The Influence of Employee-Based Brand Equity on the Health Supportive Environment and Culture – Organizational Citizenship Behavior Relation

by

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ABSTRACT

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PURPOSE: The purpose of this study were (a) to test the validity and reliability of the health-supportive environment and culture scale, (b) to examine the validity and reliability of employee-based brand equity, and (c) to explore relationships among health-supportive environment and culture, employee-based brand equity, job satisfaction, and organizational citizenship behaviors by examining the moderating effect of job level. **METHODS:** This was a cross-sectional survey of 520 full-time employees (222 men and 298 women) from three places of the largest bookstore in Korea. Exploratory factor analysis and confirmatory factor analysis were performed to obtain factor structure and to evaluate factor validity and reliability in Study 1 (Chapter 2) and 2 (Chapter 3). In Study 3 (Chapter 4), structural equation modeling (SEM) was used to test the proposed model based on Study 1 and 2. **RESULTS:** Psychometric testing demonstrated satisfactory internal consistency reliability, content and construct validity of the health-supportive environment and culture scale and the employee based brand equity scale. SEM

analysis showed that (a) the worksite environment and culture for supporting health had an influence on employee-based brand equity; (b) the health-supportive environment and culture on our findings was not a driving factor of organizational citizenship behaviors; (c) employee-based brand equity affected organizational citizenship behaviors; (d) job satisfaction was influenced by the health-supportive environment and culture, and job satisfaction affected organizational citizenship behaviors; and (e) the moderating effect of job level (i.e., employees vs. managers) was partially supported in the proposed model. **CONCLUSIONS:** The health-supportive environment and culture scale and employee-based brand equity scale are both reliable and valid measures. Employee-based brand equity in the context of worksite environment and culture for supporting health appears necessary to establish organizational citizenship behaviors. Implications and directions for future research are discussed.

CHAPTER 1

Introduction

Since the early works of Aaker (1991) and Keller (1993), the domain of brand equity has grown at an impressive rate in the business market and academic field, with two primary perspectives: consumer-based brand equity (CBBE) and employee-based brand equity (EBBE; often referred as internal brand equity). First, numerous research on brand equity has tended to center around how customers perceive a corporate brand (e.g., Biel, 1997; Blackston, 1995; Keller, 1993; Park & Srinivasan, 1994; Washburn & Plank, 2002; Yoo & Donthu, 2001). An organization with strong CBBE has several benefits. A strong branding can accelerate market awareness and acceptance of new products entering the market (Berry et al., 1998). In addition, the perceived quality, the association, and the well-known name (brand awareness) empower brand loyalty by providing reasons to buy the product and increase customer satisfaction (Aaker, 1991). Second, EBBE is recently becoming an emerging field on brand equity (e.g., Ambler, 2003; Burmann et al., 2009; King & Grace, 2010; Punjaisri & Wilson, 2007). According to King and Grace (2009), EEBE serves as a foundation to build CBBE because employees who understand and wholeheartedly endorse the organization's objectives deliver them to their customers. That is, employees play an important role in building a bridge between the organizations and customers. A firm with a high level of EBBE and CBBE may want its customers to consider themselves being a part of the family and its employees to feel they are respected and that their needs are met (Ambler, 2003). The organization recognizes the value of

its employees to achieve its brand (organization) success derived from the customers' positive perceptions and behaviors toward it. However, the unbalanced attention that is mostly focused on a CBBE has resulted in a lack of a universally accepted framework and a dearth of measurement tools for EBBE. In this regard, the current study **provides a measurement scale of cognitive and behavioral brand equity at the individual employee level through an employee survey based on King and Grace's (2010) EBBE model and Keller's (1993) CBBE model with psychometric properties.** Furthermore, CBBE has been identified as the antecedents and consequences in various external branding contexts such as advertising (Aaker, 1993), sports (Becker-Olsen & Hill, 2006; Cornwell et al., 2001), tourism (Kayaman & Arasli, 2007), and fashion industry (Kim & Ko, 2012), whereas relatively few studies have been devoted to antecedents and consequences of EBBE. Along with testing the EBBE scale psychometrically, this study **explores its antecedents in the context of health promotion, and then investigates the consequences of EBBE.**

The definitions of EBBE and CBBE are similar in the respect that they are both the values that come from the innate nature of the brand. CBBE is defined from the consumer perspective and is based on consumer knowledge, familiarity, and associations with respect to the brand (Washburn and Plank, 2002). EBBE is defined from the employee perspective and is based on the differential effect that brand knowledge has on an employee's response to his or her work environments and cultures (King & Grace, 2009). In other words, in the concept of EBBE the inherent organization largely represents the brand to the employee. Similaarly, Keller has pointed out that consumer's knowledge plays a crucial in understanding CBBE, the employees' knowledge of the organization (brand) is the key in understanding EBBE (Babin & Boles, 1996; Vallaster & de Chernatony, 2005). According to Babin and Boles (1996), identifying brand

knowledge helps employees reduce their role ambiguity that is highly associated with their job performance. If employees have a different understanding of the organization's brand knowledge and are not clear about their roles, they will deliver a different brand promise to customers, which then may lead to the deterioration of brand equity. Furthermore, another key in determining EBBE is commitment. In external branding, if consumers have high commitment levels, they are more likely to be satisfied with the product (Oliver, 1999) and have a high level of repeat purchasing (Aaker, 1991; Keller, 1998). They also tend to have increased communication about the product, and will therefore show considerable amounts of interaction with the product. This in turn should increase the likelihood of recommending the product to others (Aaker, 1991). Thus, in internal branding, commitment leads to employees' behavioral loyalty, attitudinal attachment (King & Grace, 2009), and the intention to stay (Ambler, 2003; Hansen et al., 2003). For these reasons, commitment is a key variable in determining employee-based brand equity in many internal branding studies (e.g., Ambler, 2003; King & Grace, 2010).

Social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960) provide promising insights in understanding the antecedents and consequences of EBBE. In the organizational context, social exchange refers to the benefits derived from social connectivity between employees and the organization (Wayne et al., 1997). In this regard, Greenberg and Scott (1996) assert that employees' behaviors and attitudes are responses to the treatment they received from their organizations. Given EBBE is intimately linked with employees' responses to their work environment and culture (King & Grace, 2009), the worksite environment and culture is one likely avenue for building EBBE from the social exchange perspective. One of the most popular consequences of EBBE is organizational citizenship behavior (King & Grace, 2010) as it relates to worker behavior and attitudes. Organizational citizenship behavior represents

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discretionary behavior, not part of the job description, which has been linked to overall organizational effectiveness (Darden & French, 1970; Dubinsky & Barry, 1982; Jackson et al., 1983). According to Organ (1988), organizational citizenship behavior is a significant factor that contributes to the survival of an organization. In addition, in terms of social exchange theory, many suggest that beneficial actions directed at workers by the organization establish obligations for employees to reciprocate in beneficial ways (Eisenberger et al., 1986, Settoon et al., 1996; Elstad et al., 2011). Considering all of these factors, the employee's perception of the worksite environment and culture for supporting health is used as an antecedent of EBBE, and how the organizational citizenship behavior relates to EBBE and the health-supportive environment and culture as their consequence, respectively.

Overall, only a few have published brand equity studies from the internal perspective (King & Grace, 2010; de Chernatony & Cottam, 2006). Each of these studies focused primarily on the value of EBBE and scale development. Although King and Grace (2010) reported the outcome variables of EBBE, research on EBBE's antecedents and application to other arenas is still in its early stages. This current study is important to understand the nature of EBBE and its roles in a different organizational setting, especially in the context of health promotion. What's more, the current study offers a new insight about why organizations should develop a health-supportive environment and culture based on employee-based brand equity model and social exchange theory.

Structure of the Dissertation

This is a manuscript-style dissertation. Three manuscript-style papers are presented in the next three chapters. Chapter 2 presents a reliable and valid employees' perception scale of the environment and culture for supporting health at the workplace. Chapter 3 describes the

importance of brand equity from the internal perspective and tests the validity and reliability of employee-based brand equity scale. Chapter 4 presents the results of the present investigation designed to examine the relationships among health-supportive environments and cultures, employee-based brand equity, job satisfaction, and organizational citizenship behaviors by examining the moderating effect of job levels.

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CHAPTER 2

Health-Supportive Environment and Culture (HSEC) Scale: Reliability and Validity

Introduction

For some time, much attention has been paid to wellness program research. Increasing healthcare costs have prompted organizations to initiate health promoting activities (Serxner et al., 2003) and inspired scholars to explore how organizations can reduce their health care costs (Aldana et al., 2005; Baicker et al., 2010; Haughie, 1993; Naydeck et al., 2008; Ozminkowski et al., 2002; Pelletier, 1996). The majority of worksite health promotion programs have exclusively centered on individuals rather than on the broader change in workplace culture (e.g., Everly and Feldman, 1985). Individualized wellness programs have been effective in reducing healthcare costs and improving employee productivity (Serxner et al., 2001; Goetzel et al., 2010). However, the success of individualized programs (e.g., disease management programs, coaching, weight loss classes, etc.) depends on selective participation. Many individualized programs tend to show low participation and the participants already have health problems or an interest in improving their health, which leads to a marginal effect of the health and cost trends in the whole employee population (Linnan et al., 2001; Marzec et al., 2011).

Developing a population-based approach is an alternative approach to individualized programs. This broader change in workplace environment is based on the social ecological model of influencing behavior. The basis of the social ecological model is that both social and

environmental factors are critical determinants of individual behavior (Cohen et al., 2007; Stokols, 1992). In the health management context, this model suggests that by certain supportive physical environments and social cultures, it is possible to affect health behaviors and improve health outcomes within the entire population. Examples of programs aimed at impacting the whole population include no-smoking policies, healthy foods in cafeterias and vending machines, signs at decision points to encourage stair use, and walking routes (Engbers et al., 2005; Dodson, 2008; Cheung et al., 2008; Ball et al., 2001). The social ecological model represents a sustainable, population-based approach to improving health by affecting the larger environment in which people work (Golaszewski et al., 2008 a).

The worksite environment can be generally defined to encompass the work environment and social culture (Golaszweski et al., 2008 a). The work environment is more tangible than its culture. A work environment mainly includes physical factors of an organization (e.g., physical environment, policies, wellness programs). While the work culture is less tangible, it can be measured as to its support for health in terms of social support, norms, and mood. Others have developed tools to assess the environment for supporting health. Examples include the Environmental Assessment Tool (EAT) and HeartCheck (Dejoy et al., 2008; Golaszewski and Fisher, 2002). There are also tools to assess cultural support for health (Ribisl and Reischl, 1993; Allen, 2002).

Current environmental assessments typically determine components present in the organization and do not capture the individual employee's perspective. The individual perspective is important because there may be resources available that employees are not aware of or do not have access to. Assessment of the environment and cultural support for health should be useful to determine 1) gaps between resource offerings and accessibility 2) cultural

factors that could be leveraged to improve effectiveness of health promotion initiatives and 3)

existing barriers in the environment and culture to improved health.

Thus, to better understand and assess the organizational health environment from the

individual employee's perspective, this study develops the Health Supportive Environment and

Culture (HSEC) scale that encompasses five elements of environment and policy and five factors

related to culture. The tool assesses the perception of the environment and culture for supporting

health from the perspective of individuals at the organization. Empirical studies on population-

based strategies are almost nonexistent in the health management literature (Ribisl and Reischl,

1993), and there is no overall agreement as to environment and culture scale of health at the

workplace. The main purpose of this study is to test the reliability and validity of the HSEC scale.

First, I discuss the theoretical background of worksite health environment and culture, then

review the procedures used for translating the theoretical dimensions into a scale. Third, I present

the reliability and validity results of the HSEC scale using survey data from a Korean company.

Both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are included. I

conclude with a discussion of the validity of the theoretical construct and future steps to refine

the scale.

Theoretical Background

Environment and Culture of Health

According to an ecology theory influencing individual behavior, the worksite includes

multiple social and physical environmental conditions that affect physical, mental, and social

wellbeing (Golaszewski et al., 2008 a; McLeroy et al., 1988; Stokols et al., 1996). The

multidimensional characteristics of the worksite resulted in no overall agreement as to the

measurement of worksite health environment in previous studies. Despite the inability of

Table 2.1 Overview of the Literature on Worksite Health Environment and Culture: Conceptual Study

Author(s) (Year)	Study	Main Contributions	Health Environment/Culture Elements
Allen & Allen (1987)	Conceptual	Discussing key factors: shared vision, positive culture, and sense of community to build successful culture.	• Shared vision / Positive culture / Sense of community
McLeroy, Bibeau, Steckler, & Glanz (1988)	Conceptual	Providing an ecological model for health promotion that focuses attention on both the individual and social environmental factors.	Ecological model for health promotion: • Intrapersonal factors / Interpersonal processes & primary groups / Institutional factors / Community factors / Public policy
Stokols (1992)	Conceptual	Conceptualization of health-promotive environments by developing an ecological analysis of health promotion.	Dimensions of a health-promotive environment: • Injury-resistant design • Environmental controllability & predictability • Availability of social support networks
Allen (2002)	Conceptual	Discussing five elements of workplace culture of health.	Elements of culture • Norms / Values / Peer support/ Organizational support / Climate
Golaszewski, Allen, & Edington (2008 a)	Conceptual	Illustrating a model for creating organizational health environments including work factor, physical structure, and organizational culture.	The organizational health environment: • Work factors (e.g., size & industry type) • Structure factors (e.g., awareness & policies) • Cultural factors (e.g., norms & peer support)
Edington (2009)	Conceptual	Providing five fundamental pillars of a population health management system that can serve as a guide for measuring the worksite environment.	Dimensions of the worksite environment: • Senior leadership • Policies and procedures • Individual programs • Rewards • Quality assurance

Table 2.2 Overview of the Literature on Worksite Health Environment and Culture: Empirical Study (continued)

Author(s) (Year)	Study	Method	Subjects
Ribisl & Reischl (1993)	Empirical Quantitative	Survey	Study 1: 321 employees in a medium-sized newspaper company Study 2: 203 full-time employees in 7 small businesses
Basen-Engquist, Hudmon, Tripp, & Chamberlain (1998)	Empirical Quantitative	Survey	5947 participants at 40 worksites (20 natural gas pipeline worksites and 20 rural electrical cooperatives)
Plotnikoff, Prodaniuk, Fein, & Milton (2005)	Empirical Mixed method	Documentary research, Expert review, Survey, Interview	Phase 1: 18 documents, a group (n=15) of national experts, stakeholders, and practitioners Phase 2: A group (n=31) of experts, 15 employees from three large multisite Alberta organizations Phase 3: Two individuals for interrater reliability appraisals
Lowe, Schellenberg, & Shannon (2003)	Empirical Quantitative	Survey (Cross-sectional telephone survey)	2112 Canadian employees who were randomly chosen using a household-based sample frame
Golaszewski, Hoebbel, Crossley, Foley, & Dorn (2008 b)	Empirical Quantitative	Survey	2613 employees from 55 western New York companies
Marklund, Bolin, & von Essen (2008)	Empirical Quantitative	Survey	Two stage sample: 90 workplaces' data using structured interviews with operative managers and 4306 employed individuals' data using questionnaires that were filled in at home and returned by mail
Crimmins & Halberg (2009)	Empirical Quantitative	Survey (e-mail)	3339 headquarter and research and development employees of a large US based food company

Table 2.2 Overview of the Literature on Worksite Health Environment and Culture: Empirical Study (continued)

Author(s) (Year)	Main Contributions	Health Environment/Culture Elements
Ribisl & Reischl (1993)	Developing the Worksite Health Climate Scales (WHCS). Assessing differences in the health climates by worksite and the relationships between health climate perceptions and health outcomes.	Worksite Health Climate Scales (WHCS): • Organizational support • Interpersonal support • Health norms
Basen-Engquist, Hudmon, Tripp, & Chamberlain (1998)	Developing the health and safety climate scales to measure organizational change related to worksite health promotion activities.	Health climate, Safety climate
Plotnikoff, Prodaniuk, Fein, & Milton (2005)	Developing the Workplace Physical Activity Program Standard and Assessment Tool (WPAAT) with a multilevel ecological approach.	Workplace Physical Activity Assessment Tool (WPAAT): • Management and employee commitment • Environment and needs assessments • Program components (individual level, the social level, the organizational level, the community level, the policy level) • Program administration • Safety and risk management
Lowe, Schellenberg, & Shannon (2003)	Examining whether a healthy work environment correlates with contextual factors. Assessing the relationships between employees' perceptions of a healthy work environment and organizational and individual outcomes	Employee perceptions of a healthy work environment (2 measures: "The work environment is healthy." and "The work environment is safe.")

Table 2.2 Overview of the Literature on Worksite Health Environment and Culture: Empirical Study

Author(s) (Year)	Main Contributions	Health Environment/Culture Elements
Golaszewski, Hoebbel, Crossley, Foley, & Dorn (2008 b)	Testing the reliability and validity of an organizational health culture assessment consisting of five dimensions	Organizational health culture: • Norms • Values • Social support • Organizational support • Organizational climate
Marklund, Bolin, & von Essen (2008)	Examining the associations between organizational characteristics of worksites and employees' health outcomes including general health, sickness absence, mental health, musculoskeletal disorders, and work ability	Workplace characteristics: • Division of labor (Functional flexibility, Customer adaptation) • Authority (Individual responsibility, Group responsibility • Control strategies (Performance control, Soft control systems) • Resources (Lack of resources)
Crimmins & Halberg (2009)	Providing a survey tool of "Culture of Health" through measuring employees attitudes towards a worksite health promotion	Health Values Survey: • Supportive environment • Healthy lifestyle attitudes • Knowledge and behavior

scholars to reach a consensus, the importance of addressing this in health management is underscored by numerous studies seeking to assess the worksite environment and culture of health (e.g., Basen-Engquist et al., 1998; Crimmins and Halberg, 2009; Golaszewski et al., 2008 b; Lowe et al., 2003; Plotnikoff et al., 2005; Ribisl and Reischl, 1993) (see Table 2.1 and 2.2).

Ribisl and Reischl (1993) developed measures of the health climate at the worksite using a scale including three elements: organizational support, interpersonal support, and health norms. Ribisl and Reischl also examined the intercorrelation of health climate scales and health outcomes (e.g. physical symptoms, smoking behavior, exercise habits, nutrition habits, job stress, and general job satisfaction). Likewise, Basen-Engquist and colleagues (1998) developed a five-item health climate scale and a six-item safety climate scale. They also examined the relationships between worksite health, safety climate, and variables such as the number of health promotion programs offered at the worksite, organizational characteristics, and employee health behaviors. Of special interest, Basen-Engquist et al. (1998) identified the positive effect of a health promotion intervention on workplace health climate. The study offered useful insights into worksite climate, not only in terms of scale development of the health and safety climate but also with respect to the impacts of health promotion programs on worksite health climate. Similarly, Plotnikoff et al. (2005) focused exclusively on workplace physical activity programs, while Golaszewski et al. (2008 b) tested the reliability and validity of an organizational health culture scale (e.g., norms, values, social support, cultural touch points, organizational climate) based on Allen (2002), underlining the importance of health culture as a sub-components of workplace environment. In addition, Golaszewski and colleagues (2008 a) provided a more extensive model of organizational health environment consisting three factors: work factors, structure factors, and cultural factors. The researchers contend that the "next generation" of health

Table 2.3 Operational Definitions of the Worksite Health Environment and Culture Construct

Construct		Definition
Environment components	Senior Leadership	Expressed vision and resource allocation from senior leaders indicating that employees' health is a priority for the organization.
	Policies & Procedures	Alignment to support and accomplish vision in matters of health; and serves as a catalyst to allow employees to benefit from available resources
	Individual Programs	Initiatives and programs to support and improve employee health
	Rewards	Recognition for contribution, participation and accomplishment toward goals related to health.
	Quality Assurance	Measurement process to assess the desired outcomes; and the results of the programs offered.
Culture components	Supervisor Support	Encouragement, concern and support from supervisors regarding a support for individual health and health promotion initiative.
	Role Modeling	Other's practice of healthy behaviors or setting health as a priority; living evidence that certain achievements are possible.
	Coworker Support	Encouragement and support from peers regarding a health.
	Mood	Employee attitudes, feelings and perceptions that can influence motivation. Mood can enhance or inhibit program participation.
	Norms	The social boundaries that define the expected and accepted ways of behaving with respect to health behaviors.

