DISTRESS COMMUNICATION IN CULTURAL CONTEXT: EXAMINATION OF KOREANS AND AMERICANS

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By

Eun-soo Choi, M.A.

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Eun-soo Choi, M.A.

Thesis Advisor: Yulia Chentsova-Dutton, Ph.D.

ABSTRACT

Previous research has documented that Asians tend to somatize negative experiences to a greater degree than Westerners. It is posited that somatization may be a more functional communication strategy in Korean than American context. We examined the ways in which Americans and Koreans communicate and respond to distress by analyzing use of and response to somatic words used in narratives. In Study 1, we found that Koreans used more somatic words to communicate distress than Americans. Among Koreans, but not Americans, use of somatic words predicted perceived disclosure quality and expectations of positive reactions (e.g., empathy) from others. In study 2, we found that when presented with distress narratives, Koreans (but not Americans) showed more sympathy in response to narratives using somatic words than narratives using emotional words. These findings suggest that cultural differences in use of somatization may reflect differential effectiveness of somatization in communicating distress across cultural contexts.
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Chapter 1. Emotion in interpersonal and cultural context

Emotions are described as embodied psychological processes that are typically caused by one’s evaluation of events in relation to one’s central concerns, goals, and desires (Averill, 1980; Frijda & Parrott, 2011; Oatley, 2004). Earlier models of emotions suggested that there are distinct emotional entities such as “anger” “fear” and “joy”, and that they are, to some extent, universal in the sense that they have biological bases, such as brain circuits and neurochemical systems (Ekman, Levenson, & Friesen, 1983; Oatley & Johnson-Laird, 1987; Panksepp, 1998). Other models emphasize cognitive mechanisms, often represented as “appraisal” (Arnold, 1960; Frijda, 1986; Lazarus, 1991; Scherer, 1984), as underlying causes of emotions. Appraisal approach to emotions suggests that situations are eliciting causal factors to emotional responding such as ‘anger’ or ‘fear’. For example, you would feel ‘anger’, when you think the treatment you got from another person is unfair, uncontrollable, and the other person is to blame for the unpleasant feeling. Both biological and appraisal perspectives of emotions focus on the intrapersonal processes of an individual’s mind. However, a crucial nature of emotion is that it is fundamentally interpersonal process that unfolds in the social contexts.

Emotions reflect not only individuals’ internal mental states but also the relational and situational context from which the meanings of those mental states are derived (Markus & Kitayama, 1994; Lutz, 1988; Lutz & White, 1986; Parkinson, 1995). From this perspective, one critical function that emotions serve in interpersonal relationships is communication. Communication of emotions conveys information about one’s current states, beliefs, and intentions to others. Furthermore, emotions that are communicated to others evoke emotional responses from others, which help co-ordinate social interactions (Keltner & Haidt, 1999). For
example, display of distress evokes compassionate feelings from others (Eisenberg et al., 1989) and display of anger elicits fear-related responses from observers (Dimberg & Ohman, 1996). In other words, emotions have communicative currency in a social context and cannot be understood without considering the roles of perceivers.

In order for the communication to transpire, one needs to express the mental states, whether verbally or facially, according to the agreed upon categories of emotion that have collective meaning or intentionality (Barrett, 2009; 2012; Barrett, Mesquita, & Gendron, 2011). That is, emotions become meaningful only when there is a group of people who share the same understanding of what they mean. This “collective intentionality” (Barrett, 2012, p. 420) allows for any aspect of behaviors to serve communicative functions in a given social context. In line with this theorizing, researchers from multiple disciplines, including anthropology, sociology, and psychology, have argued that emotions are culturally shaped and have focused on analyzing emotions at the cultural level (Levy, 1984; Lutz & White, 1986; Lutz, 1988; Mesquita, 2001; Chentsova-Dutton & Tsai, 2009; Wierzbicka, 1999). Here, following the perspective on culture of D’Andrade (1984), culture is defined as “learned systems of meaning, communicated by means of natural language and other symbol systems, having representational, directive, and affective functions, and capable of creating cultural entities and particular sense of reality” (p. 116). It is through these meaning systems that people adjust their interpersonal activities and adapt their behaviors to their environment (D’Andrade, 1984; Keesing, 1974).

The aim of the present work is to gain insight into the interplay between culture and emotional processes and particularly distress communication (or sharing of negative emotional experiences in interpersonal interactions). A case of somatization, one of the best known
examples of cross-cultural variations in the emotional communication between the East and the West, will be examined as the focus of this study. First, considering the interpersonal nature of distress communication, the general interpersonal aspects of emotions will be reviewed; specifically, the antecedents and consequences of emotional communication will be discussed. In the following section of this chapter, in an attempt to understand somatization as a culturally shaped phenomenon, the cultural beliefs and value systems will be reviewed, which are thought to be associated with emotions in important ways (Kitayama, Markus, & Kurokawa, 2000; Markus & Kitayama, 1991; Mesquita & Karasawa, 2002). Next, Chapter 2 will present two empirical studies that were conducted to examine the cultural variations in emotions in interpersonal interactions. Finally, Chapter 3 will discuss the theoretical and practical implications of the present work.

**Emotions in interpersonal context**

Beyond physiological and cognitive changes at the intrapsychological level, emotions engender social goals in oneself and responses from others in dynamic interpersonal contexts. Previous research on social sharing of emotions and emotional disclosure is informative in understanding the communicative aspects of emotions. A pioneering and now classic work by Schachter (1959) demonstrated that being in a negative emotional state motivates individuals to seek social contact. Subsequent researchers argued that just as infants and children seek to be comforted by their attachment figures (i.e., parents) at times of stress and uncertainty (e.g., Bowlby, 1969; Ainsworth et al., 1978; Sroufe & Waters, 1976), adults are motivated to seek emotional support or comfort from their attachment figures (e.g., friends, romantic partner, spouse) in the face of stressful life events in order to reduce negative emotional arousal and
achieve more cognitive clarity (Rimé, 2009; Shaver & Klinnert, 1982). Indeed, empirical data suggest that people willingly share experiences through conversations with others after negative emotional experiences (Curci & Rimé, 2008; Rimé et al, 1991; 1994; 1998). This is true across ages, genders, or cultural backgrounds (e.g., Singh-Manoux & Finkenauer, 2001; Rimé, Yogo, & Pennebaker, 1996).

According to the recent studies of social sharing of emotions, the primary motivation behind talking about negative emotions may be distress relief (Reis & Patrick, 1996: Rimé, 2009). Studies have shown that the reasons for social sharing after emotional experiences include expectations of help, comfort and consolation (Rimé, 2007; 2009; Zech, 2000). One large survey which was conducted in Belgium revealed that 80% of people thought that talking about emotions is helpful since it ameliorates the emotional impact of the emotional episode (Zech, 2000). In other words, individuals experiencing increased loneliness, insecurity, and anxiety caused by negative emotions have “socio-affective needs” (Rimé, 2009, p. 75) to recover their decreased self-confidence and self-esteem (Epstein, 1990). Indeed, individuals reported greater need to share with others, as a function of the intensity of aversive emotional experiences (Rimé et al., 1998). On a related note, research on self-disclosure, which is a strategic act with specific social goals (Miller & Read, 1987), demonstrates that the important goal of it is to evoke pity and compassion and ultimately supportive behaviors from others (Collins & Miller, 1994; Greene, Derlega, & Mathews, 2006; Reis & Patrick, 1996).

This is particularly the case in the context of intimate relationships, such as between romantic partners, close friends, and relationships between therapist and client (Wachtel, 1993), in which reactions of validation and caring are expected (Collins & Millers, 1994; Reis & Patrick, 1996).
Furthermore, perceived empathy has been considered to be one of the most central components in relational settings such as psychotherapeutic relationships (Rogers, 1957) and marital communication (Gottman, 1994; Notarius & Markman, 1993). For example, in a study that compared therapists who were effective and those who were not, empathic understanding predicted the difference in effectiveness of therapy between these two groups better than any other factor including personality, values, and the theoretical approach (Lafferty, Beutler, & Crago, 1989).

Individuals’ expectations of understanding, empathy, and support from their interaction partner, are not groundless, especially in intimate relationships. It has been well documented that being exposed to the emotional experience of others automatically induces emotions, as evidenced by both physiological and self-reported measurements (Preston & de Waal, 2002; Shortt & Pennebaker, 1992; Eisenberg et al., 1991). In particular, research on altruism suggests that the negative emotional state of another evokes vicarious emotional experiences in observers (Eisenberg et al., 1991; Hatfield, Cacioppo, & Rapson, 1993) and motivates the observers to reduce their personal distress for egoistic reasons (Cialdini, Schaller, Houlihan, Arps, Fultz, & Beaman, 1987). Alternatively, people respond with empathic concern for another in distress, a response that is considered by some (Eisenberg et al., 1991) to be other-oriented responses rather than egoistic. Either way, when confronted with others who are distressed, individuals are likely to engage in helping behaviors (Davis, 1983). In summary, people engage in spontaneous and automatic emotional communication in their daily lives, with an expectation to be understood and cared for by others.
Importantly, the basic premise of effective emotional communication in interpersonal interactions is that individuals engage in emotional sharing that can be interpreted in a way that is meaningful and appropriate in a given cultural context. That is, people resort to cultural scripts of emotional communication, which is considered meaningful and intentional amongst a group of people sharing the same cultural environment. Scripts are knowledge structures that are salient to members of a given culture and serve as prompt for automatic and fast retrieval of networks of information (D’Andrade, 1984; Wierzbicka, 1999); they are often understood as prototypes of an event or sequences of events (Russell, 1991; Petrie et al., 2001). People are socialized and acculturated to use the agreed-upon scripts that are drawn from individuals’ previous experiences, family members, friends, mass media, and popular culture (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010; D’Andrade, 1984; Spiro, 1961; Yamagishi, 2010). Furthermore, researchers have suggested that cultural scripts are schemata that help individuals respond effectively to the incentives and constraints in solving problems in their environment (Chiu et al., 2010; Yamagishi, Hashimoto, & Shug, 2008; Yamagishi & Suzuki, 2009). In other words, cultural scripts may function like conventionalized solutions that are widely accepted and considered effective in the community.

The present work is based on the assumption that the ways in which people communicate emotions in interpersonal context may vary depending on the culturally shared meaning systems. However, research on the interpersonal aspects of emotional communication has been conducted largely in Western cultural contexts. Given that emotional communications are embedded in culturally shared meaning systems, it is important to take cultural contexts into account. The
following part of the paper will now discuss the ways in which culture shapes individuals’
emotional communication.

**Cultural variation in emotional expression: distress communication**

One clear cultural difference in the ways in which emotions are communicated can be
observed in the context of distress communication. Research on culture and psychopathology has
documented that individuals in non-Western cultural contexts, such as China, are more likely to
experience or express emotional distress with somatic symptoms compared to individuals in
North American cultural contexts, such as Canada (Ryder, Yang, & Heine, 2002). Much research
has been done in the 1970s and 1980s, documenting the prevalence of somatization in other non-
Western cultural contexts (see Katon, Kleinman, & Rosen, 1982). For example, studies done
among Arabs in the Middle East reported that Saudi women who are depressed complain about
somatic symptoms such as gastrointestinal symptoms, loss of appetite, and decreased weight
(Racy, 1980). Similarly, more somatic symptoms were observed among depressed Peruvians
than among Americans (Mezzich & Raab, 1980). These two examples are just a small part of the
literature that documents non-Westerners’ emphasis on somatic symptoms over psychological
symptoms in their emotional expressions (See Russell, 1991, for a review).

**Neurasthenia in China**

Most extensive research on somatization was conducted with Chinese people both in China
and in North America. Chinese somatization is now a key finding of research on culture and
psychopathology (Ryder et al., 2002; Ryder, Ban, & Chentsova-Dutton, 2011; Ryder &
Chentsova-Dutton, 2012). The attention was first drawn to the somatization of depression, due to
the extremely low rates of depression in China based on data from systematic large-scale
epidemiological surveys. According to Zhang and colleagues (as cited in Ryder et al., 2002), a mental health survey that was undertaken in seven regions of China in 1993 revealed significantly lower rates of depressive disorders compared to those in the United States. Of the 19,223 people surveyed in 1993, only 16 reported a lifetime depression, which was several hundred times lower than prevalence rates observed in North America. More recently, in the World Health Organization World Mental Health Survey Initiative that was conducted in Shenzhen, China, between 2006 and 2007, depression prevalence rate among Chinese was 6.5% for lifetime prevalence and 3.8% for twelve-month prevalence. Although the prevalence rates in China have dramatically increased in recent decades, they were still significantly lower than those of the United States, which were 19.2% for lifetime prevalence and 8.3% for twelve-month prevalence (Bromet et al., 2011).

Against the background of drastically low rates of depression, neurasthenia (literally meaning “weakness of nerves”) is commonly observed among Chinese. A now classic study of Chinese somatization conducted in 1980 in Hunan province by Kleinman (1982) revealed that 80% of psychiatric outpatients suffered from neurasthenia. The diagnosis of neurasthenia has been widely used in Europe and North America and was popular among both physicians and the general public until the early twentieth century. Reflecting this popularity, the diagnosis was included in the DSM prior to its third edition in 1980 (Lee, Kleinman, & Kleinman, 2007). Adopted after the 1949 Cultural Revolution from Russian psychiatrists, the diagnostic category of neurasthenia was translated as shengjing shuairuo (SJSI) referring to a wide range of symptoms including primarily somatic symptoms (e.g., insomnia, fatigue, or dizziness), cognitive symptoms (e.g., poor memory or unpleasant thoughts), and emotional symptoms (e.g.,
vexatiousness, excitability, or nervousness). Although depressive symptoms (e.g., depressed mood, guilt, pessimism) are present in the reports, they are not as prominent among the diagnostic criteria (Parker, Gladstone, & Chee, 2001; Kleinman, 1982; Lin, 1989). Altogether, the low rates of depression and the overlapping symptoms of depression, and neurasthenia have led some researchers to believe that neurasthenia is a Chinese variation of depression (Kirmayer & Young, 1998; Ryder et al., 2002).

