

Stress and Communication across Cultural Boundaries in the U.S. Location of a Chinese Business

Yuanying Liang, MPH¹ & Robert Jecklin, MPH, PhD²

Author¹ is affiliated with National Center for AIDS/STD Control and Prevention, People's Republic of China CDC, No. 155 Changbai Road, Changping, Beijing, China 102206. Author² is affiliated with the University of Wisconsin-La Crosse. **Contact author:** Robert Jecklin, MPH, PhD, Department of Health Education, University of Wisconsin-La Crosse, 1725 State St. La Crosse, WI, 54601; Phone: (608) 785-6791; Fax: (608) 785-6792; Email: rjecklin@uwlax.edu

Submitted January 6, 2012; Revised and Accepted July 24, 2012

Abstract

One of the ways in which corporations influence human health occurs when a global corporation brings workers from two or more cultures together in the workplace where they experience the stress of acculturation. Researchers asked workers from two cultures at one international worksite to tell about their work, intercultural communication, thoughts and feelings about intercultural communication, preexisting perspectives on another culture, and stress during intercultural communication. Findings were organized as lists of declarative statements about work and intercultural communication, short narratives about preexisting cultural perspectives, and two more detailed narrative interpretations of worker stress during intercultural communication using the Transactional Model of Stress and Coping. Discussion includes an adaptation of the Transactional Model of Stress and Coping to help workers, researchers and others better understand intercultural communication and stress.

Key Words: *Acculturation, Intercultural communication, Cultural influences, International cooperation, Occupational health, Worksite stress*

Introduction

In the *Bangkok Charter for Health Promotion in a Globalized World*, international leaders in health promotion recognized that corporations had, "a direct impact on the health of people" and that the private sector had, "a responsibility to ensure health in the workplace, and to promote the health and well-being of their employees".¹ Those same leaders also proposed that, "Globalization opens up new opportunities for cooperation to improve health and reduce transnational health risks; these opportunities include: enhanced information and communication technology, and improved mechanisms for global governance and the sharing of experiences".¹

In the years since the Bangkok Charter, intercultural communication became more important in the workplace because worldwide migration made it more likely that workers from one culture would work with workers from another culture. Migration was an observable part of a globalization process where international markets became more integrated as goods, services, capital, and labor increasingly moved across national boundaries.² In 2010 over 214 million people lived in countries other than where they were born;³ this was up from 150 million ten years earlier.⁴ Migrants represented 3.1% of the world population and the total migrants in the world would be ranked as the fifth most populous country on earth.³ In 2009 migrants worked and sent \$414 billion to other countries with the actual remittances being much higher.⁵

This article documents research about intercultural communication, stress, and health in a multicultural business setting that was created when a company from the People's Republic of China opened a facility in the United States. This article includes sections about the phenomena of interest, research method, findings, discussion, and conclusions. The discussion section includes a new way to look at intercultural communication using the Transactional Model of Stress and Coping,⁶ and implications for health promotion practice and research in multicultural work settings.

Phenomena of Interest

Workers in organizations experienced communication in a number of ways. They transmitted messages up and down the hierarchical levels of their organization, and horizontally with workers on the same level. Effective communication

within organizations not only contributed to worker efficiency, but communication also helped workers feel included in their organizations, experience positive relationships with other workers,⁷ and avoid job dissatisfaction.⁸

Workers in multi-cultural work settings were like workers in single-culture work settings in their need for effective communication. In addition to the general work and life stress experienced by all workers, the workers in a multicultural work setting also faced challenges related to acculturation. The stress involved in migration and cultural adaptation were recognized by several researchers.⁹⁻¹¹

Researchers also pointed out that cultural adaptation involved the stress of a new host environment where immigrant workers struggled to meet the demands of an unfamiliar culture, strange people, new tasks and situations.^{12, 13}

Other researchers reported relationships between coping-and-adapting to stress and an individual's physical and mental health.¹⁴⁻¹⁶ The millions of workers who joined multicultural work settings were necessarily engaged in intercultural communication, and those same workers also experienced the stress of acculturation. Without a model to guide hypothesis testing, the major purpose of this study was to take an in-depth look at stress and intercultural communication in a work setting.

Methods

A Chinese graduate student conceptualized this method in collaboration with her American faculty mentor. Her interest in this research stemmed from her own experience with stress, communication, and health as she navigated the rigors of graduate study in the United States. The student discussed her experience with international students, international faculty, and she reviewed literature before she decided to focus on intercultural communication, stress, and health in multicultural work settings.

The research method was ethnographic because the student researcher immersed herself in the culture of a particular business when she moved to the location, spent her days at the worksite, and shared housing with some of the workers in the evening. The research method was also a single case study about the stress, communication, and health in one U.S. location of a Chinese company with many other locations in many other countries. The research method was also phenomenological in that it

involved two languages, two cultures, and necessarily required the researchers to repeatedly interpret words and phrases, always relying on the larger context to help understand meaning. The researchers organized the collection, analysis, and interpretation of data to answer these five questions:

1. How do Chinese and American workers generally describe their work life with those from the other culture?
2. How do Chinese and American workers describe intercultural communication?
3. How do the workers think and feel about their intercultural communication?
4. How do preexisting cultural perspectives influence intercultural communication?
5. How does stress occur during intercultural communication?

