

From customer readiness to customer retention: the mediating role of customer psychological and behavioral engagement

Psychological
and behavioral
engagement

1799

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Abstract

Purpose – Customer engagement (CE) literature features divergent definitions and conceptualizations. To clarify its meaning, antecedents and outcomes, this paper aims to propose that psychological customer engagement (PCE) is the mechanism by which customers' readiness to engage influences behavioral customer engagement (BCE) in the form of in-role and extra-role behaviors, which then affect customers' goal attainment, satisfaction and retention.

Design/methodology/approach – Set in the fitness center industry, this study combines perceptual data (from customers) and behavioral data (from the fitness center) to reveal a hierarchy of effects: customer readiness to PCE to BCE to customer goal attainment, satisfaction and retention.

Findings – Customer readiness variables (role clarity, ability, motivation) influence in-role and extra-role BCE directly and indirectly through PCE. Extra-role BCE is associated with goal attainment and satisfaction, and the latter is linked to customer retention. In-role BCE is associated with goal attainment only.

Research limitations/implications – The proposed integrative model bridges the psychological-behavioral divide in CE literature and encourages the adoption of a broader nomological network that accounts for the effects of customers' characteristics and actions on their goal attainment, satisfaction and retention.

Practical implications – Managers can enhance CE by improving customer role clarity, ability and motivation. Relative to in-role BCE, extra-role BCE appears more critical because it affects both goal attainment and satisfaction directly and retention indirectly.

Originality/value – The novel integrative approach, combining BCE and PCE in a single model, also provides a consumer-oriented view on CE, which establishes a more comprehensive perspective, as summarized in the proposed model of consumer engagement.

Keywords Customer engagement, Readiness, Goal attainment, Satisfaction, Retention, Fitness

Paper type Research paper



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Introduction

Vastly expanded research into customer engagement (CE) has not only generated valuable insights (Bowden, 2009; Pansari and Kumar, 2017; Van Doorn *et al.*, 2010; Vivek *et al.*, 2012) but also significant challenges with regard to its definition and conceptualization. Existing ideas about what constitutes CE are divergent, and insights into its antecedents and consequences from a consumer perspective are lacking. In particular, prior studies conceptualize CE as either psychological (Bowden, 2009; Brodie *et al.*, 2011; Grewal *et al.*, 2017) or behavioral (Guesalaga, 2016; Harmeling *et al.*, 2017; Pansari and Kumar, 2017; Van Doorn *et al.*, 2010), such that the very meaning of the construct remains inconsistent. Beyond the lack of clarity regarding the CE definition and its dimensionality, its antecedents and consequences also remain uncertain Dessart *et al.* (2015). Without such clarity, theory testing involving CE is challenging (Harmeling *et al.*, 2017), highlighting the need for further empirical examinations (Dessart *et al.*, 2015). To provide insights along these lines, we propose bridging two discrete streams of CE research, pertaining to psychological customer engagement (PCE) and behavioral customer engagement (BCE) approaches. In turn, we predict that PCE (i.e. attitudinal aspects of customer-firm connectedness) actually is a prerequisite of BCE (i.e. customer actions that affect the firm). Whereas PCE refers to the emotional bond between consumers and brands/firms that arises over the course of consumer experiences (Grönroos, 1995; Moliner *et al.*, 2018), BCE entails firm-/brand-focused customer actions that go beyond mere purchase (Van Doorn *et al.*, 2010).

Furthermore, prior research that takes a firm-centric perspective focuses on firm actions as antecedents and firm profitability as the outcome of CE (Harmeling *et al.*, 2017). In this view, the firm tries to motivate and empower customers to contribute so that it can earn enhanced revenues or lower its costs (Homburg *et al.*, 2017; Menguc *et al.*, 2017; Pansari and Kumar, 2017). But we seek to establish a customer-centric approach in which customer characteristics represent relevant antecedents to CE, which, in turn, has key consequences for customers. The importance of the customer-centric approach to CE is recognized by practitioners. For example, health-care authorities appreciate the direct relationship between patients' previsit preparedness and the likelihood that they will speak up, ask questions, adhere to professional advice and ultimately feel greater satisfaction and well-being. Accordingly, the Agency for Healthcare Research and Quality website (ahrq.gov) features the "Be Prepared To Be Engaged" campaign, aimed at leveraging patient readiness to elevate CE. Developing this customer-centric perspective can extend understanding of the drivers of CE, as well as draw greater attention to how customers are affected by CE (Kumar *et al.*, 2019; Van Doorn *et al.*, 2010; Verleye *et al.*, 2014). In particular, our findings delineate how customer readiness to engage with the firm affects CE, with notable outcomes for those customers.

Driven by these two research objectives, we propose a series of sequentially related effects (Vakratsas and Ambler, 1999), from customer readiness variables (knowledge, ability and motivation) to PCE (engagement as attitude) to BCE (in-role and extra-role behaviors) and finally to customer goal attainment, satisfaction and retention. Whereas in-role BCE includes customers' initiative behaviors to fulfill what is typically expected or required of them, in extra-role BCE customers go beyond what is typical, usual and/or ordinarily expected (Macey and Schneider, 2008). By conceptualizing and empirically testing a customer-centric model, we thus specify PCE as the underlying mechanism by which customer readiness variables trigger BCE, and we establish how customers' readiness and engagement influence their goal attainment, satisfaction and retention (Kumar and Pansari, 2016; Pansari and Kumar, 2017). The hierarchy of effects then establishes some notable managerial insights. In particular, previous research indicates positive effects of BCE on

customer-firm relationship quality and long-term profitability (Kumar *et al.*, 2010; Pansari and Kumar, 2017). We reveal mechanisms that managers can use to promote BCE among customers. By highlighting CE as the underlying mechanism by which customer readiness influences customer goal attainment, satisfaction and retention, we establish four key findings:

- (1) the extent to which customers exhibit BCE depends on their PCE;
- (2) customer readiness to engage with the firm intensifies PCE;
- (3) extra-role BCE boosts goal attainment and satisfaction, whereas in-role BCE affects only the latter; and
- (4) in our empirical study context (i.e. group fitness), retention relates to satisfaction, but not goal attainment.

Research background

Customer engagement

The term “engagement” has been used extensively in communication, psychology, organizational behavior and marketing, leading to a variety of conceptualizations (Achterberg *et al.*, 2003; Hollebeek, 2011; Saks, 2006) and different interpretations (London *et al.*, 2007). Communication researchers, for example, tend to focus on media engagement, defined as the consumer’s psychological experience while consuming media, which results in a state of connectedness with the media (Calder and Malthouse, 2008). In psychology, engagement instead refers to a state of being occupied or fully absorbed (Higgins and Scholer, 2009), resulting from a motivational force to make or not make something happen (Higgins, 2006). Organizational behavior research focuses on employee engagement, a “pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior” but that can enhance firm productivity (Schaufeli *et al.*, 2002, p. 74) and financial performance (Bowden, 2009; Saks, 2006).

Prior to 2005, few marketing articles used the term “engagement” in conjunction with the terms customer, consumer or brand (Brodie *et al.*, 2011). However, the increasingly interactive and experiential nature of customer relationships (Vivek *et al.*, 2018) and the need to build two-way connections with customers to foster mutually valued interactions have led marketers to prioritize engagement as an effective approach to managing customer and stakeholder relationships. From this view, engagement refers to the creation of deeper, more meaningful connections between the customer and the company (Van Doorn *et al.*, 2010) that increase market share and profitability and extend the scope of their interactions (Bowden, 2009; Dessart *et al.*, 2015). In turn, CE offers a strategic pathway toward competitive advantages and improved sales or profitability (Brodie *et al.*, 2011). As more insights have emerged though, CE literature has suffered from the introduction of divergent claims about what constitutes CE and a dearth of customer-centric approaches to identifying its antecedents and consequences.