*Hwa-byung in Korea*

Similar to neurasthenia in China, *Hwa-byung* in Korea is another example of cultural variation in emotional communication. Hwa-byung highlights somatic complaints as its primary symptoms (Min, Suh, & Song, 2009; Min, 2008). The commonly reported symptoms by patients suffering from hwa-byung are respiratory stuffiness, shortness of breath, headaches, heat-sensations in the face and body, lump in the throat and chest, as well as psychological symptoms including depressed mood and anxiety (Min, 2008; Min et al., 2009). The term hwa-byung is made up of two words: hwa meaning “fire” or “anger” and byung meaning “disorder” or “illness” and it literally means an “illness of fire” or “illness of anger”. Hwa-byung was recognized as a culture-bound syndrome in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994). Due to the overlapping symptoms and high comorbidity with major depressive disorder (Min et al., 1986), some researchers have suggested that Korean hwa-byung, just like Chinese neurasthenia, is a culturally patterned way of expressing major depression (Kim et al., 2007; Lin, 1983; Lin et al., 1992).

Hwa-byung has the reputation of being “Korea’s national illness” (Kim, 2004; Suh, 2011, p. 83) as Korean people share the cultural script for both the causes and symptoms of this illness.
The symptoms of hwa-byung are more or less standardized, allowing for the afflicted ones to communicate their distress with physical states and feel understood by others. Hwa-byung is predominantly observed among middle-aged married women and those of lower-socioeconomic status (Min & Kim, 1986; Min, Son, & Byeon, 1989) and patients with hwa-byung usually attribute unfair family relationship, a husband’s extra-marital affair, or a harsh mother-in-law as the problems causing their physical illness (Kim & Song, 1997; Kim, 2004; Min & Kim, 1986; Min et al., 1989; Lee et al., 1989). The cultural script of hwa-byung is formed against the background of the traditional patriarchal Korean culture, in which married women are subordinated to their husband and live with and take care of mother-in-laws, an experience which can be distressing and alienating (Kim & Song, 1997; Park & Chae, 2001). Additionally, because of the unequal power relationship between a husband and a wife at home, women cannot express their complaints openly for fear of disrupting harmony. Suppression of negative emotions, particularly pent-up anger, in reaction to unfair treatment is considered to be central to hwa-byung (Cho, 1991).

In sum, both neurasthenia of China and hwa-byung of Korea are somatic idioms of distress. These cultural scripts are available to members who have a collective knowledge about what it means to have or express physical symptoms when one is suffering from hardship. Although neurasthenia and hwa-byung are idiosyncratic, each reflecting Chinese and Korean cultural structures respectively, both can be understood in association with the shared cultural characteristics of East Asian cultural contexts, to which I now turn in the next section.

**Cultural factors relevant to somatization**

*Mind-body holism in East Asia*
Several cultural factors that are relevant to somatization and to its relative prominence in non-Western cultural contexts have been put forth. First of all, it has been well established that East Asian cultures, in general, are influenced by the dialectical philosophy that emphasizes mind-body holism (So, 2008; Wig, 1999). Mind-body holism refers to a belief that mind, body, and soul are nothing more than points along a continuum and that they are inseparable from one another (Geaney, 2002; Jullien, 2007; Kasulis, Ames & Dissanayake, 1993). The philosophy of mind-body holism is reflected in many elements of East Asian cultures, such as medical theory and language (Wierzbicka, 2006; Yu, 2007). First, oriental medicine of East Asia reflects the tradition of mind-body holism, which views that human organs are interrelated, influencing and controlling one another (Choi, Koo, & Choi, 2007; Hwang, Myers, Abe-Kim, & Ting, 2008). The Chinese character \textit{xin} (心), which is translated as mind in English, is a great example of how a body part can represent both cognitive and affective faculty in Chinese language (Yu, 2005; 2007). \textit{Xin} (心) is a pictograph of a physical organ, the heart, that is a site for cognitive capacities, the locus of emotions, and desire (Slingerland & Chudek, 2011; Yu, 2007). Similarly, Korean word, \textit{maum}, which is the conventional translation of the English word mind, is conceptualized to be located inside one’s chest area (Yoon, 2003).

In contrast, Cartesian dualism, which views mind as being independent from the body, is prevalent in Western society (Duncan, 2000; Gone & Kirmayer, 1996; Slingerland & Chudek, 2011). Western philosophical tradition posits that there is a separate faculty that governs reason that is distinct from faculty of perception and bodily movement (Lakoff & Johnson, 1999). Cognitive scientists—Paul Bloom, for example—have argued that infants develop mind-body dualism early on and automatically and that we (i.e., Westerners) are “natural Cartesians”
The notion that psychological states are separate from physical states has been particularly well recognized from the 20th century on (Beeman, 1985; Katon et al., 1982). Indeed, it is reported that the public in the U.S. holds the view that mind and body are two separate things and understands that mental illness is unrelated to physical health (Satcher, 2000). Consequently, this mind-body dualism provided the groundwork for a biomedical model of modern Western societies (Mehta, 2011) and the clinical practice that views the body as a machine that is devoid of self (Kriel, 1988).

Based on these differences, some researchers have argued that “Western psychologization” is just as much of a cultural phenomenon as Chinese somatization and deserves as much empirical attention (Kleinman, 1986; Ryder & Chentsova-Dutton, 2011). Indeed, recent findings support this notion of psychologization of European Americans (Dzokoto, Opare-Henaku, & Kpobi, 2013; Parker, Cheah, & Roy, 2001; Ryder, Yang, Zhu, Yao, Yi, & Heine, 2008). For example, using multiple methods of assessing depressed outpatients in China and Canada, Ryder and colleagues (2008) found that across the methodologies, —spontaneous problem reports, structured clinical interviews, symptom questionnaires—depressed Canadian individuals reported more psychological symptoms (i.e., feeling depressed, loneliness, lack of emotions) than did Chinese individuals.

The role of language in distress expression

Another culturally relevant factor to consider in understanding somatization is the ways in which people use language to express emotional content (Leff, 1981; Leighton, Lambo, Hughes, Leighton, Murphy & Macklin, 1963). According to Marsella’s (1981) review, many non-Western cultural groups do not have an equivalent word for depression. For example, there are
no words corresponding to depression as it is defined in English in the Yoruba language of Nigeria (Leighton, Lambo, Hughes, Leighton, Murphy & Macklin, 1963), the language of Native Americans (Termansen & Ryan, 1970), Malay (Resner & Hartog, 1970), and Chinese (Chan, 1990; Tseng & Hsu, 1969). Leff (1980; 1981), one of the early researchers on this subject, suggested a language evolution theory for linguistic representations of emotions. According to this theory, the languages evolve from those languages that do not differentiate between bodily and psychological experiences to those languages that express distinct psychological experiences. By this logic, Chinese language with vocabulary that does not distinguish between bodily and psychological experience is considered by Leff to be in the lower ladder of evolution compared to English that has distinct words for both psychological and bodily states. However, this kind of Western ethnocentric approach has been widely criticized for being “empty and groundless” (Beeman, 1985, p. 219). Beeman (1985) disapproved of this approach, arguing that it reflects Western medical practitioners’ endorsement of the ability to clearly label and categorize symptoms into the Western psychiatric diagnostic criteria. Furthermore, the contention that Chinese lack emotional vocabulary turned out to be simply untrue in empirical studies (Cheung & Lau, 1982; Kwong & Wong, 1981).

Although Leff’s (1981) argument that there is a lack of emotional vocabulary in Chinese language is flawed, converging literature suggests that the interconnected relationship between emotions and body is reflected in the ways in which East Asians use physical words in association with emotional discomfort. The specific words people use to describe their subjective emotional experiences are crucial and fundamental, given the critical role that language plays in mental states (Barrett, 2004; Barrett, Kristin, Lindquist, & Gendron, 2007; Harré, 1986; Russell,
Within the framework of the conceptual act model posited by Lisa Feldman Barrett and her colleagues, words have an important function in perception or recognition of emotions through categorization (Barrett, 2009; Barrett, Lindquist, & Gendron, 2007; Gendron, Lindquist, Barsalou, & Barrett, 2012). The categorization or labeling of a stream of experiences, which includes sensations from the external environment, sensations of internal changes in the body, and understanding of the situation one is in, affects the consequent mental states that are made meaningful for the experiencing person. Previous studies show that there are cultural differences in the ways in which people label negative mood states (Tanaka-Matsumi & Marsella, 1976; Wong & Kwong, 1981). For example, Tanaka-Matsumi and Marsella (1976) administered a word association test to Japanese and Americans to reveal that while Americans associated the word ‘depression’ with predominantly mood-state terms such as sad and lonely, Japanese associated *yuutsu* (depression in Japanese) with somatic references such as headaches, as well as external referent terms such as rain and clouds. In addition, in a study where Hong Kong Chinese speaking Cantonese were asked to produce as many words as they could to describe emotional discomfort, a significantly higher proportion of words related to bodily symptoms or a body organ were mentioned compared to emotional words (Wong & Kwong, 1981).

*Cultural difference in the perception of bodily sensations*

Considering the role of language in perception of emotions, and more specifically in detecting sensations of internal changes in the body, one may wonder whether there are any differences in the perceptions of bodily sensations between the cultural contexts that tend to rely on somatic language to denote distress and those that do not. Growing evidence suggests that somatization may be associated with the inability to accurately perceive one’s bodily states
(Aronson, Barrett, & Quigley, 2001; Barsky, Goodson, Lane, & Cleary, 1988; Bogaerts et al., 2008; Gardner, Morrell, & Otrowski, 1990). For example, poor interoceptive accuracy, which is the accuracy of detecting physiological change inside the body from a variety of sources, such as heart and lungs, was associated with greater, rather than lower, reports of somatic symptoms (Bogaerts et al., 2008).

Indeed, individuals from non-Western cultural contexts, which put emphasis on physical rather than on emotional states, may be worse at attending to internal bodily changes than individuals from North American culture (Chentsova-Dutton & Dzokoto, 2014; Ma-Kellams, Blascovich, & McCall, 2012; Bogaerts et al., 2008). In a study by Ma-Kellams and colleagues (2012) using a heartbeat detection task, Chinese subjects were less accurate in detecting their heart beat compared to their European American counterparts (Study 3). In addition, Chentsova-Dutton and Dzokoto (2014) found that West Africans, a cultural group that is known to rely heavily on referencing body parts in affective expressions (Dzokoto, 2010), were less accurate in detecting their heart rate changes in response to a fear-inducing film clip compared to European Americans. Thus, although much more research is needed to be confident, the current state of knowledge suggests that the cultural difference in somatization may in part be associated with differences in the ability to accurately detect bodily changes. This cultural tendency to misperceive one’s own bodily states may in fact demonstrate the relative salience of somatic script of emotional experience in non-Western cultural contexts. The greater reliance on somatic script in this cultural context could actually draw individuals’ attention away from the physiological information and result in inaccurate bodily perception (Chentsova-Dutton & Dzokoto, 2014).
The cultural differences in mind-body relationship and language used to denote distress have been reviewed as the possible underlying causal factors of somatization. In addition, the presence of cultural difference in the perception of bodily sensation was examined, which can be understood in light of the different prominence of somatic emphasis in culturally available script. Altogether, these provide important insight into factors that are relevant to somatization at the intrapersonal level. Earlier in this chapter, I emphasized the view that emotional communication is fundamentally interpersonal and unfolds in the sociocultural context. Somatization, too, at its core, is emotional communication and thus should be examined in the context of cultural meaning systems regarding emotions. However, to my knowledge, no study has investigated the interpersonal consequences of somatization in different cultural contexts. In the remainder of Chapter 1, cultural differences in interpersonal aspects of emotions will be discussed in detail.

**Culture and emotional expression**

East Asians’ tendency to emphasize somatic symptoms rather than emotional states in their communication can be understood in relation to their cultural norms for expressing emotions (Cheung, 1986; Kleinman, 1986; Ryder & Chentsova-Dutton, 2012). In East Asian cultural contexts, extreme negative emotions, such as losing one’s temper, have been considered particularly dangerous (Wu & Tseng, 1985; Russell & Yik, 1996), since outwardly expressing these emotions has potential to offend others (Levenson, Ekman, Heider, & Friesen, 1992; Tsai & Levenson, 1997; Lutz, 1988; Soto, Levenson, & Ebling, 2005; Wu & Tseng, 1985). Chinese medicine regards extreme emotions as potential causes of physical illness, and, according to this tradition, one must moderate and control them in order to achieve health (Wu & Tseng, 1985).
Notably, paying attention to and maintaining social harmony is particularly crucial for East Asians who tend to endorse the interdependent model of self (Kitayama & Markus, 2000; Markus & Kitayama, 1991; Triandis, 1995). The interdependent model of self is described as viewing oneself as inseparable from social relationships and one’s behavior is largely contingent upon others’ thoughts, feelings, and behaviors (Kitayama & Markus, 2000; Markus & Kitayama, 1991). In these cultural contexts, a sense of belongingness and connection to others is the primary concern for individuals (Lebra, 1976). Accordingly, preventing potential risks to relational harmony becomes an important goal for individuals in interdependent cultural contexts, and thus, emotional constraint or suppression is a norm in this culture (Matsumoto et al., 2008; Wierzbicka, 1994). This may be especially true for cases of severe emotional disruptions like depression that trigger strong social stigma. Stigma is a powerful factor worldwide that motivates people to reject, avoid, and distance themselves from people with mental illness (Hwang, Myers, Abe-Kim, & Ting, 2008). Stigma in Asian culture has a particularly great impact in that mental illness not only reflects badly on the individual who is ill, but also on his or her family members (Littlewood, Jadhav, & Ryder, 2007; Ryder, Bean, & Dion, 2000). Thus, East Asians have the tendency to limit their emotional communication to their primary social networks including family members or close friends (Cheung, Lau, & Wong, 1984).

