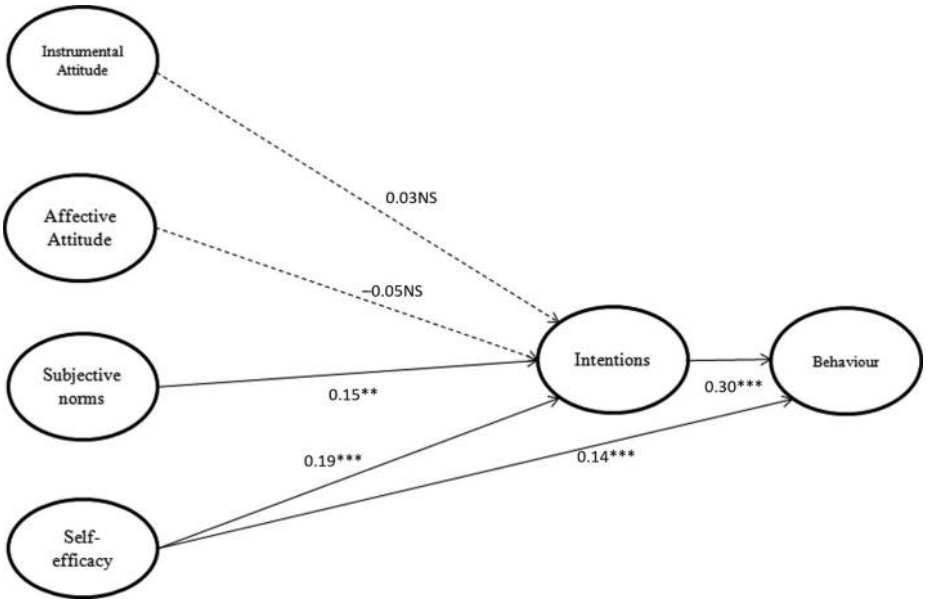

Figure 2.
TPB novice mothers

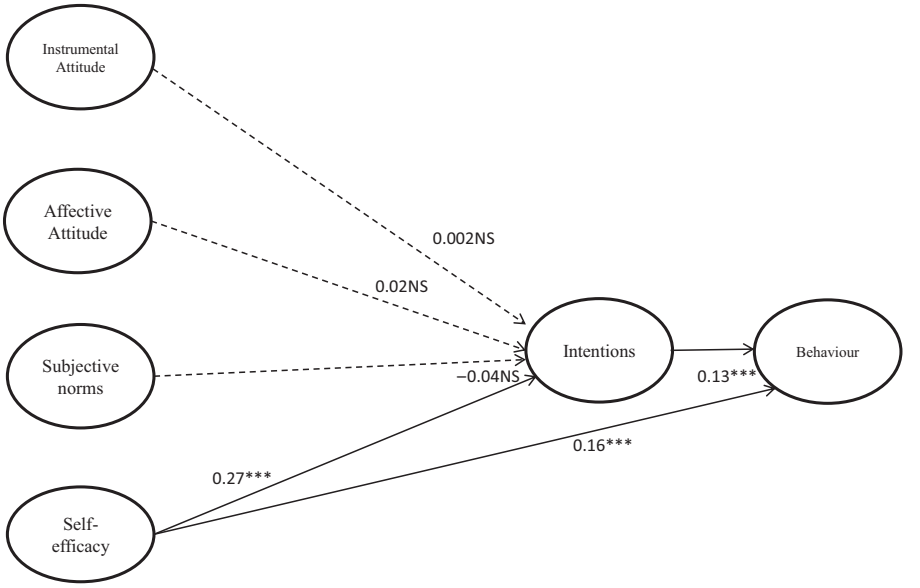

Figure 3.
TPB experienced mothers

rules of thumb (Marsh and Hau, 1996). This approach has merit, and while test statistics and fit indices are very beneficial, they are no replacement for sound judgment and substantive expertise (Bollen and Long, 1993; Marsh and Hau, 1996). This demonstrates using a more parsimonious model provides an incomplete picture of which variables are influencing