Definitions and dimensions of customer engagement

Table 1 provides a selected summary of prior literature and its various definitions and dimensions of CE. Some researchers view CE as a psychological process; others conceptualize it as a set of behaviors. For example, Brodie *et al.* (2011, p. 260) refer to the “psychological state that occurs by virtue of interactive, cocreative experiences with a focal agent/object in a focal service relationship.” For Bowden (2009), CE is a psychological process involving the mechanisms by which consumer loyalty forms and persists. Focusing

Table 1.
Literature summary

Study	Key finding(s)	PCE dimensions	BCE dimensions	CE definition, dimension, scale	Antecedents (customer-centric [C] or firm-focused [F])	Consequences (customer-centric [C] or firm-focused [F])
Behnam et al. (2021)	Customer learning and knowledge sharing boosts CE, which promotes customer cocreation and relationship quality	Cognitive processing; affection	Activation	Adopts Hollebeek et al.'s (2014) definition and dimensions	Customer learning; customer knowledge sharing [C]	Customer cocreation; relationship quality [F]
Gupta (2021)	CE with travel apps enhances customer value	–	–	Adopts Vivek et al.'s (2014) CE scales. Lists but does not define enthusiastic participation, cognitive attention and social connection as dimensions	–	Customer value [C]
Kaveh et al. (2021)	Perceived value and customer satisfaction serially mediate the positive effect of CE on purchase intention	–	–	Defines CE in sales promotion as a behavioral construct: “the extent to which customers make suggestions in the type and amount of sales promotion and become involved in it” (p. 425)	–	Perceived value; customer satisfaction; purchase intention [C, F]
Hollebeek et al. (2020)	Develops a framework of lockdown-based CE with essential/nonessential service interactions based on Maslow's hierarchy of needs	–	–	Adopts Kumar et al.'s (2019) definition: “investment of operant modes [F] resources (i.e., cognitive, emotional, behavioral, and/or social knowledge/skills) and operant resources (e.g., equipment) in [their] brand interactions” (p. 141)	Lockdown-prompted service	–
Li et al. (2020)	Both brand attachment and customer trust fully mediate the effect of CE on brand loyalty	Identification; absorption	Interaction	Adopts Harrigan et al.'s (2017) definition: “frequent transactions between customers and the tourism social media brand that enhance customers' affective (e.g. identification), cognitive (e.g. absorption), and behavioral (e.g. interaction) investment toward the brand” (p. 185)	–	Brand attachment; customer trust; brand loyalty [F]

(continued)

Study	Key finding(s)	PCE dimensions	BCE dimensions	CE definition, dimension, scale	Antecedents (customer-centric [C] or firm-focused [F])	Consequences (customer-centric [C] or firm-focused [F])
Islam <i>et al.</i> (2019)	CE mediates the effect of service quality on brand experience and repatronage intent	Cognitive processing; affection	Activation	Adopts Hollebeek <i>et al.</i> 's (2014) definition: a consumer's "investment of cognitive, emotional, behavioral, and social operant, and operand resources in their brand interactions" (p. 167)	Service quality [F]	Brand experience; re-patronage intent [C, F]
Kumar <i>et al.</i> (2019)	Offers a service-dominant logic framework of CE	-	Direct purchases; indirect profit contributions	Adapts Hollebeek <i>et al.</i> 's (2016) definition: "customer's motivationally driven, volitional investment of focal operant resources (including cognitive, emotional, behavioral, and social knowledge and skills), and operand resources (e.g., equipment) into brand interactions in service systems" (p. 141)	Satisfaction; emotional attachment [C]	-
Vivek <i>et al.</i> (2018)	Introduces firm offerings, programs or activities initiated by the organization as CE strategies aimed at engaging current or potential customers	-	-	Adopts Vivek <i>et al.</i> 's (2012) definition: "the intensity of an individual's participation in and connection with an organization's offerings or activities, which either the customer or the organization initiates" (p. 32)	Strategies; dialogue; facilitative role; authenticity; relevance [F]; individual conditions; experience-seeking; meaningfulness; psychological safety; psychological availability [C]	-
Pansari and Kumar (2017)	When a relationship is satisfying and has emotional connectedness, partners become engaged in their concern for each other in direct and indirect ways	-	Direct CE: buying. Indirect CE: referring; influencing; feedback	Defines CE as "the mechanics of a customer's value addition to the firm, either through direct or/and indirect contribution" (p. 296)	Defines CE as "An individual difference representing consumers' propensity to include important brands as part of how	Firm performance; opt-in privacy sharing; relevant marketing [F]
Hollebeek <i>et al.</i> (2014)	CE mediates the effect of consumer brand involvement on self-brand connection and brand usage intent	Cognitive processing; affection	Activation	Defines CE as "An individual difference representing consumers' propensity to include important brands as part of how	Involvement [C]	Self-brand connection; brand usage intent [C, F]

(continued)

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Study	Key finding(s)	PCE dimensions	BCE dimensions	CE definition, dimension, scale	Antecedents (customer-centric [C] or firm-focused [F])	Consequences (customer-centric [C] or firm-focused [F])
				they view themselves...A consumer's positively valenced cognitive, emotional and behavioral brand-related activity during, or related to, specific consumer/brand interactions" (p. 151)		
Chan <i>et al.</i> (2014)	CE mediates the effects of multiple antecedents on repurchase and word-of-mouth intentions on social networking sites	–	–	Adopts Patterson <i>et al.</i> 's (2006) definition: "the level of a person's value; freedom of expression; cognitive, emotional and behavioral presence in brand interactions with an online community" (p. 85)	System support; community value; freedom of expression; rewards/recognition [F]	Repurchase intention; word-of-mouth intention [F]
Vivek <i>et al.</i> (2012)	As a vital component of relationship marketing, CE includes cognitive, emotional, behavioral and social elements	–	–	Defines CE as "the intensity of an individual's participation in and connection with an organization's offerings or activities, which either the customer or the organization initiates" (p. 133)	Participation; involvement [C]	Value; trust; affective commitment; word of mouth; loyalty; brand community involvement [F]
van Doorn <i>et al.</i> (2010)	CE mediates the effects of several antecedents on the consequences for customers, firms and society	–	Valence, form/modality; scope; nature of impact; customer goals	Defines CE as "customer's behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers" (p. 254)	Customer: satisfaction, trust/commitment, identity, consumption goals, resources, costs/benefits. Firm: brand characteristics, reputation, size/diversification, information usage and processes, industry. Context: competitive, political, economic, socio-cultural, technological [C, F]	Customer: cognitive, attitudinal, emotional, physical/time, identity, Firm: financial, reputational, regulatory, competitive, employee, product. Other: consumer welfare, economic surplus, social surplus, regulation, cross-brand, cross-customer [C, F]
Bowden (2009)	Creating engaged and loyal customers requires understanding the roles of	–	–	Defines CE as "a combination of rational and emotional bonds ... [F] for new versus repeat purchase	Commitment; involvement; trust	–

(continued)

Study	Key finding(s)	PCE dimensions	BCE dimensions	CE definition, dimension, scale	Antecedents (customer-centric [C] or firm-focused [F])	Consequences (customer-centric [C] or firm-focused [F])
This study	commitment, involvement and trust in satisfaction research Bridges psychological CE (PCE) with behavioral CE (BCE), PCE mediates the effects of customer readiness variables (i.e. role clarity, ability, motivation) on both in-role and extra-role BCE	Vigor; dedication; absorption	<i>In-role</i> : information seeking and sharing, responsible behavior, personal interaction. <i>Extra-role</i> : feedback, advocacy, helping, tolerance	customers of a specific service brand" (p. 65) Adapts Grönroos's (1995) and Moliner et al.'s (2018) definitions of PCE: emotional bond established between consumers and brands/firms as a consequence of accumulated consumer experiences. Adapts Van Doorn et al.'s (2010) definition of BCE: firm-/brand-focused customer behaviors that go beyond mere purchase	Role clarity; ability; motivation [C]	Goal attainment; satisfaction; retention [C, F]

Notes: Dash indicates that the study does not provide information pertinent to that column

Table 1.

on behavioral aspects of customer-firm relationships, VA Doorn *et al.* (2010) instead define CE as the sum of behavioral manifestations that signal a brand or firm focus beyond mere purchase. We refer to these distinct approaches as PCE and BCE, respectively.

This definitional divergence has induced inconsistent conceptualizations of CE dimensions. For example, Brodie *et al.* (2011) document inconsistent uses of cognitive, emotional and behavioral dimensions in prior research. Van Doorn *et al.* (2010) suggest five CE components: valence (i.e. positive or negative view of CE from the firm perspective), form or modality (i.e. types of resources that customers adopt to engage), scope (i.e. temporal and geographic aspects), nature of the impact (i.e. immediacy, intensity and breadth) and customer goals (i.e. purpose of their engagement). So *et al.* (2014) propose a wholly different set of CE components: enthusiasm (i.e. level of interest in and passion for the brand), identification (i.e. consumer's sense of belonging or perceived unanimity with the brand), absorption (i.e. pleasurable condition of being very happy, rigorous and deeply absorbed as a brand customer), interaction (i.e. various levels of participation with the brand) and attention (i.e. level of attention focused on and linked with the brand).