Sources of Data

The student researcher collected data in the U.S. location of a Chinese company (hereafter referred to as Company C). Company C located in a U.S. city to distribute and eventually manufacture heavy industrial equipment that heretofore came from China. Thirty-seven workers were employed at the U.S. location to do finance, human resources, customer service, and research and development functions: twenty were Americans, and seventeen were Chinese. The twenty American workers varied in age, education, and relevant work experience. Ten of the Chinese workers had advanced degrees from U.S. universities and some work experience in the U.S. while the remaining seven Chinese workers had limited experience and education in China, and no experience working in the U.S.

For three months Company C gave the student researcher daily access to the worksite including a workstation during the day and shared housing with some of the Chinese workers in the evening. The researchers followed the protocol accepted by their university Institutional Review Board as the student researcher made all workers aware of the research by placing Chinese and English posters throughout the worksite; five American and six Chinese workers (both groups varied by gender, age, and cultural experience) volunteered directly to the researcher who scheduled interviews after she resided at the worksite for several weeks. The student researcher used English and Chinese interview guides with broad open-ended questions and lists of narrower follow-up questions about how each participant generally understood work, personally experienced intercultural communication, personally thought and

felt about intercultural communication, previously understood Chinese or U.S. cultures, and personally experienced stress. The student researcher piloted both her questions and her skills with five international college students at her American university. The student researcher kept brief field notes on her experience, and recorded 30-60 minute interviews with each participant in a confidential space where she used the participant's first language; the researchers protected the identity of all participants and their data.

Analysis and Interpretation

The researchers reviewed literature about intercultural communication and stress prior to data collection. During data analysis and interpretation, the researchers returned to the literature with special attention to cultural variability,¹⁷⁻¹⁹ expectancy violation theory,²⁰⁻²³ stress, coping and health behavior^{6, 24-26} and a model of intercultural communication competence.^{21, 27-30}

The student researcher transcribed all recorded interviews verbatim in Chinese or English, and the researcher translated the Chinese transcripts to English. A qualified faculty member back-translated the English translations to Chinese and the student researcher resolved discrepancies where possible and remained sensitive to unresolved discrepancies.

The researchers rejected software-assisted analysis and more complex coding schemes because of the complexity of research in two languages with each language bound to a separate culture. After the Chinese text was translated to English, the student researcher scrutinized transcripts line-by-line and word-by-word, and used open coding to identify any text of interest to the researcher. The student researcher reviewed the identified segments of text and used closed coding to associate each segment of text with one or more research questions. The researchers further coded the segments associated with each question into thematic subgroups.

The researchers identified themes to answer the first four questions, and then they discovered the applicability of constructs from the Transactional Model of Stress and Coping⁶ to better understand how research participants experienced stress during intercultural communication. The researchers developed six narratives to illustrate how six research participants experienced stress during intercultural communication at work.

Results

The researchers used five questions to organize data collection, analysis, and interpretation about intercultural communication, stress, and health. Participants told about their work to help the researchers find answers to question one. Participants told about their experience, thoughts, and feelings about intercultural communication to help the researchers find answers to questions two and three. Participants frequently revealed preexisting cultural perspectives which helped the researchers find answers to question four. The researchers used the findings for the first four questions to discover the applicability of the Transactional Model of Stress and Coping to answer question five. The student researcher used 90 pages with extensive participant quotes to fully report the findings for questions one through four; the student researcher used another 32 pages of narrative findings using extensive quotes from six participants (3 Chinese, 3 American) to answer question five. The researchers' university made the full report of findings available at the following link: Minds@UW (<http://minds.wisconsin.edu/handle/1793/57138>).

The complete findings for the first four research questions were included in this manuscript. Two (1 Chinese, 1 American) of the six narratives used to answer question five were also included in this manuscript while another four narratives were only included in the full report.

How do Chinese and American Workers Generally Describe Their Work Life with Those from the Other Culture?

Regarding relationships with colleagues:

- Both Chinese and American workers initially described their relationships with other workers as positive or neutral.
- Chinese and American workers were aware of cultural differences between individuals and groups of workers.
- Both American and Chinese workers reported that culturally homogeneous groups formed in this company; the workers also described some misunderstandings and suspicions between groups.

Regarding relationships between supervisors and subordinates:

- Chinese and American workers believed that relationships between supervisors and subordinates were important.

- Several workers identified concerns about relationships between supervisors and subordinates.

Regarding structure of the company:

- American and Chinese workers expressed concern about the structure of the company.
- Workers were sensitive to the existence of Company C in China and the relationship between the American and Chinese locations.

Regarding the making of decisions:

- Managers and other employees did not agree about which level of the organizational hierarchy should have the authority to make specific decisions.

Regarding responsibilities and power:

- Workers reported delays attributable to the approval process for decisions.

Regarding the work schedule:

- Workers reported overtime work when they communicated across the twelve-hour time difference with the Chinese locations.
- Some workers thought repeated overtime for routine communication was unacceptable.