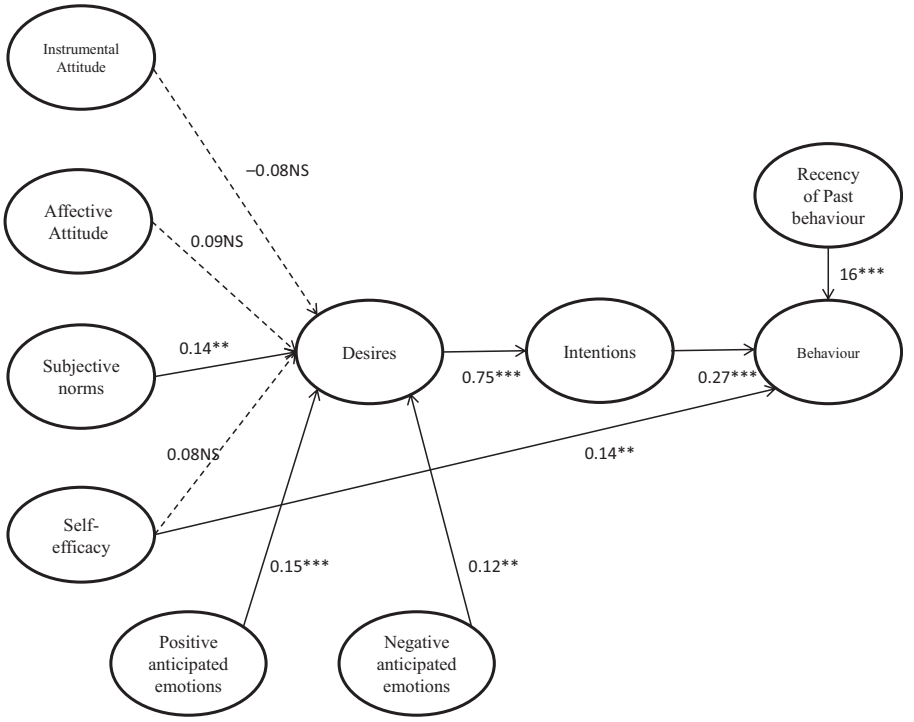

Figure 4.
MGB novice mothers

behaviors. Including variables which are likely to influence complex social behaviors such as breastfeeding provide additional explanatory power. Overall, the MGB model provides the most complete explanation of the behavior under examination and was thus used for hypotheses testing.

Hypothesis testing

Despite the chi-square being significant for the final structural model, which is to be expected given the sample size over 1,000, the other indices were within their acceptable ranges (Hu and Bentler, 1999). To test and compare the moderating effect of experience, multi-group analysis was conducted.

The hypothesized structural relationships of the antecedents contribute substantially to the explanation of intentions, but less so to desires and breastfeeding behavior. Formal tests of mediation were undertaken (Baron and Kenny, 1986) (Table IV), to examine if the relationship between variables changed from being significant to insignificant. There is full mediation if there is only a drop in strength of the relationship, but it remains significant, there is partial mediation.

Figure 4 represents the full structural model for novice mothers and Figure 5 represents the full structural model for experienced mothers, with coefficient paths of the MGB for breastfeeding behavior. Results of hypotheses are presented in Table V.

Attitudes and desires. Instrumental and affective attitudes did not have a significant influence on desires in either group, thus *H1* and *H2* are not supported.