In comparison, the independent model of self is endorsed in European American contexts (Markus & Kitayama, 1991). The independent model of self is described as viewing oneself as unique and autonomous being that is separate from their families or social groups and one’s behavior is largely contingent upon one’s own thoughts, feelings, and behaviors (Kitayama &
Markus, 2000; Markus & Kitayama, 1991). In this independent cultural context, open and explicit emotional expressions allow individuals to ascertain their unique sense of self. Thus, emotional expression is not only a societal norm but also a predictor of positive outcomes, such as subjective well-being (Berenbaum & James, 1994; Wierzbicka, 1992). For example, some studies that were conducted with European American subjects have suggested that emotional expressions are functional for maintaining self-consistency (Rogers, 1951; Su et al., 2013), which is important to subjective well-being (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997; Suh, 2002), whereas suppressing emotions is considered to be harmful to maintaining one’s self as a consistent and genuine being.

*Emotional suppression in cultural contexts*

Emotional suppression has different implications for East Asians and European Americans. These differences are driven by their cultural norms for emotional expressions. Accordingly, the effect of emotional suppression on interpersonal interaction should be examined with these different cultural norms in mind. However, most research examining the effects of suppression has been conducted in North American cultural contexts. Most previous research has shown suppression to be maladaptive and even pathological, especially for negative emotions. For instance, Wenzlaff and Wegner (1996) argued that avoiding negative thoughts and emotions by denying or suppressing them results in prolonging and aggravating both the situation and the resultant distress. Moreover, empirical evidence suggests that emotional suppression is disruptive for multiple aspects of intrapersonal and interpersonal psychological processes, causing stress for both suppressors and their interaction partner (Butler, 2011; Gross, 1998; Kappas & Descoteaux, 2003; Keltner & Kring, 1998). For example, suppression has been linked with increased
cardiovascular responding, which is known to be associated with stress response and subsequent weakening of immunity (Gross, 1998; Harris, 2001) and with reduced memory for details of visual stimuli as well as episodes in daily lives (Richards & Gross, 2000), suggesting that it creates increased physiological and cognitive load for the suppressor. In addition, studies have shown that expressive suppression leads to more distraction and less responsiveness during conversation with the interaction partner, resulting in negative social consequences such as reduced rapport and affiliation potential (Butler, Egloff, Wilhelm, Smith, Erickson, & Gross, 2003; Butler, Lee, & Gross, 2007). However, much research on expressive suppression has been conducted in the United States, with subjects of primarily European American background. The negative effects of suppression may not be generalizable to people from other cultural backgrounds, especially for those who hold interdependent selves (Butler et al., 2007; Soto, Perez, Kim, Lee, & Minnick, 2011).

Indeed, emerging research suggests that emotional suppression is not necessarily maladaptive in interdependent cultural contexts. In fact, it may be normative or even functional. Although it is still scarce, growing empirical evidence suggests that the detrimental effects of suppression on social interaction may be attenuated depending on the cultural values one holds (Butler et al., 2007; Cheung & Park, 2010; Le & Impett, 2013; Su, Lee, & Oishi, 2012; Soto et al., 2011). Specifically, for individuals endorsing Asian values to a greater degree, suppression is associated with prosocial goals, such as preserving relationships, as opposed to self-protective goals that are considered to have harmful social impact (Butler et al., 2007). In addition, the relationship between suppressing anger and depressive symptoms is attenuated by one’s interdependent self-construal (Cheung & Park, 2010). Moreover, suppressing emotions in specific situations can
even offer important benefits (Le & Impett, 2013; Su et al., 2012). In Le and Impett’s recent study (2013), suppressing negative emotions in dating relationships for the sake of one’s romantic partner (i.e., sacrificing) predicted greater authenticity felt in a romantic relationship, which ultimately enhanced one’s well-being and relationship quality.

In sum, whereas emotional suppression goes against the norm of openly expressing emotion in European American cultural context, it may be understood in relation to the tendency to avoid expressing emotions to others in hopes of maintaining social harmony in East Asian cultural context. As the cultural script of hwa-byung suggests that suppression of anger leads to physical illness, it is possible that somatizing tendency of East Asians is positively associated with emotional suppression.

**Culture and help-seeking**

The cultural differences in support-seeking, which is one of the critical motivations for emotional communications, appear to be consistent with cultural differences in emotional expression. Consistent with the tendency to avoid active disclosure of the negative emotional experiences in interpersonal contexts, East Asians are more reluctant to directly seek support from others compared to European Americans (Kim, Sherman, & Taylor, 2008; Taylor, 2004). For example, in a study in which participants reported their preferred strategies to deal with stress (i.e., seeking emotional support, positive reframing, and denial), participants with an Asian cultural background reported using social support less to cope with stressful situations compared to European American participants (Taylor et al., 2004). Specifically, Asians and Asian Americans sought less emotional support (e.g., “I got comfort and understanding from someone”) than did European Americans. Examinations of possible explanations for this cultural
difference revealed that compared to European Americans, Asian Americans tended to show greater levels of relationship concerns, that is, fear of negative consequences for seeking help in relationships (Taylor et al., 2004; Kim, Sherman, Ko, & Taylor, 2006).

The notion that reluctance to help seeking is due to sensitivity to relational concerns in seeking social support was further supported by a study that observed the support seeking behavior of European American and Asian American couples (Sherman, Kim, Pearson, Kane, Guichard, & Safarjan, 2009). In this study, one member of the couple was asked to prepare to give a speech while the other member of the couple was given a puzzle to complete. The difficulty level of the puzzle was manipulated to create two groups. In the first group, participants were given a difficult puzzle and thus had few resources to support their highly stressed partners who were preparing for a speech. In the second group, participants were given an easy puzzle and had more resources to support their partners. The results showed that while European Americans sought support regardless of the difficulty level of the puzzle assigned to their partner, Asian Americans’ support-seeking depended on the kinds of puzzles assigned to their partner. Asian Americans sought less help from their partners when their partners had a more difficult puzzle. This study supports the notion that Asian Americans are more likely to be tuned in to relational concerns and thus take other persons’ situations into account to a greater degree when deciding whether they would seek help from them. Furthermore, the same relational concerns led Asian Americans to perceive the help from others as less than effective (Taylor et al., 2004; Kim et al., 2006). These findings about Asian Americans’ reluctance to seek support explicitly due to relational concerns are congruous with East Asian model of interdependent self.
Notably, a closer look at different kinds of social support revealed that implicit social support, which is distinct from explicit social support, is used more by East Asians than by European Americans (Kim et al., 2008). Unlike explicit support, implicit social support does not involve explicit disclosure of one’s problems. Implicit forms of seeking help, which involve reminding oneself of close others without discussing one’s stressful situations explicitly, resulted in less negative impact on biological stress response or negative emotions like regret or shame for East Asians (Kim et al., 2008; Taylor, Welch, Kim, & Sherman, 2007) and was associated with higher relational quality (Chen, Kim, Sherman, & Hashimoto, 2014). Thus, Kim and colleagues (2008) have concluded that implicit modes of help seeking would be more beneficial for Asians than explicit help seeking, whereas European Americans may benefit more from explicit than implicit social support use.

Based on the perspective that views somatization as distress communication, the cultural differences in two important interpersonal aspects of emotions, emotional expression and help-seeking, have been reviewed. The central element of the differences in the interpersonal aspects of emotional communication between East Asian and American cultural contexts is the varying levels of emphasis put on relational concerns. Thus, it would be important to take individuals’ relational concerns into account in examining their distress communication in interpersonal interactions.

*Somatization and help-seeking*

Against the cultural background of avoiding emotional discussions and reluctance to seeking help, somatization has been viewed by some researchers as an effective coping strategy in East Asian culture (Kleinman, 1982; 1986; Kirmayer & Young, 1988). In contrast, others have
considered somatization to be a strategy of masking the “real” psychological problems and preventing people from getting the needed help (Allen, Gara, Escobar, Waitzkin, & Silver, 2001; Dubovsky, 1997). That is, somatization is thought to be a debilitating factor preventing Asians from identifying mental illness, ultimately resulting in the delay of seeking professional help (Zhang, Snowden, & Sue, 1998). They have argued that Asians’ tendency to somatize emotional experiences is reflected in significantly lower rates of utilization of mental health services in countries such as Hong Kong (Chiu, 2004; Rudowicz & Au, 2001), Taiwan (Lin, 2002), mainland China (Chang, Tong, Shi, & Zeng, 2005), Singapore (Ow & Katz, 1999; Quah & Bishop, 1996), and South Korea (Lee, Cho, & Lee, 1989), as well as among Asian Americans living in the United States (USDHHS, 2001). Many physicians, social scientists, and Western psychiatrists, with few exceptions (Kleinman, 1982; 1986; Kirmayer & Young, 1998), have regarded somatization as maladaptive and pathological (Allen, Gara, Escobar, Waitzkin, & Silver, 2001; Dubovsky, 1997).

However, the data on the relationship between somatic symptom reporting and help seeking is still inconclusive (Bridges, Goldberg, Evans, & Sharpe, 1991; Chang, 2007; Mak & Zane, 2004; Zhang, Snowden, & Sue, 1998; Yoo & Skovholt, 2001). There is growing empirical evidence that suggests that individuals who somatize are more likely rather than less likely to seek help from others (Cheung, 1987; Kung & Lu, 2008; Mak & Zane, 2004; Ritsner, Ponizovsky, Kurs, & Modai, 2000). In a study with Chinese Americans, a significantly higher percentage of somatizers sought help from a psychiatrist or other mental health specialists and medical doctors for their mental health problems compared to non-somatizers (Mak & Zane, 2004). This pattern held even after controlling for the symptom severity, comorbidity, and social
disruptiveness, that is, the degree to which their lives and activities were disrupted by the symptoms of disorder (Kung & Lu, 2008). Given the current state of knowledge, somatization does not seem to discourage help seeking intention, but rather reflect a tendency of Chinese people to attribute distress to physical rather than psychological symptoms (Kung & Lu, 2008; Mak & Zane, 2004; Parker et al., 2001). Therefore, the lower rates of utilization of mental health services may be attributable to factors other than somatization, such as lower accessibility of mental health services in East Asian cultural contexts (Jacob et al., 2007). As an illustration, a number of psychiatrists per 100,000 people are 4 in China and 3.5 in Korea compared to 13.6 in the United States (Jacob et al., 2007).

**Somatization as a communication strategy**

One question researchers posited on somatization is whether it has utility in the interpersonal context, specifically in securing social support or health resources (Cheung, 1986; Kleinman, 1986; Ryder & Chentsova-Dutton, 2012). Just as beliefs and practices are shared among members of a cultural context, as illustrated by hwa-byung, somatization may be distributed as a cultural script among members of a given culture. Based on the perspective of some researchers who view scripts as socially effective strategies that are likely to have utility (Chiu, Kim, & Chaturvedi, 2009; Chiu et al., 2010; Yamagishi et al., 2008; Yamagishi & Suzuki, 2009; Yamagishi, 2010), I hypothesized that employing somatization is a functional communication strategy that leads to positive interpersonal consequences. Such an effective communicative strategy might have a positive impact on the experiences of a person who is expressing distress. It may relieve communicators’ apprehension about disrupting relational harmony and make communication more free-flowing. This may result in a feeling that one communicates
effectively. Moreover, an effective communicative strategy would bring about positive reactions from the interaction partner, such as support and empathy.

One potential pathway to the formation of scripts is through the process of socialization via interpersonal responses that reinforce specific forms of expression (D’Andrade, 1984; Kirmayer & Sartorius, 2007; Spiro, 1961). For example, interpersonal verbal and nonverbal reinforcement may shape one’s interpretation and labeling of distressing experiences in somatic or psychological terms (Lam, Marra, & Salzinger, 2005). In a study conducted on American undergraduates, Lam and colleagues (2005) found that participants who received verbal social incentives (i.e., positive verbal reaction) after using either somatic or psychological words to describe distressing situations subsequently increased their use of the reinforced type of words. In line with this mechanism of social reinforcement, some researchers suggested that Chinese family interaction may in part be responsible for somatization (Wu & Tseng, 1985). According to Wu and Tseng (1985), Chinese mothers demonstrate care and love for their children by paying attention to their bodily needs; while expressing negative emotions like fear would not get a child much attention or may even result in getting scolded, complaints about abdominal pain would prompt his or her mother to give the child some warm soup to eat (Wu & Tseng, 1985).

**Summary and Research Overview**

Previous work has focused on the factors related to the cultural differences in somatization, including mind-body relationships, language use, and bodily sensations. Going beyond the previous literature, the present research adopts the perspective that somatic expressions may serve as a communicative strategy in interpersonal contexts. The primary aim of the present research was to examine cultural differences in the use of somatic expressions, in particular the
communicative effects they have on people engaged in an interpersonal interaction. At the same time, concerns about relationships people have when sharing negative experiences with others were considered while taking cultural contexts into account. The present work will be the first to test whether there are differential consequences of somatic expressions for communicators’ (people who discloses distress) (Study 1) and for interaction partners (people who are the target of the distress disclosure) depending on the cultural contexts (Study 2).

The current study attempts to examine distress expressions in Korean and American cultures, the two cultural contexts that have differed in their emphasis on somatic symptoms in the previous literature. Specifically, the distress communication of individuals from these cultural contexts was examined by looking into their distress narratives. Numerous scholars have argued that the ways people use words serve as a window to their psychology (for a review see Pennebaker, Mehl, & Niederhoffer, 2003). Given that the words we use in daily life to communicate with others reflect our internal thoughts and emotions, and that somatization has been detected during verbal communication in the past, investigating distress narratives is appropriate for the purposes of studying this phenomenon.