Most CE literature also is conceptual (Brodie *et al.*, 2011; Van Doorn *et al.*, 2010; Verhoef *et al.*, 2010; Wirtz *et al.*, 2013), and the few empirical investigations highlight inconsistencies in the number and nature (i.e. psychological or behavioral) of CE dimensions applied (Brodie *et al.*, 2011; Calder *et al.*, 2013; Gummerus *et al.*, 2012; Jaakkola and Alexander, 2014; Sprott *et al.*, 2009; Vivek *et al.*, 2019). We contend that incorporating PCE and BCE in the same conceptual model may provide a more complete understanding of CE (Dessart *et al.*, 2015; Patterson *et al.*, 2006). As Kumar and Pansari (2016) point out, CE encompasses both attitudes and behaviors that jointly determine the level of connection between a firm and its customers. Therefore, drawing on prior definitions, we define *PCE* as an emotional bond established between consumers and brands/firms as a consequence of accumulated consumer experiences (Grönroos, 1995; Moliner *et al.*, 2018) and *BCE* as firm-/brand-focused customer behaviors that go beyond mere purchase (Van Doorn *et al.*, 2010).

Because PCE refers to a customer's connectedness with a focal object (Brodie *et al.*, 2011), it captures attitudinal and emotional aspects that may be prerequisites for BCE (Macey and Schneider, 2008). As an inner force, PCE can motivate people to opt for higher or lower levels of performance (Bakker and Bal, 2010), including BCE. According to Kumar *et al.* (2010) and Pansari and Kumar (2017), BCE benefits the firm directly in the form of product purchases or indirectly through acts such as referrals, social media conversations about the brand and feedback to the firm.

Antecedents and consequences of customer engagement

The BCE outcomes identified in previous research (e.g. referral, feedback) represent outcomes for the company. However, the different conceptualizations of CE and the scarcity of empirical studies from the customer perspective make it difficult to determine further antecedents and consequences (Van Doorn *et al.*, 2010). As noted, extant research tends to focus on the role of the firm in developing CE and the consequent outcomes for the firm (Harmeling *et al.*, 2017; Homburg *et al.*, 2017; Menguc *et al.*, 2017). Pansari and Kumar (2017) differentiate tangible and intangible CE outcomes, citing firm performance measures (higher profit, revenue or market share) as tangible benefits, then defining intangible benefits as facilitators of the firm's marketing activities, such as permission marketing, privacy sharing and more relevant marketing messages. A firm-centric approach can inform our understanding of CE, but scholars and practitioners also could benefit from an alternative, extended model. Accordingly, to establish antecedents and consequences of CE, the customer-centric model proposed herein incorporates customer readiness to engage with the

firm as a relevant and previously ignored personal factor, together with customer goal attainment, satisfaction and retention. The proposed relationships are depicted in Figure 1.

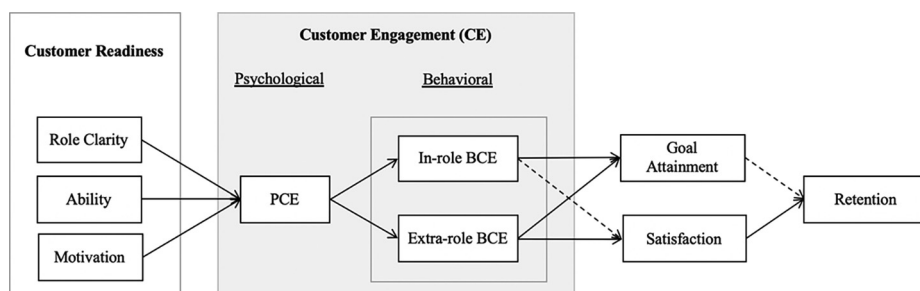
Hypothesis development

Customer readiness to engage with the firm: antecedents of customer engagement

CE depends on many factors attributable to the customer (e.g. customer resources, goals, identity, perceived costs and benefits), the firm (reputation, brand characteristics, industry, size, diversification) or the general context (political, economic, environmental, social, technological factors; Van Doorn *et al.*, 2010). The multiplicity of factors, dynamic nature of CE and central role of customers have prompted research into the relationship between customer characteristics and CE. Prior research that recognizes the importance of personal factors also contains the argument that a customer-centric understanding of CE requires the incorporation of consumer variables (Bowden, 2009). For example, with a customer-brand relationship lens, Hollebeek (2011) identifies involvement and relationship quality (comprising trust, commitment and satisfaction) as crucial customer factors that influence CE. Prentice and Loureiro (2018) also propose a customer-based classification of behavioral engagement manifestations and emphasize customer motives such as desire and social value.

In a review, VA Doorn *et al.* (2010) assert that individual traits and predispositions affect the likelihood and level of CE. For example, the degree of personal desire for positive recognition by others affects word of mouth, a form of engagement behavior (Hennig-Thurau *et al.*, 2004); a desire to help others influences customer participation in brand promotion activities; and customers' feelings toward a brand influence their engagement with it (Garg *et al.*, 2005). Interpersonal differences, such as product involvement and participation readiness, also can determine cognitive processes, decision-making and behavior (Dong *et al.*, 2015). Verleye *et al.* (2014) argue that CE depends on customers' affect toward the firm and role readiness (i.e. confidence that they have appropriate knowledge and skills to engage in encounters with the firm), which combines role clarity and ability in a single variable. To build on prior research, the current study incorporates motivation and distinguishes role clarity from ability.

Meuter *et al.* (2005) argue that customer readiness, which consists of role clarity, ability and motivation, determines the likelihood that a customer will use self-service technologies. Similarly, Marcus *et al.* (1992) introduce exercise readiness as cognitive and motivational processes that determines the degree to which people exercise. By combining elements from these definitions, we propose that *customer readiness to engage with the firm* is the degree of



Notes: Dashed lines indicate a lack of support for the hypothesis

Figure 1. Proposed model of customer engagement

role clarity, ability and motivation that prepare a customer to engage with a company or brand and consume its products and services. As such, customer readiness is a state of preparedness and willingness in customers that prompts them to serve as active participants in interactions with the firm (Meuter *et al.*, 2005).

Role clarity refers to customers' awareness of their role in a given service, what they need to do and their knowledge of how to do it; it is the opposite of confusion (Meuter *et al.*, 2005). For example, familiarity with buffet restaurant etiquette determines how customers serve and handle themselves at buffet lines, ultimately influencing food safety and experience quality for themselves and other customers. Next, ability refers to the possession of necessary skills, knowledge and experience to complete a task (Mahajan *et al.*, 1990; Meuter *et al.*, 2005). For example, restaurant customers who want to order food using self-service technology (without employee assistance) would not be able to complete the task if they did not possess requisite knowledge or experience (Kim and Christodoulidou, 2013). Finally, people may have the ability to engage in an activity but still not be motivated to do so. Motivation is the energizing inner force that drives people to undertake required actions through meaningful applications of their abilities (Danatzis *et al.*, 2021; Dellande *et al.*, 2004). Motivation is determined by desire (want) and expectancy. Want is an outcome that a person seeks at a given moment (Kruglanski *et al.*, 2014); it establishes the basis for a commitment to take action and accounts for internal (fun, pleasure) and external (convenience, time/money savings) sources of desire (Meuter *et al.*, 2005). Expectancy is the subjective probability that a person assigns to achieving gratification (Kruglanski *et al.*, 2014). Thus, returning to the restaurant ordering example, customers who desire efficiency and independence in ordering food should be interested in the restaurant's self-service technology (Kim and Christodoulidou, 2013).

Mediating role of psychological customer engagement

Customer readiness may help explain why some people achieve high levels of energy to perform their role while others do not (Verleye *et al.*, 2014). This section details how each customer readiness variable (i.e. role clarity, ability and motivation) links to PCE and then explains the mediating role of PCE in the relationship between readiness and BCE.

Two theoretical arguments suggest that customers exhibit greater PCE when they have the knowledge (role clarity) and ability to perform a task and are motivated to do so. First, according to the self-determination theory of motivation (Ryan and Deci, 2000), PCE is the energy in people that mobilizes their effort and bolsters their persistence in the task. The level of PCE accordingly depends on the cognitive and motivational inputs that generate and provide energy to the self (Ryan and Deci, 2000). These cognitive and motivational "nutrients" (i.e. role clarity, ability and motivation) support and trigger PCE, which energizes the customer to act (i.e. BCE). For example, weight loss customers tend to be more animated and energetic when they are cognizant of the centrality of their role and possess the knowledge, skills and motivation to play their part (Dellande *et al.*, 2004). Second, role theory (Kahn *et al.*, 1964) predicts less engagement if customers lack the knowledge and skills they need to contribute to service production and delivery (Verleye *et al.*, 2014). Evidence in support of this prediction in studies of individual well-being (Gagné *et al.*, 2003) and video gaming (Ryan *et al.*, 2006) affirms that knowledge and ability covary with PCE. Because they reduce uncertainty surrounding the service encounter (Meuter *et al.*, 2005) and provide an apt reason to exhibit psychological and behavioral connectedness (Kasser and Ryan, 2001), role clarity and motivation should enable a person to experience greater PCE.