Regarding challenges for the company:

- Workers recognized that this was a new company.
- Workers recognized that difficulties come from cultural differences between workers.
- Workers identified the need to improve basic management functions.
- A Chinese worker and a Chinese manager pointed to the need to clarify responsibilities and authority for decisions.
- Some workers expected difficulties in a new company.
- Workers reported that some difficulties were caused by cultural differences.

How Do Chinese and American Workers Describe Intercultural Communication?

Regarding descriptions of work-related intercultural communication:

- Workers varied in their need to communicate.
- Workers varied in their need to communicate with workers from another culture.
- Communication with the Chinese location occurred outside of regular business hours.

Regarding geographic scope of the communication:

- Geographic scope of communication varied.
- Workers reported that most communication was within the U.S. location.
- Some communication was between the U.S. and Chinese locations.

- International communication was influenced by 12-hour time difference.
- English language skills were required for Chinese at the U.S. location, but not the Chinese locations.
- Access to information at the Chinese location was restricted.

Regarding non-oral communication:

- Email and text messages were used throughout the company.

Regarding oral communication:

- Workers described face-to-face, telephone, and videoconference forms of oral communication.

Regarding language skills:

- Both Chinese and American workers agreed that English was the common language used in their communication.
- Four American workers identified Chinese or English language skills as a problem.
- Four Chinese workers reported their effective use of English language skills.
- Some Chinese workers reported that other Chinese workers lacked adequate English skills.
- Some workers reported the use of translators or interpreters to understand a second language, and that Chinese were more likely to serve as translators.

Regarding information flow and approvals:

- Workers reported limited access to information.
- Some Chinese workers helped the flow of information.
- Some information required approval from one or more persons.

Regarding the influence of organizational structure on communication:

- Workers reported how the hierarchy limited the flow of information.
- Workers reported how the flow of information required time.
- Some workers described one-way communication from the top down.

Regarding peer-to-peer communication:

- Workers described arguments and cooperative discussion.
- Workers described communication based on relationships.
- Workers described communication processes.
- Workers described intercultural communication about their personal lives.
- Some personal communication was limited to a workers cultural group.

Regarding communication on a cultural, sociological, or ideological level:

- Some workers attributed administrative or business problems to culture.

- Sometimes workers reported being excluded from communications within the other cultural group.
- Workers reported cultural differences.

How Do Chinese and American Workers Think and Feel about Intercultural Communication?

Regarding descriptions of work-related intercultural communication:

- Workers accepted that their need to communicate across cultures at work depended on the nature of their particular job.
- Some workers felt and thought differently about the need to communicate with the Chinese location because that communication usually occurred outside of regular business hours.

Regarding geographic scope of the communication:

- The workers agreed that intercontinental communication was both important and necessary for their work.
- Some Chinese workers were enthusiastic and positive about their role in communication with the Chinese locations after regular working hours.
- Some American workers were uncomfortable and questioned the need to communicate with the Chinese location after regular working hours.
- Some workers thought that communication with the Chinese location relied on technology.
- Some workers believed that after-hours communication with the Chinese location could be facilitated by the use of technology from the worker's home.
- One worker thought flexible and adjustable work hours would make after-hours communications more tolerable.
- At least one American worker thought it was important to establish relationships with the workers in China.

Regarding non-oral communication:

- Some workers preferred non-verbal communication with workers in the Chinese location because it allowed them to communicate during regular work hours.
- Some American workers preferred non-verbal communication because it provided access to translation software.
- Both Chinese and American workers valued the use of hand-drawn pictures as part of their non-verbal communication.

Regarding language skills:

- Even though this was a Chinese company, workers at this U.S. location accepted English as the common language.

- Many workers understood that Chinese language skills were required to access important company information and to receive approvals from company leaders.
- Some American workers believed English was essential to company operations in the United States.
- Some American workers expressed respect for the Chinese language skills of their fellow workers.
- Some Chinese workers reported that they did not intend to improve their English proficiency.
- Workers feared the loss of information when they used a translator or interpreter to communicate with other workers.
- Workers had little trust in translated communication.
- Workers believed that technical language was more likely to survive translation between Chinese and English.

Regarding information flow and approval:

- Some American workers thought their access to information was restricted and those workers felt that they were not trusted.
- Some American workers believed their limited access to information adversely affected their work.
- Some Chinese workers were uncertain about management's instructions about how much information to share with American workers.

Regarding the influence of organizational structure on communication:

- Some workers thought the vertical layers of organizational structure were excessive.
- Some workers thought the vertical structure interfered with effective communication.
- At least one worker thought the vertical structure was hiding how trust and mistrust played a role in communication within the organization.

Regarding peer-to-peer communication:

- Workers understood their co-workers through both cooperative and argumentative communication.
- Some American workers expressed regret for the limited personal communications between members of cultural groups and expressed a need for more intercultural communication outside of work.
- Chinese workers did not express any interest in more personal conversations between cultural groups.

Regarding communication on a cultural, sociological, or ideological level:

- Some workers believed that differences in cultural experience lead to less communication between cultural groups.

- Some workers believed that personal relationships can overcome cultural differences.
- Some workers felt the need to act to overcome cultural differences.
- Some workers discovered resistance in their efforts to overcome cultural differences.

How Do Preexisting Cultural Perspectives influence Intercultural Communication?