Note. Sources: Allen (2002), Basen-Engquist et al. (1998), Cameron (2008), Edington (2009), Ribisl and Reischl (1993)

management programs must include a much wider array of environmental factors that support a healthy and productive workforce. In line with "next generation" of health promotion, Edington (2009) suggested Five Pillars (e.g., senior leadership, policies and procedures, programs, rewards, and quality assurance) of a population health management system from an extensive organizational support perspective. The Five Pillars encompass environment and policy factors (i.e., work factors and structure factors) but do not include cultural components such as social support and behavioral norms within the organization. The strength of the newly developed HSEC scale is that it encompasses previously established factors and includes both environment and culture. A second distinction of this tool is that it captures the individual perspective. Table 2.3 shows the definitions of components of health environment and culture used in the present study.

Worksite Health Environment and Culture Elements

Senior Leadership. Leadership is defined as "the ability of individuals to influence others toward the achievement of relevant organizational goals and objectives" (Shortell et al., 1994, p.512). To promote population health, McGinnis et al. (2002) emphasize the importance of leadership that informs and motivates the public to understand the power of health promotion with public policy approaches. Likewise, in the organizational context, leadership has been considered a significant factor that facilitates an implementation of health promotion programs at the worksite (Emmons et al., 2000).

Given that leaders articulate and share their visions with employees for a healthier workforce (Allen, 2002), senior leadership is important in building healthy environments at the worksite (Edington, 2009; Pronk, 2007). Allen (2002) points out that leaders can serve as catalysts for supporting employee wellness. Healthy lifestyle choices and participation of leaders

in health promotion activities inspire employees. In this regard, Edington (2009) introduces five characteristics of vision from senior leadership for a healthy worksite environment: clear vision within leadership, vision connected to company strategy, vision shared with employees, accountability and responsibility assigned to operations leadership, and leadership of the company and unions' transition to become the cheerleaders. In his book, Zero Trend, Edington (2009) describes the importance of senior leadership, quoting Margie Blanchard, CEO of The Ken Blanchard Companies: "People look to the top to see what's important. When leaders include health and well-being as a major strategic initiative and are serious about it, good things happen." In other words, employees recognize and learn the vision to support a healthy worksite environment from their leaders. Yukl and Van Fleet (1992) argue that leadership is the process of influencing organizational members to take action on organizational goals. Indeed, the role of senior leadership is essential to integrate employee health into the environment of an organization.

Strong senior leadership helps to align the organizational visions of employers and employees (Stephenson, 2004). Leadership is not only crucial for improving employee health through a successful culture based worksite health promotion (Edington, 2009), but also plays a vital role in fortifying a corporate brand (or, more generally, an organization brand) from the internal perspective (Vallaster & de Chernatony, 2006). By conducting thirty depth interviews and one expert group discussion with employees, Vallaster and de Chernatony (2006) identified that leadership is important throughout the internal brand building process. Vallaster and de Chernatony state (2005) that "effective leadership is a key factor in distinguishing successful and less successful service brands" (p.182).

Policies and Procedures. In an organization environment, policies and procedures are

strategically important in determining employees' behaviors (Page, 1998). Policies and procedures are defined as "formal, conscious statements" that support organizational goals (Marchington et al., 2005). The notion of a policy refers to a "predetermined written course with respect to rules, obligations and expectations for employees" and the notion of a procedure indicates a "method by which a policy can be implemented" (Dundon, 2002; Page, 1998). According to Wilson et al. (2004), job design, job future, and organizational climate for support, communication, and involvement are all associated with an organization's policies and procedures derived from beliefs and value structures.

In terms of policies and procedures for enhancing employee health, organizations provide fitness breaks to exercise during the day, prohibit alcohol and smoking, and/or inform worksite healthy eating policies (Linnan et al., 2008; O'Donnell, 2002). Given policies and procedures play a crucial role with which employees make decisions (Falkenberg & Herremans, 1995; Marchington et al., 2005; Page, 1998), numerous researches indicate that health promotion policies and procedures at the worksite have an influence on employee behaviors regarding their health (e.g., Crespo et al., 2011; Fichtenberg & Glantz, 2002; Grunbaum et al., 2001; Story et al., 2008). For example, Crespo et al. (2011) identified that physical activity policies serve as inducing employees' moderate-to-vigorous physical activity. In addition, Fichtenberg and Glantz (2002) discovered that worksite smoke-free policies encourage employees to reduce or discontinue the use of tobacco. This result was also consistent with other smoking cessation studies (e.g., Farrelly et al., 1999; Gerlach et al., 1997; Sorensen et al., 2004).

To create a worksite environment for supporting employee health and wellness, policies and procedures, as a formal managerial approach, need to align with the organizational vision and principles of health (Edington, 2009). Policies and procedures toward accepted organization

objectives regarding employee health promotion allow employees to trust their senior leaderships (Edington, 2009) as well as gain benefits from resources provided by their organization.

Individual Programs. Individual programs in worksite health promotion provided by organizations help their employees develop self-leadership in maintaining or improving their health (Edington, 2009). The commonly accepted definition of self-leadership is "the process of influencing oneself to establish the self-direction and self-motivation needed to perform" (Neck & Manz, 1992, p.682). From the self-influence perspective, creating a self-leadership allows individuals to reach higher levels of performance and effectiveness (Houghton & Yoho, 2005; Manz, 1986).

Given that self-leadership is associated with not only individual outcomes but also group and organizational performance (Neck & Houghton, 2006), organizations, in the workplace health promotion context, also need to focus on encouraging employees to become self-leaders who attempt to enhance their own health and overall well-being and influence others (Edington, 2009), by providing a variety of individual health-promotive programs. Edington (2009) asserts that the organization needs to provide opportunities that enable employees to realize their health status and improve their health via health risk assessments, health screening, health coaching, and wellness programs as to general nutrition, risk reduction, and/or physical activity. Such well-developed comprehensive programs meet various individuals' needs by embracing personalized aspects. Bowden et al. (2010), highlight that organizations are urged to implement health-related educational programs such as self-treatment lessons that allow employees to make better decisions regarding health care and in effect, save employee's health care costs.

Rewards. An organization provides its employees with rewards to motivate and encourage them to perform the targeted behaviors (Bartol & Locke, 2000; Mottaz, 1985). Mottaz

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(1985) asserts that the organizational rewards include extrinsic rewards such as adequate working conditions, fair salary, promotional opportunity, and sufficient fringe benefits. Rewards also refer to recognition given by co-workers and supervisors in the organization (Bartol & Srivastava, 2002; Daily & Huang, 2001; Mottaz, 1985).

Given that employee behavior including motivation and performance is affected by rewards, numerous organizations, in health management, utilize incentives to increase employee engagement in health-related programs such as wellness programs and health risk assessments (Edington, 2009). Taitel et al. (2008) identified positive relationships between employees' participation in health risk assessments and a variety of incentive types such as cost sharing, cash/gift card, merchandise, awards/recognition, or preferred benefit plan. According to Hennrikus et al. (2002), the rates of registration in worksite smoking cessation programs in incentive sites was nearly double to those of no-incentive sites. Thus, to encourage continued attendance of health promotion programs and maintenance of recommended behaviors, organizations need to provide employees with positive rewards (Edington, 2009).

A reward system is often used as a tool for developing internal brand equity by motivating employees (Papasolomou & Vrontis; 2006). By examining employees' views of internal marketing activities in the UK banking industry, Papasolomou and Vrontis (2006) found that employees are encouraged by rewards and show increased performance levels based on organization's objective. Moreover, Mahnert and Torres (2007) urge organizations to implement reward systems in developing brand equity since rewards allow organizations to educate and manage employees on their brand strategies.

Quality Assurance. As the role of employees is becoming important in business, the organizations focus on establishing, maintaining, and developing their culture of health at the

workplace. From an internal organizational perspective, creating the worksite environment and implementing the health promotion programs are valuable activities for the health promotion of the employees. Yet, numerous worksite health promotion projects focus on the program results such as what behaviors have or have not been changed (Kizer et al., 1992; Lowe et al., 1989).

Although the problems of program implementation have often been overlooked at a worksite environment, monitoring the program implementation through a quality assurance system plays a significant role in improving employee health in a worksite health promotion program (Davies & Macdonald, 1998; Speller, 1998). Quality assurance is defined as "a system of activities whose purpose is to provide to the producer or user of a product or a service the assurance that it meets defined standards of quality with a stated level of confidence" (Taylor, 1987, p. 2). Taylor (1987) argues a continuing evaluation of products produced and of the performance of the production system provides evidence that quality has been achieved. That is, the accomplished quality represents desirable levels of the health promotion programs perceived by employees. Several researchers address the role of quality assurance in the development of effective health improvement strategies (Lowe et al., 1989; Speller et al., 1997).

Quality assurance from employees as customers allows a culture of health to run programs smoothly and to help employees improve their health effectively. According to Edington (2009), evidence-based outcome measures are crucial and absolutely central to the success of the health management strategy. Edington (2009) asserts that the results of the programs provided and the effects of changes in the environment must be fed back into the process to ensure continuous quality improvement. For instance, the organizations need to share summarized reports of the programs with their employees. By identifying and delivering the results of the health programs to employees, the organizations not only can gain a pervasive

recognition that the health of employees is considered significant at the worksite environment, but also promote their employees' health.

  Role Modeling. "Role models are widely expected to inspire others to pursue similar excellence" (Lockwood et al., 2002, p. 854). Bidwell and Brasler (1989) contend that a role model is a process that an individual takes based on the values and behaviors of another. In organization settings, leaders, in general, strive to present strategies or solutions to settle the problems the organizations face. According to Conger and Benjamin (1999), leaders need to pay attention to their role model behaviors to implement those solutions efficiently and effectively, as their role model behaviors transmitted to employees helps the organizations create their own cultures (Schein, 1991). With regard to the importance of role models, Schein (1991) stresses that although the message of role models derived from the leaders may be very implicit in the organizational culture, the role model is crucial in developing organizational culture.

  The effects of role models can be shown in numerous organizational settings. Berenson et al. (1998) found the role model behavior of parents and teachers has an influence on children in adopting healthy lifestyles. In addition, children's fruit and vegetable intake can be increased by parents' role model behavior (Fisher et al., 2002). Similarly, at the worksite, Allen (2002) argues employees tend to exercise if their CEO and/or immediate managers frequently jog during lunch. According to Golaszewski et al. (2008 b), role modeling at the worksite is exhibited by formal leaders and by informal peer leaders. In concurrence with Allen's (2002) argument, Golaszewski et al. (2008 b) also state that leaders, in terms of developing the workplace culture that supports employee health, need to increase "the visibility of their good role models or to vary the types of role models (i.e., gender, age, achievement)" at the worksite. Thus, leaders' role model behaviors can encourage employees to promote their health voluntarily, which helps to establish and

develop organization culture for supporting health. Lockwood and Kunda (1997) assert that positive role models, or individuals who have achieved outstanding success, inspire others to adopt the behavior derived from the role models. Given the CEO represents a person who has succeeded in business, the role model behavior of leaders related to improving health can lead to employee health by changing the organization culture. Moreover, co-workers' role model behaviors can be an instrument in developing organizational culture. By sharing information about health promotion with others at the workplace, workers tend to take on healthy role models of others (Tessaro et al., 2002). That is, the organizational culture for supporting health is affected by the role model behavior of the leaders and co-workers.

   Supervisor Support and Co-worker Support. The concept and effects of social support have received considerable attention in the social and behavior science literature, which has led to numerous definitions and taxonomies (Adelman, 1988; Barrera, 1986; DiMatteo, 2004; Ducharme & Martin, 2000). Albercht and Adelman (1987) defined social support as "the verbal and nonverbal communication between recipients and providers that reduces uncertainty about the situation, the self, the other, or the relationship, and functions to enhance a perception of personal control in one's life experience (p. 19)." Social support can be shown in various social contexts such as community, worksite, or school settings, as Albrecht and Goldsmith (2003) state that social support is "a process embedded in structures of ordinary relationships in social life."

   Work-based social support research has centered on two main sources: supervisors and co-workers supports (e.g., Karasek et al., 1982; Golaszewski et al., 2008 a, Allen, 2002). Support from supervisors and co-workers is then divided into two characteristics: instrumental and emotional supports (Allen, 2002; Beehr et al., 2000; Cohen & Hoberman, 1983; Golaszewski et al., 2008a). Instrument supports indicate tangible aid (Ducharme & Martin, 2000) such as

spending time to help other employees' work, and emotional supports refer to the provision of empathy, trust, and caring (House, 1981) such as encouraging words (Allen, 2002; Beehr et al., 2000; Golaszewski et al., 2008a). Social support from supervisors and/or co-workers, especially, plays a vital role in promoting employee health. According to Cohen and Wills (1985), social support is directly linked to health in the areas of stress and physical health. Social support protects individuals from the stressful life events (e.g., job loss) and those with high social support enjoy their lives with better health. Green and Johnson (1990) identified that for older workers self-reported as smokers, strong co-worker support influenced their likelihood of quitting smoking. Moreover, given the worksite is an increasingly common channel for improving employee's healthy eating behavior in large segments of the population (Sorensen et al., 1998), strong coworkers' support can provide employees with better eating habits (Sorensen et al., 1999). House (1981) reported positive effects of supervisor's support on the physical and mental health of employees. Similarly, the effects of supervisor support on employee health are shown in studies of other occupational settings such as school (Russell et al., 1987) and hospital (Constable & Russell, 1986). Ganster et al. (1986) argue that social support from the supervisor has a beneficial impact on workers' mental and physical welfare.

With respect to workplace culture to support employee health, several researchers also have considered a variety of social supports (Allen, 2002; Golaszewski et al., 2008 a). While Allen (2002) addresses peer support as a concept of work-based social support that includes assistance from family, friends, coworkers, and immediate supervisors, Golaszewski and colleagues' (2008 a) study measuring the organizational health culture from 2613 employees and 55 companies is predicated on the notion that workplace social support is mainly related to co-workers support. In their studies, supervisor support is included as another component of health

culture organizational climate (moods). Given these two studies (Allen, 2002; Golaszewski et al., 2008 a) which deserve the scholarly attention they have received, the current study divides social support into co-workers support and supervisor support based on Allen (2002), in terms of measuring workplace health culture. Yet, as Golaszewski and colleagues (2008 b) measured supervisor support out of social support, the proposed study uses another dimension of workplace culture for supervisor support developed by UM-HMRC.

Norms. Norms are "implicit rules of behavior that define appropriate and inappropriate actions within the organization" (Russell & Russell, 1992, P.644). Balthazard et al. (2006) argue that norms refer to the unwritten rules that influence how members of an organization behave. In other words, norms have an influence on individual and organizational outcomes (e.g., role clarity, job satisfaction, turnover, and quality of workplace) and serve as indicators of organizational culture. According to Schein (1968), when employees reject all norms, they may either be expelled from the organization or waste their time and effort against the organizational goals. Employees, thus, need to learn and accept the norms based on the organizations' point of view.

A considerable amount of research on organizational culture to support health has considered norms as an important dimension of culture. Allen (2002) defines norms as "an expected and accepted behavior" and considers them to be vital elements of an organizational health culture. Allen (2002) states, "one important purpose of a culture change effort is to modify cultural norms so that they are consistent with widely held health promotion values" (p.206). Measuring the climate for health at the workplace, Ribisl and Reischl (1993) view norms as a dimension of workplace culture that supports health. These researchers assessed four different worksite norms for healthy behavior: healthy nutrition norms, exercise norms, smoking norms,

and tension (job stress) norms. Similarly, emphasizing the necessity of norms in determining the organizational health culture based on Allen (2002), Basen-Engquist et al., (1998), Cameron (2008), and Ribisl and Reischl (1993), Golaszewski et al. (2008 b) tested the norms consisting two different levels: exercise/diet norms and general health norms. Exercise/diet norms include exercise, weight maintenance, and healthy eating. General health norms indicate desired social behavior relating to health such as use of car safety belts, not operating a motor vehicle after alcohol consumption, and encouragement to prevent smoking. In light of previous research, given the behavior of organizational members is guided by cultural norms, the norms in the current study are measured in four health areas (i.e., exercise, diet, smoking, and alcohol).

Moods. Moods (organizational climate) at work are affective states that are encountered on the job (George & Brief, 1992) and during unstable short-term intraindividual changes (Tellegen, 1985). Lazarus (1991) defined a mood as "a transient reaction to specific encounters with the environment, one that comes and goes depending on particular conditions" (P.47). Although moods are characterized as temporary reactions and diffuse feeling states, they are pervasive at the worksite (George & Brief, 1992; Nowlis, 1970). For instance, we probably are often unaware that we are experiencing a certain mood (Forgas, 1992). However, the pervasiveness of moods, without realization, significantly affects our thought processes, attitudes, and behaviors (e.g., Barsade et al., 2000; Leventhal & Tomarken, 1986). That is, a mood is a significant determinant of an individual's impressions and actions (Clark & Isen, 1982). Bower (1981) identified people in good moods tend to recall positive experiences compared to people who are not feeling well. A laboratory experiment conducted by Forgas (1990) demonstrated that a positive mood leads to more positive judgments. Similarly, Kelley and Barsade (2001) assert that positive moods and mood contagion of group members are highly

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associated with their performance in the group.

Given that moods have such extensive effects on individuals' judgments and behaviors, health management scholars have also acknowledged profound effects of moods on thought processes and behavior at the workplace (e.g., Allen, 2002; Allen & Allen, 1987; Golaszewski et al., 2008 b). In terms of worksite culture based health promotion, mood is defined as "a set of temporary employee attitudes, feelings and perceptions that are influenced by workplace social and structural characteristics; and serve as a catalyst to individual health behavior change" (Golaszewski et al., 2008 b, p.118). Considering that developing organization climate (mood) is directly related to promoting employee health (Ribisl & Reischl, 1993), Allen (2002) suggests that mood at work can be viewed in terms of three work climate factors: a sense of community, a shared vision, and a positive outlook. Based on a conceptual model of Allen and Allen (1987), Allen (2002) stresses the three work climate factors contribute to successful culture change efforts. In concurrence with the studies of Allen and Allen (1987) and Allen (2002), Golaszewski et al. (2008 a) argue that a sense of community, a shared vision, and a positive outlook can facilitate organizational and individual change. "Given a good work climate, employees may, for example, be open to discussing their health risks and involving their families in health promotion activities" (Golaszewski et al., 2008 a, p.8).

Methods

Worksite Health Environment and Culture Scaling

In reviewing the literature on worksite health environment and culture, 49 items representing various dimensions underlying organizational environment and culture of health were identified in previous studies (Golaszewski et al., 2008 a; Golaszewski et al., 2008 b; Ribisl & Reischl, 1993; Allen, 2002; Basen-Engquist et al., 1998; Edington, 2009; Cameron, 2008).

Focus groups were conducted to identify duplicate items and potential sources of ambiguity, after which several of the items were modified and eliminated. The 21 items for environmental factors and 22 items for cultural factors (see Appendix 2.1) were finalized and utilized a seven-point Likert-type scale, with responses ranging from "strongly disagree" to "strongly agree". For each question, respondents were asked to mark the response which best described their level of agreement.

A pilot study discovered a factor structure of the HSEC scale, using an exploratory factor analysis (EFA) with 43 items, and then performed a confirmatory factor analysis (CFA) to determine the factor structure extracted in the EFA. The main study was carried out to confirm the factorial structure extracted in the pilot study. The main study first followed the same methodology of pilot study (i.e., EFA and CFA), and then tested the validity and reliability during the CFA.

Samples

Participants for a pilot study were drawn from 102 full-time employees of the largest bookstore Kyobo in Seoul, South Korea. Questionnaires were distributed and returned via workplace mailboxes of the employees at its headquarter. Data collection was organized at their offices or desks and the respondents completed the questionnaire when they were available during their office hours. The questionnaire required 12-17 minutes to complete. The main study sample included 582 full-time Kyobo employees at three places (i.e., headquarters, distribution centers, and stores). The employees who participated in the pilot study were excluded from the sample of the main study. Questionnaires were first handed to the managers at each place through the Human Resources department, and then the managers distributed the questionnaires to their employees. The survey was self-administered and returned to the managers after a week.