Chapter 2. Empirical studies on distress communication in cultural context

Study 1 – Communicative effects of somatization on a communicator

In Study 1, participants wrote about their experiences of negative emotions to an imagined interaction partner. There are various approaches to analyzing verbal behaviors, focusing on different aspects of language. Due to its efficiency, quantitative approach to text analysis has gained popularity among researchers interested in identifying psychological properties in
language. The present study chose the Linguistic Inquiry and Word Count (LIWC) for quantitative text analysis of the American participants’ narratives (Pennebaker, Francis, & Booth, 2001). The LIWC program has been widely used in previous studies and validated to detect a wide range of meaningful psychological processes including attentional focus, emotionality, social relationships, and thinking styles (for a review, see Tausczik & Pennebaker, 2010). The LIWC operates based on a word count strategy. It provides simple word counts of categories such as grammatical units (e.g., personal pronouns, articles), psychological dimensions (e.g., emotion words, social words), and biological processes (e.g., eat, pain, body). The narratives of Korean participants were analyzed using the Korean Linguistic Inquiry and Word Count (KLIWC, Lee, Shim, & Yoon, 2005). This study focused on two word categories: somatic and negative emotion words. Somatic words included physical symptoms or states (i.e., ache, heart), eating, and sleeping. Negative emotion words included anger, anxiety, and sadness (i.e., hurt, angry).

Study 1 investigated two different social settings in communication, considering that individuals’ behaviors depend on social partners (Goffman, 1967; Pennebaker et al., 2003), particularly for those of interdependent cultural context (Markus & Kitayama, 2000). The two interaction partners selected were a friend and a therapist. Friends are thought to be one of the most common sources of companionship and support (Crohan & Antonucci, 1989). Particularly, East Asians were more likely to rely on friends rather than on mental health professionals about their psychological problems (Cheung et al., 1984). The other interaction partner, a therapist, was chosen given that previous findings of somatization were largely based on client-expert (i.e., psychiatrist, counselor, or therapist) relationship. More specifically, participants in Study 1 were
asked to write distress narratives either in the imagined presence of a close friend or a psychology professional (i.e., therapist, counselor). This method allowed an examination of individuals’ emotional descriptions as directed at a specific partner. Although hypothetical in nature, previous studies have found this method to be effective in deriving different language use depending on the interaction partner (Morand, 2000).

Based on the previous literature on culture and emotion in interpersonal context, I predicted that Koreans would use more somatic expressions than Americans. Given the lack of previous empirical studies, whether individuals differ in somatic words used in their distress narratives depending on the interaction partner (therapist vs. friend) is an exploratory question. More importantly, Study 1 examined whether there are any cultural differences in the positive effect of somatic expressions on a communicator, specifically focusing on perceived quality of disclosure. Given the cultural script of somatic expressions of distress in Korean culture, I predicted that somatization has a positive effect for Koreans, such that the greater somatic expressions are associated with increased perceived disclosure quality by a communicator. In contrast, in the absence of such somatic script in American cultural context, it is predicted that somatic expressions are not associated with perceived disclosure quality for American communicators. In terms of the negative emotion words in the narratives, the present study examined whether there was any evidence of Western psychologization. Psychologization was previously observed in comparisons of Canadians and Chinese (Ryder et al., 2008; but see Tsai, Simenova, & Watanabe, 2004) and of European Americans and Ghanaians (Dzokoto et al., 2013). Given the previous findings on Western psychologization, I predicted that Americans would use greater negative emotional words than Koreans.
With respect to the characteristics of interdependent cultural contexts, it can be hypothesized that the perceived quality of disclosure would depend on the interaction partner for Koreans, who are likely to be more sensitive to interpersonal context (Matsumoto, 1993). Additionally, the preference for family members and friends over psychological professionals as confidants among Asians (Cheung et al., 1984) suggests that Koreans will view their disclosure experience with a friend as more favorable than with a therapist. In contrast, given that Americans’ emotional expressions are relatively less influenced by the interpersonal contexts (Matsumoto, 1993), it was predicted that Americans’ perceived disclosure quality would not differ depending on the interaction partner.

Additionally, another important cultural factor relevant to perceived disclosure quality considered was the relational concern about help seeking. The main focus was on the potentially moderating effect of culture on the relationship between relational concerns and perceived disclosure quality. Relational concerns involve the negative consequences of help-seeking, such as burdening others, upsetting relationships, or losing face (Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004). Based on the previous literature on the cultural differences in relational concerns and in the perception of its helpfulness to solve problems, I predicted that higher relational concerns would point to lower perceived disclosure quality for Koreans. In contrast, it is expected that the perceived disclosure quality of Americans would not be affected by the relational concerns.

Finally, Study 1 examined the relationship between suppression and somatization. Previous literature has posited that somatization may be associated with suppression (Dubovsky, 1997) and described hwa-byung as a condition that is due to chronically suppressed anger and linked
somatic nature of hwa-byung with Koreans’ tendency to repress negative emotions (Cho, 1991; Lim, Jung, & Seo, 2012; Min, Suh, & Song, 2009). Although there are no previous empirical finding regarding the relationship between emotional suppression and somatization, I predicted that suppression and somatic expressions would be positively associated.

To summarize, the main hypotheses based on the previous literature were as follows:

Hypothesis 1a: Koreans would use more somatic words in their disclosure statements than Americans.

Hypothesis 1b: Americans will use more negative emotion words in their disclosure statements than Koreans.

Hypothesis 2: Koreans’ perceived disclosure quality will be moderated by the interaction partner. Specifically, Koreans will report higher perceived disclosure quality when they direct their disclosure to a friend than to a therapist. In contrast, Americans’ perceived disclosure quality will not be moderated by the interaction partner.

Hypothesis 3: There would be a positive association between somatic words in the narratives and perceived disclosure quality for Koreans but not for Americans.

Hypothesis 4: Relational concerns would be negatively associated with perceived disclosure quality for Koreans but not for Americans.

Hypothesis 5: Participants who suppressed their emotional expression would show more somatic expressions in their disclosure.

**Method**

**Participants.** Participants were 113 Koreans (79 females and 34 males; 100% Koreans) and 119 Americans¹ (58 females and 61 males; 82.4 % White Americans, 10.1% African Americans, 7.5% Hispanic Americans, 0.8% Asian Americans, 0.8% Multiracial Americans).
5.0% Hispanic Americans, 3% other ethnicities). All Korean participants were born and raised in Korea. Korean participants were recruited from Kangwon National University, in Chun-cheon City, South Korea, in 2013. American participants were recruited using Amazon.com’s Mechanical Turk (MTurk) interface. They were restricted to those who reside in the United States and are between the ages of 18 and 25. The age was restricted in order to make the US sample equivalent to Korean college student sample. In addition to its remarkable convenience in recruiting participants, Mturk has been documented to be a valid way of getting quality data (Berinsky, Huber, & Lenz, 2011; Crump, McDonnell, & Gureckis, 2013). The independent samples t-test revealed that there was no difference in the SES of the family in which they grew up between Koreans and Americans (1 = low income; 5 = upper income) ($M_{\text{Korean}} = 3.00$, $SD_{\text{Korean}} = 0.83$; $M_{\text{American}} = 2.82$, $SD_{\text{American}} = 0.87$), $t(223) = -1.55$, $p = .122$. However, there was a significant difference in age between these two cultural groups, $t(184.43) = -2.62$, $p = .009$. Koreans ($M = 21.31$, $SD = 5.41$) were significantly younger than Americans ($M = 22.87$, $SD = 3.33$). This is due to the fact that American participants from Mturk consist of both students ($n = 58$) and non-students ($n = 60$). Additional analyses were conducted to ensure that the main results for student and non-student group in American sample were equivalent.

**Procedure**

First, participants completed the initial questionnaire which included questions asking demographic information and initial levels of positive and negative affect. They were then provided with an instruction telling them to write about a situation in which they had conflict with other(s), were treated unfairly, and felt very badly. The purpose was to capture negative emotional states, specifically anger, which is the prototypical emotion associated with the
Korean somatization syndrome, hwa-byung. The instruction purposefully avoided using the emotional words such as angry or upset in order to avoid priming semantic differences. The participants were asked to write about their experience as if they were talking to either a friend or a therapist. The instruction for the writing task was as follows:

Think about a situation in the past 12 months in which you had a conflict with someone, were treated unfairly and felt very badly. Now imagine that you are talking about the experience in this situation to one of your friends/to a therapist. Think about how this situation affected you physically or psychologically (for example, how it made you think or feel). In the space below, I would like you to write what you would tell your friend/a therapist about this experience, as if you are actually talking to him/her in person. Ideally, the situation you are writing about should be the one that you have not previously discussed with others, or have been discussed to a minimal extent. Don’t worry about spelling, sentence structure or grammar. Also, your information will remain confidential, so feel free to express yourself openly.

After writing about their negative experiences, participants completed a follow-up questionnaire asking about their perceived disclosure quality, relational concerns, and emotion regulation. The measurements assessing relational concerns and emotion regulation were provided after the writing task to avoid the possible influence that these measurements may have on participants’ disclosure. All materials including the writing instruction and measurements followed the standard translation and back-translation procedures. First, I translated the English material into Korean. Then, a person who is bilingual and proficient in English and Korean back-translated the Korean version into English. Any discrepancy between the original version and
back-translated English version was addressed through discussion between the translators to assure linguistic equivalence of the material.

**Materials**

*Initial mood.* The mood state of participants was assessed using the 10-item International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) (Thompson, 2007). Positive affect scale included items assessing the following states: alert, inspired, determined, attentive, and active. Negative Affect scale included items assessing the following states: upset, hostile, ashamed, nervous, and afraid. The items were measured on a 5-point scale ranging from 1 (Never) to 5 (Always). Cronbach’s alphas for positive affect were .60 and .83 for Koreans and Americans, respectively. Cronbach’s alphas for negative affect were .79 and .83 for Koreans and Americans.

*Negative impact of the experience.* Participants were asked to rate the degree of the negative impact of the experience described in the narratives. This measure included two items asking: “how serious was this experience?” and “how much distress this experience caused you?” The items were measured on a 4-point scale ranging from 1 (*Not at all*) to 4 (*Very much*). The average score of these two items was used as a composite score of negative impact of the experience. Cronbach’s alphas for these two items were .71 for Koreans and .67 for Americans.

*Relational concerns.* Participants completed an 11-item questionnaire that captures the concerns that might affect whether or not they might seek social support from others (Kim, Sherman, Ko, & Taylor, 2006). Participants were asked to rate how important each of the concerns would be for them in seeking social support on a scale of 1 (*Not at all*) to 5 (*Very much*). The relational concerns items captured reasons for not seeking social support, such as
desire to maintain the group harmony, belief that seeking help would make the problem worse, concern for others’ evaluation and criticism when sharing problems. Cronbach’s alphas of this scale were .86 for Koreans and .91 for Americans.

**Perceived disclosure quality.** After writing about their experience, participants were asked to report how they evaluated their experience of disclosing distress to the interaction partner. Participants’ perceived disclosure quality encompasses the perception of self-efficacy in communicating distress, the expectation of empathetic response from the interaction partner, and general satisfaction with disclosure. This measure consisted of three items asking to report the interaction partner’s (a friend or a therapist) empathy for them, the extent to which their communication was effective, and the extent to which they were satisfied with their disclosure. These items were rated on a 4-point scale ranging from 1 (*Not at all*) to 4 (*Very much*). I averaged across these items to generate a composite score of perceived disclosure quality. Cronbach’s alphas for these three items were $\alpha = .86$ for Koreans and $\alpha = .81$ for Americans.

**Emotion regulation.** Emotion regulation was measured with items developed by Iris Mauss (personal communication, August 12, 2013). Of the emotion regulation strategies in this questionnaire, only suppression was used in the analysis for the purpose of the study. Suppression was measured with a single item asking whether participants thought they were successful at hiding their emotions on a scale of 1 (*not at all or very slightly*) to 5 (*extremely*). There was a marginal cultural difference in the level of suppression, with Koreans reporting higher levels of suppression than Americans, $t(223.02) = -1.66, p = .09$. In order to examine whether there was any difference in the use of somatic words depending on the level of suppression, participants were categorized into two groups, one reporting low levels of
suppression and the other – high levels of suppression. Participants who responded with either “not at all or very slightly” or “a little” to this question were grouped into the low suppression group, whereas those who responded with “moderately”, “quite a bit”, or “extremely” were classified into the high suppression group. This resulted in 86 participants in the low suppression group (74 Koreans and 67 Americans) and 141 participants in the high suppression group (34 Koreans and 52 Americans). There was a marginally different proportion of participants who were categorized into the two groups, Pearson’s $\chi^2 (1, N = 227) = 3.59, p = .058$. 68.5% of Korean participants and 56.3% of American participants were in the high suppression group.

**LIWC categories.** Of the categories available in LIWC, eight word categories were relevant to the present study: negative emotion words (i.e., hate, nervous), anxiety words (i.e., tense, afraid), anger words (i.e., hate, pissed), sadness words (i.e., grief, cry, sad), physical state words (i.e., ache, breast), body state words (ache, heart, cough), eating words (eat, swallow, taste), and sleeping words (asleep, bed, dreams). Each LIWC variable represents the percentage of the number of words that belongs to the categories in a given text. Furthermore, studies using the LIWC have reported good internal consistency across time, topic, and text source (Pennebaker & King, 1999; Mehl & Pennebaker, 2002). For example, Pennebaker and King (1999) tested the reliability of LIWC by comparing daily diaries of participants over repeated sessions and showed that the language use of participants was reliable over time. The consistency of language use was also observed with daily writing assignments of summer school students and authors of psychological research articles. In addition, the external validity of LIWC was tested by comparing LIWC categories (e.g., positive and negative emotions, several types of thematic contents) and human ratings of writing samples of assigned topics (deepest thoughts and feelings.
about coming to college vs. control) (Alpers et al. 2005; Pennebaker & Francis, 1996). The results of Pearson correlational analyses indicated that LIWC categories and human judges’ ratings were highly correlated.

Below is a sample of a disclosure narrative written by a Korean participant, as analyzed by LIWC.