In Company C, the researchers found that both American and Chinese workers held preexisting perspectives about their own culture and about the second culture in their workplace. Some American workers described Chinese culture as similar to Japanese culture, and one American worker used his previous experience with Japanese culture to understand Chinese culture. Another American worker said, "there is a cultural acceptance of poor quality in China", and this worker made this generalization about the culture of Chinese workers based on his experience in Company C.

After exposure to another culture, some American workers acknowledged their perspectives about their own culture. For example, an American worker generalized that, "a U.S. Company tends to be a little bit more business oriented", compared to a company based in an Asian culture like Japan which the American described as focused on "a more personal level". Another American worker believed that American workers are "very information oriented people".

Some Chinese workers saw U.S. culture as "rich and diverse", and some Chinese workers said that U.S. culture made an effort to decrease the differences between supervisors and subordinates. The Chinese workers who had previous experience studying or working in the U.S. accumulated more perspectives on U.S. culture, and they believed that their understanding of U.S. culture contributed to their effectiveness during intercultural communication.

Some Chinese workers saw Chinese culture as a conservative culture. A Chinese manager explained that he was hesitant to provide direction to workers, and a Chinese worker was similarly hesitant to participate in intercultural communication. More than one Chinese worker expressed concern about a "face issue" when American workers asked Chinese workers about an error or flaw; several Chinese workers described communication that was limited in order to save face and avoid embarrassment. These were some of the ways in which Chinese and

American workers at Company C held perspectives about their culture and the culture of others. Workers from both cultures consistently attributed their perspectives to experience, and those perspectives were susceptible to change based on new experience with others.

How does stress occur during intercultural communication?

In the full report, the researchers applied the Transactional Model of Stress and Coping⁶ to describe how stress occurred during intercultural communication in the individual experiences of three American and three Chinese workers. Here are two examples that illustrate the explanatory value of the model—one with a Chinese worker and one with an American worker; in combination these two provide a contrast between stress that was less attributable to intercultural communication and stress that was more attributable to intercultural communication.

The first example of stress during communication involved a Chinese worker who was the only person left on an important project after his co-workers voluntarily or involuntarily left employment. He stayed because he wanted to complete the project. He described vertical communication as a stressor when he said, "the instructions from the upper level managers changed continuously, in many situations the plans were changed more than once...so some projects originally required a short time—however the plan was changed...several times...many of the projects I'm working on right now have been repeated several times, and I'm still working on them." This worker experienced a loss of homeostasis when his internal insistence that he complete the project on time conflicted with the external demands that delayed or changed the project. This worker's context involved people from two cultures, the business of one culture that operated in a second culture, and this worker consistently identified communication difficulties as a source of stress. Despite being immersed in international business, this Chinese worker did not attribute his stress to intercultural communication.

The second example involved an American engineer who Company C hired to gain his experience when the engineer made similar products for another company. He talked confidently about the challenge to design good components when he said, "this is just a piece of the puzzle to me." He performed specialized work and he frequently needed to receive and send information so that his work would be

coordinated with other individuals and teams who worked on the same piece of equipment. Unfortunately the necessary information was retained in China, and access to the information was delayed by restrictions, approval processes, and the inefficiencies of intercultural communication. The engineer experienced a loss of homeostasis when his internal expectations to competently solve engineering puzzles were challenged by obstacles related to trust, communication, and geographic distance between important sources of information.

*Primary Appraisals*⁶- Both workers described how they assessed the significance of a stressor. The Chinese worker described how project changes and delays combined with high expectations which created unusual stress levels in his work. He said, "first, our plan was to catch up with speed" and "complete the construction within 10 months, later the instruction became 'completed within 6 months'...however, the economic crisis came, the schedule was delayed". Original direction to construct an environment-friendly building was replaced with direction to build quickly at the lowest possible cost. He understood his Chinese manager, but the continuous changes made him very frustrated and exhausted. He seemed to surrender when he said, "I just did what I was asked to do".

The American engineer described how a lack of information threatened his personal expectation that he does a good job in the design of his part of the project. He explained that, "technical communication hardly existed in the company", and this made it difficult for him to make accurate and credible contributions to the project. He also explained how the lack of access to information held him back in ways that were beyond his control when he said, "it could take a week, sometimes it could take two weeks, it could take a lot of time...if I could just reach out there and grab it, I could have completed the design and validated the design within that two week period while we waited." Repeated delays increased the intensity of his stress.

*Secondary appraisals*⁶- Both workers evaluated their ability to cope with stressors. The Chinese worker insisted that he was determined and he described his limited ability to manage so many changes to his project when he said, "in many cases, the managers' instructions were not flexible at all; there was no room for your advice and innovation." He described how chronic exposure to stress made him less responsive, "I just did what the manager said, did whatever I was told, if it's too hard for me, I'll just do it bit by bit, and get it done slowly."

The American worker was reluctant to assume responsibility when the company did not provide him with important information, but he also proposed potential solutions when he recounted experience with another Chinese company where, “every Chinese employee I worked with could speak fluent English ... so the communication was actually very easy...we could even talk on a technical level”. He also suggested he knew how things could be improved when he said, “my previous company, we openly shared, if an engineer from China called me and needed a wire diagram, I didn’t think twice about it, I sent it to him.” This engineer believed that to manage the stress caused by missing information was beyond his control, but not beyond his understanding.