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Of the 582 employees participated in the survey, 520 employees completed the survey (response rate: 89.3%). There was a lottery incentive ($20) offered for participation. The 150 winning respondents were randomly selected among those who completed the survey.

Statistical Analysis

Exploratory Factor Analysis. An exploratory principle component factor analysis with a varimax rotation in SPSS version 20.0 was applied to the date using the eigen value criterion (>1.0) to identify the number of dimensions of the scales. To better understand organizational health environment and culture, five environmental factors and five cultural factors were combined and estimated (Edington, 2009; Golaszewski et al., 2008a). Consistent with leading researchers (e.g., Fabrigar et al., 1999; Netemeyer et al., 2003; Nunnally & Bernstein, 1994), multiple criteria were used to determine the number of factors to include in the model and which items to retain for each factor. More specifically, items with low factor loadings (<.50), high cross-loadings (>.50), or low communalities (<.30) were candidates for elimination. The Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity also were utilized to evaluate the applicability of principal components analysis.

Confirmatory Factor Analysis. Based on the recommendations of different authors, overall fit statistics of the measurement model (Bentler, 1990; McDonald & Marsh, 1990; Mulaik et al., 1989) were as follows: $x^2/d.f.$, RMSEA (Root Mean Square Error of Approximation), SRMR (Standardized Root Mean Square Residual) and incremental indices CFI (Comparative Fit Index), TLI (Tucker Lewis Index) and NFI (Normed Fit Index). These goodness of fit indices are considered acceptable when $x^2/d.f.$ is less than five, the error index RMSEA is less than 0.08 or less than 0.07, the error index SRMR is less than 0.08 and

incremental indices CFI, TLI, and NFI are more than 0.90 (Bentler, 1990; Browne & Cudeck, 1993; Hu & Bentler, 1995; Hu & Bentler, 1999; Steiger, 2007).

To establish factorial validity and reliability for the measurement model in main study, I followed the validation procedures outlined by Hair and the colleagues (2006). Amos 20.0 was used to refine the factor structure derived from the EFA. That is, the CFA confirmed factor validity (convergent and discriminant) of the five constructs extracted in the EFA. The following measures were considered in establishing validity and reliability during the CFA based on the contributions made by different authors (Fornell & Larcker, 1981; Hair et al., 2006; see Table 2.4): Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), and Average Shared Squared Variance (ASV). Convergent validity requires CR should be greater than AVE and AVE should be at least .50 or higher. With regard to discriminant validity, MSV and ASV should be less than AVE (Fornell & Larcker, 1981; Hair et al., 2006). Another test of discriminant validity is to compare the AVE score for each construct. In the AVE test of discriminant validity, the square root of a given construct's AVE should be larger than any correlation of the given construct with any other construct in the model (Chin, 1998).

Table 2.4 Threshold of CR, AVE, MSV, and ASV Measures for Establishing Reliability and Validity

Reliability		▪ CR > 0.7
		▪ Cronbach's Alpha > 0.7
Construct Validity	Convergent Validity	▪ CR > AVE
		▪ AVE > 0.5
	Discriminant Validity	▪ MSV < AVE

		▪ ASV < AVE
		▪ $\sqrt{AVE}$ > any correlation of the given construct with any other construct

Note: Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), Average Shared Squared Variance (ASV)

Sources: Fornell and Larcker (1981), Hair et al. (2006)

To test the reliability of measurement items, Cronbach's alpha and a composite reliability (CR) which is evaluated in the same way as Cronbach's alpha, were used in the each construct. All constructs showed a reliability score well over the .70 threshold accorded to exploratory research (Nunnally & Bernstein, 1994).

Results

Demographics

In the pilot study, all respondents (N=102) are Kyobo full-time employees working at the headquarter in Seoul. Nearly 62% of the respondents are employees and the rest are self-identified managers (38.2%). Almost three in ten respondents are employees who have worked for over 10 years (29.4%). In the final main study, the sample was 42.7% male and had an average age of 37.09 ± 6.5 years (mean ± standard deviation) (see Table 2.5). In the main study, all respondents (N=520) are Kyobo full-time employees working at the three places in South Korea, and 19.2% of the respondents are self-identified managers and the rest are employees (80.8%).

Table 2.5 Demographics for main study sample

		Main study	
N		520	
Gender	Male	222	42.7%

(N / %)	Female	298	57.3%
Average age / S.D.		Mean= 37.09 / S.D.= 6.46	
Job position	Employee	420	80.8%
	Manager	100	19.2%

Pilot Study

This study aimed to determine the factorial structure of the worksite environment and culture of health scale.

Factorial Structure. An EFA was performed to identify factorial structures with 43 items. The factorial structure produced six factors with eigenvalues above 1.0. However, 7 items (3 environment items and 4 culture items) were removed because they did not load highly on any factor, meaning their factor loading values were below .5, or they loaded on more than one factor (Hair et al., 2006). The EFA was performed again without these items.

In the pilot study model of the HSEC scale, a repeat of the exploratory principal component analysis of the remaining 36 items produced five factors with eigenvalues above 1.0, accounting for 83.10% of the total variance. The Kaiser-Meyer-Olkin measure of sampling adequacy was .920 and the Bartlett's test for sphericity was highly significant ($\chi 2 = 4917.95$, p < .001), indicating the appropriateness of using factor analysis.

The first factor, labeled as "Senior Leadership and Policy", contained eight items that focus on the company's vision, policies, and procedures relating to employee health. The range of factor loading of each item was between .65 and .88. Cronbach's alpha (r) of .87 indicated high internal consistency of this factor. The second factor was comprised of seven questions regarding health coaching services, health and wellness educational services, or incentives provided from company and labeled as "Program and Rewards." These questions loaded into the

factor with a loading value greater than .66 (r = .85). The third factor, "Quality Assurance", included all three questions associated with the company's activities involving evaluation and informing of health and wellness initiative performance. Factor loading values for these questions ranged from .70 to .77 (r = .81). The fourth factor contained eight items related to manager's behaviors encouraging respondents to be healthy and was labeled as "Supervisor Support" with all factor loadings over .75 (r = .87). Lastly, the fifth factor was labeled as "Coworker Support" since questions grouped under this factor reflected social boundaries, collective beliefs, and supportive behaviors of colleagues with respect to health issues. These nine questions have factor loadings greater than .69 (r = .87). The factor loadings of 36 items ranged from .55 to .88. The percentages of explained variance for these five factors (Senior leadership & Polices, Programs & Rewards, Quality assurance, Supervisor support, and Coworker support) were 21.74%, 20.79%, 20.13%, 13.31%, and 7.13% respectively. Total variance explained for the five factors was greater than 50% (Hair et al., 2006; Tabachnick & Fidell, 2001). In addition, items of environment components (Senior Leadership & Polices, Programs & Rewards, Quality Assurance) did not load or cross-load on cultural components (Supervisor Support, Coworker Support) and vice versa, suggesting the distinct role of the environment and culture constructs for supporting health.

The HSEC exhibited satisfactory fit statistics through a CFA (x^2/df = 3.863, p <.001; RMSEA = .059; SRMR = .072; CFI = .941; NFI = .889; TLI = .921). While an ideal NFI score is .90 or greater, a liberal cutoff of .80 indicates a reasonable error of approximation and is therefore satisfactory (Ullman, 2001). Consequently, the results obtained in the CFA demonstrated that the model was suitable.

Main Study: Exploratory and Confirmatory Factor Analysis

The purpose of this study was to confirm the factorial structure of the HSEC scale using all full-time employees of Kyobo working at the three places (headquarters, distribution centers, and stores), and to perform the validation and reliability of the HSEC scale.

Factorial Structure. I confirmed the HSEC scale according to the same EFA and CFA procedures as used in the pilot study. An EFA was performed to identify factorial structures with 36 items extracted from the pilot study and produced the same five factors with eigenvalues above 1.0. Bartlett's test of sphericity ($\chi2 = 21438.964$, $p < .001$) was significant and the Kaiser-Meyer-Olkin measure of sampling adequacy was in a desirable range (.963). The range of factor loading of each item of Senior Leadership and Policy was between .62 and .83 ($r = .947$). The questions loaded into the second factor Program and Rewards with a loading value greater than .61. Cronbach's alpha (r) of .939 indicated high internal consistency of this factor. Factor loading values for Quality Assurance ranged from .65 and .76 ($r = .908$). The fourth factor contained eight items for Supervisor Support, was between .74 and .80 ($r = .966$). Lastly, the ten questions of Coworker Support had factor loadings greater than .56 and had Cronbach's alpha of .955. An EFA showed that the total explained variance was 76.96%, which is greater than the suggested minimum of 50% (see Table 2.6) (Hair et al., 2006; Tabachnick & Fidell, 2001). In addition, Table 2.6 shows that environment items (Senior Leadership & Polices, Programs & Rewards, Quality Assurance) were not loaded and cross-loaded on cultural components (Supervisor Support, Coworker Support) and vice versa, confirming that environment and culture are distinct entities.

Validity and Reliability. A CFA was performed to test the validation and reliability of the model proposed in this study. The CR, AVE, MSV, and ASV were used to evaluate convergent

Table 2.6 Rotated Factor Loadings for the 36-Item Instrument and Item-Total Correlations

Construct	Item Code	Coefficient α	Corrected item-to-total correlation	Component 1	Component 2	Component 3	Component 4	Component 5	Total explained variance
Senior Leadership & Policies	SP1	.947	.833	.831					20.40%
	SP2		.820	.761					
	SP3		.824	.765					
	SP4		.811	.713					
	SP5		.795	.685					
	SP6		.782	.690					
	SP7		.822	.622					
	SP8		.757	.619					
Programs & Rewards	PR1	.939	.779		.666				18.41%
	PR2		.816		.724				
	PR3		.845		.742				
	PR4		.772		.624				
	PR5		.827		.672				
	PR6		.785		.607				
	PR7		.766		.729				
Quality Assurance	QA1	.908	.769			.755			17.39%
	QA2		.833			.646			
	QA3		.841			.690			
Supervisor Support (Included Role modeling)	SS1	.966	.880				.766		13.34%
	SS2		.887				.752		
	SS3		.881				.746		
	SS4		.869				.742		
	SS5		.861				.799		
	SS6		.871				.786		
	SS7		.847				.798		
	SS8		.840				.792		
Coworker Support (Included Norms and Moods)	CS1	.955	.858					.849	7.42%
	CS2		.898					.882	
	CS3		.862					.820	
	CS4		.693					.558	
	CS5		.763					.655	
	CS6		.694					.558	
	CS7		.879					.845	
	CS8		.886					.845	
	CS9		.761					.779	
	CS10		.748					.719	

Note. * Items with factor loading below 0.5 are not listed.

† Extraction Method: Principle Component Analysis.

‡ Rotation Method: Varimax with Kaiser Normalization.

Table 2.7 Convergent Validity, Discriminant Validity, and Factor Correlation Matrix

	CR	AVE	MSV	ASV	Senior Leadership & Policies	Programs & Rewards	Quality assurance	Supervisor support	Coworker support
Senior Leadership & Policies	0.946	0.687	0.686	0.544	0.829[a]				
Programs & Rewards	0.936	0.687	0.677	0.515	0.823	0.829[a]			
Quality Assurance	0.909	0.770	0.635	0.518	0.797	0.737	0.878[a]		
Supervisor Support	0.963	0.767	0.542	0.490	0.698	0.674	0.736	0.876[a]	
Coworker Support	0.954	0.678	0.476	0.392	0.604	0.613	0.592	0.690	0.823[a]

$x^2/df = 3.277$, p < .001; RMSEA = .066; SRMR = .0581;
CFI = .939; NFI = .915; TLI = .933

Note. Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), Average Shared Squared Variance (ASV).
† [a] indicates the square root of a given construct's AVE.

validity, discriminant validity, and reliability (Fornell & Larcker, 1981; Hair et al., 2006). In the

CR and AVE test of convergent validity, each CR score of the five factors was greater than its

AVE score and the AVE score should be greater than 0.50 (e.g., Programs and Rewards: CR =

0.936 > AVE = 0.687). Two tests were performed to evaluate discriminant validity. First, each

MSV score and ASV of the five factors was less than its AVE score (e.g., Quality Assurance:

MSV = 0.635, ASV = 0.518 < AVE = 0.770). Second, the square root of AVE exceeded the

correlations of that construct and all others. All dimensions exhibited both convergent and

discriminant validity as shown in Table 2.7. Cronbach's alpha coefficient and a CR score of each

factor were over the .70 threshold (see Table 2.6 and Table 2.7), indicating a satisfactory internal

consistency reliability (Nuunally and Bernstein, 1994). The HSEC exhibited satisfactory fit

statistics (x^2/df = 3.277, p <.001; RMSEA = .066; SRMR = .058; CFI = .939; NFI = .915; TLI

= .933) (see Table 2.7).

Discussion

The purpose of this study was to perform a validation and reliability of the Health-

Supportive Environment and Culture (HSEC) scale. This scale was based on a survey designed

to assess perception of multiple aspects of environment and culture of health at the worksite. The

main reason for this study was to address the need for a valid and reliable instrument that

assesses environmental and cultural support for health within organizations. Furthermore,

information resulting from this tool can be leveraged for wellness program development and

improvement.

With regard to convergent validity and discriminant validity, the HSEC scale has shown a

structure of five orthogonal factors: Senior Leadership & Policies, Programs & Rewards, Quality

Assurance, Supervisor Support, and Coworker Support. The factor structure with the five factors

extracted from the EFA has shown that the worksite health environment consists of worksite culture construct and environment construct, which is consistent with the work of Golaszewski et al. (2008a).

The results of the EFA also reveal that environment construct and culture construct are distinct entities, which indicates that an organization can establish and develop its environment or culture for supporting health separately. It is important to highlight this fact because the organization can have flexibility in developing wellness strategies. For example, an environmental focus may suit an office setting whereas another setting such as manufacturing may be limited in environmental changes and can focus on strategies emphasizing culture. A 'choose and focus' strategy between worksite environment and culture for supporting health can provide flexibility. However, most experts argue that both environment and culture need to be addressed for a comprehensive wellness program (Golaszewski et al., 2008a).

As far as reliability is concerned, the results have shown suitable internal consistency. In conclusion, the HSEC scale has shown suitable psychometric properties, which support its use to measure the organizational health environment and culture in the worksite health promotion context.

Limitation

There are a number of limitations of the current study. First, although main study performed validity and reliability with the factorial structure extracted from the pilot study, these findings need to be validated in a wider variety of worksites as well as in cross-cultural studies. Second, the HSEC scale may need to be developed as different scales for a manager and an employee, since they might perceive their environment and culture differently.

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Appendix 2.1 The Worksite Health Environment and Culture Scale

Construct	Original Construct	Original item code	Item
Senior Leadership & Policies[a]	Senior Leadership	Q1	Vision for supporting employee health
		Q2	Integration of health and wellness strategies into business plan
		Q3	Communicates employee health connected with company success
		Q4	Senior leaders put resources into supporting health
	Policies & Procedures	Q5	Communicates purpose of health management strategies
		Q6	Provides policies/procedures which support employee health (e.g., a smoke-free campus)
		Q7	Uses worker input in development of employee health programs (e.g., surveys, focus groups, open meetings, or employee advisory groups)
		Q8	Values employees beyond job performance
		Q9*	Trains managers to address a range of employee needs
		Q10*	Managing employee stress/burnout as high priority
Programs & Rewards[a]	Individual Programs	Q11	Offers employee health assessment services (e.g., total health assessment, health screening for blood pressure or cholesterol)
		Q12	Offers health coaching to all employees
		Q13	Offers health management educational services
		Q14	Environment supports health and wellness (e.g., use of stairwells, healthy food choices in cafeteria, fitness center or discounts for fitness center, encouragement of walking)
		Q15*	Provides health management services to family members
	Rewards	Q16	Recognizes employees for important contributions to wellness initiative
		Q17	Rewards employees for practicing healthy behaviors
		Q18	Provides incentives for participating in programs (e.g., incentives for taking the total health assessment, completing a health program or reaching a health goal)
Quality Assurance[a]	Quality assurance	Q19	Performance review for managers includes support of health initiatives
		Q20	Informs employees about progress toward company health goals
		Q21	Company shows how changes in employee health are connected to company objectives (e.g., number of illness days, morale)

		Q22	Shows support for health initiative
		Q23	Communicates healthy employees important for company success
	Supervisor support	Q24	Regularly communicates information to be at healthy best
Supervisor Support[b] (Included Role Modeling)		Q25	Promotes use of health and wellness programs
		Q26	Shows concern for employee health
		Q27	Encourages employees to take care of health
		Q28*	Senior leaders are role models for health
	Role modeling	Q29	Managers is a role model for health
		Q30	Managers practices healthy behaviors
		Q31*	Coworkers practice healthy behaviors
	Coworker support	Q32	Coworkers show concern for each other's health
		Q33	Coworkers encourage each other to take care of their health
		Q34	Coworker provide each other with health information
		Q35	Coworkers trust company to support health
Coworker Support[b] (Included Moods and Norms)	Moods	Q36*	Coworkers often seem stressed at work
		Q37	Coworkers have a sense of community
		Q38*	Coworkers are satisfied with jobs
		Q39	Coworkers are confident in long term business success of the company
		Q40	Encourage each other to exercise regularly
	Norms	Q41	Encourage other to eat healthy
		Q42	Encourage each other not to smoke
		Q43	Encourage each other to use alcohol in moderation (if at all)

Note. * [a] indicates worksite environment components, [b] indicates worksite culture components.

† * indicates the removed items through an exploratory factor analysis.

‡ Sources: Allen (2004), Basen-Engquist et al. (1998), Edington (2009), Golaszewski et al. (2008a) and Ribisl and Reischl (1993)

CHAPTER 3

Employee-Based Brand Equity: Scale Development

Introduction

Brand equity has received a great deal of attention by academics and practitioners during the past three decades. Brand equity is one of the most valuable intangible assets an organization can possess (Keller & Lehmann, 2006). However, much scholarly work has been conducted on the topics of brand equity from the consumer-based perspectives (Aaker, 1991; Keller, 1998; Pappu et al., 2005; Yoo & Donthu, 2001; Washburn & Plank, 2002). Despite the necessity of an employee's role in establishing and developing brand equity, the internal view of brand equity has received relatively little attention from academics and practitioners in comparison with consumer-based perspectives (Ambler, 2003; Burmann et al., 2009; King & Grace, 2008; King & Grace, 2009).

"A firm's first customers are its own employees" (Ambler, 2003, p.177). Numerous scholars suggest that good employees are vital to building brand equity (e.g., Ambler, 2003; de Chernatony, 2001; Keller, 1998; King & Grace, 2009; Mitchell, 2002). The concept of internal branding is not new to practitioners as well, and companies have realized the importance of their employees. According to Howard Schultz the chairman of Starbucks, "If we want to exceed the trust of our customers, then we first have to build trust with our people." The employees who are familiar with their role and understand organizational objectives can deliver the promises a brand makes to its customers. Harris and de Chernatony (2001) assert that employees are required to

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fulfill the brand promise. Employees build brand equity as a means of a powerful medium (Berry, 2000). Hence, it becomes vital for organizations to have access to valid and reliable employee-based brand equity instruments.

The purpose of this study is to develop and test a scale of employee-based brand equity in the service industry. In the following section we will begin by providing a brief overview of consumer-based brand equity before we embark upon employee-based brand equity since the employee-based brand equity concept has extended Keller's cognitive psychology approach to brand equity (King & Grace, 2010). Following the literature review on consumer and employee based brand equity, the research methods are presented, then the data analysis and results are reported.

Literature Review

Brand equity from the consumer perspective

For the most part, brand equity studies have tended to center around the question of the consumer approach. Aaker (1991) and Keller (1993) introduced the most notable theories on brand equity from on the consumer perspective. According to Aaker (1991), brand equity is "a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers (p. 15)". Aaker (1991) provided the most comprehensive brand equity model which consists of five components: brand awareness, brand associations, perceived quality, brand loyalty and other proprietary assets such as patents and trademarks.