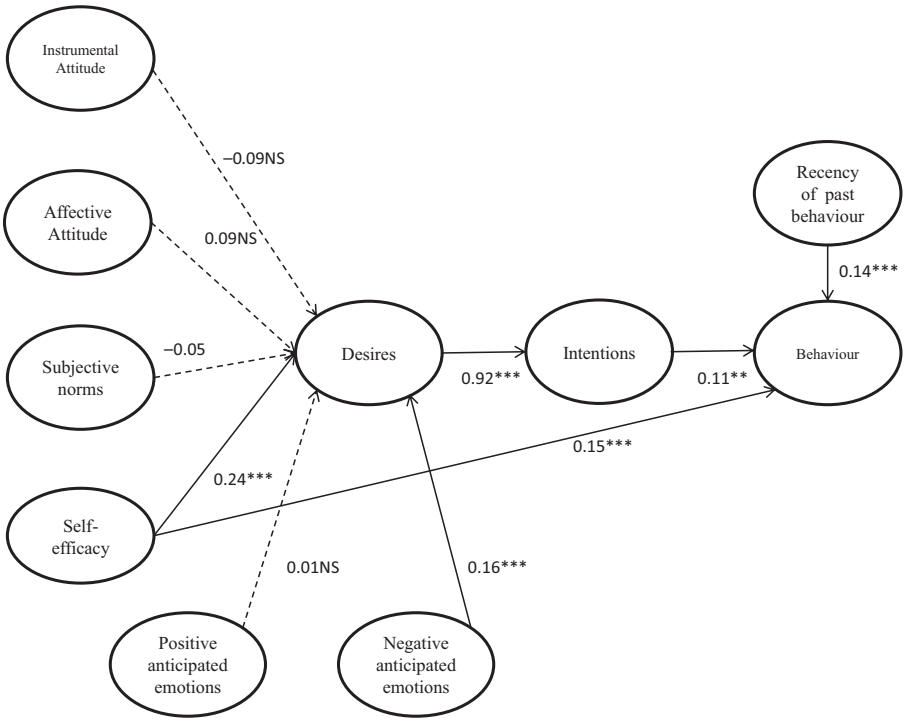

Figure 5.
MGB experienced mothers

Subjective norms, emotions and desires. The impact of subjective norms ($\Delta\chi^2 = 5.72$, $p < 0.001$) and positive anticipated emotions ($\Delta\chi^2 = 1.97$, $p < 0.05$) on desires were significantly different between novice and experienced mothers, which supports *H3*, *H4* and *H6*. Examination of the path weights indicates subjective norms ($\beta = 0.14$, $p < 0.01$; $\beta = -0.05$, p = ns) and positive anticipated emotions ($\beta = 0.15$, $p < 0.001$; $\beta = 0.01$, p = ns) are more important drivers of desires for novice mothers than for experienced mothers. Negative anticipated emotions have a significant relationship with *desire* in both groups with no significant differences between groups; thus, *H7* is not supported.

Self-efficacy and desires. Self-efficacy ($\beta = 0.08$, p = ns; $\beta = 0.24$, $p < 0.001$) is a more important driver of desires for experienced mothers ($\Delta\chi^2 = 2.52$, $p < 0.05$). This suggests that as mothers gain experience with breastfeeding, self-efficacy strengthens as a driver of desires. The impact of self-efficacy on breastfeeding behavior was not significantly different between groups, with strong positive relationships for both novice and experienced mothers ($\beta = 0.14$, $p < 0.01$; $\beta = 0.15$, $p < 0.01$); thus, *H5* was not supported. These findings can be explained using self-efficacy theory (Bandura, 1977), which has been found to play a critical role in health behavior change and maintenance (Strecher *et al.*, 1986). Self-efficacy comprises expectancy, which is the personal conviction one is able to successfully perform those behaviors to produce the desired outcome (Bandura, 1977). Importantly, individuals may believe a particular behavior will enable them to produce a desired outcome; however, they have little confidence in their own ability to perform that behavior (Bandura, 1977, 1993). This desired outcome varies between individuals, as, culturally, we are led to believe both breastmilk and formula lead to a healthy baby. For example, if a mother believes not

Table IV.
Mediation tests

Relationship	Direct with mediator				Direct without mediator				Mediation	
Mediator: desires on intentions	First	*p*	Experienced	*p*	First	*p*	Experienced	*p*	First	Experienced
Affective attitude	−0.03	NS	0.04	NS	−0.02	NS	0.07	NS	None	None
Instrumental attitude	0.25	***	0.36	***	0.06	NS	0.23	***	Full	Partial
Subjective norms	0.11	0.005	−0.003	NS	0.12	0.004	−0.03	NS	None	None
PBC	−0.04	NS	0.07	NS	0.13	0.007	0.16	***	None (direct effects)	None (direct effects)
PAE	0.13	0.004	−0.02	NS	0.09	0.05	−0.13	0.001	Partial	None
NAE	0.10	0.015	−0.10	0.005	0.06	NS	0.11	0.002	Full	None
Mediator: Desires and Intentions on Behavior										
Affective attitude	−0.03	NS	0.04	NS	0.003	NS	0.008	NS	None	None
Instrumental attitude	0.25	***	0.36	***	−0.06	NS	0.07	NS	Full	Full
Subjective norms	0.11	0.005	−0.003	NS	0.03	NS	0.08	0.04	Full	None
PBC	−0.04	NS	0.07	NS	0.13	0.01	0.11	0.01	None (Direct effects)	None (Direct effects)
PAE	0.13	0.004	−0.02	NS	0.01	NS	−0.05	NS	Full	None
NAE	0.10	0.015	0.10	0.005	0.04	NS	0.03	NS	Full	Full