With regard to BCE, this study includes both in-role and extra-role behaviors (Macey and Schneider, 2008; Yi and Gong, 2013). In-role BCE or participation behavior, entails a

“demonstration of initiative behaviors and proactively seeking opportunities to contribute what is typically expected or required” (Macey and Schneider, 2008, p. 15), so it encompasses various required contributions of effort, labor or resources (e.g. information, knowledge, competencies, tangible resources; Bettencourt *et al.*, 2002; Skjolsvik *et al.*, 2007) to create value with the firm (Mustak *et al.*, 2013). This conceptualization has evolved, emerging as a predominantly positive notion that identifies customers as integral contributors of myriad resources that support value creation (Grönroos and Ravald, 2011; Heimonen *et al.*, 2010; Lusch and Vargo, 2006). In these assumed roles, customers become partial employees (Johnston, 1989), coproducers (Kelley *et al.*, 1990), decision-makers (Bitner *et al.*, 1997) or quality evaluators (Ennew and Binks, 1999).

Extra-role BCE or customer citizenship behavior (Lee and Allen, 2002; Organ, 1997), instead involves “actions that, given a specific frame of reference, go beyond what is typical, usual, and/or ordinarily expected” (Macey and Schneider, 2008, p. 16). Originally introduced in organizational behavior research, extra-role BCE refers to voluntary and informal behaviors that may not provide a specific benefit to the performers (Bove *et al.*, 2009; Yi and Gong, 2006) but could indirectly benefit the firm (Groth, 2005; Rosenbaum and Massiah, 2007), influence production efficiency (Bendapudi and Leone, 2003; Hsieh and Chang, 2004), offer additional value (Groth, 2005; Yi *et al.*, 2011) or facilitate the firm’s social system (Organ, 1997; Saks, 2006). Discretionary behaviors, beyond what is required (Gruen, 1995), include providing feedback, advocacy, helping or showing tolerance (Yi and Gong, 2013). Through extra-role BCE, the customer contributes to overall firm performance (Motowidlo and Van Scotter, 1994; Yi *et al.*, 2011) by helping others and recommending the service (Yi and Gong, 2013; Yi *et al.*, 2011).

In summary, the in-role/extra-role distinction is essential to capturing behaviors typically expected or required of customers versus behaviors that go beyond what is typical, usual and/or ordinarily expected of them. In line with this discussion, we posit that customer readiness variables reinforce PCE, which, in turn, facilitates in-role and extra-role BCE.

- H1. PCE positively mediates the effects of role clarity on in-role BCE.
- H2. PCE positively mediates the effects of ability on in-role BCE.
- H3. PCE positively mediates the effects of motivation on in-role BCE.
- H4. PCE positively mediates the effects of role clarity on extra-role BCE.
- H5. PCE positively mediates the effects of ability on extra-role BCE.
- H6. PCE positively mediates the effects of motivation on extra-role BCE.

Customer-centric consequences of behavioral customer engagement

Engagement with a product or service may factor into customer evaluations, which shape satisfaction (Calder *et al.*, 2013). For example, Rather (2019) demonstrates that CE affects satisfaction and trust, which then determine commitment and loyalty. Various manifestations of BCE (e.g. providing input, interacting with employees and other customers) also create opportunities to understand customers’ needs as a prerequisite to meeting their expectations and generating satisfaction (Mustak *et al.*, 2013). That is, in addition to leaving them more satisfied, CE should enhance their goal attainment. Participating in service delivery tends to increase customers’ sense of responsibility for the outcomes and improve the likelihood of goal attainment (Bagozzi and Dholakia, 1999; Mills *et al.*, 1983). Health care and consumer well-being research offer empirical support for a

direct association between in-role BCE and goal attainment. For example, patient participation in goal setting leads to better psychotherapy outcomes (Wollburg and Braukhaus, 2010), and weight loss patients' in-role BCE, along with compliance with program instructions, facilitates their achievement of health-related goals (Dellande *et al.*, 2004).

Extra-role BCE also helps customers achieve their goals due to reciprocity norms (Gouldner, 1960), as stipulated by social exchange theory (Blau, 1964). When a customer adopts discretionary behaviors, such as helping other customers, those other customers may return the favor, which enhances the focal customer's service experience. Firms also tend to reward customers who provide positive or constructive feedback or who recommend it to other customers. If extra-role BCE leads to amiable interactions, employees may feel empowered and motivated to perform their service role effectively which should result in superior goal attainment for customers (Podsakoff *et al.*, 2009; Sun *et al.*, 2007). Overall, in-role and extra-role BCE should help customers achieve their goals and experience satisfaction:

H7. In-role BCE is positively associated with goal attainment.

H8. In-role BCE is positively associated with satisfaction.

H9. Extra-role BCE is positively associated with goal attainment.

H10. Extra-role BCE is positively associated with satisfaction.

Customer retention, goal attainment and satisfaction

Retention is an important construct with direct implications for customer lifetime value and firm profitability (Blattberg *et al.*, 2001; Reinartz *et al.*, 2005). It results from two key drivers. The first is goal attainment: customer retention accrues to firms if customers perceive they have achieved their goals (Degbey, 2015; Hennig-Thurau and Klee, 1997). Kivetz *et al.* (2006) argue that customer retention is a function of the customer's original distance from the goal and degree of perceived progress toward it. As customers get closer to earning some reward, they dedicate more financial and nonfinancial resources to the firm, which leads to greater retention and subsequent CE behavior (Kivetz *et al.*, 2006). These results have been corroborated in paid membership contexts, such as museums and educational websites (Bhattacharya, 1998). Moreover, Temerak and El-Manstrly (2019) identify goal attainment as a significant predictor of staying intentions.

The second driver of customer retention is satisfaction. Prior literature offers conceptual and empirical support for this association between satisfaction and retention (Baumann *et al.*, 2012; Jones *et al.*, 2000; Shankar *et al.*, 2003). Customers use satisfaction as a primary criterion when comparing choice alternatives, so it also serves as a determinant of whether they remain with the firm and buy its products and services again (Anderson and Sullivan, 1993; Calder *et al.*, 2013). The key to retaining customers is to satisfy them (Petruzzellis *et al.*, 2006):

H11. Goal attainment is positively associated with retention.

H12. Satisfaction is positively associated with retention.

Methodology

Setting and respondents

Consumers exhibit relatively extensive engagement with fitness programs, and accordingly, this research uses a fitness center as the study context. Specifically, the data come from

customers of a two-location fitness provider in the southeastern USA. The provider introduced the survey to its members through e-mails and posters, provided us with a list of all active members and helped distribute and collect questionnaires. From the combined lists of members across the two locations, a random selection process identified 220 members (roughly half the total membership) by generating a random set of integers, sorting the membership list based on the integers and picking every other member. The selected members received a copy of the questionnaire to complete when they entered the facility, which they were asked to return either on the same visit or their next visit. A total of 206 responses were received and verified for completeness. The high response rate (94%) is attributable primarily to the culture of the fitness center and the close-knit relationships of the owner-managers with customers. Given the estimated 54 million US fitness consumers in 2019 (Gough, 2021), Cochran's modified formula (Israel, 1992) suggests that a sample size of 210 would be sufficiently large and varied ($p(\% \text{ of U.S. fitness users}) \approx 0.19; q = 0.81; Z = 1.96; \alpha = 0.05$), so the sample size appears appropriate.

Notably, the sample is heavily gender skewed, with women constituting 70% of the sample. The strikingly higher popularity of group exercises among women is a well-established trend. Men generally prefer to exercise alone or with a friend, while women are more likely to join group fitness classes and/or work with a trainer (Hoyt, 2015). Respondents range from 19 to 58 years of age, with a median of 26 years. In addition, 79% are Caucasian, 10% Hispanic, 7.5% African-American and 2.5% Asian. Most of the respondents (73%) earn less than \$40,000 annually, whereas 22% earn \$40,000–\$80,000 annually and 5% have more than \$80,000 in annual income. Furthermore, 58% are single, 28% are married and 14% indicated other marital statuses. In terms of their highest education level, it was high school for 15% of the respondents, associate's degree for 22%, bachelor's degree for 49% and graduate degree for 14%.

Instrument and measures

To test the relationships proposed in Figure 1, we gathered both perceptual and behavioral data, seeking to minimize common method variance (Podsakoff *et al.*, 2003). The survey instrument consisted of scales for customer readiness, PCE, BCE, goal attainment, satisfaction and retention, in addition to demographic items and control variables, as listed in Table 2. All of the items come from established scales, adapted to fit the empirical context. For example, the PCE section of the instrument instructed respondents to recall their fitness routines and base their responses on their experiences with the current fitness center. As confirmation of the content validity of the adapted scale items, an expert panel of five marketing faculty members reviewed the materials and offered suggestions, which we incorporated to improve the instrument.