Most consumer-based brand equity studies exclude Aaker's proprietary assets dimension since they are generally not understood by consumers. Furthermore, the first four dimensions are enough to represent consumers' evaluations and reactions to the brand (Kim & Kim, 2004; Pappu

et al., 2005; Tong & Hawley, 2009; Yoo & Donthu, 2001). Aaker (1991) incorporated both perceptual and behavioral dimensions as attitudes alone generally serve to be poor predictors of marketplace behavior (Myers, 2003). While Aaker (1991) developed brand equity as a useful managerial tool, Keller (1993) introduced a conceptual model of brand equity from the consumer point of view based on Aaker's (1991) work. Keller (1993) defined brand equity as "the differential effect of brand knowledge on consumer response to the marketing of a brand." Keller's customer-based brand equity (1993) consists of two dimensions – brand awareness and brand association. The differences between Aaker's model and Keller's model for brand equity are that Keller considers perceived quality as a product-related association and brand loyalty as a manifestation of brand equity, while Aaker groups brand equity into the five dimensions. Since consumers with strong brand equity are often loyal to that brand, brand loyalty is considered the manifestation of brand equity. In this regard, Keller (1993, p. 54) states that "brand loyalty is one of the many advantages of creating a positive brand image and manifestations of having brand equity."

Brand Awareness. Aaker (1991) refers to awareness as the starting point in developing brand equity, as awareness not only plays a significant role consumer decision making, but also affects the development and depth of brand associations. Brand awareness is the ability of a potential buyer to recognize or recall that a brand is a member of a certain product category (Aaker, 1991). Brand awareness refers to the strength of a brand's presence in the mind of consumer. According to Percy and Rossiter (1992) and Keller (1993), brand recognition and brand recall are two separate types of brand awareness. Keller (1993, p. 3) asserts "brand recognition relates to consumer's ability to confirm prior exposure to the brand when given the brand as a cue." Since brand recognition occurs in the situation where all the relevant brand and

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attribute information are physically present, the point of purchase is more important in understanding brand recognition (Keller, 1993; Percy & Rossiter, 1992). According to Keller (1993), brand recall requires a consumer to retrieve the actual brand element from memory. Unlike brand recognition, the consumer may identify the brand without the presence of the brand. Thus, brand recall is a more challenging memory task than brand recognition. A significant disparity between brand recognition and brand recall exists. In terms of consumer purchase behavior, recall is a determining factor for high involvement products, while recognition is identified for low involvement products (Singh et al., 1988). For example, consumers make a purchase decision at home and in the absence of the goods for high involvement products such as a vehicle. In addition, according to Aaker (1996), brand recognition can be valuable for new or niche brands since when a company introduces its new brand, the first step of brand communication makes a consumer correctly discriminate the new brand. Brand recall is more meaningful for well-known brands due to already achieving consumers' brand recognition.

Perceived Quality. According to Zeithaml (1988), perceived quality refers to consumers' subjective judgments of a product, not the real quality of the product. The consumers' judgments can be associated with their personalities, needs, experiences, and preferences (Aaker, 1991; Yoo et al., 2000). Aaker (1991) contends that perceived quality provides a firm with five values to the firm and its customers. By enhancing the level of perceived quality of a brand, a firm can provide a pivotal reason-to-buy to consumers and make its product and/or service set apart from competition. Moreover, a high perceived quality can be meaningful to gain distribution, launch brand extension, and charge price premium. Thus, brand quality perceived by consumers can be an essential component of brand equity.

Brand Associations. High brand awareness serves to build brand associations. According to Aaker (1991, p.109), "a brand association is anything 'linked' in memory to a brand." Keller (1993) argues brand associations include the meaning of the brand for consumers. That is, brand associations refer to any mental connections a consumer creates with a brand. The strength of mental connections (brand associations) depends on the amount of experience, exposures to communications, and network of other links in memory to a brand (Aaker, 1991). Brand associations play a dominant role in building brand equity as signals of quality, loyalty, and purchase decision and provide credibility and confidence in the brand (Aaker, 1991; O'Malley, 1991; Yoo et al. 2000). Brand associations, like perceived quality, yield several values to the firm and its customers: they help the customers to retrieve information, provide an important basis for differentiation, lend consumers a reason to buy, and create the brand and positive attitudes/feelings. Moreover, brand associations provide a firm with the basis for an extension.

Brand Loyalty. Brand loyalty is a primary dimension of brand equity, and over the years has received much attention in both academic and practitioners. According to Aaker (1996), brand loyalty, in terms of marketing strategy, is the ability to attract and retain customers, and the core a firm should achieve. Oliver (1999) defines brand loyalty as "a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future" (p.34). In contrast to other components of brand equity (i.e., perceived quality, brand awareness, brand associations), brand loyalty cannot exist without prior purchase and user experience (Aaker, 1991). A high level of brand loyalty, which is greatly related to customer satisfaction, generates repeat purchasing and/or habitual buying behavior (Aaker, 1991; Keller, 1998; Dick & Basu, 1994), helps increase market share (Chaundhuri & Holbrook, 2001), provides a company with a barrier when its potential competitors entry into the same product or service market (Aaker,

1996), and establishes a favorable 'word of mouth' (Dick & Basu, 1994). Thus, brand loyalty can be a powerful tool to contend in competitive environments (Amine, 1998).

Brand equity from the employee perspective

Internal branding is becoming increasingly vital within industry and academia. A firm develops internal branding or internal marketing to fortify its employee-based brand equity (Burmann et al., 2009; Keller 1998; Papasolomou & Vrontis, 2006). For example, in the health management field (see Cardy et al., 2007). According to Berry (1981), internal marketing is defined as "viewing employees as internal customers, viewing jobs as internal products that satisfy the needs and wants of these internal customers while addressing the objectives of the organization." Similarly, Grönroos (1981) views internal marketing as selling the firm to its employees. Kotler and Armstrong (1991) maintain that internal marketing is "the building of customer orientation among employees by training and motivating both customer-contact and support staff to work as a team" (p.607). In addition, given the fact that internal marketing has been applied under many different circumstances, Rafiq and Ahmed (1993) define internal marketing as a planned effort to overcome organizational resistance to change and to align, motivate and integrate employees towards the effective implementation of corporate and functional strategies.

Internal brand management serves as an effective tool for creating and maintaining strong brands (Burmann et al., 2009). By promoting and educating the brand to employees, internal branding helps employees clarify their roles in building and delivering brand attributes associated with the products and/or services they sell and can therefore encourage them to think about the brand more consciously. In other words, employees can make a powerful connection to the organization's products and/or services (Mitchell, 2002) and learn their place in 'the big

picture' (Bergstrom et al., 2002), which leads to employees' commitments to the corporate brand. According to Keller (1998), "internal branding ensures that employees and marketing partners appreciate and understand basic branding notions and how they can affect the equity of brands" (p.668). Moreover, given that internal branding is seen as a means to build powerful brands (Punjaisri & Wilson, 2007), it helps the organization acquire a sustainable and competitive advantage (Burmann et al., 2009), and eventually allows the organization to differentiate itself from its competitors.

A great deal of research on employee internal branding with a conceptual approach has been discussed. However, since the mid-2000s, interest in empirical studies of internal brand management has understandably gained visibility in an academic context (see Table 3.1, Burmann et al., 2009; King & Grace, 2009). Mitchell's (2002) "Selling the Brand Inside", for example, has recently attracted the attention of scholars. Mitchell (2002) contends that managers should encourage their employees to understand the organizations' vision because the employees who know the brand vision can deliver their brand promise to customers. From the manager perspective, Mitchell (2002) introduces three principles of internal marketing. First, an employer should consider and create the internal and external moments that give positive energy to employees. Second, a firm should ensure that employees understand the organization's goals and transport the same goals to their customers. King and Grace (2010) stress that the level of brand knowledge is highly associated with employee's role clarity and brand commitment that is also intimately linked to brand promise. The level of employee commitment is consistently linked to the relationship customers have with a brand. If employees, that is, have higher levels of brand knowledge, internal and external communications are highly matched (Mitchell, 2002). The third principle Mitchell (2002) maintains is employees' commitment through emotional connections to

the firm. The brand commitment, in terms of organizational success, motivates employees themselves, and even creates connection with individuals on the outside. Brand commitment is a key variable in measuring brand equity from the employee perspective (Ambler, 2003; Mowday, 1998; Meyer et al., 2002).

Considering the roles of executives, Vallaster and de Chernatony (2005) also highlight that employees need "a shared understanding" of brand vision to develop internal branding. Employees should share the meaning behind their brand and every aspect that brand comprises. This shared understanding contributes to employees' alignment and brand commitment (Thomson et al., 1999). In addition, another crucial factor in building the process of internal brand is culture. Thompson et al. (1999) stress that an organization's culture is associated with a shared understanding of brand vision.

Aurand et al. (2005) examined the impact of human resource activities on employees' personal attitudes and their incorporation of the brand message into their work activities. By a two-wave e-mail survey from business seminar participants, these researchers found that promoting the brand and educating employees about the organization's goals are linked to their attitude towards the brand and successfully delivering the corporate branding message to employees. The results of the study show the value of employee brand knowledge and the importance of human resource activities in developing internal branding equity.

Burmann and Zeplin (2005) introduced a holistic model for internal brand management based on a review of existing research and in-depth interviews with brand managers and branding experts. The main point of the model is that brand commitment leads employees to show brand citizenship behavior. King and Grace (2009) assert that brand citizenship behavior

Table 3.1 Overview of the Literature on Internal Branding (continued)

Author(s) (Year)	Study	Method	Subjects
King & Grace (2008)	Empirical Qualitative	Interview	10 employees who worked in the service industry (Entry-level & Middle-level management position)
King & Grace (2009)	Conceptual	.	.
King & Grace (2010)	Empirical Quantitative	Survey (online)	371 employees who worked in the service organizations
Burmann, Zeplin, & Riley (2009)	Empirical Mixed	Interview & Survey	• Interview: 18 experts (marketing professionals with internal marketing responsibilities) / • Survey: 1783 employees and 1372 customers
Vallaster & de Chernatony (2005)	Empirical Qualitative	Interview & Documents	10 employees (middle and senior management) in 4 German firms and 1 Austrian firm in services industries.
de Chernatony & Cottam (2006)	Empirical Qualitative	Interview	68 employees from two financial services organizations with successful brands and four with less successful brands
Punjaisri & Wilson (2007)	Empirical Mixed	Case study (Interview & Survey)	• Interview: 50 employees in six major Thai hotels (20 senior and middle management and 30 customer-facing employees) • Survey: 699 employees from 3 departments (F&B, F/O, & housekeeping)
Burmann & Zeplin (2005)	Empirical Qualitative	Interview & Documents	11 employees (2 brand consultants and 9 top-level managers responsible for the corporate brand and/or internal branding)
Gapp & Merrilees (2006)	Empirical Qualitative	Case study (Interview)	566 employees in a major healthcare provider in Queensland.
Aurand, Gorchels, & Bishop (2005)	Empirical Quantitative	Survey (email)	201 respondents who participate business seminars at a large Midwestern university

Table 3.1 Overview of the Literature on Internal Branding

Author(s) (Year)	Main Contributions
King & Grace (2008)	Investigating the brand knowledge, provision of information, critical success factors for brand promise deliverance and the impact of internal market orientation initiatives on employees.
King & Grace (2009)	Developing a framework of employee-based brand equity.
King & Grace (2010)	Providing the empirically-tested model of employee-based brand equity based on King and Grace's (2009) study.
Burmann, Zeplin, & Riley (2009)	Empirically testing the holistic model for internal brand management representing the casual relationships among brand commitment, brand citizenship behavior, and brand-customer relationship.
Vallaster & de Chernatony (2005)	Focusing on a shared understanding of brand vision, the influence of leadership on the process of internal brand building.
de Chernatony & Cottam (2006)	Identifying the internal brand factors related to financial services brand success.
Punjaisri & Wilson (2007)	Assessment of the relationship between key tools in the internal branding process (internal communicating and training) and brand performance as well as the mediator effect of brand attitude.
Burmann & Zeplin (2005)	A framework for internal brand management representing the impact of the brand commitment on brand citizenship behavior.
Gapp & Merrilees (2006)	The importance of internal branding as a managerial and communication strategy as well as the need of the communication and dialogue in order for a shared understanding of organization goals.
Aurand, Gorchels, & Bishop (2005)	The impact of human resources involvement in internal branding on employees' incorporation of the brand message and their personal attitude. The need of employee's brand knowledge in building brand equity.

is "the first construct that contributes to organizational benefits derived from employee-based brand equity" (p.139). As brand loyalty plays a dominant role in determining consumer-based brand equity (Keller, 1998), brand commitment is a key variable in understanding the equity of brand from the employee perspective. In addition, based on Burmann and Zeplin's (2005) holistic model for internal brand management, Burmann et al. (2009) empirically tested determinants of the three key concepts of the model: brand commitment, brand citizenship behavior, and the brand-customer relationship. They also highlight that brand commitment is a key determinant of brand strength.

King and Grace (2008) identified the differential effect of an internal market orientation and its subsequent impact on the organization's brand. Based on in-depth interviews with employees, they found more information related to brand and organization enables employees to gain strong brand knowledge and deliver the brand promise to customers. Their empirical evidence is similar to that of Aurand et al. (2005) and Mitchell (2002), which state that a higher level of brand knowledge leads to a match of internal and external communications.

Limitations of previous frameworks of employee-based brand equity

King and Grace (2009, 2010) articulate that brand equity from the employee perspective should be considered and measured since employees are ambassadors who deliver brand promise to customers. In other words, employee-based brand equity is the foundation for consumer-based based equity. Based on King and Grace's study (2008) devoted to the need of brand knowledge, they introduced three dimensions of employee based brand equity: "Internal brand management," "Employee brand knowledge effects," and "Employee based brand equity benefits."

Given that employees need to be aware of the existing brand knowledge to deliver the brand promise (Ambler, 2003; Aurand et al., 2005; King & Grace, 2008; Mitchell, 2002), King

and Grace (2009) stress that an organization should guide its employees to understanding the brand knowledge. Since "Internal brand management" is an organizational activity that enhances employees' roles and responsibilities based on brand knowledge, it is highly associated with the implementation of internal marketing strategies (Gounaris, 2006). In other words, "Internal brand management" is more of an internal marketing strategy than a dimension of employee-based brand equity. For example, sponsorship, in terms of an external marketing strategy, is often considered as a consumer- based brand-building vehicle (Cornwell et al., 2001; Roy & Cornwell, 2003). In light of this, the components of "Internal brand management" (Information generation, Knowledge dissemination, Openness, and the 'H' factor) are brand-building vehicles from the internal branding view, and are not a component of employee-based brand equity. However, as brand knowledge is the key to understanding consumer-based brand equity (Keller, 1993), employees' knowledge is importantly considered as the foundation to understand "Internal brand management". According to King and Grace's (2010) the proposed employee-based brand equity model, "an internal market orientation results in the development of employee brand knowledge" (p.361). Another dimension of employee-based brand equity King and Grace (2009) claim is "Employee-based brand equity benefits" consisting of four benefits: "Brand citizenship behavior," "Employee satisfaction," "Employee intention to stay," and "Positive employee word of mouth." Similar to Aaker's (1991) six values derived from strong brand equity (efficiency and effectiveness of marketing programs, brand loyalty, prices/margins, brand extensions, trade leverage, and competitive advantage), "Employee-based brand equity benefits" are also the values derived from enhanced brand equity from the internal perspective. At the heart of King and Grace's approach lies the conception of the "Brand knowledge effects." In other words, "Brand knowledge effects" are the key structures including "Role clarity" and "Brand

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commitment" in determining of employee-based brand equity; according to the results, "Brand knowledge effects" indicate a positive correlation with employee-based brand equity benefits (King & Grace, 2010).

Conceptual domain of employee-based brand equity

The present research conceptualizes employee-based brand equity based on previous brand equity models provided by King and Grace (2009, 2010) and Aaker (1991). The employee-based brand equity scale is also developed to measure the equity of the brand from the internal perspective. The following sections provide a description of the three dimensions of employee-based brand equity proposed in the study: brand knowledge, role clarity, and brand commitment (see Figure 3.1).

Brand Knowledge. Understanding consumer brand knowledge is the driving force to creating brand equity, which helps a firm advance branding theory and strategy (Keller, 2003). According to Keller (1998), brand knowledge is "a function of awareness, which relates to consumers' ability to recognize or recall the brand, and image, which consists of consumers' perceptions and of associations for the brand." The importance of brand knowledge can be equally adapted to the internal branding area, since brand knowledge relates to the cognitive representation of the brand (Peter & Olson, 2001). Keller (1993) introduced the cognitive approach, which is based on cognitive psychology and argued that an individual understands, remembers, makes decisions, and performs based on the information he/she has received, of consumer-based brand equity. Consistent with Keller's (1993) cognitive approach of consumer-based brand equity, employee brand knowledge is formed based on human cognitive activity.

King and Grace (2009) assert that employees' knowledge of an organization brand is difficult to identify, explain, and therefore influence or shape, as each employee has his or her

own different accumulated experiences, intuition, and judgment. They defined employee

knowledge as "a form of subjective knowledge that is difficult to formalize" (p.131). Backhaus

and Tikoo (2004) stress brand knowledge is the foundation that influences organizations to build

brand equity. If the employees have a high level of brand knowledge, they are able to clarify
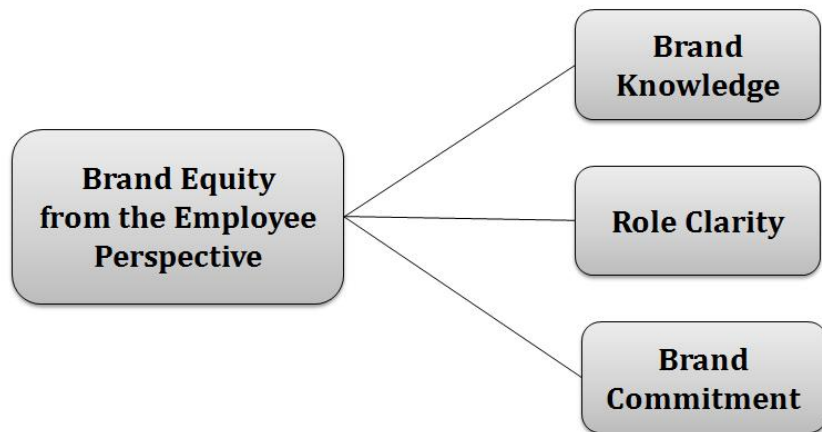
Figure 3.1. Proposed Model of Brand Equity from the Employee Perspective

their roles and deliver the brand promise (Ambler, 2003; Aurand et al., 2005; King & Grace,

2010). Brand promise refers to what a particular brand stands for in the consumers' mind.

According to Kotler and Keller (2006), brand promise is defined as "the marketer's vision of

what the brand must be and do for consumers" (p.278).

By identifying brand knowledge, employees can reduce the role ambiguity that is highly

associated with their job performance (Babin & Boles, 1996). In terms of brand promise,

employees can have different knowledge of the brand, which may lead to a deterioration of brand

equity. For example, new employees who get a job at Nike might be aware of the Nike Swoosh

logo, Air Jordan, and the "Just Do it" slogan differently. To establish and develop brand equity,

they need "a shared understanding" of brand knowledge (Vallaster & de Chernatony, 2005). According to King and Grace (2009), "employees must translate this brand identity into what it means for them as an employee and how they conduct themselves in the context of their work environment" (p.130). Thus, without such brand knowledge, employees cannot transform brand vision into brand equity (Berry, 2000; Miles & Mangold, 2005) and therefore cannot deliver brand promise to their customers.