*Coping efforts*⁶- Imbalance stimulated coping efforts in both workers. The Chinese worker repeatedly used direct communication to manage problems created by changes to the substance and schedule of his work. He also described how he abandoned his efforts to contribute through direct communication in favor of simple compliance with each new change in direction. Avoidance emerged as a form of emotional regulation in his work; he did not avoid work but he tried to avoid the dissonance he felt about so many changes. Productive efforts to cope were more difficult because this worker was isolated by the departure of all the other workers in his unit and because he lived a similar form of isolation outside of work in a culture far from his home.

Even though the American engineer felt Company C should provide him with all information required for his work, he described his personal efforts to improve information flow in his communications as he shared his thoughts, “look for other meanings, don’t be afraid to repeat yourself, or just explain: ‘I’m sorry, I don’t understand,’ and no harm...we just work together to get the point across”, and he illustrated a devotion to resolve the language barriers when he said, “I would definitely be open to learning Chinese if that opportunity were given to me, you know, as part of my work plan, I would definitely be open to learning Chinese, cause I just think that would definitely help to bridge the communication gap between the employees”. He also said, that when he traveled to China that it, “helped me to build a relationship with engineers in China who do work on the (same product) team, so if I have a question, I have a relationship with a person who knows me and I know them, so I can communicate through email.” This American worker used positive reappraisal as a form of meaning-based coping when he described how his thoughts changed about communication

barriers, and he hoped that someday, “we can look back and say, ‘You know, look how far we have come.’ and you can have that satisfaction, like yes you know, come into work and instead of waiting two days to get an answer from China, I can just email my friends...and they will email me in a reasonable amount of time”.

*Outcomes of coping*⁶- Both workers exhibited several outcomes related to emotional well-being, functional status, and health behavior. The Chinese worker described the health outcome of his continued efforts to cope with frequent changes in direction and scheduling when he said, “I felt too tired to keep working on it, for example most of the work I’m doing right now were repetitions of the original work, and were repeated more than once and still not finished yet.” He also explained his emotional regulation when he said, “I have little work stress right now because I just acted according to the order from managers”. His adaptation unsettled his relationship with the company.

The American worker's remarks sounded emotionally well, healthy, and exemplified work towards solutions to his concerns about information sharing. He was optimistic and he described continued efforts to cope with the stress of missing information. He envisioned how his efforts to cope might be beneficial in the future. The outcomes of coping for the American and Chinese workers may also be related to personal resources outside of work; while the American had easy access to family, friends, and a familiar culture, the Chinese worker's isolation at work was exacerbated by more isolation when he was away from work.

*Dispositional coping style*⁶- The researchers were less able to establish an understanding of dispositional coping styles because of the limited time allowed for this research. The Chinese worker transitioned from someone of high persistence and integrity to someone who might sacrifice integrity while being highly compliant. When the student researcher queried the American about his apparent disposition to be a realistic problem-solver he said, “I mean—I’m just an engineer. I’m not a vice president or president or anything like that”. He proposed solutions, acted to solve problems, and he remembered his role in the organization.

*Social support*⁶- The Chinese worker perceived little social support from his supervisor. He did not describe supportive relationships with his co-workers, and his closest co-workers left his unit and were not replaced. He also described limited

communication with Chinese workers outside of work when he said, "We had little communication, most times we just stay in our own rooms when we get back to the apartment at night." The isolation of this worker was inconsistent with the social support experienced by other workers.

The American worker built social support as he coped and managed problems. He built relationships with workers in China and he used those relationships to improve communication. He said, "I do think that I built good rapport with some employees, we talk on a personal level, and they show gratitude to me as well...by taking care...to translate for me and help me understand certain situations." The American worker did not describe the importance of social support with American workers.

Discussion

The findings of this research illustrated some of what happened when Company C brought Chinese and American workers together in a U.S. location. The findings of other researchers about acculturation and the stress of acculturation⁹⁻¹¹ were apparent during interviews and observations in this workplace. Communication was how workers defined personal stressors and defined the organizational challenges posed by acculturation; communication was also the means by which incremental acculturation could contribute to business success and the well-being of employees.

Chinese and American workers indicated their awareness of cultural differences regardless of how often the worker engaged in direct communication with workers from another culture. The invisible boundary between cultures in this workplace was sometimes accentuated when workers from both cultures participated in homogeneous cultural groups where suspicions and misunderstandings of the other cultural group were discussed. These groups also provided a means for new workers to temporarily avoid the stress of acculturation as they adapted to their new positions. While the workers who participated in this research recognized cultural differences and sometimes participated in culturally homogeneous groups, they generally described relationships with members of the other culture as positive or neutral.

The leadership of Company C relied on the successful acculturation of workers to Chinese culture, U.S. culture, and perhaps a hybrid culture

that emerged to accommodate both cultures in the U.S. location of Company C. Global businesses and advocates for employee health would benefit from further research on the influence of a multicultural workforce on business operations and worker health.