Note: ***Significant at the <0.001 level

Table V.
Results of the structural model and chi-square difference tests

			New mothers			Experienced mothers			
Hyp	Hyp testing	Path	*t*-score	β	Significance	*t*-score	β	Significance	$\Delta\chi^2$
H1	Not supported	Instrumental attitude → Desires	−0.53	−0.04	NS	−1.82	−0.09	NS	NS
H2	Not supported	Affective attitude → Desires	1.08	0.07	NS	1.62	0.09	NS	NS
H3	Supported	Subjective norms → Desires	2.80	0.13	0.005	−1.06	−0.05	NS	5.72***
H4	Supported	Self-efficacy → Desires	1.81	0.09	0.070	5.66	0.24	***	2.52*
H5	Not Supported	Self-efficacy → Behavior	3.11	0.13	0.002	3.24	0.13	0.001	NS
H6	Supported	Positive anticipated emotions → Desires	3.09	0.12	0.002	0.28	0.01	0.774	1.97*
H7	Not supported	Negative anticipated emotions → Desires	2.58	0.12	0.010	3.7	0.16	***	NS
H8	Supported	Desires → Intentions	18.91	0.73	***	33.48	0.92	***	4.72***
H9	Supported	Intentions → Behavior	6.68	0.28	***	2.81	0.11	0.005	NS
H10	Supported	Recency → Behavior	−4.19	−0.16	***	−4.37	−0.17	***	NS
R^2	Desires		0.10				0.10		
R^2	Intentions		0.57				0.85		
R^2	Behavior		0.15				0.10		

Notes: ***Significant at the <0.001 level; *significant at the <0.05 level

giving her infant formula is important but is not confident in her ability to breastfeed, it is unlikely she will abstain from formula supplementation. Therefore, to participate in a particular behavior successfully, an individual must both believe it will produce the desired outcome and have confidence in performing the particular behavior. Novice mothers typically become more self-confident in their parenting abilities over time as they become more familiar with being a mother. This is consistent with the literature, which indicates longer-term customers have information on which they can base their evaluations not available to novice customers early in the consumption experience (Voeth *et al.*, 2005).

Desires and intentions. Examining the path weights, *desires* had a strong influence on *Intentions* in both groups ($\beta = 0.75$, $p < 0.001$; $\beta = 0.92$, $p < 0.001$), indicating *H8* is supported; however, the impact was significantly stronger for novice mothers ($\Delta\chi^2 = 4.72$, $p < 0.001$).

Intentions and behavior. As predicted, *intentions* had a significant positive relationship with breastfeeding behavior in both groups ($\beta = 0.27, p < 0.001$) ($\beta = 0.11, p < 0.01$), thus *H9* is supported; there were no significant differences between groups. The results of this study found the influence of intentions was reduced for experienced mothers compared to novice mothers, which is consistent with previous research where effects of intentions decreases for blood donors (Bagozzi, 1981). Researchers in the past took this to mean with experience, volitional behavior effects decline and the results of this study support this notion.

Recency of past behavior and behaviors. When controlling for baby age, *Recency of past behavior* had a significant influence on actual breastfeeding behavior for both novice and experienced mothers ($\beta = 0.16$, $p < 0.001$) ($\beta = 0.14$, $p < 0.001$), and therefore, *H10* is supported; however, there was no significant difference between groups.

Discussion

This research reframes marketers' perspectives on how to study complex social phenomenon. The results challenge the notion that a complex social behavior, such as breastfeeding, can be explained by an exclusively planned approach. When the TPB is used to analyze breastfeeding, attitudes have a significant relationship with other variables in the model. However, when emotional variables are added to the model in the form of the MGB, there is no relationship. This finding is a small, simple step toward explaining complex social behaviors. As the empirical account suggests, the findings support Bagozzi's (1992) premise that there are boundary conditions on when attitudes matter, and thus, our study demonstrates attitudes do not always influence intentions and behaviors.