“I have a master’s degree in international relations and I wanted to find a job that is relevant to what I studied. I took this job at a research institute where I get to work on relevant issues, however, it is a temporary position for one year and the pay is unbelievably low. Also, I am realizing now that the work is mostly administrative, boring, and so simple that even a high school graduate could manage it. Moreover, one coworker and I have been on bad terms since the beginning….For some reason, this girl is jealous of me and talks about me behind my back, which is so upsetting. Low salary, dull tasks, and a mean coworker are enough reasons to quit the job but I have no other option at the moment but to stay here. Ever since I started this job I haven’t been digesting food well and every once in a while I throw up. Also, one day, my sister found a patchy baldness in my hair.” (bold letters indicate somatic words according to LIWC)

**Results**

**Topics of the disclosure narratives**

Disclosed experiences included: conflicts with friend(s) (betrayal, falling out) (42.3% Korean; 29.1% American), problems with family members (parents, siblings, spouses, and relatives) (16.5% Korean; 19.7% American), romantic conflict (break-up, infidelity, and argument) (8.2% Korean;
12.0% American), conflict with people at work (boss, colleagues) (12.4% Korean; 21.4% American), conflict with strangers (e.g., customers, shop owners, taxi drivers) (10.3% Korean; 7.7% American), and other (stress from low income, searching for jobs, etc.) (10.3% Korean; 10.3% American). Two additional categories that emerged only from narratives created by Korean participants but not American participants were conflict with seniors (school seniors, 0.09%) and self-blame (blaming oneself in the situation, 0.05%).

**Initial mood**

There was a significant cultural difference in initial mood. Koreans were lower in positive affect (Koreans: $M = 3.67$, $SD = 0.90$, Americans: $M = 4.37$, $SD = 1.26$), $t(213.21) = 4.89$ and higher in negative affect, $p = .000$, and higher in negative affect (Koreans: $M = 2.34$, $SD = 1.08$, Americans: $M = 1.69$, $SD = 0.95$), $t(225) = −4.84$, $p = .000$. The initial levels of positive affect and negative affect were controlled for in the analyses examining participants’ perceived disclosure quality.

**Negative impact of the experiences**

There was a cultural difference in the levels of negative impact of the experiences disclosed by the participants. Americans reported greater negative impact of their experience than did Koreans ($M_{Korean} = 2.63$, $SD_{Korean} = 0.76$; $M_{American} = 3.03$, $SD_{American} = 0.71$), $F(3, 228) = 19.51$, $p < .001$, $\eta_p^2 = .08$. In addition, there was an effect of interaction partner condition. The negative impact of the experience was greater for participants in the therapist condition ($M = 2.96$, $SD = 0.75$) compared to those in the friend condition ($M = 2.70$, $SD = 0.76$), $F(3, 228) = 9.25$, $p = .003$, $\eta_p^2 = .040$. There was no culture by interaction partner condition interaction, $F(3, 228) = 0.23$, $p = .634$, $\eta_p^2 = .001$. Since the negative impact of emotional experience has been
associated with greater needs to share with others in previous studies (Rimé et al., 1998), the level of negative impact of the experience was controlled for in the subsequent analyses along with the initial positive affect and negative affect.

**Relational concerns in help-seeking**

There was no significant difference between Koreans and Americans ($M_{Korean} = 2.70, SD_{Korean} = 0.71$; $M_{American} = 2.87, SD_{American} = 0.91, F(1, 222) = 2.74, p = .10, \eta^2_p = .012$). There was also no effect of the interaction partner condition ($M_{Friend} = 2.74, SD_{Friend} = 0.75; M_{Therapist} = 2.83, SD_{Therapist} = 0.88, F(1, 222) = 0.91, p = .342, \eta^2_p = .004$), nor the culture by target condition interaction, $F(1, 222) = 0.03, p = .857, \eta^2_p < .001$.

**Somatic and emotion word categories**

In order to ensure that LIWC and KLIWC operate relatively equivalently, I examined the structure of LIWC and KLIWC variables by looking at the correlations between overarching categories (i.e., emotion words, somatic words) and subcategories (i.e., negative emotion, anger, body) of interest. As is shown in the correlation tables, the relationship among the emotion (somatic) subcategories between LIWC and KLIWC are highly similar (Table 1a and Table 1b).

**Word categories in the narratives**

To test Hypothesis 1a, the somatic words (physical state, body, sleep, eat) in LIWC were analyzed in 2 (culture: Korean, American) x 2 (interaction partner condition: therapist vs. friend) multivariate analysis of variance (MANOVA). Similarly, to test Hypothesis 1b, negative emotion words (anxiety, anger, sad) were analyzed in 2 (culture: Korean, American) x 2 (interaction partner condition: therapist vs. friend) MANOVA. Table 2 presents the mean rates and standard deviations for each word category across the two cultural groups. Two interaction partner
conditions were collapsed since there was no main effect or the interaction effect between interaction partner condition and culture for any of the word categories.

**Somatic words**

The main effect of interaction partner condition was not significant (all $F$s < 2.23), but there emerged the main effect of culture, $F(4,225) = 23.18, p < .001, \eta_p^2 = .292$. Consistent with the prediction based on previous literature, a follow-up univariate ANOVAs revealed that Koreans were more likely than Americans to use physical state words, $F(1,228) = 9.24, p = .0031, \eta_p^2 = .039$, body state words, $F(1,228) = 22.30, p = .000, \eta_p^2 = .089$, eating related words $F(1,228) = 19.604, p = .000, \eta_p^2 = .079$, and sleep related words $F(1,228) = 15.43, p = .000, \eta_p^2 = .063$. No interaction of culture by interaction partner condition was observed, $F(1,228) = 0.10, ns$.

**Negative emotion words**

The main effect of interaction partner condition was not significant (all $F$s < 1.26). There emerged a main effect of culture, $F(4,225) = 6.57, p < .001, \eta_p^2 = .104$. A follow-up univariate ANOVAs revealed that, contrary to the hypothesis, Koreans were more likely than Americans to use negative emotion words in their responses, $F(1,228) = 10.49, p = .001, \eta_p^2 = .044$. There were no cultural group differences in anxiety ($F(1,228) = 0.02, ns$), anger ($F(1,228) = 0.20, ns$), and sadness words ($F(1,228) = 0.05, ns$). There was no culture by interaction partner condition effect on any of the negative emotion word categories (all $F$s < 1.18). Thus, Hypothesis 1b was not supported.

**Perceived disclosure quality**
I anticipated a significant interaction between culture and other predictors on perceived disclosure quality. Specifically, Korean participants’ perceived disclosure quality was expected to vary depending on the interaction partner, somatic words, and relational concerns, whereas it was predicted that American participants would not be affected by these variables. To provide an overall impression of the pattern of associations among the variables, the correlations of the three variables (somatic words, negative emotion words, and perceived disclosure quality) in each cultural group and for each interaction partner condition are presented in Table 3.

These predictions were tested with a hierarchical multiple regression. In Step 1, the baseline levels of positive affect and negative affect, and the negative impact of the described experiences were entered to control for these factors. In Step 2, dummy-coded interaction partner condition (therapist = 0; friend = 1), dummy-coded cultural group (American = 0; Korean = 1), somatic word use, and relational concerns were entered. In Step 3, the interaction between culture and interaction partner condition, culture and somatic words, and culture and relational concerns were examined. All of the continuous predictors in the analysis were centered to reduce multicollinearity and for ease of interpretation. Higher interaction terms were not included in the model, since preliminary regression models have shown that they did not contribute to additional explained variance ($\Delta R^2 = 0.003, p = .520$). Preliminary analysis showed no significant effects of gender or age, so these variables were dropped from the analyses.

The results from the hierarchical multiple regression analysis are summarized in Table 4. Consistent with the prediction, the main effect of culture was significant, indicating that Americans reported higher perceived disclosure quality than Koreans, $B = -.53, \beta = -.36, SE = .09, t = -5.63, p < .001$. In addition, interaction partner condition and relational concerns were
significant predictors for perceived disclosure quality. Specifically, participants who disclosed to a friend reported higher perceived disclosure quality than those who disclosed to a therapist, $B = .42, \beta = .29, SE = .08, t = 5.12, p < .001$, and those with higher degrees of relational concerns reported lower perceived disclosure quality, $B = -.11, \beta = -.13, SE = .05, t = -2.19, p = .031$. Among the control variables, only initial positive affect, $B = .14, \beta = .21, SE = .04, t = 3.69, p < .001$, but not the initial negative affect and the negative impact of the experience predicted perceived disclosure quality (Step 2).

More importantly, the results from Step 3 revealed that the effects of interaction partner condition, relational concerns, and somatic words on perceived disclosure quality were moderated by culture. As shown in Figure 2, there was a significant interaction between culture and interaction partner condition, $B = .65, \beta = .35, SE = .13, t = 4.23, p < .001$, indicating that Koreans who disclosed to a friend reported higher perceived disclosure quality than those who did to a therapist, whereas Americans’ perceived disclosure quality did not differ for the interaction partners. There was also a significant interaction between culture and somatic words, $B = .20, \beta = .20, SE = .07, t = 2.83, p < .01$, indicating that for Koreans, but not for Americans, there was a positive association between somatic words and perceived disclosure quality, as shown in Figure 3. Finally, there was a significant interaction between culture and relational concerns, $B = -.34, \beta = -.22, SE = .10, t = -3.45, p < .001$, indicating that for Koreans, but not for Americans, there was a negative association between relational concerns and perceived disclosure quality, as shown in Figure 4.

To probe the significant interaction effects, I used Hayes and Matthes’s (2009) MODPROBE SPSS macro and examined the effects of the predictors, interaction partner, somatic word use,
and relational concerns, on perceived disclosure quality depending on the moderator (culture). 

The analyses showed that the effect of interaction partner was significant for Koreans, $B = .78$, $SE = .11$, $t = 7.01$, $p < .001$, but not for Americans, $B = .13$, $SE = .07$, $t = 1.21$, $p = .226$. 

Likewise, the effect of somatic words was only significant for Koreans, $B = .19$, $SE = .06$, $t = 3.07$, $p < .01$, but not for Americans, $B = -.01$, $SE = .05$, $t = -0.21$, $p = .837$. Lastly, the effect of relational concerns was significant for Koreans, $B = -.32$, $SE = .09$, $t = -3.60$, $p < .001$, but not for Americans, $B = .02$, $SE = .07$, $t = 0.29$, $p = .77$. The results from these analyses supported Hypotheses 2-4.

Additionally, in order to examine whether student and non-student group in American sample are comparable, I ran the main analyses for both groups separately. Including only the student group of American sample resulted in the same pattern of results found in the sample as a whole. There was a significant effect of culture on perceived disclosure quality, with Americans reporting higher perceived disclosure quality than Koreans, $B = -.87$, $\beta = -.55$, $SE = .15$, $t = -5.73$, $p < .001$. There was a significant culture by somatic words interaction, $B = .24$, $\beta = .27$, $SE = .09$, $t = 2.69$, $p = .008$, and a significant culture by relational concerns interaction, $B = -.34$, $\beta = -.26$, $SE = .12$, $t = -2.83$, $p = .005$. Likewise, including only the non-student group of American sample resulted in the same pattern. There was a significant effect of culture on perceived disclosure quality, with Americans reporting higher perceived disclosure quality than Koreans, $B = -.73$, $\beta = -.48$, $SE = .14$, $t = -5.13$, $p < .001$. There was a significant culture by somatic words interaction, $B = .18$, $\beta = .20$, $SE = .08$, $t = 2.30$, $p = .023$, and a significant culture by relational concerns interaction, $B = -.29$, $\beta = -.20$, $SE = .11$, $t = -2.64$, $p = .009$.

**Suppression and somatic words**
To explore whether there is a cultural difference in the effect of suppression on somatic words, 2 (Cultural group: Korean, American) × 2 (Suppression level: Low, High) ANOVA for somatic words used was conducted. There was no main effect of suppression level on somatic words, $F(1, 223) = 0.57, p = .448, \eta^2_p = .003$, but a significant main effect of culture was observed, $F(1, 223) = 4.51, p = .035, \eta^2_p = .020$. There was also a significant Cultural group × Suppression level interaction effect, $F(1, 223) = 8.60, p = .004, \eta^2_p = .037$. Further analyses revealed that for Koreans, the high suppression group ($M = 1.46, SD = 1.12$) used more somatic words than the low suppression group ($M = 0.93, SD = 0.77$), $t(89.80) = -2.86, p = .005$. For Americans, somatic words did not differ between the high suppression group ($M = 0.74, SD = 0.82$) and the low suppression group ($M = 1.05, SD = 1.27$), $p = .108$ (see Figure 1). Thus, Hypothesis 5 was supported.

Discussion—Study 1

In Study 1, I examined somatic and negative emotion words that appeared in the disclosure narratives of Koreans and Americans. In addition, perception of disclosure quality of Koreans and Americans were examined in relation to the somatic words used in the narratives, the interaction partner of disclosures, and the concerns about relationship. Several findings have been obtained. Consistent with previous literature on somatization, the present study provided initial evidence that Koreans relied more on somatic expressions than did Americans when they were disclosing distressing experiences to friends and therapists. To my knowledge, findings from Study 1 provide the first empirical evidence of the cultural differences in the use of somatic expressions by people from Korean and American cultural contexts. This adds to the previous empirical findings that documented a preponderance of somatic references in the communication...
of negative emotions in non-Western cultural contexts (e.g., Chinese, Ghanaian) (Dzokoto et al., 2013; Tsai et al., 2004).

Unexpectedly, however, Koreans also used more negative emotion words than Americans, which was inconsistent with the argument that Westerners are more likely than non-Westerners to have a “psychologization bias” (Parker et al., 2001). This may be due to the peculiarity of Korean language that is known to be rich in emotional words (Ahn, Lee, & Kwon, 1993), although there does not exist a previous study that directly compared categories of emotions in English versus Korean. With previous literature in cultural psychology treating Japan, Korea, and China as a single cultural entity and referring to it as “East Asia”, the subtle differences among these groups have often been overlooked (Chu, Abe, Hall, Kim, Njoroge, & Qin, 2009; Flores & Huo, 2102). The present results indicate that unlike the Chinese, Koreans may use similar levels of emotion and somatic words to communicate to others that they are distressed. Further studies need to replicate this pattern.