The workers in this research talked about work experience, acculturation, and the stress of acculturation. The researchers observed clear differences when workers handled similar types of communication, and this caused the researchers to use the Transactional Model of Stress and Coping⁶ to understand intercultural communication and stress as a transaction between each worker and a multicultural environment. Intercultural communication and stress in the U.S. location of Company C are explained in Figures 1 and 2. Figure 1 summarizes constructs relevant to understanding stress as workers receive intercultural communication, and Figure 2 summarizes constructs relevant to understanding stress as workers send intercultural communication. This research did not find sending and receiving to be separate acts, but instead were part of many transactions between workers in their multicultural environment. No single worker described all the functioning in figures 1 and 2, but the figures incorporated the combined experience of workers during this research at Company C.

In Company C, work stressors were understood through sending and receiving communication messages. Workers appraised stressors, their ability to cope, their actual coping, and the outcomes of their coping. Experience with stress and coping caused workers to reflect and acquire coping styles and social support--all of which influenced appraisals of self and coping with stressors.

Since Company C was a Chinese company in a U.S. location with both Chinese and American workers, communication about work stressors also involved demands for acculturation. Workers identified language and cultural differences as part of their appraisal of stressors. As they appraised their ability to cope, workers identified language skills, cultural competence and their trust in others as part of their ability to cope with demands for acculturation.

At Company C, worker productivity, worker skills, and sometimes worker health were influenced by demands for acculturation. Workers reported how demands for acculturation contributed to and detracted from company success. Some workers acquired a global attitude that led them to improve

cultural knowledge and language skills while others retreated away from the demands of acculturation.

Workers at Company C described what they experienced when they received communication. Figure 2 summarizes these findings to help workers consider stress and coping when communicating in a multicultural worksite. The outcomes of communication at Company C influenced how workers understood their work, their work performance, and shaped work-related beliefs. At Company C, attention to moderating influence like language skills, cultural knowledge, and related skills in individuals and cultural groups could favorably influence intercultural communication. Workers, researchers, and others may find it helpful to consider expected outcomes when sending intercultural communication in a workplace.

Workers at Company C helped the researchers clarify how the stress of acculturation occurred during work-related intercultural communication, and the researchers used existing research^{14, 16, 28} to propose a connection to the physical and emotional well-being of workers. Both types of research were used by the student researcher to persuade Company C to incorporate stress and coping as part of how the business understands intercultural communication and how the business helps workers respond to the stress of acculturation. As a trainer for a global Chinese business, the former student researcher used established concepts to improve intercultural communication competence,^{27, 31, 32} and to increase coping as a way to benefit both business operations and personal well-being.

Peterson and Wilson³³ in a 2002 article about the important influence of organizational culture on stress and health emphasized that the right organizational culture contributed to both business success and worker health. Their observation was especially relevant for the U.S. location of Company C where the task to establish a common culture was more important and complex than the challenge to establish organizational culture in a domestic company where workers enter the workplace with basic shared cultural attributes like a common language. Business leaders and advocates for employee health may benefit from research about intercultural communication and the stress of acculturation in the worksite. Researchers in multicultural business settings may find it helpful to focus on: 1) how workers assess the stress when demands for acculturation are part of workplace communication, 2) how workers appraise their ability to respond, 3) how workers choose to cope

during stressful communication, 4) how sources of moderating influence such as social support, language skills, cultural knowledge, and dispositional coping styles help workers manage stress, and 5) how stress and coping determines the emotional and physical well-being of workers.

Conclusion

When American and Chinese workers were employed at a U.S. location of a Chinese business, workers from both cultural groups experienced the stress of acculturation in addition to other forms of work-related stress. The findings about intercultural communication and stress at Company C were explained as personal transactions between individual workers and the demands of their multicultural environment. Workers, researchers, and others may find this approach helpful in their efforts to understand intercultural communication, stress, and health in the growing number of multicultural worksites in this era of globalization.

Acknowledgments

The authors appreciated the workers who openly shared their experience in the workplace and the employer who provided access to those workers. The student researcher also appreciated the contributions of two other committee members Dr. R.D. Duquette and Dr. Chia-Chen Yu. Dr. Yu was especially helpful in her discussion of intercultural communication and her willingness to back translate from English to Chinese.

References

1. International Conference on Health Promotion. The Bangkok charter for health promotion in a globalized world, 2005; Geneva, Switzerland.
2. Rodrik D. Sense and nonsense in the globalization debate. *Foreign Policy*. Summer 1997(107):19.
3. United Nations Population Division. International Migrant Stock: The 2008 Revision. *International Migrant Stock* [<http://esa.un.org/migration>, 2011.
4. International Organization for Migration. World migration report 2010 the future of migration : building capacities for change. Vol 2011. Geneva: International Organization for