Employee-based brand equity is a complex phenomenon. Ambler (2003) introduced an alternative approach following the 'employee as customer' logic in order to measure brand equity from the employee perspective. He grouped brand equity into six categories: familiarity, penetration, perceived quality, satisfaction, brand loyalty, and availability. One of the most acceptable components, given the models/results in internal branding research, is familiarity (King & Grace, 2009; Mangold & Miles, 2007; Vallaster & de Chernatony, 2005), which is defined as the extent of awareness of organization goals (vision) (Ambler, 2003). Mangold & Miles (2007) argue that employee knowledge and understanding of the desired brand image underlie the employee branding process. Understanding how the desired brand image is linked to organization goals provides employees with role clarity. King and Grace (2010) highlight the necessity of knowledge dissemination that is "the extent to which an employee perceives that brand knowledge is transferred from the organization to the employee in a meaningful and relevant manner (p.949)." In other words, knowledge dissemination represents what the organization provides to make a better environment that encourages employees to know their organization goals. Although employee knowledge for the organization vision was not measured in their study, King and Grace (2008) highlighted the need for employee knowledge that transforms the brand vision into brand reality.

Role Clarity. The concept of role clarity or role ambiguity has been investigated in various organizational behavior studies. Given that a role is defined as "a set of norms and expectations applied to the incumbents of a particular position" (Banton, 1965, p. 29) in an organizational context, when employees have high role clarity, they can clearly understand their requirements. Lang et al. (2007) point out a high role clarity may be helpful for employees reporting high job demands. According to Lyons (1971), the concept of role clarity can be operationalized in two ways. In terms of objective role clarity, it refers to the presence of enough information related to role because of variations in the quality of the information. From the subjective perspective, role clarity can also occur when employees subjectively feel that they have as much role-relevant information as they would like to have.

Role clarity plays a critical role in organizational behavior due to its being considered a predictor of organizational outcomes such as organizational performance, satisfaction, commitment, and turnover. Employees' perceived uncertainty regarding their expected roles and behaviors is negatively associated with satisfaction (Babin & Boles, 1996; Geersbro & Ritter, 2010; House & Rizzo, 1972), commitment (Babin & Boles, 1996; Geersbro & Ritter, 2010), general job interest (Ivancevich & Donnelly, 1974), organizational performance (Babin& Boles, 1996; Brief & Aldag, 1976; Geersbro & Ritter, 2010), and organizational effectiveness (House & Rizzo, 1972). Furthermore, the role ambiguity is associated with job anxiety and stress (House & Rizzo, 1972), job tension (Ivancevich & Donnelly, 1974), and propensity to leave to organization (House & Rizzo, 1972; Ivancevich & Donnelly, 1974).

King and Grace (2005) argue that a high level of brand knowledge serves as a catalyst for employees' role clarity. If an employee has a high awareness level of the firm's goals (vision/direction), he/she, in terms of job performance, will deliver the brand promise to the

customers through his/her role (Donnelly & Ivancevich, 1975; Walker et al., 1977; Sharma & Bajpai, 2011). In other words, employees who perceive role clarity in their jobs are more likely to perform better. Furthermore, according to Mukherjee and Malhotra (2006), employees who are clear about their role have the feeling of belonging towards the organization. Korczynski (2002) stresses that low levels of role clarity among employees are negatively associated with brand commitment. Zaccaro and Dobbins (1989) offer the fullest account of role clarity from the internal branding perspective. They highlight that employees with high role clarity are more likely to identify with their firms and understand the goals, and have a high level of brand commitment to their firms.

Brand Commitment. Commitment has been conceptualized and operationalized in a variety of ways (Morrow, 1983; Steers & Porter, 1983; Allen & Meyer, 1990). In organizational behavior research, the commitment is "the strength of an individual's identification with and involvement in a particular organization" (Porter et al., 1974, p.604). Burmann and Zeplin (2005) defined brand commitment as "the extent of psychological attachment of employees to the brand, which influences their willingness to exert extra effort towards reaching the brand goals" (p.284). In the context of corporate brand management, brand commitment is synonymous with organizational commitment (Burmann & Zeplin, 2005). Although an extensive literature proposing the concept of commitment exists, several aspects of commitment are commonly found such as personal identification with the organization, psychological attachment, loyalty and concern for future welfare (Garbarino & Johnson, 1999; O'Reilly & Chatman, 1986).

Using notions of psychological attachment to the organization, O'Reilly and Chatman (1986) identify underlying elements of commitment based on Kelman (1958): compliance, identification, and internalization. In terms of compliance, an individual adopts induced attitudes

and behaviors in order to gain specific rewards or avoid specific punishments. Identification occurs when influence is accepted because an individual wants to establish or maintain a satisfying, self-defining relationship with another person or group. Lastly, internalization refers to the acceptance of influence since an individual's adopted behaviors are congruent with his own value system. In addition, based on O'Reilly and Chatman (1986) research, Burmann et al. (2009) hypothesize brand commitment to be a three-dimensional construct consisting of obedience, identification, and internalization. However, the results Burmann and his colleagues found indicate a one-dimensional model of brand commitment as 'identification' and 'internalization' had to be merged for statistically significant results.

Considerable attention has been paid to the role of brand commitment in organizations since the 1970s. The empirical evidence confirms that brand commitment positively influences employee satisfaction (King & Grace, 2010), brand citizenship behavior (Burmann et al., 2009; Moorman, Niehoff, & Organ, 1993), and intention to stay (Bloemer & Odekerken-Schröder, 2006, King & Grace, 2010; Meyer & Allen, 1991; Steers, 1977). Several meta-analyses (e.g., Mathieu & Zajac, 1990; Meyer et al., 2002; Randall, 1990) summarize and assess the relationships between organizational commitment and the variables identified as its consequences.

Ambler (2003) argues that the most important measure in determining brand equity is commitment in internal branding research. In external branding, if consumers have high commitment levels, it indicates that they are satisfied with the product (Oliver, 1999) and have a high level of repeat purchasing (Aaker, 1991; Keller, 1998). They will show considerable amounts of interaction and communication about the product, and even recommend the product to others (Aaker, 1991). In this sense, in internal branding, commitment leads to employees'

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behavioral loyalty, attitudinal attachment (King & Grace, 2009) and the intention to stay (Ambler, 2003; Hansen et al., 2003). For these reasons, commitment is a key variable in determining employee-based brand equity in many internal branding studies.

The present study develops a scale of brand equity from the employee perspective based on the work of King and Grace (2010) and Aaker (1991). The internal associations among three employee-based brand equity dimensions (brand knowledge, role clarity, and brand commitment) are identified in this study. Brand knowledge in the current study has been defined as the employee's ability to be aware of the organization's goals and/or vision (Ambler, 2003; King & Grace, 2009). Role clarity refers to the clarity level an employee has of his expected role of a particular position (Banton, 1965; King & Grace, 2010). Brand commitment is defined as an employee's psychological attachment to the brand beyond his duty in order to achieve the organization's goals (Burmann & Zeplin, 2005; Castro et al., 2005).

Methods

Scale Development

The employee-based brand equity scale from the employee perspective is based on three underlying dimensions of brand equity: brand knowledge, role clarity, and brand commitment. Brand knowledge scale includes five items developed based on Baumgarth and Schmidt (2010), Ambler (2003), and King and Grace (2010). The five-item scale of brand knowledge measures employees' knowledge related to the organizations' goals (visions) for delivering the brand promise (e.g., "I have a clear sense of my organization's vision"). The role clarity scale is based on eight items adopted from Mukherj and Malhotra (2006), Donnelly and Ivancevich (1975), and King and Grace (2010) to access the extent to which employees feel they have a clear understanding about expected roles (e.g., "I know what I expected to achieve in my job"). The

eight-item scale of brand commitment is drawn from previous studies (e.g., O'Reilly &

Chatman, 1986; Burmann et al., 2009; King & Grace, 2010; Punjaisri et al., 2009). These items

reflect employees' sense of belonging to the brand and organization (e.g., "I feel like part of a

family at this organization") and the sense of incorporating the brand values into their values

(e.g., "The reason I prefer this organization to others is because of what it stands for, its values").

All items include 7-point Likert scales (1= strongly disagree, 2= disagree, 3=slightly disagree,

4=neither agree nor disagree, 5=slightly agree, 6=agree, 7= strongly agree) and respondents

indicated the degree to which they agree or disagree with each statement. Appendix 3.1 presents

the actual items used in the present study.

The pilot study found a factor structure of the employee-based brand equity scale, using

an exploratory factor analysis (EFA) with 21 items, and then performed a confirmatory factor

analysis (CFA) to determine the factor structure extracted in the EFA. Main study was carried

out to confirm the factorial structure extracted in pilot study. Main study first followed the same

method of the pilot study (i.e., EFA and CFA), and then tested the validity and reliability during

the CFA.

Sample and Data Collection

Participants for a pilot study were drawn from 102 full-time employees of the largest

bookstore Kyobo in Seoul, South Korea. Questionnaires were distributed and returned via

workplace mailboxes of the employees at headquarter site. Data collection was organized at their

offices or desks and the respondents completed the questionnaire when they were available

during their office hours. The questionnaire required 12-17 minutes to complete. The main study

sample included 582 full-time Kyobo employees at three places (i.e., headquarter, distribution

centers, and stores). The employees who participated in the pilot study were excluded in the

sample of a main study. Questionnaires were first handed to the managers at each place through Human Resources department, and then the managers distributed to their employees. Since the questionnaire is developed in English, two bilingual experts translated the questionnaire into Korean. With the back-translation technique that is commonly used in the cross-cultural study (Beaton et al., 2000; Brislin, 1970; McGorry, 2000), we verified the verbal equivalence between two versions: English and Korean. Subjects were asked to respond to the questionnaire questions and complete the questionnaires using the Korean version by self-administration. They were told that there are no 'right' or 'wrong' answers to these questions and only their personal opinions would be important. Some questions might be avoided to answer (e.g., "I know what I expected to achieve in my job.") because employees might feel that the survey examines their ability at work. To reduce sensitivities for answering questions, respondents were assured that their responses will be completely anonymous. In the introduction section, respondents were told that the purpose of the study is to identify the dimensions of brand equity from the employee perspective. The questionnaire also includes questions dealing with the three dimensions of brand equity from the employee perspective as well as the demographic information (e.g., age, gender, and job position).The survey was self-administered and returned to the managers after a week later. Of the 582 employees who participated in the survey, 520 employees completed the survey (response rate: 89.3%). There was a lottery incentive ($20) offered for participation. The 150 respondents were randomly selected among those who completed the survey.

Method of Analysis

To validate the multidimensionality of the brand equity construct from the employee perspective, the current study employed exploratory factor analysis (EFA). EFA may be appropriate for the early stage of scale development while confirmatory factor analysis (CFA)

would be preferred where measurement models have a well-developed underlying theory for hypothesized patterns of loadings (Hurley et al., 1997). Cronbach's alpha coefficients for the items of each construct were used to examine the internal consistency of the factors. If Cronbach's alpha coefficient exceeds .70, then the construct has an adequate inter-item reliability (Nunnally & Bernstein, 1994).

This study employed CFA to confirm how well the items load on the factors EFA provides in this study (Kelloway, 1995). By employing a CFA, the proposed model of the underlying factor structure was tested (see Figure 3.2); construct validity was also examined (Hatcher, 1994). The multiple fit indices were used to assess the fit between model and data: Chi-square (χ^2), the ratio χ^2 of statistic to degree of freedom, the Goodness-of-Fit Index (GFI), Standardized Root Mean Residual (SRMR), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA).

To establish factorial validity and reliability for the measurement model in the main study, The main study followed the validation procedures outlined by Hair and the colleagues (2006). I performed to further refine the factorial structure derived from an EFA, using AMOS version 20.0. That is, the CFA confirmed factor validity (convergent and discriminant) of the five constructs I extracted in the EFA. The following measures, based on the contributions made by different authors (Fornell & Larcker, 1981; Hair et al., 2006), were considered for establishing validity and reliability during the CFA: Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), and Average Shared Squared Variance (ASV). Convergent validity requires CR should be greater than AVE and AVE should be at least .50 or higher. With regard to discriminant validity, MSV and ASV should be less than AVE (Fornell & Larcker, 1981; Hair et al., 2006). Another test of discriminant validity is to compare

the AVE score for each construct. In the AVE test of discriminant validity, the square root of a given construct's AVE should be larger than any correlation of the given construct with any other construct in the model (Chin, 1998).
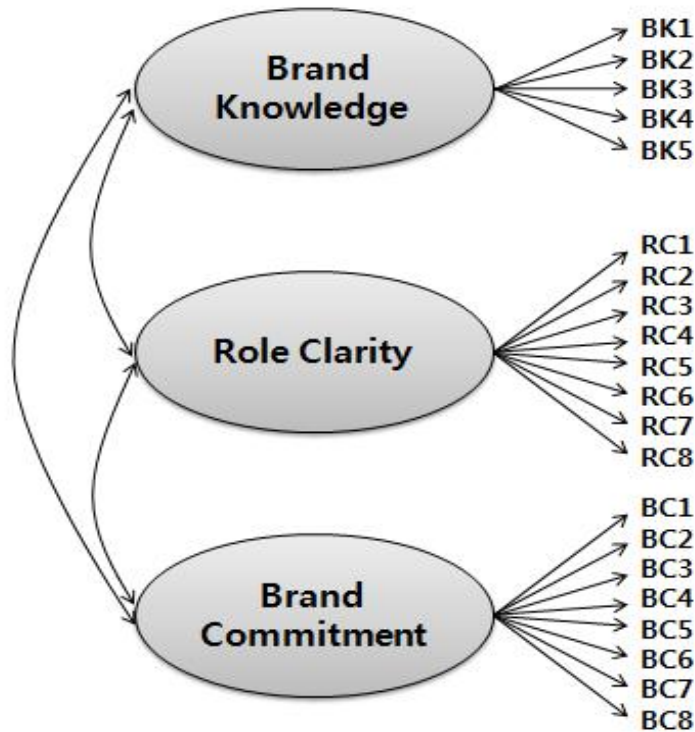
Figure 3.2. Confirmatory Factor Model of Employee-Based Brand Equity

To test the reliability of measurement items, Cronbach's alpha and a composite reliability (CR) which is evaluated in the same way as Cronbach's alpha, were used in the each construct. All constructs showed a reliability score well over the .70 threshold accorded to exploratory research (Nunnally & Bernstein, 1994).

Results

Demographics

Pilot study included 102 Kyobo full-time employees working at the headquarter in Seoul. About 62% of the respondents are self-identified employees (managers: 38.2%). Almost three in ten respondents are employees who have worked for over 10 years (29.4%). The main study sample was 42.7% male and had an average age of 37.09 ± 6.5 years (mean ± standard deviation) (see Table 3.2). In main study, all respondents (N=520) are Kyobo full-time employees working at the three places in South Korea. Nearly 81% of the respondents are employees and the rest are self-identified managers (19.2%).

Table 3.2 Demographics for Main Study Sample

		Main study	
N		520	
Gender (N / %)	Male	222	42.7%
	Female	298	57.3%
Average age / S.D.		Mean= 37.09 / S.D.= 6.46	
Job position	Employee	420	80.8%
	Manager	100	19.2%

Pilot Study

A principal component analysis using a varimax rotation with initial 21 items resulted in 3 factors with eigenvalues above 1.0. The 3 of 21 items (2 items related to employee's understanding about expected roles and 1 item related to employee's commitment towards the

company) were removed because these three items loaded highly on more than one factor. After deleting overlapping items, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were employed again to assess whether data are suitable to conduct factor analysis. Results indicated that KMO measure of sampling adequacy was high (.95) and the Bartlett's test for sphericity was highly significant ($\chi2$ = 2518.03, p < .001). A repeat of the principal component analysis of the remaining 18 items produced the same 3 factors with eigenvalues above 1.0 were produced, accounting for 80.62% of the total variance. The first factor was comprised of 5 items associated with employee's knowledge about the company such as vision or goals and labeled as "Brand knowledge". This factor explained 21.74% of total variance with factor loadings ranging from .73 to .86. The second factor, labeled as "Role clarity", contained 6 items, reflecting the extent to which employee understands clearly about expected role in the company. The percentage of total variance accounted for by this factor was approximately 20.79% and factor loading values ranged from .66 to .77. The third factor, labeled as "Brand commitment", included 7 items regarding employee's attachment to the company. The variance explained for this factor was 20.13% and all factor loadings were greater than .64. The internal consistency reliability of each three factor (i.e., Brand knowledge, Role clarity, and Brand commitment) was supported by Cronbach's alpha coefficients (r=.94, .94, and .96, respectively). Total variance explained for the 3 factors was greater than 50% (Hair et al., 2006; Tabachnick & Fidell, 2001).

The employee-based brand equity scale exhibited satisfactory fit statistics through a CFA (x^2/df = 3.154, p <.001; RMSEA = .052; SRMR = .068; CFI = .952; NFI = .913; TLI = .927). Although RMSEA $\leq$ .05 was considered an indication of fair fit (Browne and Cudeck, 1993), more recently, a cut-off value close to .06 (Hu & Bentler, 1999) seems to be the general

consensus to make a decision whether the fit of the suggested model is good or poor (Hooper et al., 2008). Consequently, the results obtained in the CFA demonstrated that the model was suitable.

Main Study: Exploratory and Confirmatory Factor Analysis

The purpose of this study was to confirm the factorial structure of the employee-based brand equity scale using all full-time employees of Kyobo working at the three places (headquarters, distribution centers, and stores), and to perform the validation and reliability of the employee-based brand equity scale.

Factorial Structure. I confirmed the employee-based brand equity scale according to the same EFA and CFA procedures as pilot study. An EFA was performed to identify factorial structures with 18 items extracted from pilot study and produced the same 3 factors with eigenvalues above 1.0. Bartlett's test of sphericity ($\chi2 = 7666.420$, $p < .001$) was significant and the Kaiser-Meyer-Olkin measure of sampling adequacy was in a desirable range (.950). The range of factor loading of each item of Brand Knowledge was between .69 and .82 ($r = .906$). The questions loaded into the second factor Role Clarity with a loading value greater than .57. Cronbach's alpha (r) of .923 indicated high internal consistency of this factor. Lastly, the seven questions of Brand Commitment had factor loadings greater than .60 and had Cronbach's alpha of .915. An EFA showed that the total explained variance was 71.89%, which is greater than the minimum of 50% (see Table 3.3) (Hair et al., 2006; Tabachnick & Fidell, 2001).

Validity and Reliability. A CFA was performed to test the validation and reliability of the model proposed in this study. The CR, AVE, MSV, and ASV were used to evaluate convergent validity, discriminant validity, and reliability (Fornell & Larcker, 1981; Hair et al., 2006). In the CR and AVE test of convergent validity, each CR score of the 3 factors was greater than its AVE

Table 3.3 Rotated Factor Loadings for the 18-Item Instrument and Item-Total Correlations

Construct	Item Code	Coefficient α	Corrected item-to-total correlation	Component			Total explained variance
				1	2	3	
Brand Knowledge	BK1	.906	.730		.764		24.49%
	BK2		.773		.796		
	BK3		.767		.690		
	BK4		.720		.717		
	BK5		.834		.817		
Role Clarity	RC1	.923	.779			.810	21.86%
	RC2		.768			.840	
	RC4		.759			.703	
	RC5		.752			.569	
	RC6		.806			.677	
	RC8		.819			.670	
Brand Commitment	BC1	.915	.672	.601			25.54%
	BC3		.808	.766			
	BC4		.834	.772			
	BC5		.743	.695			
	BC6		.818	.802			
	BC7		.558	.697			
	BC8		.788	.684			

Note. * Items with factor loading below 0.5 are not listed.

† Extraction Method: Principle Component Analysis.

‡ Rotation Method: Varimax with Kaiser Normalization.

Table 3.4 Convergent Validity, Discriminant Validity, and Factor Correlation Matrix

	CR	AVE	MSV	ASV	Brand Knowledge	Role Clarity	Brand Commitment
Brand Knowledge	0.908	0.664	0.643	0.601	0.815[a]		
Role Clarity	0.919	0.655	0.643	0.629	0.802	0.809[a]	
Brand Commitment	0.916	0.616	0.613	0.586	0.747	0.784	0.785[a]

x^2/df = 3.960, p <.001; RMSEA = .076; SRMR = .0442;
CFI = .950; NFI = .934; TLI = .941

Note. Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), Average Shared Squared Variance (ASV).
† [a] indicates the square root of a given construct's AVE.

score and the AVE score should be greater than 0.50 (e.g., Brand Knowledge: CR = 0.908 > AVE = 0.664). Two tests were performed to evaluate discriminant validity. First, each MSV score and ASV of the five factors was less than its AVE score (e.g., Role Clarity: MSV = 0.643, ASV = 0.629 < AVE = 0.655). Second, the square root of AVE exceeded the correlations of that construct and all others. All dimensions exhibited both convergent and discriminant validity as shown in Table 3.4. Cronbach's alpha coefficient and a CR score of each factor were over the .70 threshold (see Table 3.3 and Table 3.4), indicating a satisfactory internal consistency reliability (Nuunally and Bernstein, 1994). The employee-based brand equity scale exhibited satisfactory fit statistics (x^2/df= 3.960, p <.001; RMSEA= .076; SRMR= .0442; CFI= .950; NFI= .934; TLI= .941) (see Table 3.4).