Koreans’ use of somatic words did not depend on the interaction partner, suggesting that the cultural script of somatization may not be limited to clinical settings, which were the focus of most prior studies. This adds to the recent findings that the cultural scripts of affective communication are characteristic of population as a whole, suggesting that clinical settings are only a part of a larger cultural context (Dzokoto et al., 2013). At least based on the findings from this study, Koreans’ tendency to use somatic words was associated with the ways in which they regulated emotions. Specifically, Koreans who thought they were successful in suppressing expression of emotions showed greater somatic references in their distress disclosure. Considering that emotional suppression is a cultural norm that is prevalent in East Asian context,
especially under circumstances where there are concerns for relational harmony (Shea & Yeh, 2008; Wierzbicka, 1994; Friesen, 1972), this finding suggests that regulating emotions in a culturally appropriate way may have led Koreans to use greater somatic words. Interestingly, somatic references of Americans were not affected by emotional suppression, suggesting that emotional suppressions may have different underlying mechanisms for Koreans and Americans. However, since the present study measured participants’ post-hoc evaluation of their emotion regulation, the causal link between suppression and somatization cannot be determined.

Although differences between the interaction partners did not impact somatic words used in the narratives for either Koreans or Americans, overall perceived quality of disclosure depended on the interaction partner for Koreans but not for Americans. As expected, Koreans perceived their disclosure to be more effective, satisfying, and to draw more empathy in their hypothetical communication with a friend compared to the one with a therapist. This result was consistent with previous research that has repeatedly found that Asians, compared to their American counterparts, are more reluctant to seek professional psychological help, underutilize formal mental health services, and end the treatment prematurely (Snowden & Cheung, 1990; Sue & Sue, 2003). This can be explained by Asian cultural values emphasizing avoidance of shame and saving “face,” especially in interaction with people outside a close familial relationship (Zane & Yeh, 2002; Inman & Yeh, 2006). On the contrary, Americans did not differ in perceived disclosure quality according to the interaction partner. This may be related to the Western cultural norms that encourage open emotional expression (Lutz, 1989; Kitayama et al., 2000) across different interpersonal contexts such as in public and in conversation with casual acquaintances (Matsumoto, 1993).
Moreover, perceived disclosure quality was differentially influenced by relational concerns about help-seeking for Koreans but not Americans. Although Koreans and Americans were not different in their reports of how much relational concerns they had about seeking help, Koreans, but not for Americans, perceived their disclosure to be particularly ineffective and unsatisfying when they were concerned about the potentially negative consequences for relationship. This is consistent with previous research highlighting the role of relational concerns in explaining the cultural difference in perceived benefits of social support (Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004; Kim, Sherman, & Taylor, 2008). Kim and colleagues (2006) showed that relational concerns of Asian Americans were negatively correlated with the perception of helpfulness of support provided by their friends and family, whereas no such correlation was observed for European Americans.

Additionally, Americans’ positive evaluation of their own hypothetical disclosure irrespective of the interaction partner and relational concerns may reflect their cultural tendency for positive self-regard (Heine, Lehman, Markus, & Kitayama, 1999; Mezulis, Abramson, Hyde, & Hankin, 2004). Compared to East Asians, Americans show greater positivity bias and believe that the source of behavioral outcome is individual-based rather than situational (Anderson, Krull, & Weiner, 1996).

Interestingly, the perception of the quality of disclosure depended on the level of somatic words in the Koreans’ distress narratives. Not only did Koreans use more somatic words compared to Americans, these words predicted higher perceived disclosure quality. The result suggests that expressing negative emotions in a culturally endorsed way may have a “value from fit” (Higgins, 2000; 2005). Value from fit occurs when individuals pursue a goal activity with the
means that match their habitual approach to goal pursuit (Higgins, 2000; 2005). In the context of the present study, Koreans who communicated distress in a culturally shared way, which is using somatic expressions, were also likely to perceive greater value of their communications. Whether or not Koreans employed physical terms in their communication with the intention of drawing empathy from others is difficult to know from this study. However, it would not be surprising if Koreans used somatic symptoms without a clear motivation to secure support. The culturally appropriate patterns of social interactions such as cultural norms are so natural and habitual for people inhabiting the given cultural milieu that they are often invisible to them. Thus, people are able to behave in a culturally prescribed way with relatively little conscious effort or awareness (Kitayama, Markus, & Kurokawa, 2000; Markus, 2004).

One question that remains, based on the perspective that cultural scripts of communication help individuals to respond effectively, is the actual utility of such scripts. In other words, does the culture-specific strategy of communicating distress observed in Koreans bring benefits not only in the sense that it enhances value from fit of the communicator but also that it indeed leads to positive responses from others? If somatization indeed serves as a script that is useful in Korean cultural context, one may expect that somatic descriptions of experience would meet the goal of communication, such as getting pity or help from others. The aim of Study 2 was to see whether people respond more favorably toward those who talk about their distress using physical descriptions rather than using explicit emotional descriptions.
Study 2 – Empathic responses to distress narratives across cultures

When sharing negative emotions with others, people hold the expectation that others will react with support, thus promoting intimacy (Rimé, 2007; 2009). Indeed, emotional sharing brings about expected interpersonal consequences; individuals who detect a signal of pain from others are motivated to engage in prosocial behaviors, feel compassionate, and are willing to help people in distress (see Batson, Ahmad, & Lishner, 2009 for a review). In Study 2, I explored whether Koreans’ perceptions of positive interpersonal consequences of somatic narratives found in Study 1 would correspond to actual positive reactions to somatic expressions from their interaction partners. Likewise, Study 2 explored whether the absence of positive relationship between somatic words and perceived disclosure quality for Americans found in Study 1 would correspond to the absence of positive reactions to somatic expressions from others. Accordingly, Study 2 examined the effects of different styles of expressions of negative experiences by looking into Koreans’ and Americans’ empathic responses to distress narratives. Specifically, participants were provided with distress narratives, which were written with either emotional descriptions or with somatic descriptions signaling distress.

As for the empathic responses, the present study focused on two distinct aspects of empathy-related responses, perspective taking and empathy, as many researchers have distinguished between these two (Eisenberg, 1986; 2008). Perspective taking is defined as a cognitive ability to understand others’ mental state, including intentions, desires, and beliefs (Davis, 1983; Eisenberg et al., 1991), whereas empathy, often used interchangeably with empathic concern or sympathy, is considered to be an emotional response that involves feelings of sadness, concern for others, and compassion (Eisenberg, 2008). Although previous literature suggests that
perspective taking is undoubtedly involved in the generation of altruistic behaviors such as sympathizing and helping (Batson et al., 1997; Eisenberg et al., 1994), it can have the opposite effect on sympathy (Eisenberg, 2007). For example, taking the perspective of others may even increase personal distress, which is a self-focused and aversive affective reaction, and motivate a person to reduce one’s own distress by avoiding contact with the suffering others (Batson, 1991). Sympathy or empathic concerns, on the other hand, are closely linked to the action tendency to reduce the pain of others.

The narratives used in Study 2 described highly stressful experiences, such as difficulty with getting a job or conflicts with colleagues. Assuming that the results from Study 1 are grounded in social reality, I expected that Korean participants would respond with more other-oriented empathic responses, especially sympathy, in response to the narratives with somatic descriptions compared to those with emotional descriptions. As for Americans, since there was no expectation of positive relationship between somatic words and disclosure satisfaction based on Study 1, it was expected that there would be no difference in empathic responses between the two narrative conditions. Therefore, I predicted a significant interaction between culture and narrative condition for empathic responses.

Additional predictions for the effects of culture on empathy-related responses

In addition to the hypothesized differential empathic concerns for others’ distress depending on the relative emphasis on somatic or emotional words, past research on models of self in the West and the East suggests that there may be cultural differences in the level of empathy-related response, particularly in perspective taking (Kitayama & Markus, 2000; Markus & Kitayama, 1991). As reviewed earlier, unlike social situations in North America where independent model
of self is promoted, many social situations in East Asia are constructed on the basis of an
interdependent model of self, which assumes that a person is part of a larger social relationship,
which determines the course of behaviors, particularly acts of adjustment of the self to the
situational requirements (Markus & Kitayama, 1991). In general, individuals with interdependent
self tend to focus on others to a greater degree than those with independent self (Brewer &
Gardner, 1996). Indeed, empirical findings evidenced that East Asians have superior ability to
take the perspective of others compared to their European American counterparts (Leung &
Cohen, 2007; Wu & Keysar, 2007). Based on the differences in models of self and the
attentional focus on others between East Asian and American cultural context, Koreans were
expected to show greater perspective taking than Americans.

Method

Participants. 84 Korean participants (40 females, $M_{\text{age}} = 22.49, SD_{\text{age}} = 2.45$) were recruited
from Korea University located in Seoul, Korea. 79 European American$^4$ (40 females, $M_{\text{age}} =
23.35, SD_{\text{age}} = 2.45$) participants were recruited in the United States using Amazon’s Mechanical
Turk system. Korean participants were all born and raised in Korea. European American
participants were all born in the United States and identified themselves as White Caucasian.
There was a significant age difference between these two groups, $t(160) = 2.42, p = .017$.

Materials & Procedure. Participants were asked to read the narratives that described
distressing experiences of anonymous writers. They then filled out a questionnaire asking about
their responses to the narratives.

Narrative stimuli. Participants were presented with two narratives that were created based
on the common descriptions from Study 1. The narratives were written in first-person, describing
highly stressful experiences a narrator went through recently, one about looking for a job and the other about a conflict with a colleague. Each subject was either in the emotional narrative condition or in the somatic narrative condition and was presented with two narratives of the same kind. The narrative about the stress from looking for a job was presented first. All materials were written in English first and translated into Korean. The Korean version was back translated into English by a person who is fluent in English and Korean.

In the emotional narrative condition, the experiences were described with emotional and affective words such as “depressed”, “sad”, and “down”. In the somatic condition, physical terms were used to describe the distressing experiences, such as “headache”, “dizziness”, and “stomachache”. Except for the last two sentences describing the narrators’ emotional and somatic states, the rest of the contents of the stories were completely identical. Below is an example of the narrative (see Appendix for all of the stories used):

“When I was job searching, I felt I was doing all I could to find a job. I had a great resume, I thought I was interviewing well, and yet I still could not find a job for 8 months. In one particular interview, the interviewer was not only rude and condescending, and he also put me down about my education and experience. All I did was put my best foot forward, and I was treated very poorly. After this whole experience I felt very down and bad about myself. It was hard for me to go on my next interview. However, I did go on another interview but despite the fact that I fared much better, I was still very insecure about myself and my achievements. It was very hard to shake the feeling of insecurity and not feeling good enough. For months, I have been feeling very depressed and down almost all the time. I have been feeling really sad.
and depressed (emotional narrative)/ For months, I have had constant acute headaches and dizziness. I haven’t been digesting food well so I lost a lot of weight (somatic narrative).

**Manipulation check.** After reading the narratives, participants responded to a single item asking about how much physical distress they thought the writer went through. This measure was used as a manipulation check, on a scale from 1 (not at all) to 6 (extremely).

**Negative impact of the experience.** Participants were asked to indicate to what extent they thought the experiences in the narratives were serious and caused distress to the writers of each narrative on a scale from 1(not at all) to 6 (extremely). Overall negative impact of the experience was created by averaging the responses of these items.

**Sympathy.** Participants responded to three items asking to indicate the extent to which they felt sorry for the writer, the extent to which they did not pity the writer (reverse coded), and the extent to which they wanted to help the writer on a scale from 1 (not at all) to 6 (extremely), (α = .84 for Koreans, α = .77 for Americans).

**Perspective taking.** The perspective taking measure was adapted from the perspective taking subscale of Davis’ (1983) Empathy Scales. The participants were asked to indicate to what degree they were able to 1) relate to the situation the writers are in, 2) relate to writers’ emotional state, 3) relate to writers’ thoughts, on a scale from 1 (not at all) to 6 (extremely). The three items were averaged across to create a composite score of perspective taking (α = .81 for Koreans, α = .87 for Americans).

**Results**

**Manipulation check**
I conducted a 2 (cultural group: Korean, American) × 2 (narrative condition: emotion, somatic) ANOVA on the item asking participants to indicate the degree to which the participants thought that the writer suffered physical distress. There was a significant difference between the emotional narrative condition (M = 2.66, SD = 1.33) and the somatic narrative condition (M = 4.52, SD = 1.00), $F(3, 159) = 114.83, p = .001$, $\eta_p^2 = .419$. There was also a main effect of culture, $F(3, 159) = 12.47, p = .001$, $\eta_p^2 = .073$. Americans (M = 3.91, SD = 1.36) perceived higher physical distress of the writer than Koreans (M = 3.39, SD = 1.57). Finally, there was a significant interaction between narrative condition and culture, $F(1, 159) = 5.68, p = .018$. $\eta_p^2 = .034$, indicating that the differences in physical distress between emotion and somatic writing conditions were more pronounced for Koreans than for Americans. An examination of the effect of narrative condition on this item for Koreans and Americans separately revealed that for both cultural groups participants perceived higher physical distress for somatic narrative condition (European Americans, $t(66.95) = -5.58, p < .001$; Koreans, $t(82) = -9.75, p < .001$).

Negative impact of the experience

A 2 (cultural group: Korean, American) × 2 (narrative condition: emotion, somatic) ANOVA was conducted to examine whether there was any cultural difference in the perceived negative impact of the experiences depending on the narrative condition. The result of the ANOVA revealed a main effect of culture and a main effect of the narrative condition, $F(1, 159) = 3.94, p = .049$, $\eta_p^2 = .024$ and $F(1, 159) = 4.45, p = .037$, $\eta_p^2 = .027$, respectively. Americans (M = 4.66, SD = 0.71) perceived the experiences described in the narratives to have greater negative impact on the writers than did Koreans (M = 4.43, SD = 0.79) and participants in the somatic narrative condition (M = 4.65, SD = 0.76) perceived greater negative impact than those in the emotional
narrative condition ($M = 4.42, SD = 0.74$). There was no culture by narrative condition interaction effect, $F(1, 159) = 0.13, ns$. Since reactions to emotional content are influenced by the intensity of emotions (Luminet, Bouts, Delie, Manstead, & Rimé, 2000; Rimé, 2009), the subsequent analyses controlled for the perceived negative impact of the experience as well as the manipulation check item.