The measure of PCE is an adaptation of the widely used Utrecht Work Engagement Scale (Schaufeli *et al.*, 2002) to a fitness context. In this scale, PCE is a second-order construct with three dimensions: vigor (six items), dedication (five items) and absorption (six items). For BCE, Yi and Gong's (2013) scale consists of four in-role dimensions (information seeking, information sharing, responsible behavior and personal interaction) and four extra-role dimensions (feedback, advocacy, helping and tolerance), all comprising four items each. The items for customer readiness to engage with the firm came from Meuter *et al.* (2005) and included role clarity (five items), ability (six items) and intrinsic and extrinsic motivations (24 items). Consistent with the expectancy theory of motivation, separate items were used to measure expectancy, instrumentality and valence; which were ultimately combined via a multiplicative rule to derive a single score for intrinsic motivation and another for extrinsic motivation. The consequences of CE included a three-item goal attainment scale adapted from

Scale items	Loading	<i>t</i>
<i>Customer Readiness to Engage with the Firm</i> (adapted from Meuter et al., 2005)		
Role Clarity (CR = 0.929; α = 0.903)		
I feel certain about what I should do in my exercises	0.93	939
I am NOT sure what to do in my exercises	0.78	15.5
I know what is expected of me in my exercises	0.93	66.0
The processes of my exercises are clear to me	0.94	114.5
I believe there are only vague directions regarding what I should do in my exercises	0.64	10.4
Ability (CR = 0.944; α = 0.928)		
I am fully capable of satisfying the requirements of my exercises	0.92	56.8
I am confident in my ability to complete my exercises	0.91	48.8
My exercises are well within the scope of my abilities	0.94	68.1
I do NOT feel I am qualified for my exercises	0.75	12.6
My past experiences give me confidence that I will be able to complete my exercises	0.92	74.3
In total, my exercises involve things that are more difficult than I am capable	0.70	12.7
Motivation* (AVE = 0.935; CR = 0.967; α = 0.931)		
Extrinsic motivation	0.96	113.8
Intrinsic motivation	0.97	176.8
<i>Psychological Customer Engagement (PCE)</i> (adapted from Schaufeli et al., 2002)		
Vigor (CR = 0.938; α = 0.921)		
When I get up in the morning, I feel like going to . . .	0.84	28.8
When I think of my exercises, I feel bursting with energy	0.84	27.4
As far as . . . is concerned, I always persevere, even when things do not go well	0.79	15.1
I can continue exercising for long periods	0.86	39.8
I am very resilient, mentally, as far as my exercises are concerned	0.86	34.6
I feel strong and vigorous when I exercise	0.90	57.7
Dedication (CR = 0.929; α = 0.900)		
To me, my exercises are challenging	0.58	7.2
Exercising inspires me	0.87	22.4
I am enthusiastic about my exercises	0.94	69.4
I am proud of my exercises	0.93	65.7
I find my exercises full of meaning and purpose	0.90	39.7
Absorption (CR = 0.941; α = 0.924)		
When I am exercising, I forget everything else around me	0.84	31.1
Time flies when I am exercising	0.87	41.8
I get carried away when I am exercising	0.86	33.2
It is difficult to detach myself from my exercises	0.75	18.0
I am immersed in my exercises	0.91	55.7
I feel happy when I am exercising intensely	0.88	44.0
<i>In-Role Behavioral Customer Engagement (In-Role BCE)</i> (adapted from Yi and Gong, 2013)		
Information Seeking (CR = 0.891; α = 0.836)		
When I have a question, I ask the trainer	0.72	14.5
I do not mind asking clarifying questions from other members	0.84	23.0
When I feel lost, I communicate with other members to figure out what I need to know	0.85	26.9
I usually try and find answers to my questions as a member	0.87	34.4
Information Sharing (CR = 0.930; α = 0.899)		
Whenever necessary, I give updates to my trainer	0.81	20.5
When needed, I provide proper information to other members	0.93	65.2
I always try to answer questions that other members may have	0.91	47.2
I share my experience with others at . . .	0.86	34.4

Table 2.
Scale items and
statistical properties

(continued)

Scale items	Loading	<i>t</i>
Responsible Behavior (CR = 0.951; α = 0.931)		
I perform all of the tasks required of me as a member	0.93	54.9
I adequately complete all the routines	0.93	62.0
I adequately complete all my responsibilities as a member of . . .	0.93	66.0
I follow my trainer's instructions	0.86	22.5
Personal Interaction (CR = 0.938; α = 0.911)		
I am polite toward everyone at . . .	0.86	19.6
I never act rudely towards others	0.83	15.9
As a member, I try to maintain mutual respect	0.93	52.6
I am a courteous member	0.93	48.6
<i>Extra-Role Behavioral Customer Engagement (Extra-Role BCE)</i> (adapted from Yi and Gong, 2013)		
Feedback (CR = 0.944; α = 0.920)		
If I have useful ideas that might result in an improvement, I let the trainer know	0.91	53.9
If I have a comment about a specific issue, I share it with others at . . .	0.92	50.1
When I experience a problem, I let the staff know about it	0.85	22.9
I like giving feedback to my trainer	0.92	6.8
Advocacy (CR = 0.983; α = 0.974)		
I say positive things about . . . to others	0.96	85.3
I recommend . . . to others	0.98	234.7
I encourage friends and relatives to join . . .	0.98	226.7
Helping (CR = 0.971; α = 0.961)		
I assist other members if they need my help	0.94	62.6
I help other members if they seem to have problems	0.96	125.3
I teach other members to use the equipment correctly	0.94	85.1
I give advice to other members	0.94	82.9
Tolerance (CR = 0.920; α = 0.884)		
I show tolerance when I face difficulties at . . .	0.88	40.3
When the routine is not what I expect, I usually put up with it	0.81	18.6
I am sympathetic when the trainer makes a mistake	0.86	32.0
When I experience difficulties at . . ., I try to adapt	0.90	59.8
Goal Attainment (CR = 0.985; α = 0.978) (adapted from Annesi, 2003)		
I have made a lot of progress at . . .	0.97	193.2
So far, . . . has helped me accomplish a great deal	0.98	192.7
I have attained the goals I have been pursuing through . . .	0.98	200.2
Satisfaction: How do you feel towards . . .? (CR = 0.992; α = 0.988) (adapted from Zolfagharian et al., 2017)		
Dissatisfied . . . Satisfied	0.99	260.9
Displeased . . . Pleased	0.99	411.3
Unfavorable . . . Favorable	0.99	348.8
Retention: Will you continue to use . . . services? (CR = 0.986; α = 0.981) (adapted from McMullan and Gilmore, 2008)		
Unlikely . . . Likely	0.98	124.9
Very Improbable . . . Very Probable	0.97	122.6
Impossible . . . Possible	0.97	110.9
No Chance . . . Certain	0.98	172.4

Notes: The scales are seven-point semantic differential for satisfaction and retention; seven-point Likert (from "strongly agree" to "strongly disagree") for all other constructs. AVE: average variance extracted; CR: composite reliability; α : Cronbach's alpha. *[Meuter et al. \(2005\)](#) list all 24 items in the motivation measurement scales

Table 2.

Annese (2003), a three-item satisfaction scale adapted from Zolfagharian *et al.* (2017) and a four-item customer retention scale adapted from McMullan and Gilmore (2008). Satisfaction and retention are measured on seven-point semantic differential scales. All other constructs are measured on seven-point Likert scales, ranging from 1 (“strongly agree”) to 7 (“strongly disagree”).

In addition to the perceptual data, for in-role BCE and goal attainment, we relied on behavioral data provided by the fitness center. The behavioral measures for in-role BCE refer to customers’ attendance (number of sessions missed partially or completely) and adherence to instructions (scores provided by coaches/trainers). Goal attainment was measured by tracking customers’ decrease in weight and increase in the percentage of lean mass, cardio scores and physical strength scores. To match perceptual and behavioral data, the instrument included respondents’ fitness center membership number.

Analysis and results

Construct reliability and validity

Through screening, prior to the analysis, we addressed any problems with missing data, outliers, nonresponses or inattentive responses. As shown in Table 3, the behavioral measure of in-role BCE is strongly correlated with the four dimensions of the perceptual measure (ranging from 0.52 to 0.81). The correlation is even stronger (0.89) between the behavioral and perceptual measures of goal attainment. Consistent with Meuter *et al.* (2005), we calculated an index for each intrinsic and extrinsic motivation and created a single motivation composite score. Next, the variance inflation factor (VIF) is used to check multicollinearity problems associated common method (Kock, 2015). Since the largest VIF is 5.4, the existence of undue multicollinearity is ruled out (Hair *et al.*, 2012).