- Migration; 2010:1 online resource (xxi, 272 p.) : col. ill., col. maps.
5. Ratha D, Mohapatra S, Silwal A. *Migration and remittances factbook 2011: second edition* Washington, D.C.: World Bank; 2011.
 6. Glanz K, Schwartz MD. Stress, coping and health behavior. In: Glanz K, Rimer BK, Viswanath K, eds. *Health behavior and health education: Theory, research and practice*. San Francisco, California: Wiley; 2008:211-236.
 7. Fay M, Kline S. Telecommuting and Organizational Identification: The Role of Informal Communication. *Conference Papers -- International Communication Association*. 2008 Annual Meeting 2008:1-37.
 8. Hoeven C, De Jong M. Organizational Communication and Burnout. Paper presented at: Conference Papers -- International Communication Association, 2006.
 9. Chen EC, Kakkad D, Balzano J. Multicultural competence and evidence-based practice in group therapy. *Journal of Clinical Psychology*. 2008;64(11):1261-1278.
 10. Hayne AN, Gerhardt C, Davis J. Filipino nurses in the United States: recruitment, retention, occupational stress, and job satisfaction. *Journal of Transcultural Nursing*. 2009;20(3):313-322.
 11. Knipscheer JW, Kleber RJ. The Relative Contribution of Posttraumatic and Accusative Stress to Subjective Mental Health Among Bosnian Refugees. *Journal of Clinical Psychology*. 2006;62(3):339-353.
 12. Allen MW, Amason P, Holmes S. Social support, Hispanic emotional acculturative stress and gender. *Communication Studies*. 1998;49(2):139-157.
 13. Jiali Y. An examination of acculturative stress, interpersonal social support, and use of online ethnic social groups among Chinese international students. *Howard Journal of Communications*. 2006;17(1):1-20.
 14. Durvasula RS, Mylvaganam GA. Mental health of Asian Indians: Relevant issues and community implications. *Journal of Community Psychology*. 1994;22(2):97-108.
 15. Kim BSK, Abreu JM. Acculturation measurement: theory, current instruments, and future directions In: Ponterotto JG, Casas JM, Suzuki LA, Alexander CM, eds. *Handbook of multicultural counseling*. Second ed. Thousand Oaks, California: Sage; 2001:394-424.
 16. Moghaddam FM, Ditto B, Taylor DM. Attitudes and attributions related to psychological symptomatology in Indian immigrant women. *Journal of Cross-Cultural Psychology*. 1990;21(3):335-350.
 17. Hofstede GH. Culture's consequences : comparing values, behaviors, institutions, and organizations across nations: Sage Publications; 2001: <http://catdir.loc.gov/catdir/enhancements/fy0656/00010498-d.html>. Accessed August 9, 2011.
 18. Javidan M, House RJ, Dorfman PW, Hanges PJ, De Luquet MS. Conceptualizing and measuring cultures and their consequences: a comparative review of GLOBE's and Hofstede's approaches. *Journal of International Business Studies*. 2006;37(6):897-914.
 19. Machado DD, Carvaiho CE. Cultural Typologies and Organizational Environment: A Conceptual Analysis. (cover story). *Latin American Business Review*. 2008;9(1):1-32.
 20. Burgoon JK, Hubbard AS. Cross-cultural and intercultural application of expectancy violations theory and interaction adaptation theory. In: Gudykunst WB, ed. *Theorizing about intercultural communication*. Thousand Oaks: Sage; 2005:149-172.
 21. Gudykunst WB, Nishida T. Anxiety, uncertainty, and perceived effectiveness of communication across relationships and cultures. *International Journal of Intercultural Relations*. 2001;25(1):55-71.
 22. Kopalle PK, Lehmann DR. Strategic Management of Expectations: The Role of Disconfirmation Sensitivity and Perfectionism. *Journal of Marketing Research (JMR)*. 2001;38(3):386-394.
 23. Spreng RA, Chiou J-s. A cross-cultural assessment of the satisfaction formation process. *European Journal of Marketing*. 2002;36(7/8):829-839.

24. Goh YW, Sawang S, Oei TPS. The Revised Transactional Model (RTM) of Occupational Stress and Coping: an Improved Process Approach. *Australian and New Zealand Journal of Organisational Psychology*. 2010;3(1):13-20.
25. Lazarus RS, Folkman S. *Stress, appraisal, and coping*. New York: Springer Pub. Co.; 1984.
26. McCarthy CJ, Lambert RC, O'Donnell M, Meledres LT. The Relation of Elementary Teachers' Experience, Stress, and Coping Resources to Burnout Symptoms. *The Elementary School Journal*. 2009;109(3):282-300.
27. Arasaratnam LA, Doerfel ML. Intercultural communication competence: Identifying key components from multicultural perspectives. *International Journal of Intercultural Relations*. 2005;29:137-163.
28. Kim YY. *Becoming intercultural : an integrative theory of communication and cross-cultural adaptation*. Thousand Oaks, CA: Sage Publications; 2001:
<http://catdir.loc.gov/catdir/enhancements/fy0658/00010052-t.html>. Accessed August 11, 2011.
29. Spitzberg BH, Cupach WR. *Handbook of interpersonal competence research*. New York: Springer-Verlag; 1988.
30. Wiseman R, Koester J. Intercultural communication competence. In: Gudykunst WB, Mody B, eds. *Handbook of international and intercultural communication*. Thousand Oaks, CA: Sage; 1993:207-224.
31. Arasaratnam LA. Further testing of a new model of intercultural communication competence. *Communication Research Reports*. 2006;23(2):93-99.
32. Arasaratnam LA. The development of a new instrument of intercultural communication competence. *Journal of Intercultural Communication*. 2009;20(2).
33. Peterson M, Wilson JF. The Culture-Work-Health model and work stress. *American Journal Of Health Behavior*. 2002;26(1):16-24.