**Sympathy**

To test whether there was a significant interaction between culture and narrative condition on sympathy, I conducted 2 (cultural group: Korean, American) × 2 (narrative condition: emotional, somatic) ANCOVA for sympathy for the writers, controlling for the manipulation check item and the negative impact of the experience of the narratives. Overall, there was a highly significant effect of the covariate, negative impact of the experience of the narrative, on sympathy, $F(1, 157) = 31.10, p < .001, \eta_p^2 = .238$, but there was no effect of the manipulation item, $F(1, 157) = 0.68, p = .313, \eta_p^2 = .006$. Furthermore, there was a significant main effect of culture, with Americans showing greater sympathy than Koreans, $F(1, 157) = 69.14, p < .001, \eta_p^2 = .31$. However, no main effect of narrative condition was observed, $F(1, 157) = 2.47, p = .118, \eta_p^2 = .015$. Of importance, the predicted interaction between culture and narrative condition for sympathy proved significant, $F(1, 157) = 6.49, p = .012, \eta_p^2 = .040$ (see Figure 5). As expected, follow-up comparisons revealed that Koreans responded with more sympathy for the narrators of somatic narratives compared to the emotional narratives, $F(1, 80) = 6.54, p = .012, \eta_p^2 = .076$. On the other hand, Americans showed no difference in sympathy for the narrators in these two conditions.
Additionally, in order to examine whether this pattern held for student and non-student Americans, the same analysis was run for these two groups separately. As in the sample as a whole, including only the student group of American sample resulted in the same pattern. Although the interaction between culture and narrative condition did not reach statistical significance due to the reduced sample size ($F = 3.20, p = .076$), the same pattern of interaction was observed. Similarly, the same pattern of interaction was observed for the analysis including the non-student group only ($F = 3.47, p = .065$), but not reaching the statistical significance due to the small sample size of non-student Americans.

**Perspective taking**

The same 2 (cultural group: Korean, American) × 2 (narrative condition: emotional, somatic) ANCOVA was conducted for perspective taking, controlling for the manipulation check item and the negative impact of the experiences. Overall, there was a highly significant effect of the covariate, the negative impact of the experience, on perspective taking, $F(1, 157) = 34.70, p < .001, \eta^2_p = .181$, but there was no effect of the manipulation, $F(1, 157) = 0.13, p = .716, \eta^2_p = .001$. There was a significant main effect of culture on perspective taking, $F(1, 157) = 26.46, p < .001, \eta^2_p = .144$, which was consistent with the prediction based on the prior studies that East Asians were better at taking the perspective of others compared to Americans. However, there was no significant main effect of narrative condition on perspective taking, $F(1, 157) = 2.71, p = .102, \eta^2_p = .017$. There was a marginally significant interaction between culture and narrative condition, $F(1, 157) = 3.77, p = .054, \eta^2_p = .023$. Further analysis revealed that American participants reported greater perspective taking in response to emotional narratives than to somatic narratives, $F(1, 75) = 5.37, p = .023, \eta^2_p = .067$, whereas no difference in perspective
taking between the two narrative conditions was present in Korean participants, $F(1, 80) = 0.01, p = .931, \eta^2_p < .001$ (Figure 6). As one might expect, perspective taking was moderately correlated with sympathy for both Koreans ($r(84) = .42, p < .001$) and Americans ($r(79) = .56, p < .001$).

**Discussion—Study 2**

Findings from Study 2 provided the first empirical evidence of cultural differences in the levels of prosocial emotions in response to distress narratives depending on the somatic and emotional words used in the narratives. Koreans felt more sympathy in response to the distress narratives that were described with physical symptoms compared to the ones that were described with explicit emotional terms. However, Americans felt similar levels of sympathy for these two different styles of narratives. The belief in the effectiveness of somatic expressions as a communication strategy among Koreans in Study 1 turned out to be grounded in the actual effectiveness of somatic expressions in inducing supportive reactions from others in Study 2.

However, one unexpected finding from Study 2 was the overall higher level of sympathy reported by Americans compared to Koreans. One possible explanation could be related to the differential responsibility or sensitivity to others depending on the relationships one has with them in Korean culture. Studies have demonstrated that empathy or helping others is related to how much the target individuals are identifiable with one’s self and whether or not they belong to the same group (Burnstein, Crandall, & Kitayama, 1994; Park & Schaller, 2005; de Waal, 2009; Stürmer, Snyder, Kropp & Siem, 2006). In Korea, a tendency to value the harmony and well-being of in-group members compared to out-group members is particularly pronounced (Hofstede, 1980). One’s prosocial emotional responses like sympathy may be attenuated when
one does not share any meaningful relationship with the target in distress. In this study, participants responded to the narratives of strangers. This could explain the lower levels of sympathy of Koreans relative to Americans. If the narratives were from people with whom they had a close relationship, the cultural difference in sympathy observed in the current study might have been reduced, if not reversed.

As for the perspective taking, consistent with the hypothesis, Koreans reported higher levels of perspective taking than Americans. Interestingly, the pattern of the cultural difference in perspective taking was different from that of sympathy—Koreans were higher in perspective taking but lower in sympathy compared to Americans. It may suggest that the quality of relationship (i.e., closeness, connectedness) may be more relevant to feeling compassionate and supportive for others than to viewing things from others’ perspective for Koreans. Moreover, the pattern of the effects of narrative condition on perspective taking was different from that of sympathy. Whereas Koreans did not differ in their reports of perspective taking across two narrative conditions, Americans reported higher perspective taking in response to the emotional narratives than to the somatic narratives. In other words, for Americans to relate to the difficult situation of another person, communicating with emotional descriptions may be more effective than somatic descriptions.

Chapter 3: Discussion and Conclusion

General Discussion

*Somatization, culturally adaptive strategy of communicating negative emotions*
At the outset of the present study, the act of sharing emotional experiences with others was hypothesized to be a communication strategy that serves an adaptive function in a given culture. The findings of the present study suggest that the specific communicative strategy that is considered adaptive and is employed depends on cultural context. Consistent with previous studies that showed a higher tendency of East Asians to rely on somatic descriptions in communicating distress compared to Americans (Kirmayer, 1989; Kleinman, 1982; Ryder et al., 2002, 2011, 2012), the present study found that Koreans used more somatic words than Americans. This tendency was associated with Korean participants’ perceived success in regulating emotions through suppression of outward expressions, supporting the notion that somatization may be a regulatory strategy aimed at preserving relational harmony. In contrast, such a regulatory strategy did not affect Americans’ use of somatic words. This may indicate that the consequences of suppressing emotional expressions are different for Koreans and Americans. As the script of hwa-byung suggests that physical illness is caused by suppressing anger in response to an unfair treatment, there may be a closer link between suppressing negative emotions and bodily reactions for Korean compared to Americans. However, more research is needed using a more controlled experimental method and in other cultural contexts to find out the causal effect of suppression on somatization.

On the contrary to the notion of “psychologization bias” in Western culture (Parker et al., 2001), in this study Americans did not use more negative emotional words in their narratives compared to Koreans. In line with this finding is the idea that “Western psychologization” may be primarily driven by cognitive symptoms rather than affective symptoms (Dere et al., 2013). In their examination of Chinese and Canadians, Dere and colleagues (2013) found that Canadians
reported similar levels of mood symptoms as Chinese but greater levels of cognitive symptoms such as hopelessness compared to Chinese, suggesting that the cultural differences in psychological symptoms should be examined in a more nuanced way. Another puzzling finding was that Americans’ but not Koreans’ perspective taking was influenced by the narrative condition; somatic expressions led to lower perspective taking for Americans but not for Koreans. These different patterns of results support the view that perspective taking and sympathy may be distinct processes. It is also noteworthy that there was an advantage of emotional expressions over somatic expressions in inducing greater perspective taking for Americans. More studies are needed to see if these culture-specific patterns replicate.

Further evidence for the communicative value of somatization in Korean culture comes from the positive association between the somatic words used in the narratives and perceived disclosure quality in Study 1; Koreans who used more somatic words in communicating distress expected that others would react more positively. The validity of this expectation was indeed confirmed by greater sympathy in response to somatic descriptions among Koreans in Study 2. In contrast, there was neither a positive association between somatic words and perceived disclosure quality nor greater sympathy in response to somatic rather than emotional descriptions among Americans. According to the present findings, the use of somatic expressions in communicating distress has a greater ecological fit in Korean culture than in American culture. In other words, the probability of situations in which the use of somatic expressions leads to increased value from fit of the communicator and greater sympathy from others would be higher in a Korean than an American context. Thus, the present work is in line with the notion that a
cultural script functions as an adaptive strategy that helps one attain one’s goals in a given cultural context (Cohen, 2001; Yamagishi & Suzuki, 2009; Yamagishi, 2010).

Most of the previous studies that have looked into somatization relied on comparisons between North Americans and Chinese. Also, they focused on clinical populations and used standardized diagnostic instruments as a method for research. The present study extended prior literature by examining Korea, a cultural context that shares cultural values with other East Asian culture but is understudied on the topic of somatization. Korean hwa-byung provides a rich resource for future researchers interested in the cultural shaping of distress experience and expressions. In addition, the participants in the study were young adults who were not selected based on any diagnostic criteria for mood disorders. The findings of the current study that showed somatizing tendency among non-selected student participants suggest that expressing distress in somatic ways in this culture is not unique to the depressed but is generalizable to healthy individuals. Furthermore, instead of utilizing pre-determined sets of questions selected by researchers, the current methodology of having participants freely describe their own negative experiences allowed for participants to generate relatively culturally unbiased responses (Kirmayer, Robbins, Dworkind, & Yaffe, 1993; Ryder et al., 2008).

Previous work suggests that emotional experiences and expressions are shaped by cultural contexts (Russell, 1991; Kitayama et al., 2000; Mesquita & Karasawa, 2002). The cultural contexts, made up of countless repeated transactions of members of a given culture (Kim & Markus, 1999), affects the formation of individuals’ beliefs of how others will respond, which in turn shapes the specific communicative strategies individuals use to adapt to the cultural environment. These cyclic processes linking social reality, cultural beliefs, and behavioral
strategies constitute and sustain the cultural script on communicating negative emotional experiences. The utility that somatic expressions have for individuals’ communicating distress in interpersonal contexts may be one of the factors sustaining a cultural script like hwa-byung in Korea. The present study provides a possible mechanism underlying the cultural shaping of distress communications.

**Limitations and future direction**

Several shortcomings of the present work should be noted. First, in Study 1 participants’ verbal behaviors were not observed during the real-time interaction with real partners, but instead were observed as reflected in a hypothetical setting with their written narratives. The methodology of Study 1 undermines the generalizability of the findings from the present study to actual emotional communication in a relationship, which involves nonverbal behaviors such as facial expressions (Ekman & Rosenberg, 2005), body posture and movement (Atkinson, Dittrich, & Gemmell, 2004; Keltner, 1995; Keltner & Harker, 1998; Wallbott, 1998), vocal tones (Banse & Scherer, 1996), and touch (Hertenstein, Holmes, McCullough, & Keltner, 2009; Hertenstein, Keltner, App, Bulleit, & Jaskolka, 2006). A second limitation pertains to the inherent problem of the text analysis method. The analysis of word use in written language relies on word counts and is a probabilistic system (Pennebaker & Graybeal, 2001; Tauscik & Pennebaker, 2010). Thus, like any other text analysis program, LIWC analysis that was used in Study 1 does not account for the context, irony, sarcasm, or even multiple meanings of the homonyms. Third, participants in Study 2 were given written narratives of unknown individuals describing negative experiences. Individuals’ empathic responses to the stranger may be different from responses toward others with whom one shares a close relationship. It would be important to examine
potential cultural differences in the relationship between communication strategy and empathy-related responses, while taking relational closeness into consideration.

Another noteworthy issue of comparing two different languages pertains to the inherent difficulty of determining whether what is being looked at is language or culture, or both. Language and culture are often considered intricately interwoven that they are not separable from one another (Brown, 1994). Using bilingual individuals does not cleanly solve the problem of parceling out culture and language, since language often primes culture (Hong, Chiu, Morris, & Menon, 2001). While there is a previous finding suggesting that somatization may be primarily due to culture (Tsai et al., 2004), other studies indicate that language rather than culture is responsible for somatic expressions used in emotional discussions (Dzokoto & Okazaki, 2006; Dzokoto et al., 2013). Further research examining bilinguals in different cultural contexts, such as India or Hong Kong, would provide additional information as to the relative impact of language and culture on distress communication.

Next, considering that hwa-byung, the most widely known somatic communication strategy in Korea, is typically observed among middle-aged women (Kwon et al., 2008; Lin et al., 1992), the findings of the current study based on healthy young adults may be conservative. Future research examining different age groups as well as samples that have clinical symptoms such as depressed mood or somatic disorders are needed. For instance, expressing somatic symptoms might have a significantly greater benefit for hwa-byung patients in Korea in interpersonal contexts than it is for young Korean adults. Moreover, comparing hwa-byung patients with Americans who are diagnosed with somatoform disorder or chronic illness whose primary
complaints are also somatic would allow the comparison of the tendency to somatize and its association with interpersonal benefits depending on the cultural context.

**Conclusion and implications**

These limitations notwithstanding, the current work examined the long-standing puzzle of cross-cultural differences in somatization. The present study contributes to the existing literature on the cultural differences in expressing emotions, with a particular focus on the communicative functions that somatic expressions of distress have in a relationship depending on the cultural context. Somatization has long been considered as dysfunctional in Western culture where direct expressions of feelings are valued and expected (Dubovsky, 1997; Keyes & Ryff, 2003). However, findings from the present work suggest that, depending on the culturally shared beliefs and reality formed through these beliefs, somatization may actually be beneficial in interpersonal interactions. The results of the present work unearth differences in communicating emotions in Korean and American cultural contexts. It would be important for future researchers to consider that emotional expression and its relational consequences are moderated by cultural context. In addition to aiding scientific understanding, these findings have the potential to be useful in clinical or consulting settings, particularly those that involve cross-cultural interactions.