Due to the inclusion of second-order constructs, we also performed multiple confirmatory factor analyses using the perceptual data to identify the model with the best overall fit. Then we ran the models for in-role BCE and goal attainment a second time each, using behavioral measures. Where behavioral data were used for either of in-role BCE or goal attainment, the measures were specified as formative indicators of the respective constructs. This formative specification is necessary because in-role BCE does not cause, but rather is caused by, customers’ attendance (i.e. number of sessions missed partially or completely). Similarly, goal attainment does not cause, but rather is caused by, customers’ decreased weight and increased percentage of lean mass, cardio scores and physical strength scores. Hence, when BCE and goal attainment were represented by behavioral data, they were specified as formative constructs. In all other cases, the constructs were specified as reflective.

The results confirm that the best overall fit arises when PCE, in-role BCE and extra-role BCE are specified as second-order constructs, and role clarity, ability, motivation, goal attainment, satisfaction and retention are first-order constructs. The standardized factor loadings are strong, ranging from 0.583 to 0.990 and only three individual item loadings fall below the recommended cutoff point of 0.70 (role clarity item = 0.636; ability item = 0.697; dedication item = 0.583) (Tabachnick and Fidell, 2019).

The scale reliabilities also are strong; the squared correlations between latent factors and their indicators range from 0.34 to 0.98, and the composite reliability and Cronbach’s alpha values range from 0.92 to 0.99 and from 0.88 to 0.99, respectively, for each set of variables. Moreover, none of the latent factors indicates a variance extracted estimate lower than 0.60, and the *t-values* are significant at the 0.0001 level. Therefore, the measures possess adequate convergent validity. In support of discriminant validity, in the comparison of the variance extracted estimates with the corresponding squared interfactor correlations (Table 3), the former are larger for all 14 possible latent factor pairings. Although a potential threat to

No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Role Clarity	0.853																		
2	Ability	0.883	0.860																	
3	Motivation	0.804	0.823	0.967																
4	Vigor	0.765	0.775	0.822	0.847															
5	Dedication	0.767	0.770	0.784	0.850	0.853														
6	Absorption	0.665	0.685	0.711	0.820	0.834	0.853													
7	In-Role BCE (Beh.)	0.690	0.658	0.746	0.735	0.721	0.694	1.00												
8	Information Seeking	0.722	0.715	0.726	0.811	0.739	0.738	0.736	0.820											
9	Information Sharing	0.668	0.671	0.681	0.741	0.700	0.678	0.754	0.814	0.877										
10	Responsible Behavior	0.690	0.719	0.711	0.783	0.768	0.742	0.756	0.706	0.778	0.910									
11	Personal Interaction	0.573	0.588	0.633	0.589	0.592	0.529	0.543	0.516	0.562	0.706	0.889								
12	Feedback	0.546	0.563	0.554	0.664	0.609	0.603	0.712	0.712	0.722	0.724	0.473	0.898							
13	Advocacy	0.874	0.841	0.816	0.812	0.793	0.713	0.741	0.781	0.709	0.766	0.612	0.625	0.975						
14	Helping	0.629	0.662	0.643	0.702	0.707	0.688	0.772	0.668	0.790	0.785	0.595	0.781	0.678	0.946					
15	Tolerance	0.734	0.731	0.702	0.714	0.697	0.665	0.708	0.691	0.696	0.687	0.592	0.572	0.773	0.688	0.861				
16	Goal Attainment (Beh.)	0.635	0.670	0.769	0.764	0.719	0.674	0.740	0.777	0.718	0.767	0.603	0.597	0.688	0.607	0.624	1.00			
17	Goal Attainment	0.851	0.811	0.825	0.825	0.793	0.766	0.750	0.777	0.718	0.767	0.603	0.613	0.934	0.672	0.799	0.718	0.978		
18	Satisfaction	0.860	0.826	0.762	0.770	0.741	0.686	0.683	0.731	0.667	0.715	0.574	0.571	0.897	0.638	0.768	0.647	0.887	0.988	
19	Retention	0.828	0.779	0.744	0.748	0.712	0.676	0.667	0.738	0.656	0.687	0.569	0.569	0.892	0.607	0.770	0.652	0.880	0.965	0.973
	Mean	5.12	5.44	2.770	5.21	5.52	5.06	-	5.34	5.34	5.67	6.15	5.31	5.45	5.46	5.19	-	5.37	5.51	5.52
	SD	1.47	1.35	1.407	1.33	1.28	1.41	-	1.33	1.34	1.34	1.62	1.42	1.62	1.43	1.41	-	1.65	1.81	1.77

Notes: $n = 206$. Average variance extracted is shown along the diagonal line. Beh.: behavioral measures of the constructs

Table 3.
Descriptive statistics,
reliabilities and
correlation among
variables

discriminant validity arises in the correlation of 0.883 between role clarity and ability, these two variables have strong composite reliability and Cronbach's alpha values (i.e. ≥ 0.903), so consistent with prior research, and we proceed with role clarity and ability as distinct variables.

Hypothesis testing

The tests of the hypotheses relied on the INDIRECT Macro for SPSS (Hayes, 2013) and path analysis techniques. Following Zhao *et al.* (2010), the tests of *H1–H6* encompasses two phases: the Baron and Kenny (1986) four-step mediation test and then application of the Hayes (2013) PROCESS Macro, which controls for the effects of age, gender and ethnicity. Tables 4 and 5 summarize the results of the mediation tests.

Recall that *H1* suggests that PCE mediates the effect of **role clarity** on in-role BCE. In Phase 1 (Baron and Kenny, 1986), we find evidence for significant positive effects of role clarity on in-role BCE ($\beta = 0.71$; $p < 0.001$) and PCE ($\beta = 0.83$; $p < 0.001$), as well as a significant positive effect of PCE on in-role BCE ($\beta = 0.54$; $p < 0.001$). The positive effect of role clarity on in-role BCE remains significant ($\beta = 0.27$; $p < 0.01$) even after controlling for the effect of PCE. In Phase 2, the 5,000-sample bootstrap estimation indicates a significant indirect effect ($\beta = 0.44$, 95% confidence interval [CI] = 0.307 to 0.582). Therefore, *H1* is supported.

For *H2*, we argued that PCE mediates the effect of **ability** on in-role BCE. Ability exerts significant positive effects on in-role BCE ($\beta = 0.69$; $p < 0.001$) and PCE ($\beta = 0.84$; $p < 0.001$), and PCE has a significant positive effect on in-role BCE ($\beta = 0.61$; $p < 0.001$). Ability still has a significant effect on in-role BCE ($\beta = 0.18$; $p < 0.05$) when we control for the effect of PCE. The bootstrap estimation reveals a significant indirect effect ($\beta = 0.51$, 95% CI = 0.371 to 0.640). Thus, *H2* is supported.

We contend that PCE mediates the effect of **motivation** on in-role BCE in *H3*. The analysis reveals that motivation has significant positive effects on in-role BCE ($\beta = 0.76$; $p < 0.001$) and PCE ($\beta = 0.84$; $p < 0.001$) and that PCE exerts a significant positive effect on in-role BCE ($\beta = 0.41$; $p < 0.001$). Motivation retains its significant effect on in-role BCE ($\beta = 0.42$; $p < 0.001$) while controlling for the effect of PCE. The bootstrap estimation shows a significant indirect effect as well ($\beta = 0.34$, 95% CI = 0.202 to 0.479). Thus, *H3* is supported.

Testing these hypotheses using perceptual data instead of behavioral measures of in-role BCE produces the same pattern of results. In support of all three hypotheses, the bootstrap estimation corroborates the significant indirect effects of role clarity (*H1*, $\beta = 0.58$, 95% CI = 0.445 to 0.719), ability (*H2*, $\beta = 0.54$, 95% CI = 0.428 to 0.653) and motivation (*H3*, $\beta = 0.56$, 95% CI = 0.401 to 0.716) on in-role BCE.

With *H4*, we expect PCE to mediate the effect of **role clarity** on extra-role BCE. Role clarity has a significant positive effect on extra-role BCE ($\beta = 0.82$; $p < 0.001$) and on PCE ($\beta = 0.83$; $p < 0.001$), and PCE exerts a significant positive effect on extra-role BCE ($\beta = 0.58$; $p < 0.001$). Role clarity continues to have a significant effect on extra-role BCE ($\beta = 0.34$; $p < 0.01$) when we control for the effect of PCE. The 5,000-sample bootstrap estimation indicates a significant indirect effect ($\beta = 0.48$, 95% CI = 0.128 to 0.333). Therefore, *H4* is supported.