Discussion

The hypothesized three-factor model fitted the data well for pilot study (headquarter) and main study (distribution centers, stores, and headquarters). With regard to convergent validity and discriminant validity, the results were statistically significant (Hair et al., 2006; Fornell & Larcker, 1981). The employee-based brand equity scale has shown a structure of three orthogonal factors: Brand Knowledge, Role Clarity, and Brand Commitment. The overall model goodness-of-fit results and the measurement model supported the proposed three factor model. The measures of absolute and incremental fit indicated that the model in both pilot study and main study was acceptable. The overall results of the confirmatory factor analysis confirmed the employee-based brand equity was a three-dimensional construct. In addition, the results of reliability tests have shown suitable internal consistency.

The purpose of this study was to improve the measurement of employee-based brand equity. Despite considerable interest in the value of internal brand, there have been few attempts

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at its measurement and scale development. The measurement scales of internal brand prior

studies provided suffer from some limitations including: the lack of consensus on employee-

based brand equity components (e.g., Ambler, 2003; Baumgarth & Schmidt, 2010) and the lack

of international associations among employee-based brand equity components. For example,

although the studies of King and Grace (2009, 2010) recently provided strong contributions in

understanding the components of employee-based brand equity, the study more attempted to

sketch out the benefits that organizations obtain through employee-based brand equity. King and

Grace (2010) did not observe an association which underlines the connection among the

components of employee-based brand equity. The present study addressed some of these

limitations.

The results of the present study established the multidimensionality of employee-based

brand equity, consistent with the conceptualization of King and Grace (2009). The three-

dimensional construct (i.e., brand knowledge, role clarity, and brand commitment) found in this

study was similar to King and Grace (2009), but King and Grace did not observe brand

knowledge. They introduced a concept of Internal Brand Management as one of employee-based

brand equity components. However, as mentioned in the literature review, Internal Brand

Management (e.g., Information generation, Brand Knowledge Dissemination, Openness, and the

'H' factor) is more of an internal marketing strategy to develop internal brand equity than one of

the employee-based brand equity dimensions (Gounaris, 2006), because the' H' factor (defined

as the extent to which an employee perceived that the organization treats them like a human

being with respect) and Openness (defined as the extent to which an employee is receptive to

organizational dialogue) are often used for the tool to build internal brand equity as a role of

sponsorship to build consumer-based brand equity. As brand knowledge is the key to

understanding consumer-based brand equity (Keller, 1993), the importance of brand knowledge is equally adapted to the internal branding area. Brand knowledge relates to the cognitive representation of the brand (Peter & Olson, 2001). Backhaus and Tikoo (2004) highlight brand knowledge is the foundation that influences organizations to build brand equity. If employees have a high level of brand knowledge, they are able to clarify their roles and deliver the brand promise to their customers (Ambler, 2003; Aurand et al., 2005).

Another improvement of the current study is the inclusion of employee-based brand equity components previous studies on internal branding universally suggest: the need of employee's brand knowledge to transport organization's goals to their customers (Ambler, 2003; Aurand et al., 2005; King & Grace, 2008; Mitchell, 2002), the value of role clarity considered a predictor of various organizational outcomes such as organizational performance, satisfaction, commitment, and turnover (Babin & Boles, 1996; Geersbro & Ritter, 2010; House & Rizzo, 1972), and the need of psychological attachment of employees (commitment) to the brand, which influences their willingness to exert extra effort towards reaching the brand goals (Ambler, 2003; Burmann & Zeplin, 2005; Burmann et al., 2009; King & Grace, 2010; Mitchell, 2002). The three components of employee-based brand equity used in this study are intimately linked each other. A high level of brand knowledge serves as a catalyst for employees' role clarity. If employees have a high awareness level of the organization's vision (goals), they are more likely to deliver brand promise to their customers through their high role clarity (Donnelly & Ivancevich, 1975; Walker et al., 1977; Sharma & Bajpai, 2011). In addition, employees' commitments are likely to be high when they have a high level of brand knowledge and when they have a high level of role clarity and vice versa (Korczynski, 2002; Mukherjee & Malhotra, 2006; Zaccaro & Dobbins, 1989).

Moreover, the present study relies on a sample of service industry. Although King & Grace studies were conducted using the sample of service industry, they also suggested to repeat studies using the service industry samples. The researchers have noticed that the studies measuring internal brand equity still need to be first validated in service industry, and then need to be validated in other various industries.

Limitation

This study has several limitations that must be addressed in future studies. First, although main study performed validity and reliability with the factorial structure extracted from pilot study, these findings need to be validated in a wider variety of industries as well as in cross-cultural studies. Second, the removed role clarity items and brand commitment items during exploratory factor analysis would be needed for the studies in other industries. Although this study has been only examined with pilot study and main study samples in three places (headquarters, stores, and distribution centers) due to budget constraints, future researchers should enrich survey samples from several organizations in any further study of internal brand equity.

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Appendix 3.1 The Employee-Based Brand Equity Scale

Construct	Original item code	Items
Brand Knowledge	BK1	I am aware of my organization's goals we try to achieve through the brand.
	BK2	I am familiar with what my organization's brand stands for.
	BK3	I have a clear sense of my organization's vision.
	BK4	I know which attributes of our brand differentiate us from our competitors.
	BK5	I know the importance of my organization's goals in delivering the brand promise.
Role Clarity	RC1	I know exactly what is expected of me in my job.
	RC2	I feel certain about the level of my authority in my present job.
	RC3 [a]	I know how my performance is going to be evaluated.
	RC4	I know how I am expected to handle unusual problems and situations while on the job.
	RC5	I know what I expected to achieve in my job.
	RC6	I know what my responsibilities are.
	RC7 [a]	I know how to make specific decisions for my job because I have information about this organization's brand.
	RC8	I know how I should behave while I am on the job.
Brand Commitment	BC1	I am proud to tell others that I am a part of this organization.
	BC2 [a]	I view the success of brand as my own success.
	BC3	The reason I prefer this organization to others is because of what it stands for, its values.
	BC4	I feel like part of a family at this organization.
	BC5	My values are similar to this organization.
	BC6	What this organization stands for is important to me.
	BC7	If the values of this organization were different, I would not be attached to this organization.
	BC8	I feel belonging to this organization.

Note. * [a] indicates the removed items through an exploratory factor analysis.
† Sources: prior studies on each construct (see p. 65-66)

Chapter 4

**The Influence of Employee-Based Brand Equity on the Health-Supportive Environment
and Culture – Organizational Citizenship Behavior Relation:
The Moderating Role of Job Level**

Introduction

Many studies have been conducted on the workplace environment and culture for

supporting employee's health in the health management literature in recent years (Allen, 2002;

Allen & Allen, 1987; Golaszewski et al., 2008; Ribisl & Reischl, 1993). Organizations have

begun to consider building workplace environments and cultures for supporting health using

population-based strategies, rather than focusing on the health care of an individual employee

level (Golaszewski et al., 2008). Health management researchers suggest that creating supportive

health environments and social culture affects health behaviors and improves health outcomes

within the entire population.

Stokols (1992, 1995) suggested that both social and environmental factors are critical

determinants of individual behavior in health promotion. In a theoretical and conceptual study,

he introduced the translation of social ecological theory into guidelines for health promotion. In

light of this, building the workplace environment and culture support for health serves to

improve health by affecting the larger environment in which people work (Golaszewski et al.,

2008; Ribisl & Reischl, 1993). Examples of programs aimed at impacting the whole population

include no-smoking policies, signs encouraging stair use, walking routes, healthy foods in the

cafeteria, and on-site health education classes (Ball et al., 2001; Cheung et al., 2008; Engbers et

al., 2005; Goetzel & Ozminkowski, 2008). However, the benefits of creating supportive health environments and culture at the worksite are not limited to improving individual health, but may lead to the development of the corporate brand.

Business scholars have exhibited increasing interest in the impact of organizational culture on its brand success (e.g., de Chernatony, 2001; de Chernatony & Cottam, 2008; Hatch & Schultz, 2003). The organization's culture is a powerful driver of employees' perceptions and behavior, and as such strongly affects the brand success of an organization (de Chernatony & Cottam, 2008). Employees make a strong connection to their firms' products and/or services (Mitchell, 2002) and serve as ambassadors in delivering promises made by the brands to customers (Ambler, 2003). Previous studies have highlighted that the employees who are familiar with their roles, who understand organizational objectives, and who have a high level of commitment to their organizations are more likely to deliver the promises the organization makes to its customers (e.g., Ambler, 2003; Aurand et al., 2005; Burmann & Zeplin, 2005; King & Grace, 2010). That is, employees are the key to success of the organization's brand in terms of internal brand management. In addition, brand equity from the internal perspective is a strong predictor of organizational citizenship behaviors (OCBs), which include behaviors above and beyond role requirements (e.g., extra job activities, helping others, and upholding workplace rules and procedures regardless of personal inconvenience, etc.) (King & Grace, 2010). OCBs are highly related to organizational performance (Podsakoff & MacKenzie, 1994; Organ et al., 2006). OCBs and internal brand equity are highly related to employees' perception, attitude, and behaviors. As a precursor to positive employee behavioral intentions, job satisfaction has been considered a major requirement for organizations, and is related to both internal brand equity and OCBs (King & Grace, 2010). Thus, the current study has four purposes: (a) to examine how

supportive health environments and cultures in worksite influence the corporate brand from the internal perspective (internal brand equity), (b) to identify the relations between internal brand equity and organizational citizenship behaviors as the benefits of internal brand equity (King & Grace, 2010), (c) to investigate a role of job satisfaction in the proposed model, and (d) to test a moderating role of job levels (i.e., managers and employees) among supportive health environments and cultures, internal brand equity, and organizational citizenship behaviors.

Theoretical Background

The Health-Supportive Environment and Culture as Antecedents of Employee-Based Brand Equity and Organizational Citizenship Behaviors

Organizational culture represents the collective behavior of humans (Schein, 1984). Ravasi and Schultz (2006) contend that organizational culture is a set of shared mental assumptions that guide interpretation and action in organizations by defining appropriate behavior for various situations. In light of this, health management scholars have suggested that building supportive worksite health culture including multiple social and physical environmental conditions can be the alternative concept of focusing on health care at an individual employee-based level. It is because that the population-based strategies on health promotion (i.e., creating and developing environments and cultures supporting for health at the workplace) affect employees' perception and behaviors on physical, mental, and social wellbeing (Golaszewski et al., 2008a; McLeroy et al., 1988; Stokols et al., 1996).

Several studies have identified the impact of organizational culture as being key to achieving brand success (e.g., de Chernatony, 2001; de Chernatony & Cottam, 2006; Hatch & Schultz, 2003; Wilson, 2001). de Chernatory and Cottam (2006) argued that the internal branding is based on the organization's culture since the behaviors and attitudes of employees

derived from the culture reflect their organization to customers. King and Grace (2010) argue

that employees' perception and behavior based on the mission of their organization are

specifically important in the service industry, since employees meet their customers and have an

opportunity to inform them of the organization's objectives. These researchers found that various

characteristics (e.g., management support, organizational socialization, information generation,

etc.) of organizational culture influence how an employee perceives brand knowledge

transformed from the organization to the employee. In addition, the authors noted that

employees' role clarity and brand commitment (employees' psychological attachment towards an

organization) are influenced by such contextual conditions of the organization's culture. Wilson

(2001) notes that culture may have influence on external stakeholders through the behavior and

attitudes of service personnel. In other words, employees play a vital role in linking between

organizational culture and customers.
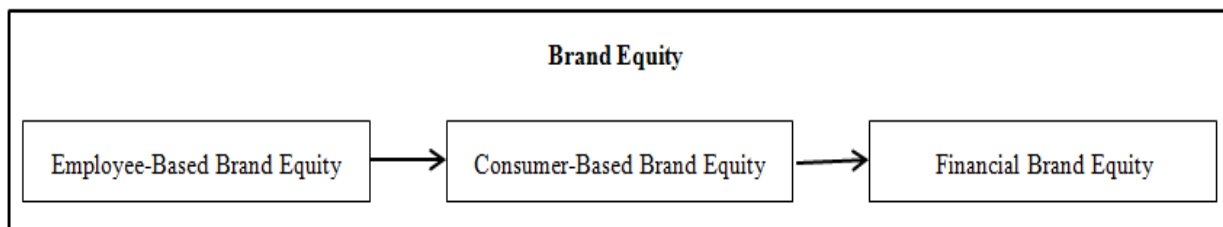
Source: King & Grace (2009)

Figure 4.1. Components of Brand Equity

King and Grace (2009) suggest the relations among employee-based brand equity,

consumer-based brand equity, and financial brand equity (see Figure 4.1). The authors state that

employee-based brand equity "contributes to consumer-based brand equity, which in turn

underpins financial based brand equity (p.126)". In the current study, employee-based brand

equity is defined as the differential effect that brand knowledge has on an employee's response

to their work environments and cultures (King & Grace, 2009). It is considered as not only the foundation of building brand equity but also the core of achieving brand success (de Chernatony & Cottam, 2006; King & Grace, 2009). Given that employers consider their employees' health as a most valuable factor when developing work cultures (Edington, 2009; Golaszewski et al., 2008a), organizational health culture also might be a driver to achieving brand equity. Further, organizational culture has been identified as the main variable that creates organizational citizenship behaviors (Ebrahimpour et al., 2011). Beckett-Camarata and colleagues (1998) asserted employees who are satisfied with their work environments and cultures tend to show discretionary behaviors that are beyond the job required. Thus, the following hypotheses are proposed:

H1. An employee's perception of worksite health culture is positively related to employee-based brand equity.

H2. An employee's perception of worksite health culture is positively related to organizational citizenship behaviors.

The Effects of Employee-Based Brand Equity on Organizational Citizenship Behaviors

Employee-based brand equity and internal brand equity serve as synonyms in the current study (Ambler, 2003; Mitchell, 2002). Employee-based brand equity is a relatively new approach, which enables organizations to focus on their objective or vision. Mitchell (2002) asserts that managers should encourage their employees to understand the organizations' (brand) vision because the employees who know the organization (brand) vision can deliver their brand promise to customers. That is, employees play a role as ambassadors between their organization and customers (Ambler, 2003).

Baumgarth and Schmidt (2009) argue that internal brand equity measures the incremental effect of branding on employees' behavior. These researchers also identified that a high level of employee-based brand equity helps an organization fortify its consumer-based brand equity. Accordingly, strong employee-based brand equity helps the organization acquire a sustainable and competitive advantage (Burmann et al., 2009) and eventually allows the organization to differentiate itself from its competitors. Employee-based brand equity is conceptualized in this study as a high-order latent construct underlying three related but distinct relationship constructs (i.e., brand knowledge, role clarity, brand commitment) based on previous brand equity models provided by King and Grace (2009, 2010) and Keller (1993) (see Study 2).

Organizational citizenship behavior (OCB) is defined as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988, p. 4). The OCBs represent discretionary behaviors, which are not part of the job description, and thus have been linked to overall organizational effectiveness (Darden and French, 1970; Dubin sky and Barry, 1982; Jackson et al., 1983). According to Organ (1988), OCBs are significant factors that can contribute to the survival of an organization. Accordingly, OCBs have been a major target of organizational effectiveness evaluation by researchers. Previous studies have highlighted the importance of investigating different OCBs needed in a particular context in order to identify job performance (Rotundo & Sackett, 2002; Nielsen et al., 2009). For example, MacKenzie et al. (1993) assert that four types of OCBs (i.e., altruism, civic virtue, sportsmanship, and conscientiousness) serve as evaluation indicators of a salesperson's performance in the insurance industry.

As the importance of internal brand's success based on their employees' performance is becoming an emerging issue in business, employee-based brand equity has been found as a somewhat new predictor of OCBs. According to King and Grace (2010), brand citizenship behavior is one of the employee-based brand equity benefits. These authors adopted the concept of Burmann and Zeplin (2005)'s brand citizenship behavior that is reinterpreted from organizational citizenship behavior. With this in mind, employee-based brand equity can be the driving force of organizational citizenship behaviors. Cheung et al. (2009) proposed employees' branding (internal branding) has a strong relationship with organizational citizenship behaviors. The present study adopted MacKenzie et al.'s (1993) four OCB dimensions (i.e., altruism, civic virtue, sportsmanship, and conscientiousness). The table 4.1 provides operational definitions of OCBs' terms. Thus, the following hypothesis is proposed:

H3. Employee-based brand equity is positively related to organizational citizenship behaviors.

Table 4.1 Definitions of Organizational Citizenship Behaviors (OCBs)

Dimension of OCBs	Definition
Altruism	Discretionary behavior that has the effect of helping a specific other person with an organizationally relevant task (e.g., sharing sales strategies or voluntarily helping to orient new salespeople)
Civic Virtue	Behavior indicating that the salesperson responsibly participates in and is concerned about, the life of the company (e.g., attending meetings/functions that are not required but that help the company, keeping up with changes in the organization, taking the initiative to recommend how company operations or procedures can be improved)
Sportsmanship	Willingness on the part of a salesperson to tolerate less than ideal circumstances without "...complaining...railing against real or imagined sights and making federal cases out of small potatoes"
Conscientiousness	Discretionary behavior that goes well beyond the minimum role requirements of the organization (e.g., working extra-long days, returning phone calls from the home office promptly, never bending the rules, entertaining only when it is clearly in the best interest of the company to do so)

Source: Mackenzie et al. (1993), Organ (1988)

Another scholarly work on internal brand equity is identifying the relations with job satisfaction. Since job satisfaction is commonly considered as precursor to positive employee behavioral intentions and subsequent behavior (Loveman, 1998), investigating the association between employee-based brand equity and job satisfaction may provide a better insight in understanding how employees perceive, experience, and enjoy their organization's brand. Supporters of the internal perspective contend that employees who know their roles clearly and who have organization's vision as represented by brand knowledge in the present study are more likely to have a high level of job satisfaction (King & Grace, 2010; Rogers et al., 1994). The literature also promotes the fact that brand commitment and job satisfaction are commonly found to be related outcomes with respect to employees (Jones et al., 2003). Thus, consistent with prior research, it is hypothesized that:

H4. Employee-based brand equity is positively related to job satisfaction.

The Roles of Job Satisfaction between Environment and Culture of Health and Organizational Citizenship Behaviors

There is considerable evidence that job satisfaction and organizational culture are positively related (Adkins & Caldwell, 2004; Downey et al., 1975; Johnson & McIntyre, 1998; Lund, 2003; Sempane et al., 2002). Lund (2003) conducted an empirical investigation of the influence of organizational culture on job satisfaction in a survey of marketing professionals in a cross-section of companies in the USA. Based on the consistent evidences of prior studies that are a positive association between organizational culture and job satisfaction, Lund found that job satisfaction levels differ across organizational cultural typology (e.g., clan, adhocracy, hierarchy, and market). Egan et al. (2004) also tested the relationships among organizational culture, job satisfaction and turnover intention. They provided empirical evidence to show the

impact of organizational culture on job satisfaction and the effects of organizational culture and job satisfaction on turnover intention. In related studies, Nystrom (1993) reported that employees in strong cultures are more likely to display higher job satisfaction in the healthcare industry.