This research describes the holistic nature of the breastfeeding experience from the perspective of mothers. The findings highlight breastfeeding must be viewed more broadly than a biological perspective requiring only the dissemination of knowledge and a specific skill set to women. Rather, breastfeeding support and interventions must incorporate the psychosocial and emotional aspects including the need to provide encouragement and reassurance to women (Gallegos *et al.*, 2014), particularly novice mothers. Mothers need to be aware of common breastfeeding challenges when the realities of breastfeeding do not meet personal and societal expectations (Gurrieri *et al.*, 2013), reassurance difficulties are common but can be overcome, and have access to resources to problem solve issues as they arise. Those developing breastfeeding social marketing programs and offering individual support must recognize not everyone finds breastfeeding doable and enjoyable, and should tailor messaging and service-support accordingly to acknowledge the range of experiences. Finally, social marketing programs need to provide emotional support and reassurance for those who are saddened or feel guilty about their breastfeeding experience.

Motherhood is a journey, and at different stages, women experience different levels of knowledge, confidence and emotion toward breastfeeding. In this research, experienced mothers showed less evidence for a planned approach than novice mothers with emotion playing a key role. Thus, experience alters the factors which influence breastfeeding intentions and behavior. Additionally, this insight into the customer journey of breastfeeding highlights the role of factors external to the consumer that influence behavior. Novice mothers are more influenced by subjective norms (the opinions of those around them) and are less confident compared to experienced mothers. The stronger relationship between negative emotions and desires for experienced mothers indicates experienced mothers appear to be more prepared to "battle the barriers" to breastfeeding: physical, social and emotional (Dietrich Leurer and Misskey, 2015). Drawing on past experiences when difficulties arise, women integrate a series of emotional, cognitive, self-perception and social appraisals when forming the intention to breastfeed. The relationship between desires and intentions to breastfeed is stronger for experienced mothers; demonstrating experience matters.

Theoretical implications

This research presents empirical evidence to challenge the prevalent use of planned behavior models and theories in marketing. Importantly, in complex social behavior models, emotion rather than attitudes have a larger role in determining intentions and behaviors. Contrary to the dominant emphasis on studying the role of cognition to explain consumers' adoption of social behavior changes (Conner *et al.*, 2015; Manstead and Parker, 1995), this research illustrates the importance of including emotions and experience. Essentially, the cognitive approach to explaining behavior narrowly focuses on the role of attitudes in driving behavior change, which has resulted in these theories attaining a privileged position in social marketing programs and planned interventions. In terms of conducting research on complex social behaviors, researchers should be critical of past approaches and models that privilege cognitive factors, and move toward inclusion of additional forces – emotional, social and cultural. Thus, the need to carefully select an appropriate theoretical framework for investigating complex social behaviors is apparent.

The research findings also demonstrate the importance of including behavioral outcomes in behavior change models extending beyond the use of intentions as proxies. Prior research has shown the varying levels of impact between intentions and breastfeeding behavior (Bai *et al.*, 2011; Lawton *et al.*, 2012; Richetin *et al.*, 2011). Our findings reveal that while intentions for novice mothers are higher than for experienced mothers, both relationships are low. The explained variance in behavior for both novice and experienced mothers is also low, indicating there are factors not included in the model that have a greater influence. This is consistent with one of the criticisms of planned behavior models, the focus on parsimony (achieving significance with as few variables as possible), rather than explanatory power (Bagozzi, 1992). For complex social behaviors such as breastfeeding, models which include salient factors may provide better explanatory power resulting in improved behavioral outcomes. Thus, the deepened MGB presented here offers an alternative explanation to models focusing on cognitive variables only, providing key insights into modifiable variables. These understandings provide a further step to advance how research is conducted for complex social behaviors.

Finally, this research emphasizes the importance of understanding the stages in the customer journey for complex social behaviors. Drawing on services marketing, the use of the customer journey concept allows us to consider the customer experience of a complex social behavior as dynamic rather than static, and based on a continuum (Zainuddin *et al.*, 2016). Our research therefore deepens the MGB by showing experience is another boundary

condition for complex social behaviors. For novice mothers, in the early stage of the customer journey, the explained variance in intentions is lower when compared with experienced mothers. Positive anticipated emotions also had a much stronger influence on intentions and desires for novice mothers than experienced mothers. Thus, consideration of the relevant stage of the customer journey is important when selecting and applying theoretical models and designing research to monitor (and evaluate) the consumer experiences.

Managerial implications

Empirical evidence from this study demonstrates the need to develop social marketing programs that assist consumers to positively manage their emotions. This is contrary to many past approaches where negative emotions such as guilt, shame and fear have been used as sticks in an attempt to change complex social behaviors (Brennan and Binney, 2010). Social behavior frameworks and models should therefore include an assessment of the consumers' emotions regarding their experience. This will enable the development of individualized support that acknowledges and respects the diversity of psychosocial responses, including recognition not everyone reacts the same way.