We also contend that PCE mediates the effect of **ability** on extra-role BCE in *H5*. The data suggest that ability has a significant positive effect on both extra-role BCE ($\beta = 0.83$; $p < 0.001$) and PCE ($\beta = 0.84$; $p < 0.001$) and that PCE has a significant positive effect on extra-role BCE ($\beta = 0.55$; $p < 0.001$). When controlling for PCE, ability continues to have a

Path	Path Aa (X → M) B	Path B (M → Y _X) B	Path C (X → Y) B	Path C' (X → Y _M) B	Total effect	Effect	Indirect effects 95% Confidence interval		Type
							Lower	Upper	
Role clarity → PCE → In-role BCE	0.83**	0.54**	0.71**	0.27**	0.718	0.44c	0.307	0.582	Partial
Ability → PCE → In-role BCE	0.84**	0.61**	0.69**	0.18*	0.692	0.51c	0.371	0.640	Partial
Motivation → PCE → In-role BCE	0.84**	0.41**	0.76**	0.42**	0.764	0.34c	0.202	0.479	Partial
Role clarity → PCE → Extra-role BCE	0.83**	0.58**	0.82**	0.34**	0.821	0.48c	0.128	0.333	Partial
Ability → PCE → Extra-role BCE	0.84**	0.55**	0.83**	0.37**	0.832	0.46c	0.338	0.597	Partial
Motivation → PCE → Extra-role BCE	0.84**	0.67**	0.79**	0.23**	0.792	0.55c	0.194	0.451	Partial

Notes: 5,000 bootstrap samples with 95% confidence level. The control variables are age, gender, income, education, marital status and ethnicity. * $p < 0.05$, $t = 1.96$. ** $p < 0.001$, $t = 3.29$. ^a Path A: IV → mediator; Path B: mediator → DV controlling for IV; Path C: direct IV → DV, Path C': direct IV → DV controlling for mediator. ^b Indirect effect of IV on DV, using Preacher and Hayes's (2008) bootstrapping technique. ^c Significant indirect effect, according to the absence of 0 in the confidence interval

Table 4.
Mediation test
results

Table 5.
Path difference test
results

Statistic	PCE → In-Role	PCE → Extra-Role
Sample size	206	206
Path coefficient	0.76	0.845
Standard error	0.0021	0.0016
<i>t</i> -statistic	31.68	
<i>p</i> -value (two-tailed)	0.000	
	In-Role → Goal Attainment	Extra-Role → Goal Attainment
Sample size	206	206
Path coefficient	0.468	0.325
Standard error	0.0056	0.0054
<i>t</i> -statistic	18.29	
<i>p</i> -value (two-tailed)	0.000	

significant effect on extra-role BCE ($\beta = 0.37$; $p < 0.001$). The bootstrap estimation shows a significant indirect effect ($\beta = 0.46$, 95% CI = 0.338 to 0.597). Thus, *H5* is supported.

In line with *H6*, which suggests that PCE mediates the effect of **motivation** on extra-role BCE, motivation exhibits significant positive effects on extra-role BCE ($\beta = 0.79$; $p < 0.001$) and PCE ($\beta = 0.84$; $p < 0.001$), and PCE has a significant positive effect on extra-role BCE ($\beta = 0.41$; $p < 0.001$). The significant effect of ability on extra-role BCE ($\beta = 0.23$; $p < 0.001$) persists even while controlling for the effect of PCE. In Phase 2, the bootstrap estimation documents a significant indirect effect ($\beta = 0.55$, 95% CI = 0.194 to 0.451). Therefore, *H6* is supported.

To test *H7* through *H12*, we subject the conceptual model (Figure 1) to partial least squares structural equation modeling in SmartPLS 3.2.9. The R^2 values (variation accounted for) are strong; the Q^2 values (Stone–Geisser blindfolding analysis criterion) exceed the recommended threshold of 0.45 (Götz *et al.*, 2010), listed in respective order as follows: PCE (0.72, 0.45), in-role BCE (0.58, 0.57), extra-role BCE (0.71, 0.45), goal attainment (0.58, 0.57), satisfaction (0.67, 0.65) and retention (0.93, 0.88). Therefore, we are confident in the overall fit of the structural model and the predictive and explanatory power of the exogenous variables (Hair *et al.*, 2012).

Although the results support *H7*, regarding the positive effect of in-role BCE on goal attainment ($\beta = 0.47$, $t = 5.77$, $p < 0.001$), they do not confirm *H8*, which predicts a positive effect of in-role BCE on satisfaction ($\beta = -0.007$, $t = 0.09$, $p = 0.926$). Replicating these tests using perceptual instead of behavioral data again offers support for *H7* ($\beta = 0.24$, $t = 2.31$, $p = 0.021$) but not for *H8* ($\beta = 0.16$, $t = 1.50$, $p = 0.135$). This lack of support adds to the mixed findings regarding the in-role BCE → satisfaction relationship (Zolfagharian *et al.*, 2018).

Moving to the effects of extra-role BCE on goal attainment and satisfaction, we find support for both *H9* ($\beta = 0.33$, $t = 4.18$, $p < 0.001$) and *H10* ($\beta = 0.82$, $t = 13.00$, $p < 0.001$). The replicated tests, using perceptual data instead of behavioral measures for goal attainment, provide consistent results and affirm the positive effect of extra-role BCE on goal attainment ($\beta = 0.64$, $t = 6.10$, $p < 0.001$). Finally, regarding the prediction that goal attainment and satisfaction each have positive effects on retention, we find support for *H12* ($\beta = 0.93$, $t = 36.03$, $p < 0.001$) but not for *H11* ($\beta = 0.05$, $t = 1.72$, $p = 0.086$). When we replicate the latter test with perceptual data for goal attainment, we still find no support for an effect on retention ($\beta = 0.11$, $t = 1.75$, $p = 0.081$). The salience of goal attainment and nonsignificance of satisfaction in predicting retention may reflect the study context, as we discuss further in the next section.

Discussion

Rapid growth in CE research has yielded invaluable insights, yet this literature stream also exhibits significant variation in describing the nature of CE (psychological versus behavioral) and its antecedents and consequences. Consistent with our research objectives, we incorporate both psychological and behavioral views of CE and empirically examine their interplay. In addition, we identify and test customer readiness to engage the firm – which encompasses role clarity, ability and motivation – as a key determinant of PCE, which provides the underlying mechanism through which customer readiness influences BCE and customer goal attainment, satisfaction and retention (Kumar and Pansari, 2016; Pansari and Kumar, 2017).

As a first contribution, this research specifies PCE as the underlying mechanism through which personal factors such as customer readiness trigger BCE. All three customer readiness variables – role clarity, ability and motivation – have significant influences on the degree to which customers become psychologically engaged with the firm. Moreover, PCE mediates the effect of customer readiness on both in-role and extra-role BCE. The results are robust regardless of the measure used to capture in-role BCE (perceptual vs behavioral data). Demonstrating these mediated relationships can be instrumental to subsequent customer-centric developments in CE literature. Specifically, PCE should serve as a conceptual bridge between BCE and other customer-related drivers, in addition to customer readiness and we highlight the need for researchers to incorporate both psychological and behavioral aspects of CE. Without PCE, it is difficult to explain how customers' personal factors lead to in-role or extra-role BCE. Incorporating BCE without PCE also may limit explanations of how or through which psychological mechanisms, antecedent variables influence BCE. Focusing just on PCE without BCE may keep researchers from specifying ways that customer psychological states influence firm performance.

As a second contribution, we delineate the effects of CE on customer goal attainment, satisfaction and retention. Through their readiness and engagement, customers influence their own goal attainment, satisfaction and retention. Two findings are especially noteworthy in this regard. First, in-role and extra-role BCE contribute to customer goal attainment. These results are robust across perceptual and behavioral data for in-role BCE and goal attainment. Second, extra-role BCE is a salient determinant of satisfaction. This delineation of the effects of CE on goal attainment, satisfaction and retention is an important contribution to literature dominated by firm-centric perspectives, in which revenue and cost implications for firms have been the primary focus (Homburg *et al.*, 2017). Our customer-centric contribution draws new attention to how customers, as key stakeholders, also are affected by CE.

Five further results are noteworthy. First, of the two hypothesized predictors of retention, only satisfaction is significant. Second, as suggested by Table 4, all six mediations involving PCE are partial, underscoring the *direct* effects of customer readiness on in-role and extra-role BCE beyond the indirect relationships through PCE. Third, in Table 5, in-role BCE is a significantly more salient predictor of goal attainment than extra-role BCE. Fourth, an increase in PCE has a greater impact on the likelihood of extra-role BCE than in-role BCE. Fifth, by combining these results, we can establish that retention is associated with satisfaction, but not goal attainment and satisfaction is associated with extra-role but not in-role BCE. Therefore, retention can be enhanced by increasing satisfaction through extra-role BCE. In-role BCE instead is crucial to customer goal attainment.