Prior studies suggested that job satisfaction is a robust predictor of OCBs (e.g., altruism, civic virtue, sportsmanship, and conscientiousness) (Bateman & Organ, 1983; Donovan et al., 2004; MacKenzie et al., 1998; Organ & Ryan, 1995; Werner, 2007). In a longitudinal and cross-lagged study, Bateman and Organ (1983) assert that employees are more likely to show organizational citizenship behaviors when they feel satisfied with their jobs. Consistent with Bateman and Organ (1983), Organ and Lingl (1995) found the a significant relationship between job satisfaction and OCBs in 15 independent studies. Gadot and Cohen (2004) also argues that highly satisfied employees are likely to engage in OCBs. Altruism of OCBs, in particular, has been found to have modest relationships with job satisfaction (Organ & Ryan, 1995). The authors highlighted that job satisfaction is the modest predictor of civic virtue, courtesy, and sportsmanship. Hence, I hypothesize:

H5: An employee's perception of worksite health culture is positively related to their job satisfaction.

H6: An employee's job satisfaction toward the organization is positively related to their organizational citizenship behaviors.

The Moderating Role of Job Level

To explain the relations among focal constructs, I draw on research on social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960). Social exchange theory refers to unspoken social exchanges or voluntary actions among individuals who expect that actions will be reciprocated (Blau, 1964). In the organizational context, it refers to the benefits derived

from social connectivity between employees and the organization (e.g., Wayne et al., 1997). That is, employees' behavior and attitude are responses to the treatment they received from their organizations (Greenberg & Scott, 1996). In relation to social exchange theory and employee reciprocity, some researchers revealed that employees at different levels of the organizations exhibit different behaviors and attitudes because they are affected by different work environments and cultures (Kline & Boyd, 1994). Thus, I assume:

H7: Job level (i.e., high-status employees & low-status employees) moderates all relationships among worksite environment and culture for supporting health, employee-based brand equity, job satisfaction, and organizational citizenship behaviors.
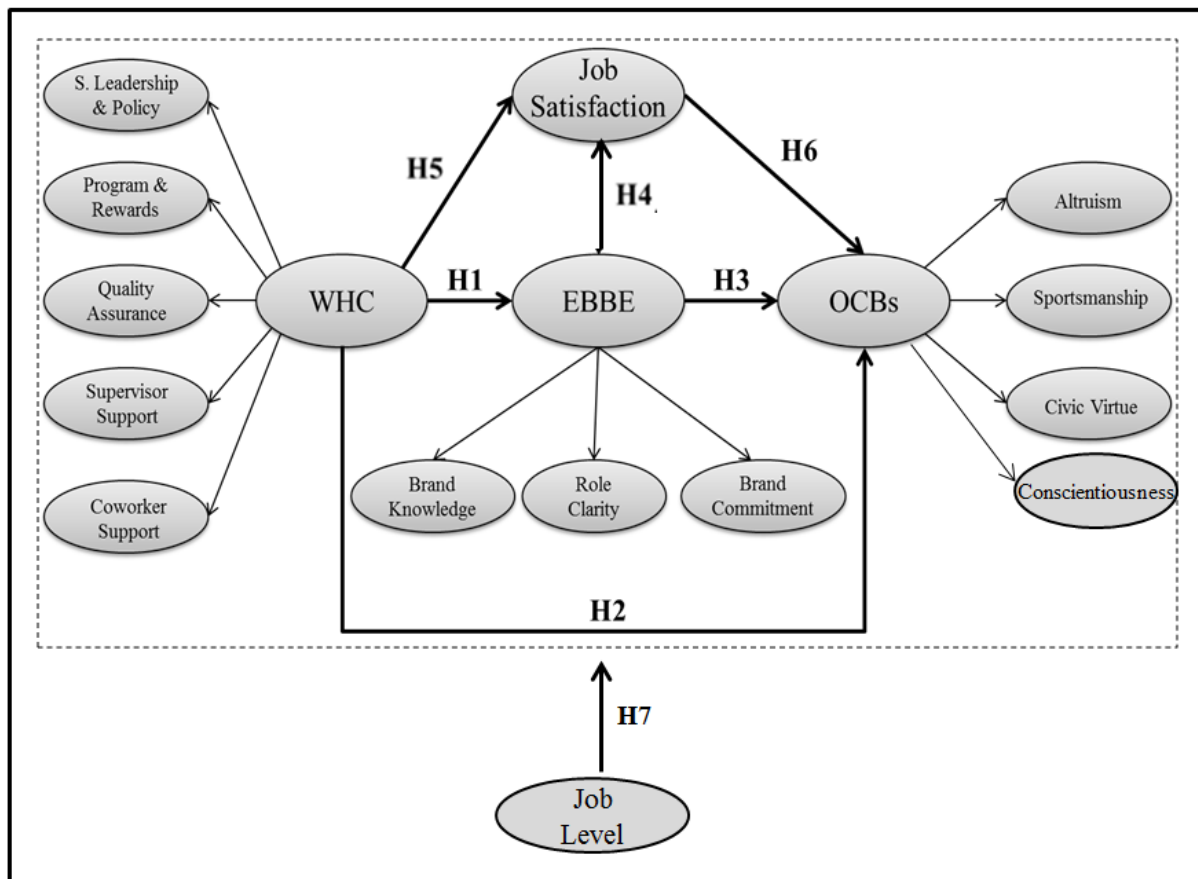

Figure 4.2. The Conceptual Model of the Study

The proposed model (shown in Figure 4.2) represents the relationships between the constructs (i.e., among workplace environment and culture for supporting health, employee-based brand equity, organizational citizenship behaviors, and job satisfaction). Figure 4.2 provides a pictorial representation of the hypotheses that guide this study.

Methods

Instrument

To measure organizational citizenship behaviors, four dimensions were adopted from previous research. Altruism is assessed by three items concerning employees' behaviors that help others with job-related tasks. Civic virtue is measured using a three-item scale assessing the extent to which employee is interested in and responsibly engages in the organization (e.g., "I attend functions that are not required, but that help the company image"). The three-item sportsmanship scale examine the degree to which employee tolerates the inconveniences of organizational conditions (e.g., "I always focus on what is wrong with my situation, rather than the positive side of it. (reverse scoring item))". Lastly, the three-item conscientiousness scale assesses the extent to which employee performs his/her task above what is expected. Respondents were asked to rate their opinions on a 7-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. Before conducting data analysis, it was necessary to reverse score three sportsmanship items. Appendix 4.1 presents the questionnaires with total 12 items.

The scale of the worksite environment and culture of health includes 36 items. To measure supportive health environment and culture at the workplace (see Study 1), an exploratory factor analysis (EFA) was first performed with 43 items, and then removed 7 items because of low factor loading values (<0.5) (Hair et al., 2006). The validity and reliability of the 36 items were determined based on the confirmatory factor analysis (CFA). The final 36 items represent various dimensions underlying organizational environment and culture of health based

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on previous studies (Golaszewski et al., 2008; Ribisl & Reischl, 1993; Allen, 2002; Basen-Engquist et al., 1998; Edington, 2009; Cameron, 2008). The first factor, labeled as "Senior Leadership and Policy", contained eight items that focus on the company's vision, policies, and procedures relating to employee health. The second factor was comprised of seven questions regarding health coaching services, health and wellness educational services, or incentives provided from company and labeled as "Program and Rewards". The third factor, "Quality Assurance", included all three questions associated with the company's activities involving evaluation and informing of health and wellness initiative performance. The fourth factor contained eight items related to manager's behaviors encouraging respondents to be healthy and was labeled as "Supervisor Support". Lastly, the fifth factor was labeled as "Coworker Support" as questions grouped under this factor reflected social boundaries, collective beliefs, and supportive behaviors of colleagues with respect to health issues. The 18 items for environmental factors (i.e., senior leadership and policy, program and rewards, and quality assurance) and 18 items for cultural factors (supervisor support and coworker support) were finalized and utilized a seven-point Likert-type scale, with responses ranging from "strongly disagree" to "strongly agree". For each question, respondents were asked to mark the response which best described their level of agreement.

The brand equity scale from the employee perspective is based on three underlying dimensions of brand equity (see Study 2): brand knowledge (5 items), role clarity (8 items), and brand commitment (8 items). A principal component analysis using a varimax rotation with initial 21 items resulted in 3 factors with eigenvalues above 1.0. The 3 of 21 items (2 items related to employee's understanding about expected roles and 1 item related to employee's commitment towards the organization) were removed because these three items loaded highly on

more than one factor. After deleting the 3 overlapping items, the validity and reliability of the 18

items were determined based on CFA. Brand knowledge scale includes five items developed

based on Baumgarth and Schmidt (2010), Ambler (2003), and King and Grace (2010). The five-

item scale of brand knowledge measures employees' knowledge related to the organizations'

goals (visions) for delivering the brand promise (e.g., "I have a clear sense of my organization's

vision"). The role clarity scale is adopted from Mukherj and Malhotra (2006), Donnelly and

Ivancevich (1975), and King and Grace (2010) to access the extent to which employees feel they

have a clear understanding about expected roles (e.g., "I know what I expected to achieve in my

job"). The seven-item scale of brand commitment is drawn from previous studies (e.g., O'Reilly

& Chatman, 1986; Burmann et al., 2009; King & Grace, 2010; Punjaisri et al., 2009). These

items reflect employees' sense of belonging to the brand and organization (e.g., "I feel like part

of a family at this organization") and the sense of incorporating the brand values into their values

(e.g., "The reason I prefer this organization to others is because of what it stands for, its values").

All items include 7-point Likert scales (1= strongly disagree, 2= disagree, 3=slightly disagree,

4=neither agree nor disagree, 5=slightly agree, 6=agree, 7= strongly agree) and respondents

indicated the degree to which they agree or disagree with each statement.

A three-item measure was used to assess job satisfaction as a moderating role on the

proposed model (Hartline & Ferrell, 1996; Netemeyer et al., 1997). The items measures the level

of satisfaction an employee receives from their work (e.g., "I feel a great sense of satisfaction

from my job"). The item includes 7-point Likert scales ranging from (1) strongly disagree to (7)

strongly agree.

Sample and Data Collection

Participants for a pilot study were drawn from 102 full-time employees of the largest

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bookstore Kyobo in Seoul, South Korea. Questionnaires were distributed and returned via

workplace mailboxes of the employees at headquarter site. Data collection was organized at their

offices or desks and the respondents completed the questionnaire when they were available

during their office hours. The questionnaire required 12-17 minutes to complete. The main study

sample included 582 full-time Kyobo employees at three places (i.e., headquarter, distribution

centers, and stores). The employees who participated in the pilot study were excluded in the

sample of a main study. Questionnaires were first handed to the managers at each place through

Human Resources department, and then the managers distributed to their employees. Since the

questionnaire is developed in English, two bilingual experts translated the questionnaire into

Korean. With the back-translation technique that is commonly used in the cross-cultural study

(Beaton et al., 2000; Brislin, 1970; McGorry, 2000), we verified the verbal equivalence between

two versions: English and Korean. Of the 582 employees who participated in the survey, 520

employees completed the survey (response rate: 89.3%). There was a lottery incentive ($20)

offered for participation. The 150 respondents were randomly selected among those who

completed the survey.

Method of Analysis

Confirmatory factor analysis (CFA) is a relevant technique for the validation of scales for

the measurement of constructs (Steenkamp and van Trijp, 1991). To establish factorial validity

and reliability for the measurement model in main study, I followed the validation procedures

outlined by Hair and the colleagues (2006), using AMOS version 20.0. The following measures,

based on the contributions made by different authors (Fornell & Larcker, 1981; Hair et al., 2006),

were considered for establishing validity and reliability during the CFA (see Table 4.2):

Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared

Variance (MSV), and Average Shared Squared Variance (ASV). Convergent validity requires CR should be greater than AVE and AVE should be at least .50 or higher. With regard to discriminant validity, MSV and ASV should be less than AVE (Fornell & Larcker, 1981; Hair et al., 2006). Another test of discriminant validity is to compare the AVE score for each construct. In the AVE test of discriminant validity, the square root of a given construct's AVE should be larger than any correlation of the given construct with any other construct in the model (Chin, 1998). To test the reliability of measurement items, Cronbach's alpha and a composite reliability (CR) which is evaluated in the same way as Cronbach's alpha, were used in the each construct. All constructs showed a reliability score well over the .70 threshold accorded to exploratory research (Nunnally & Bernstein, 1994).

Table 4.2 Threshold of CR, AVE, MSV, and ASV Measures for Establishing Reliability and Validity

Reliability		▪ CR > 0.7
		▪ Cronbach's Alpha > 0.7
Construct Validity	Convergent Validity	▪ CR > AVE
		▪ AVE > 0.5
	Discriminant Validity	▪ MSV < AVE
		▪ ASV < AVE
		▪ √AVE > any correlation of the given construct with any other construct

Note: Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), Average Shared Squared Variance (ASV)
Sources: Fornell and Larcker (1981), Hair et al. (2006)

To evaluate the relationships among worksite health culture, employee-based brand

equity, job satisfaction, and organizational citizenship behaviors, structural equation modeling (SEM) method was employed. The analysis was guided by Anderson and Gerbing's (1988) two-step procedure: (1) tests of the measurement model followed by (2) tests of the hypothesized casual relations among the constructs. In this study, the first stage involved employing a confirmatory factor analysis (CFA) to test that indicator variables measure the constructs of interests and that proposed measurement model demonstrates an acceptable fit to data. The multiple fit indices were used to assess the fit between model and data: $x^2/d.f.$, RMSEA (Root Mean Square Error of Approximation), SRMR (Standardized Root Mean Square Residual) and incremental indices CFI (Comparative Fit Index), TLI (Tucker Lewis Index) and NFI (Normed Fit Index). These goodness of fit indices are considered acceptable when $x^2/d.f.$ is less than five, the error index RMSEA is less than 0.08 or less than 0.07, the error index SRMR is less than 0.08 and incremental indices CFI, TLI, and NFI are more than 0.90 (Bentler, 1990; Browne & Cudeck, 1993; Hu & Bentler, 1995; Hu & Bentler, 1999; Steiger, 2007). In the second step, I examined the structural model by assessing the statistical significance of each of the hypothesized paths among the latent factors.

Furthermore, SEM was performed to test for the moderating effects of job level on the proposed model. Consistent with previous study (Bretz et al., 1994), self-reports on a single multiple-choice item were used to assess job level. Testing for moderation has two components (e.g., Walsh et al., 2008): testing the general moderating effect of job level on all the links among the four constructs, and then testing the moderator effect and the direction of the moderation for individual link between two constructs. A Chi-square difference test was used for the general moderating effect among the four constructs and for the individual moderating effect between two constructs.

Results

Demographics

Pilot study included 102 Kyobo full-time employees working at the headquarter in Seoul.

Nearly 62% of the respondents are employees and the rest are self-identified managers (38.2%).

Almost three in ten respondents are employees who have worked for over 10 years (29.4%). The

final main study sample was 42.7% male and had an average age of 37.09 ± 6.5 years (mean ±

standard deviation) (see Table 4.3). In main study, all respondents (N=520) are Kyobo full-time

employees working at the three places in South Korea. 19.2% of the respondents are self-

identified managers and the rest are employees (80.8%).

Table 4.3 Demographics for Main Study Sample

		Main study	
N		520	
Gender (N / %)	Male	222	42.7%
	Female	298	57.3%
Average age / S.D.		Mean= 37.09 / S.D.= 6.46	
Job position	Employee	420	80.8%
	Manager	100	19.2%

Main Effects

In pilot study, the proposed model exhibits satisfactory fit statistics through a CFA: x^2/df

= 2.204, p <.001; RMSEA = .048; SRMR = .032; CFI = .976; NFI = .957; TLI = .966 (Hair et al.,

2006). Consequently, the results of pilot study obtained in the CFA demonstrated that the model

was suitable.

In main study, a CFA was performed to test the validation and reliability of the model proposed in this study (Fornell & Larcker, 1981; Hair et al., 2006). The CR, AVE, MSV, and ASV were used to evaluate convergent validity, discriminant validity, and reliability (Fornell & Larcker, 1981; Hair et al., 2006). In the CR and AVE test of convergent validity, each CR score of the five factors was greater than its AVE score and the AVE score should be greater than 0.50 (e.g., Employee-based brand equity: CR = 0.886 > AVE = 0.678). Two tests were performed to evaluate discriminant validity. First, each MSV score and ASV of the five factors was less than its AVE score (e.g., Environment and culture of health: MSV = 0.230, ASV = 0.161 < AVE = 0.728). Second, the square root of AVE exceeded the correlations of that construct and all others. All dimensions exhibited both convergent and discriminant validity as shown in Table 4.4. Cronbach's alpha coefficient and a CR score of each factor were over the .70 threshold (see Table 4.4), indicating a satisfactory internal consistency reliability (Nuunally & Bernstein, 1994).

Regarding satisfactory fit statistics, the goodness-of fit criteria of the basic model meet their generally proposed thresholds (see Table 4.4): x^2/df = 1.869, p <.001; RMSEA = .046; SRMR = .050; CFI = .933; NFI = .867; TLI = .930 (Hair et al., 2006). While an ideal NFI score is .90 or greater, a liberal cutoff of .80 indicates a reasonable error of approximation and is therefore satisfactory (Ullman, 2001). Consequently, the results of main study obtained in the CFA demonstrated that the model was suitable.

Because the measures are reliable and valid, the relationship among supportive health environments and cultures at the worksite, employee-based brand equity, job satisfaction, and organizational citizenship behaviors were tested (see Table 4.5). Of six regression paths, only

Table 4.4 Convergent Validity, Discriminant Validity, and Factor Correlation Matrix

	Cronbach's alpha	CR	AVE	MSV	ASV	Environment and Culture	Brand Equity	Job Satisfaction	OCBs
Environment and Culture	0.826	0.903	0.728	0.230	0.161	0.853[a]			
Brand Equity	0.872	0.886	0.678	0.346	0.230	0.423	0.829[a]		
Job Satisfaction	0.901	0.862	0.610	0.451	0.354	0.346	0.322	0.829[a]	
OCBs	0.887	0.911	0.781	0.346	0.184	0.127	0.482	0.402	0.829[a]

x^2/df = 1.869, p <.001; RMSEA = .046; SRMR = .0497; CFI = .933; NFI = .867; TLI = .930

Note. Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV), Average Shared Squared Variance (ASV).
† [a] indicates the square root of a given construct's AVE.