Figure 1 Worker Stress and Coping While Receiving Intercultural Communication

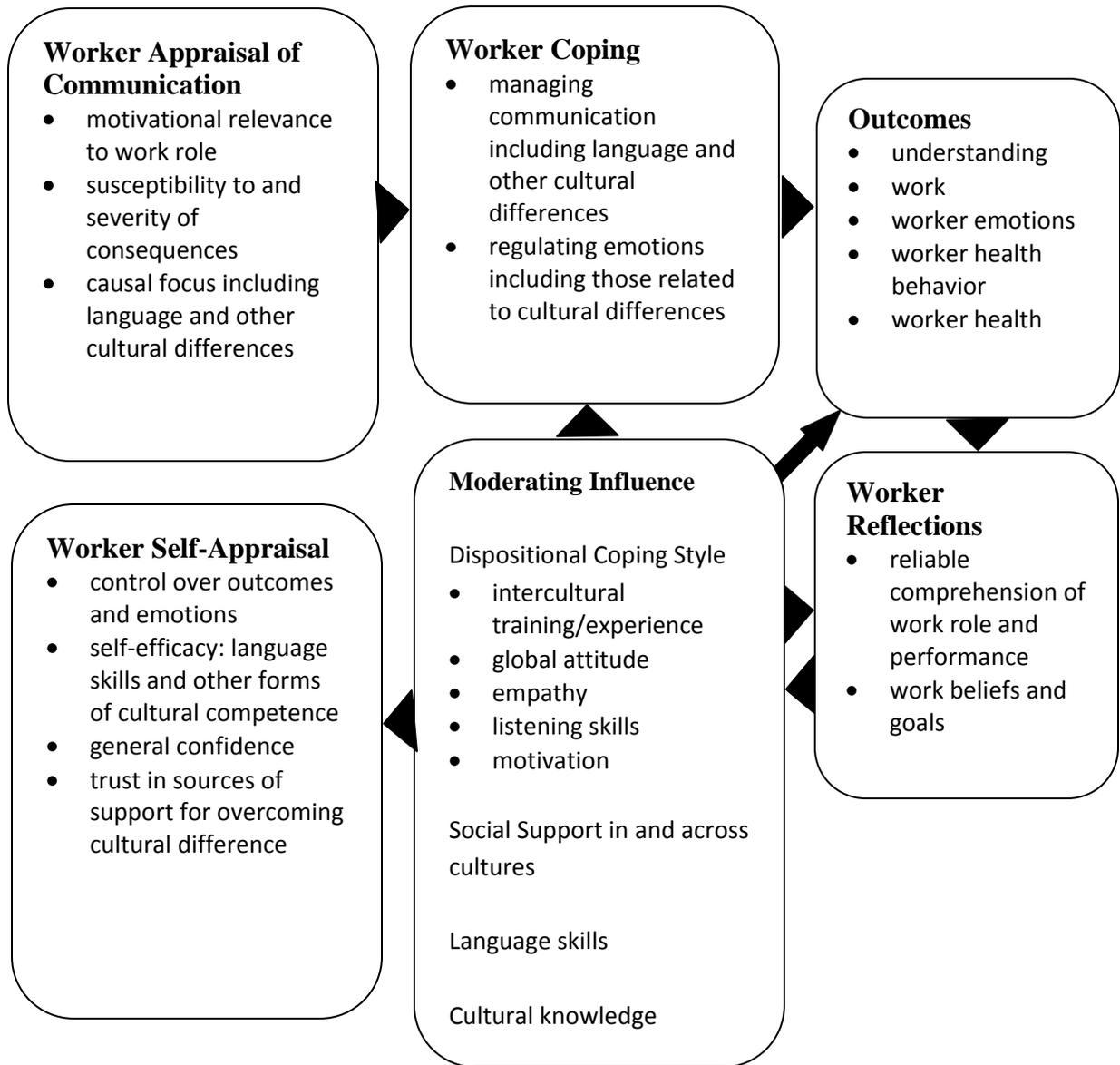


Figure 2 Worker Considerations of Stress and Coping When Sending Intercultural Communication

Consider the expected outcomes for:

- the workplace: organization, climate, organizational culture, overall productivity, individual productivity
- the worker short-term: understanding, work, situation-appropriate emotions, health behavior, health
- the worker longer-term: understanding of work role and performance of work role, beliefs about work, work-related goals

Attend to sources of moderating influence in:

- the workplace: presence and distribution of language skills, presence and distribution of cultural knowledge, and social support in-and-across cultural groups
- each worker: dispositional coping style including language skills and cultural knowledge, listening skills, empathy, motivation, and global attitude

Anticipate the other worker's understanding of intercultural communication:

- As a stressor: relevance to work role, severity of consequences, likelihood of consequences, role of language and cultural differences
- Ability to manage stressor: control of consequences and feelings about consequences, language skills and cultural knowledge, confidence in self and sources of social support

Send communication to other workers in ways that:

- consider the expected outcomes of communication
- attend to sources of moderating influence
- anticipate how workers will recognize stressors in intercultural communication
- anticipate how workers will think about their ability to respond to stressors
- encourage coping by expressing empathy for other worker's emotions especially those related to cultural difference
- encourage coping by helping other workers identify and respond to sources of stress including cultural difference.