As shown in Figure 1, this investigation provides general support for the hypothesized relationships, with two exceptions: the in-role BCE → satisfaction path and the goal attainment → retention path. The lack of support for a positive in-role BCE → satisfaction

path does not align with the preponderance of evidence in prior literature; however, a few previous studies have also failed to find support for this association (Rodie and Kleine, 2000; Wu, 2011). Zolfagharian *et al.* (2018) acknowledge the controversy and suggest that the effect of in-role BCE on satisfaction may be subject to boundary conditions. Similarly, the lack of support for the goal attainment → retention path challenges the contention that customer retention is a function of the customer's original distance from the goal and degree of perceived progress toward it (Degbey, 2015; Kivetz *et al.*, 2006). The presence of satisfaction in the model might be responsible, at least partially, for the nonsignificance of goal attainment. That is, if satisfaction is the key to retaining customers (Calder *et al.*, 2013; Petruzzellis *et al.*, 2006), its presence might suppress some of the effects of goal attainment.

Although this empirical study was conducted in a fitness center setting, the findings may be generalizable to other services. In the fitness service industry:

- relationship marketing is critical;
- the service is performed on the person;
- customers acquire the right to access facilities/equipment/expertise;
- customers play an active role in service production and delivery;
- the products are highly customizable; and
- demand fluctuates by hour, day and month (Lovelock, 1983).

Since CE has roots in relationship marketing (Vivek *et al.*, 2012) as well as service-dominant logic (Kumar *et al.*, 2019), and given the rapid growth of the sharing economy and advances in product/service customization, fitness centers share considerable commonalities with service settings such as lodging, dining, grooming, education, entertainment and health services for people or pets. Thus, the findings are cautiously generalizable to contexts that share all or most of these commonalities with fitness centers.

Implications

Theoretical implications

Previous studies conceptualize CE as either a psychological construct (Bowden, 2009; Brodie *et al.*, 2011; Grewal *et al.*, 2017) or a behavioral construct (Guesalaga, 2016; Harmeling *et al.*, 2017; Pansari and Kumar, 2017; Van Doorn *et al.*, 2010). To tackle this inconsistency, the current study incorporates both PCE and BCE into a theoretical model that explicitly highlights their interplay, as well as their antecedents and outcomes. By testing the PCE → BCE path and finding a significant relationship, we provide evidence in support of integrating two streams of literature that have not been linked empirically before, despite their close affinity.

Moreover, research focused on BCE tends to receive more attention, likely because the firm-centric perspective that dominates CE literature is less concerned with the psychology underlying customers' behaviors (Van Doorn *et al.*, 2010). By identifying PCE as a prerequisite of BCE though, we provide a more comprehensive view that can help researchers synthesize existing literature, overcome the psychological-behavioral divide and integrate diverse research. Because CE depends on both customers' personal factors and firms' activities, integrating PCE and BCE in one model offers a fuller understanding of the consequences of CE for customers and firms. In addition to specifying the psychological mechanism (PCE) through which antecedent variables such as customer readiness affect BCE, the proposed model provides a way to identify and categorize the engagement

behaviors (i.e. in-role and extra-role BCE) through which customer psychological states influence firm performance.

The firm-centric perspective in CE literature encourages considerations of CE antecedents and consequences only from a firm's vantage point (Harmeling *et al.*, 2017; Homburg *et al.*, 2017; Menguc *et al.*, 2017; Pansari and Kumar, 2017). Our customer-centric model incorporates customer readiness to engage with the firm as a key mechanism to explain why and how individual processes influence BCE and its outcomes. Adding this perspective is important because it extends understanding of the drivers of CE and also demonstrates how customers may be affected by CE (Verleye *et al.*, 2014). The links from the customer readiness variables (role clarity, ability and motivation) to PCE (engagement as attitude) to BCE (in-role and extra-role behaviors) to customer goal attainment, satisfaction and retention are consistent with the hierarchy of effects model (Vakratsas and Ambler, 1999). The sequence also highlights the role of PCE as an underlying mechanism through which customer readiness variables trigger BCE, which, in turn, influences service outcomes for customers and firms (Kumar and Pansari, 2016; Pansari and Kumar, 2017). By identifying customer-related drivers of and consequences of CE, this study encourages a broader nomological network of CE that accounts for the effects of customer characteristics and actions and firm attributes and activities. Moreover, firm-centric studies of CE can control for customer-related drivers, such as customer readiness to engage with the firm, and thereby trace how CE is likely to affect customer outcomes such as goal attainment, satisfaction and retention.

Managerial implications

The findings emphasize three main managerial implications. First, the salience of customer readiness to engage with the firm for generating PCE and BCE should inform managers; they can exert some control over this development. The customer readiness variables (role clarity, ability and motivation) constitute actionable factors that managers might influence strategically to enhance CE (Meuter *et al.*, 2005). For example, managers can make customers vividly aware of their role as active partners through education and training, user-friendly instructions and assistance (Meuter *et al.*, 2005). Some service firms already send customers push notifications through apps, text messages and e-mails, which could highlight these roles. Fitness centers and similar businesses also might provide cards, instructional posters or audio-visual technologies to share convenient, timely information that describes how customers' experiences depend on their own readiness to engage with the firm, as well as what they can do to enhance their readiness. Access to information can increase customers' ability too, together with guidance and encouragement. For example, firms might dedicate physical or virtual space to information that facilitates PCE and BCE. To amplify customer motivation, firms should ensure customers know and value service benefits. For example, some customers value easier access and extended availability; others seek options that enable them to save time and money. Obligation-free, convenient, realistic service reviews (Bitner *et al.*, 1997) can be important for customers of new services, as well as new customers of existing services.

Second, managers should recognize the differential effects of in-role and extra-role BCE. Extra-role BCE can predict both goal attainment and satisfaction, whereas in-role BCE is associated only with goal attainment. When customers engage in behaviors that go beyond what is typical, usual or ordinarily expected of them, they likely perceive higher levels of goal attainment and satisfaction. However, if customers only engage in expected behaviors, they may perceive goal attainment but not necessarily satisfaction. Inconsistency between goal attainment and satisfaction is intriguing, especially considering the implicit emphasis

that managers and employees often place on in-role behaviors (Yi *et al.*, 2011). In addition to empowering customers to initiate in-role behaviors efficiently and effectively, managers should cultivate voluntary and informal behaviors that offer additional value that indirectly enhances firm performance and is difficult for competitors to imitate (Bolino and Turnley, 2003; Groth, 2005). To elicit customer behaviors that go above and beyond the call of duty, firms should attempt to boost customer readiness to engage, which has direct and indirect effects on BCE. Such behaviors can beget reciprocity (Chan *et al.*, 2017), so managers might motivate employees to exhibit organizational citizenship behaviors toward customers. Customers then may feel obliged to respond in kind, such that they exhibit more extra-role BCE toward the firm, employees and other customers. Finally, firms could embrace corporate social responsibility in an effort to inspire customers to help others when needed, provide constructive feedback to the organization and show more tolerance after undesirable experiences with the firm or its employees (Kim *et al.*, 2020).

Third, the effect of CE on retention appears to work through satisfaction, not goal attainment. This result corroborates a long-established, critical role of satisfaction, which arises when the perceived performance of a product or service reaches or exceeds customers' expectations (Bearden and Teel, 1983; Oliver, 2014). As such, satisfaction is a broader notion than goal attainment, which instead might exert an indirect influence on retention through satisfaction. In other words, when customers perceive higher levels of goal attainment, their satisfaction increases, which leads to greater retention. Managers interested in maintaining or increasing retention rates should continue to collect and leverage customer satisfaction data.

Limitations

The empirical study was contextualized in one service industry; thus, researchers should be careful about the generalizability of the findings and apply them only if the context shares considerable commonalities with fitness centers (e.g. lodging, dining, grooming, education, entertainment, health services for people or pets). The choice of context also might explain the lack of significant association between goal attainment and retention, in that fitness centers enjoy high retention rates on average, exceeding 76% annually (Association of Fitness Studios, 2020). Such high retention rates may indicate that perceived goal attainment has little to do with customer commitment and loyalty.

We tried to address common method bias by collecting behavioral data for two key variables, but additional provisions could improve the research design even further and provide additional validation of the findings. For example, researchers might collect behavioral measures for other variables. A longitudinal research design also could capture goal attainment, satisfaction and retention over time.

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