Table 4.5 Basic Model Effects (the first basic model effects with six hypotheses and second basic model effects with five hypotheses after removing H2 that was not supported in the first test of basic model effects)

	Standardized regression coefficient (β)	Hypothesis	Support
• Environment and culture of health → Employee-based brand equity	.452***→.454***	H1	Supported
• Environment and culture of health → Organizational citizenship behaviors	.022→N/A	H2	Not supported
• Employee-based brand equity → Organizational citizenship behaviors	.514***→523***	H3	Supported
• Employee-based brand equity → Job satisfaction	.277***→.276***	H4	Supported
• Environment and culture of health → Job satisfaction	.229***→.228***	H5	Supported
• Job satisfaction→ Organizational citizenship behaviors	.167***→.172***	H6	Supported

Summary of fit indices for the proposed models tested: X^2/df = 2.057; CFI = .935; NFI = .881; SRMR = .0531; RMSEA = .045; TLI = .932 → X^2/df = 2.057; CFI = .935; NFI = .881; SRMR = .0532; RMSEA = .045; TLI = .932

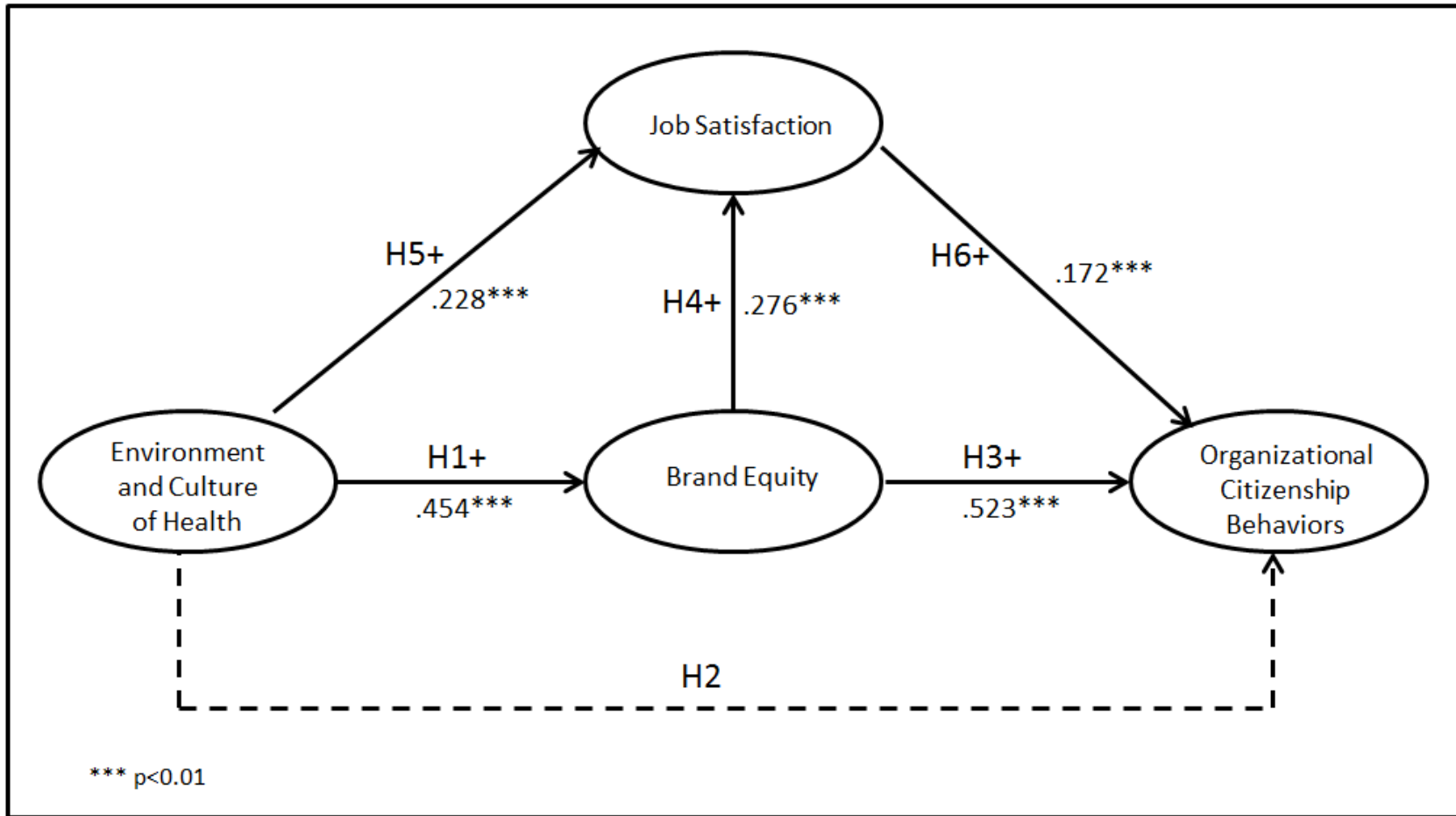*Note.* *p < 0.1, **p < 0.05 and ***p < 0.01

Figure 4.3. Basic Model Effects

one regression path (Hypothesis 2), the linkage between the employee-based brand equity to organizational citizenship behaviors, was not supported (β = .022, p >.1). After removing the path on Hypothesis 2, the suggested model retested the influence of the five postulated main effects. The regression paths from the worksite environment and culture of health to employee-based brand equity (β = .454, p < .01) and job satisfaction (β = .228, p < .01) were positive and significant, supporting Hypothesis 1 and 5. The regression paths from employee-based brand equity to organizational citizenship behaviors (β = .523, p < .01) and job satisfaction (β = .276, p < .01) were positive and significant. Thus, Hypothesis 3 and 4 were supported. Lastly, as expected, the linkage between job satisfaction and organizational citizenship behaviors was positive and significant (β = .172, p < .01), supporting Hypothesis 6. The author screened modification indices to detect any potential areas of model misspecification (cf. Long, 1983; Saris et al., 1987) but find no unreasonable estimates. All factor loadings are significant, so there is no need to re-estimate our model. As shown in Table 4.5, the goodness-of-fit criteria of the basic model meet their proposed thresholds: x^2/df = 2.057, p <.001; RMSEA = .045; SRMR = .0532; CFI = .935; NFI = .881; TLI = .932 (Hair et al., 2006).

Testing the Moderating Effects

After confirming the influence of the five of six postulated main effects, the next step was to include the suggested moderator variables into the model in order to gain deeper insights into the relationships among supportive health environments and cultures at the worksite, employee-based brand equity, job satisfaction, and organizational citizenship behaviors. In a first step, an overall Chi-square difference was conducted for the moderator effect of job level (i.e., employees & managers) in which I compared restricted and non-restricted models. With five df,

Table 4.6 Results of Multi-Group Analysis: Job Level

	Standardized regression coefficient (β)		X^2	$\Delta X^2(df = 1)$	Hypothesis	Support
	Employee	**Manager**				
Job Level					H7	Partially supported
• Environment and culture of health → Employee-based brand equity (H1)	.457	.426	7678.798	3.562*		Supported
• Employee-based brand equity → Organizational citizenship behaviors (H3)	.530	.440	7676.388	1.152		Not supported
• Employee-based brand equity → Job satisfaction (H4)	.216	.235	7675.601	0.365		Not Supported
• Environment and culture of health → Job satisfaction (H5)	.269	.319	7675.632	0.396		Not supported
• Job satisfaction→ Organizational citizenship behaviors (H6)	.168	.181	7682.517	7.281***		Supported

ΔX^2(df = 5): 11.413** (unconstrained X^2: 7675.236 - fully constrained X^2: 7686.649)

Note. *$p < 0.1$, **$p < 0.05$ and ***$p < 0.01$

the restricted model exhibits a significant Chi-square difference (at $P < 0.05$) for job level (see Table 4.6).

However, regarding the specific moderator effects, job level moderates only two of the five links among the constructs, which leads me to partially support Hypothesis 7. The link between the worksite environments and culture of health and employee-based brand equity is stronger for employees ($p < 0.10$), and the link between job satisfaction and organizational citizenship behaviors is stronger for managers ($p < 0.01$). Employees therefore appear more concerned with their worksite environments and cultures for supporting health when they learn organization's vision as represented by brand knowledge in the current study, understand their role clarity, and exhibit brand commitment when compared to managers, whereas managers are more likely to concern about satisfaction received from their work when they display organizational citizenship behaviors.

Discussion

The main objective of this study was to provide a new insight into the relationship among health-supportive environments and cultures, employee-based brand equity, job satisfaction, and organizational citizenship behaviors by examining the moderating effect of job levels. The current study showed the effect of the worksite environments and cultures for supporting health on employee-based brand equity. As noted by Stokols et al. (1996), organizational culture affects employees' perception and behaviors in physical, mental, and social wellbeing. Given employee-based brand equity refers to the differential effect that brand knowledge has on employees' response to their work environments and cultures (King & Grace, 2009), it is not surprising that employees' knowledge toward their organization (brand), their role clarity, and brand commitment (employees' psychological attachment toward the organization) are influenced by

health-supportive environments and cultures. Unlike the previous studies (Beckett-Camarata et al., 1998; Ebrahimpour et al., 2011; Mohanty & Rath, 2012; Podsakoff et al., 2000) which reported that organizational culture is a robust predictor of organizational citizenship behaviors, the hypothesized path between health-supportive culture and organizational citizenship behaviors in this study was not supported. These differences may be due to the context of organizational culture and environment. The environments and cultures used in this study are more specific compared to those of the previous studies and are the concepts that focus on employee health promotion. The present study identified that health-supportive culture was a driver to achieving employee-based brand equity. From the above evidence, although organizations employing the workplace environment and culture for supporting employee health may feel enhanced internal brand equity, they may not directly gain employees' discretionary behaviors. Therefore, in order to lead to observance of citizenship behaviors through the health-supportive workplace, organizations should generate programs that help employees learn about organizations' vision and the individual's role. Firms should also consider what programs they should promote to increase their employees' emotional attachment toward organization. Additionally, in this regard, organizations may need to make employees feel satisfied with their jobs along with building healthy-supportive environments and cultures.

The current study revealed that employee-based brand equity and job satisfaction are both affected by health-supportive environments and cultures, and the two constructs are driving factors for establishing organizational citizenship behaviors. More specifically, it is interesting that employee-based brand equity plays a dominant role in leading to organizational citizenship behaviors ($\beta = .523$) when compared to the influence of job satisfaction on organizational citizenship behaviors; job satisfaction is relatively less important ($\beta = .172$) to establish

citizenship behaviors. What's more, compared to the linkage between environments and cultures of health and job satisfaction (β = .228), the linkage between environments and cultures of health and employee-based brand equity is relatively strong (β = .454). Seen in this perspective, firms that embody culture of health should be aware of the importance of employee-based brand equity to establish organizational citizenship behaviors.

The present study showed the differences in the magnitudes of path coefficients across different job levels (i.e., managers and employees), even though the job level moderated on two of the five paths. The health-supportive environments and cultures had a greater effect on internal brand equity when the employee's job level was low. This finding implies that building environments and cultures for supporting health is largely effective to strengthen internal brand equity derived from novice employees. As another moderating effect of job level in the proposed model, job satisfaction had more of an effect on organizational citizenship behaviors when employee's job level was high. In a similar vein, Foote and Tang (2008) identified that team commitment moderates the relationship between job satisfaction and organizational citizenship behaviors. Given managers have often a high level of team commitment, the job level possibly seems to play a moderating role in the relationship between job satisfaction and organizational citizenship behaviors in the current study.

The conclusions of the present study require some caution in light of the fact that this study used an organization in the service industry. As King and Grace pointed out, examining internal brand equity and investigating the relations between other organizational behavior factors and internal brand equity in the service industry are very suitable because employees directly meet customers (often referred as service encounter) and deliver organization's vision to their customers (i.e., brand promise). However, with regard to developing and improving the

employee-based brand equity scale, testing the proposed model in other industries (e.g.,

manufacturing industry) would be necessary. In a future study, other moderating variables could

be used in the suggested model so that organizations can manage their employees effectively and

in turn, increase the organizational effectiveness.

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Appendix 4.1 The Scales of Worksite Health Environment and Culture, Employee-Based Brand Equity, Organizational Citizenship Behaviors, and Job Satisfaction

Construct	Items
Senior Leadership & Policies[a]	Vision for supporting employee health
	Integration of health and wellness strategies into business plan
	Communicates employee health connected with company success
	Senior leaders put resources into supporting health
	Communicates purpose of health management strategies
	Provides policies/procedures which support employee health (e.g., a smoke-free campus)
	Uses worker input in development of employee health programs (e.g., surveys, focus groups, open meetings, or employee advisory groups)
	Values employees beyond job performance
Programs & Rewards[a]	Offers employee health assessment services (e.g., total health assessment, health screening for blood pressure or cholesterol)
	Offers health coaching to all employees
	Offers health management educational services
	Environment supports health and wellness (e.g., use of stairwells, healthy food choices in cafeteria, fitness center or discounts for fitness center, encouragement of walking)
	Recognizes employees for important contributions to wellness initiative
	Rewards employees for practicing healthy behaviors
	Provides incentives for participating in programs (e.g., incentives for taking the total health assessment, completing a health program or reaching a health goal)
Quality Assurance[a]	Performance review for managers includes support of health initiatives
	Informs employees about progress toward company health goals
	Company shows how changes in employee health are connected to company objectives (e.g., number of illness days, morale)
Supervisor Supports[b] (Included Role Modeling)	Shows support for health initiative
	Communicates healthy employees important for company success
	Regularly communicates information to be at healthy best
	Promotes use of health and wellness programs

	Shows concern for employee health
	Encourages employees to take care of health
	Managers is a role model for health
	Managers practices healthy behaviors
Coworker Supports[b] (Included Moods and Norms)	Coworkers show concern for each other's health
	Coworkers encourage each other to take care of their health
	Coworker provide each other with health information
	Coworkers trust company to support health
	Coworkers have a sense of community
	Coworkers are confident in long term business success of the company
	Encourage each other to exercise regularly
	Encourage other to eat healthy
	Encourage each other not to smoke
	Encourage each other to use alcohol in moderation (if at all)

Note. * [a] indicates worksite environment components, [b] indicates worksite culture components.

Construct	Items
Brand Knowledge	I am aware of my organization's goals we try to achieve through the brand.
	I am familiar with what my organization's brand stands for.
	I have a clear sense of my organization's vision.
	I know which attributes of our brand differentiate us from our competitors.
	I know the importance of my organization's goals in delivering the brand promise.
Role Clarity	I know exactly what is expected of me in my job.
	I feel certain about the level of my authority in my present job.
	I know how I am expected to handle unusual problems and situations while on the job.
	I know what I expected to achieve in my job.
	I know what my responsibilities are.
	I know how I should behave while I am on the job.

	I am proud to tell others that I am a part of this organization.
	The reason I prefer this organization to others is because of what it stands for, its values.
	I feel like part of a family at this organization.
Brand Commitment	My values are similar to this organization.
	What this organization stands for is important to me.
	If the values of this organization were different, I would not be attached to this organization.
	I feel belonging to this organization.

Construct	Items
Civic Virtue	I "keeps up" with developments in the company
	I attend functions that are not required, but that help the company image.
	I am willing to risk disapproval in order to express my beliefs about what is best for the company.
Sportsmanship	I consume a lot of time complaining about trivial matters. (R)
	I tend to make "mountains out of molehills" (makes problems bigger than they are). (R)
	I always focus on what is wrong with my situation, rather than the positive side of it. (R)
Altruism	I help orient new agents even though it is not required.
	I am always ready to help or to lend a helping hand to those around me.
	I willingly give of my time to help others.
Conscientiousness	I conscientiously follow company regulations and procedures.
	I turn in budgets, sales projections, expense reports, etc. earlier than is required.
	I return phone calls and responds to other messages and requests for information promptly.
Job Satisfaction	I feel reasonably satisfied with my job.
	I feel a great sense of satisfaction from my job.
	I am satisfied with my overall job.

CHAPTER 5

Conclusions

Summary

The primary purpose of this study was to examine the relationships among health-supportive environments and cultures (HSEC), employee-based brand equity (EBBE), job satisfaction, and organizational citizenship behaviors (OCBs) by examining the moderating effect of job levels. The study was conducted through the following three stages.

In the first stage, in an attempt to find an antecedent of employee-based brand equity, a comprehensive literature review was conducted to develop the employee's perception scale of the work environment and culture for supporting health. The results of EFA from both the pilot and main studies indicated that the health-supportive environment and culture scale included a structure of 5 orthogonal factors with 36 items (total explained variance: 76.97%): Senior leadership & Polices, Programs & Rewards, Quality assurance, Supervisor support, and Coworker support. The results of CFA revealed that validity (i.e., convergent and discriminant) and reliability of the health-supportive environment and culture scale were satisfactory. In conclusion, the health-supportive environment and culture scale has shown suitable psychometric properties, which support its use in measuring the organizational health environment and culture in the health promotion context.

In the second stage, an employee-based brand equity scale was developed and tested in the service industry. Based on prior research on the internal brand (King & Grace, 2010) and the

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external brand (Keller, 1993), the present study suggested three components of employee-based brand equity: brand knowledge, role clarity, and brand commitment. Although much has been written about the importance of brand knowledge on employee-based brand equity (e.g., Ambler, 2003; Aurand et al., 2005; Backhaus & Tikoo, 2004; King & Grace, 2009) like its role for consumer-based brand equity (Keller, 1993), the proposed model of employee-based brand equity is the first study measuring brand knowledge in constructing employee-based brand equity. EFA was performed to obtain an initial factor structure, and then factor validity was evaluated using CFA. As expected, the results of EFA from both pilot and main studies showed that the employee-based brand equity scale included a structure of 3 orthogonal factors with 18 items (total explained variance is 71.89%). With regard to validity (i.e., convergent and discriminant) and internal reliability were statistically significant.

In the third stage, the present study investigated the relationships among health-supportive environments and cultures, EBBE, job satisfaction, and OCBs. More specifically, it explored the antecedents (i.e., organizational culture) and consequences (i.e., organizational citizenship behaviors) of employee-based brand equity based on social exchange theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960). The results indicated that beneficial actions directed at workers by the organization establish obligations for employees to reciprocate in beneficial ways: 1) the effects of health-supportive environment and culture on employee-based brand equity, 2) the influences of EBBE on OCBs, 3) the impacts of EBBE on job satisfaction, 4) the effects of job satisfaction on OCBs, and 5) a nonpositive relationship between health-supportive environment and culture and OCBs, but an indirect relationship between them through EBBE and job satisfaction. In addition, with regard to the moderating effect of job levels (managers vs. employees) in the proposed model, the health-supportive environments and

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cultures had a greater effect on internal brand equity when the employee's job level was low. This finding implies that building environments and cultures for supporting health is largely effective to strengthen internal brand equity derived from novice employees. As another moderating effect of job level in the proposed model, job satisfaction had more effects on OCBs when the employee's job level was high.

The findings from this study are significant for several reasons. This is the first study to measure employee-based brand equity and find its antecedent and consequences in health management. When compared to previous studies on organizational environment and culture in business (e.g., Beckett-Camarata et al., 1998; Ebrahimpour et al., 2011), the environment and culture for supporting health did not influence OCBs directly. However, the health-supportive environment and culture affected OCBs through employee-based brand equity and job satisfaction. More specifically, the influence of employee-based brand equity on citizenship behaviors was a lot stronger than the impact of job satisfaction. This finding might display the unique characteristic of the work environment and culture of health compared to that of a whole culture of organization. Moreover, in order for firms to embody culture of health establish OCBs, this study provides the necessity of employee-based brand equity. The study also gives one clue as to how organizations manage employees and managers on the relationship between the health-supportive environment and culture and employee-based brand equity and on the relationship between job satisfaction and OCBs. Lastly, the present study is significant in understanding how employee-based brand equity is measured and why brand knowledge serves as the core in measuring employee-based brand equity.

Implications

Employers strive to develop the health-supportive environment and culture at the workplace to improve employee health. However, this study shows that there are other benefits derived from creating the health-supportive environment and cultures: employee-based brand equity, job satisfaction, and organizational citizenship behaviors. As these three benefits intimately link to organizational effectiveness (Burmann et al., 2009; de Chernatoy & Cottam, 2006; Podsakoff et al., 2009; Koys, 2001), when organizations develop the health-supportive environment and cultures, they may catch two hares at once: employee health and organizational effectiveness.

The results of the job level-moderating effect can be utilized to assist organizations with suitable different activities for employees and managers. For example, exposing employees to the health-supportive environment and culture is more effective to increase employee-based brand equity than engaging managers in the environment and culture. The other lesson is that organizations should give a different strategy when they make their employees and managers satisfied with their jobs. In relation to citizenship behaviors, managers are more likely to be concerned about job satisfaction when they display discretionary behavior that is beyond job description.

Coupled with the statistical evidences on validity and reliability, both the employee-based brand equity scale and the health-supportive environment and culture scale provide a useful ground to use these scales in the brand management, organizational behavior, and health management arenas.

Directions for Future Research

The proposed model can be separated into two models: 1) a mediating role of job satisfaction on HSEC and OCBs, 2) a mediating role of EBBE on HSEC and OCBs. Future

research may examine each relationship and investigate how job satisfaction and EBBE mediate the relationship between HSEC and OCBs. For example, in the proposed model, EBBE appears to fully mediate the relationship between HSEC and OCBs. However, it is necessary to test the mediating roles on the job satisfaction and EBBE relation, respectively, so that scholars may have a better understanding of how employees perceive and behave in the worksite environment and culture for supporting health.

Future research may replicate the factor structure of the HSEC scale through confirmatory factor analysis. The factor structure of HSEC validated in this study is considered tentative until it has been successfully replicated in different samples. The cumulative evidence from a variety of sources may suggest that the HSEC scale serves as a standardize tool to measure workers' perceptions of healthy-supportive environment and culture at the workplace. In light of this, the EBBE scale may also be replicated in the other industry. As King and Grace (2010) noted, measuring EBBE is especially suitable in the service industry. However, it is necessary to measure EBBE in other industries (e.g., manufacturing industry) to develop and improve the EBBE scale.

Future research may also use other moderating variables (e.g., age) in the suggested model so that organizations can manage their employees effectively and in turn, increase the organizational effectiveness.

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