The findings from this study further extend current practice of intervention design by showing the importance of selecting a theory that reflects the complexity of the behavior and includes variables which are potentially modifiable. Thus, when choosing theories to assist in developing social marketing programs aiming to change complex social behaviors including the relevant psychosocial and emotions variables is important. Understanding the relationship between psychosocial and emotional variables and behavior will enable social marketing managers to develop interventions that address these social, cultural and other factors as part of universal social marketing programs as governments and other stakeholders strive to improve and sustain social behavior outcomes.

This research also offers useful guidance for the development of evaluation tools that go beyond intentions as proxies for behavior and demonstrates the need for behavior as the key outcome measure. Social marketers seek to change behaviors, and thus, having a more complete understanding of the focal behavior is important. The inclusion of behavioral measures provides managers with actionable insights when developing future marketing programs, as it allows understanding of which factors influenced behavior.

We augment the existing literature by introducing the importance of consumer experience with a complex social behavior. We distinguish the stage of the customer journey influences relationships between factors in a model of complex social behavior. Future research drawing on this insight should therefore include process measures that will enable the stages in the customer journey to be mapped and understood, not just the outcome. Focusing on the stage in the customer journey indicates there are multiple touchpoints and interactions that impact their capacity to manage and sustain complex behavior change (McColl-Kennedy *et al.*, 2015). By leveraging engagement opportunities where these key touchpoints occur in the customer journey, practitioners can design more effective social marketing intervention and programs.

Segmentation, an important social marketing tool, can also assist in improving intervention and program outcomes (Kubacki *et al.*, 2017). This study has provided evidence for segmentation variables such as experience levels. Targeting experience levels would move social marketing program interventions away from a "population approach" to more tailored programs that could potentially improve sustained behavioral outcomes. Thus, the development of interventions aimed at influencing complex behaviors should be grounded in an understanding of the consumer's current stage in the customer journey. Therefore, our findings will be useful in advancing policy and social marketing interventions by enhancing

understanding of how complex social behaviors are performed or influenced over time, and that segmentation of a market will contribute to sustainable change.

Conclusion, limitations and future research directions

This model should not be regarded as a solution to complex behavior intervention and policy problems, but as a tool to be applied in the process of developing interventions with the segments in question. Tools should be developed to understand consumers' experience with a social behavior and assist them to achieve their behavior change goals through confidence building and accurately anticipating their emotions. Applying the marketing concept of exchange to complex behaviors provides insights that allow marketers and policy makers to develop cost-effective interventions and institutional policies to achieve behavioral outcome objectives. For example, creating an exchange, consumers will value based on their anticipated emotions by providing them with emotional tools aimed at increasing their behavioral confidence. This may be generalizable to other social behaviors and family products and services, particularly those including other people or children as end users of the decision-making process. For example, other social behaviors include household food consumption, physical activity, domestic violence–respectful relationships and alcohol consumption. More general family products and services include education, mother and baby products, feeding products, services for mothers, services for babies, childcare and medical services. In all of these domains, marketing processes and service interfaces with customers are becoming increasingly important to ensuring consumers' experiences are positive and supportive to maintaining desired behavioral outcomes. Future research is required to understand other important variables for changing complex social behaviors and how these interact over time.

This research has several limitations. First, voluntary surveys are only representative of those who choose to participate, and typically participant characteristics differ from those who choose not to complete a survey. Respondents were a homogeneous group with higher education and income levels than the general population. Finally, data were derived from an online survey at a single point in time, which limits the possibility of richer, more detailed experiential accounts inherent in qualitative data collection methods. This indicates there is a need to move beyond traditional research design methods to investigate the consumption continuum of experience in social marketing. Employing tools and techniques which consider the dynamic nature of complex social behavior change are required. This can be achieved by employing a mix of approaches which go beyond surveys and focus groups (Carins *et al.*, 2016) including observations and interviews to enable triangulation of data sources (Almosa *et al.*, 2017), service design where solutions can be co-created by customers (McColl-Kennedy *et al.*, 2015), longitudinal research designs (Parkinson *et al.*, 2016) and netnography (Parkinson *et al.*, 2017).

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