In modern psychiatric or counseling settings, the dominant mode of distress communication is characterized by ‘Western psychologization’ (Kleinman, 1982). While clinicians trained in Western cultural context may readily identify mood symptoms in patients’ reports and give appropriate diagnosis, they may fail to notice that other symptoms, such as somatic ones, require attention. Moreover, during psychotherapy, clinicians trained in Western cultural context are likely to reinforce the tendency of their clients to report symptoms that fit well with their
diagnostic system, which emphasizes emotional and psychological symptoms rather than somatic ones; Indeed, verbal operant conditioning is common during the process of psychotherapeutic interviews (Beach, 1989; McBee & Justice, 1977). The therapeutic approach of reinforcing discussion of emotions and psychological processes may work well for individuals who are familiar with this mode of discourse, which may help build rapport between a therapist and a client and result in positive treatment outcome. However, the same approach may not be effective for individuals from different cultural backgrounds in which discussions of emotions are not considered particularly useful or appropriate. Indeed, it is not uncommon to see Koreans who consider the talk therapy with a counselor as not only foreign but pointless, and prefer to get medication instead; only highly educated Koreans who are familiar with Western psychological concepts feel comfortable with psychological forms of therapy (McDonald, 2011).

Furthermore, individuals’ relative emphasis on somatic symptoms is not only influenced by cultural milieu, but also by a more immediate environment such as family (Kremer et al., 1985; Turk et al., 1992; Walker et al., 1994). Thus, in addition to paying attention to an individual’s cultural origins, taking into account the reinforcement history of his or her distress experiences would be informative for clinicians to accurately assess and provide treatment accordingly. For example, for individuals whose primary presentation of negative experience is somatic, attending to bodily functions may be beneficial. Treatment encompassing meditation, exercise, and nutrition as well as psychotherapy can be explored as a particularly effective treatment for these individuals (Nakao et al., 2001). Clinicians interacting with individuals from diverse cultural and individual backgrounds would benefit from being conscious about the different distress communication strategies people use. The present work provides useful information that a subtle
difference in communication strategy can impact the interpersonal interactions in some cultural context.

Finally, given that distress experiences undergo changes as cultural contexts shift due to the influence from a variety of social factors such as academic theories, diagnostic systems, and popular media (Kitanaki, 2012; Vickery, 2005), further studies that focus on the dynamic interplay between these socio-cultural factors and distress communications are needed.
Appendix – Study 2

“When I was job searching, I felt I was doing all I could to find a job. I had a great resume, I thought I was interviewing well, and yet I still could not find a job for 8 months. In one particular interview, the interviewer was not only rude and condescending, and he also put me down about my education and experience. All I did was put my best foot forward, and I was treated very poorly. After this whole experience I felt very down and bad about myself. It was hard for me to go on my next interview. However, I did go on another interview but despite the fact that I fared much better, I was still very insecure about myself and my achievements. It was very hard to shake the feeling of insecurity and not feeling good enough. **For months, I have been feeling very depressed and down almost all the time. The thought that I might be a failure already is really sad and depressing.**” (Story 1 – emotion writing)

“When I was job searching, I felt I was doing all I could to find a job. I had a great resume, I thought I was interviewing well, and yet I still could not find a job for 8 months. In one particular interview, the interviewer was not only rude and condescending, and he also put me down about my education and experience. All I did was put my best foot forward, and I was treated very poorly. After this whole experience I felt very down and bad about myself. It was hard for me to go on my next interview. However, I did go on another interview but despite the fact that I fared much better, I was still very insecure about myself and my achievements. It was very hard to shake the feeling of insecurity and not feeling good enough. **For months, I have had constant acute headaches and dizziness. I haven’t been digesting food well so I lost a lot of weight.**” (Story 1 – somatic writing)
“I have a master’s degree in international relations and I wanted to find a job that is relevant to what I studied. I took this job at a research institute where I get to work on relevant issues, however, it is a temporary position for one year and the pay is unbelievably low. Also, I am realizing now that the work is mostly administrative, boring, and so simple that even a high school graduate could manage it. Moreover, one coworker and I have been on bad terms since the beginning. For some reason, this girl is jealous of me and talks about me behind my back, which is so upsetting. Low salary, dull tasks, and a mean coworker are enough reasons to quit the job but I have no other option at the moment but to stay here. Ever since I started this job I have been feeling down and really depressed. I always have to force myself to get prepared and go to work because I have nothing at all to look forward to at work. It is so depressing.”

(Story 2 – emotion writing)

“I have a master’s degree in international relations and I wanted to find a job that is relevant to what I studied. I took this job at a research institute where I get to work on relevant issues, however, it is a temporary position for one year and the pay is unbelievably low. Also, I am realizing now that the work is mostly administrative, boring, and so simple that even a high school graduate could manage it. Moreover, one coworker and I have been on bad terms since the beginning. For some reason, this girl is jealous of me and talks about me behind my back, which is so upsetting. Low salary, dull tasks, and a mean coworker are enough reasons to quit the job but I have no other option at the moment but to stay here. Ever since I started this job I haven’t been digesting food well and every once in a while I throw up. Also, one day, my sister found a patchy baldness in my hair. When I wake up in the morning, I always have
to force myself to get prepared and go to work because I have nothing at all to look forward to at work. It is so exhausting.” (Story 2 – somatic writing)
References


doi:10.1016/j.chb.2004.02.008


doi:10.1016/j.jpsychores.2008.03.019


doi:10.1037//0022-3514.71.1.83


Leventhal.


Ryder, A. G.; Yang, Jian; and Heine, Steven J. (2002). Somatization vs. Psychologization of Emotional Distress: A Paradigmatic Example for Cultural Psychopathology. *Online*


Footnotes

1 All but two American participants were born and raised in the United States. Excluding these two individuals did not alter any of the results.

2 The Korean Linguistic Inquiry and Word Count (KLIWC) was developed by a group of Korean researchers (Lee, Shim, & Yoon, 2005) based on the original English version of LIWC with taking linguistic qualities of Korean language and Korean cultural particularities into account. The researchers tried to make KLIWC and LIWC as equivalent as possible in order for the cross-cultural comparisons to be feasible, however, the inherent differences between the two languages resulted in some distinct categories that do not overlap with one another. For example, because of the linguistic differences between Korean and English, LIWC and KLIWC have different categories in linguistic dimensions. English, one of the Germanic languages, lost most of the inflective characteristics, whereas Korean is a typical case of an agglutinative language (Lee et al., 2005). These linguistic differences are reflected in the morphological and syntactic structures of each language. The function word category in KLIWC, in particular, is distinct in form from that of the original LIWC (Kim, 1998; Chung, 1991). Function words are made up of pronouns, prepositions, articles, conjunctions, auxiliary verbs, and these words serve a syntactic function in a sentence. A function word in English is an independent word with limited numbers (Kim, 1988). However, function words in Korean language are made up of phonemes or morphemes that are also limited but are relatively freer to combine with other words, resulting in thousands of combinations in some cases (Kwon & Kim, 1992; Chae, Choi, & Seo, 2002). In addition, the use of personal pronouns is very limited in Korean language for sociolinguistic reasons. Particularly, the prominence of honorific form in Korean language results in a limited
use of personal pronouns. In general, the use of second-person and third-person pronouns is discouraged. For example, the second person pronoun is only used when the speaker is clearly superior to the listeners in social status (Lee et al., 2005). However, since the focus of the present study is not on linguistic dimensions, this discrepancy should not influence our findings (Lee & Shin, 2005). Moreover, the present study focused on the effect of somatic words within each culture, making the equivalence issue less concerning.

Ahn and colleagues (1993) selected 3,582 words and phrases from Korean dictionary (Minjung Essence, 3rd edition, 1989) that involved emotions. This number was comparable to the number of emotion words/phrases that was documented by Wallace and Carson (1973) in the English language. They further followed the steps taken by Bush (1972), who had participants to sort emotion-related words into personality, behavior, and emotions, and obtained 264 words as a result. In Ahn and colleague’s study (1993), of the 3,582 Korean words involving emotions, 224 words were chosen, which again was comparable to the English words finalized by Bush (1972).
Table 1a. Intercorrelations among the emotion word variables – Study 1

<table>
<thead>
<tr>
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<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
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<td>1. Emotion</td>
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<td>.54***</td>
<td>.54***</td>
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<td>.19*</td>
<td>.23*</td>
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<td>4. Negative emotion</td>
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<tr>
<td></td>
<td>.79**</td>
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<td>.00</td>
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<td>.78**</td>
<td>−.10</td>
<td>.05</td>
<td></td>
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<tr>
<td>5. Anger</td>
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<td>.01</td>
<td>.60***</td>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>.52***</td>
<td>−.04</td>
<td>.11</td>
<td>.67***</td>
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<td>6. Sad</td>
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<td>.00</td>
<td>.04</td>
<td>.30***</td>
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<td></td>
<td>.27**</td>
<td>.05</td>
<td>.21*</td>
<td>.29**</td>
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<td></td>
<td>.26**</td>
<td>−.03</td>
<td>−.05</td>
<td>.31**</td>
<td>−.18*</td>
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Table 1b. Intercorrelations among somatic word variables – Study 1

<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Physical state</td>
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<tr>
<td>2. Body</td>
<td>.77***</td>
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<td></td>
<td>.78***</td>
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<td></td>
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<td></td>
<td>.73***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Eating</td>
<td>.54***</td>
<td>.16*</td>
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</tr>
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<td>.40*</td>
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<td></td>
<td>.69**</td>
<td>.24*</td>
<td></td>
<td></td>
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<td>4. Sleep</td>
<td>.41***</td>
<td>.26***</td>
<td>.14*</td>
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<td></td>
<td>.51***</td>
<td>.23*</td>
<td>.14</td>
<td></td>
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<td></td>
<td>.22*</td>
<td>.16†</td>
<td>-.06</td>
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* Note. ***p < .001**p < .01, *p < .05, † p < .10
Table 2. Means and standard deviations of somatic and emotion word variables – Study 1

<table>
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<tr>
<th></th>
<th>Koreans (N = 113)</th>
<th>Americans (N = 119)</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
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<td>Physical state**</td>
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<td>Body state**</td>
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<td>Eat**</td>
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<td>0.85</td>
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<td>1.66</td>
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<td>Anxiety</td>
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<tr>
<td>Sad</td>
<td>0.53</td>
<td>0.59</td>
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</table>

*Note.* Means that are significantly different between Koreans and Americans are indicated with asterisk. **$p < .01$
Table 3. Intercorrelations among the key variables for Koreans and Americans in each target condition – Study 1

<table>
<thead>
<tr>
<th></th>
<th>Somatic words – Disclosure satisfaction</th>
<th>Relational concerns – Disclosure satisfaction</th>
<th>Somatic words – Relational concern</th>
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<tbody>
<tr>
<td>Korean</td>
<td>.21*</td>
<td>−.36**</td>
<td>.18</td>
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<tr>
<td>Therapist</td>
<td>.29*</td>
<td>−.37**</td>
<td>−.20</td>
</tr>
<tr>
<td>Friend</td>
<td>.15</td>
<td>−.41**</td>
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<tr>
<td>American</td>
<td>−.14</td>
<td>.02</td>
<td>−.07</td>
</tr>
<tr>
<td>Therapist</td>
<td>−.03</td>
<td>−.02</td>
<td>.01</td>
</tr>
<tr>
<td>Friend</td>
<td>−.31*</td>
<td>.08</td>
<td>−.20</td>
</tr>
</tbody>
</table>

* Note. **p < .01, *p < .05.
Table 4. Results of hierarchical multiple regression analyses – Study 1

<table>
<thead>
<tr>
<th></th>
<th>Step1</th>
<th>Step2</th>
<th>Step3</th>
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<tbody>
<tr>
<td>Positive Affect</td>
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<td>.14(.04)**</td>
<td>.13(.03)**</td>
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<tr>
<td>Negative Affect</td>
<td>-.14(.04)**</td>
<td>-.05(.04)</td>
<td>-.06(.04)</td>
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<tr>
<td>Impact of the experience</td>
<td>.08(.06)</td>
<td>.09(.06)</td>
<td>.11(.06)†</td>
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<tr>
<td>Interaction partner</td>
<td></td>
<td>.42(.08)**</td>
<td>.13(.11)</td>
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<tr>
<td>Culture</td>
<td></td>
<td>-.53(.09)**</td>
<td>-.83(.11)***</td>
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<td>.02(.04)</td>
<td>-.01(.06)</td>
<td></td>
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<tr>
<td>Relational concerns</td>
<td></td>
<td>-.11(.05)*</td>
<td>.02(.07)</td>
</tr>
<tr>
<td>Interaction partner × Somatic word</td>
<td></td>
<td></td>
<td>-.14(.07)†</td>
</tr>
<tr>
<td>Interaction partner × Relational concern</td>
<td></td>
<td></td>
<td>-.05(.10)</td>
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<tr>
<td>Culture × Somatic word</td>
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<td>.20(.07)**</td>
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105
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<th></th>
<th>Culture × Relational concerns</th>
<th>Culture × Interaction partner</th>
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<td>−.34(.10)**</td>
<td>.65(.15)***</td>
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<tr>
<td>Total $R^2$</td>
<td>.15***</td>
<td>.36***</td>
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<td>Δ$R^2$</td>
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<td>.21***</td>
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|                          | .47***                       |

|                          | .11***                       |

* Note. ***$p < .001$ **$p < .01$, *$p < .05$, †$p < .10$
Figure 1: Mean rates of somatic words used in distress narratives between individuals with low levels of suppression and high levels of suppression - Study 1
Figure 2: The mean levels of perceived disclosure quality under different target condition among Koreans and Americans – Study 1
Figure 3: The predicted means for perceived disclosure quality at +1 and –1 SD on the somatic words used for Koreans (solid line) and Americans (dashed line)
Figure 4: The predicted means for perceived disclosure quality at +1 and −1 SD on the relational concern for Koreans (solid line) and Americans (dashed line)
Figure 5: Mean levels of sympathy of Koreans and Americans in emotion and somatic narrative conditions – Study 2
Figure 6: Mean levels of perspective taking of Koreans and Americans in emotion and somatic narrative conditions – Study 2