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What Impact Can Conflict Resolution Skills Have on Conflict Experienced Within Culturally Heterogenous Virtual Teams?

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WHAT IMPACT CAN CONFLICT RESOLUTION SKILLS HAVE ON CONFLICT

EXPERIENCED WITHIN CULTURALLY HETEROGENOUS VIRTUAL TEAMS?

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A Thesis

Presented to the

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by

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ABSTRACT

Even though there has been an increase in the use of virtual teams in organizations, there have been mixed findings on how effective they are in achieving organizational and personal success. In this study I sought to examine if conflict resolution skills could decrease the amount of conflict that culturally heterogenous virtual teams face. Specifically, this study examined the moderating role of conflict resolution skills on task and relational conflict within virtual teams. A total of 137 participants completed an electronic survey with items on task conflict, relational conflict, conflict resolution skills, cultural heterogeneity, interdependence, and team effectiveness.

It was found that conflict resolution skills were a significant predictor of relational conflict, but not task conflict. It was also found that effectiveness had a significant negative relationship with relational conflict. Cultural heterogeneity was not a significant predictor of either relational or task conflict. Another interesting outcome of this study was that interdependence caused an increase in both task and relational conflict, but also led to an increase in effectiveness. These findings indicate that training employees working in virtual teams on conflict resolution skills could be beneficial for organizations that want to utilize heterogenous virtual teams and maximize their effectiveness. Results from the hypotheses tested and their implications are discussed.

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CHAPTER ONE

LITERATURE REVIEW

Introduction

Modern and emerging electronic communication technologies, asynchronous coordination, and group-based software have given organizations the option to put together teams with individuals in different geographic areas. Referred to in this paper as virtual teams, this approach to team collaboration has the potential to be a valuable asset to organizations through the flexibility they offer in terms of lower costs in capital assets, and less travel expenses both for the commuter and the organization. Organizations that support virtual teams can become more flexible which helps with handling pressure from their competition, globalization, and meeting the demand from customers for faster service (Purvanova, 2014).

Virtual teams have increased in popularity since they were introduced in the 1990s, especially for technology companies, but there are still many who question how effective they are when compared to face-to-face teams. The introduction of additional virtual teams during the Covid-19 pandemic is likely to lead to a sustained increase in virtual team's post pandemic. A study conducted by Global Workplace Analytics (2020) predicts that between 25-30% of the workforce will be working from home at least a few days each week by the end of 2021.

Virtual team effectiveness depends on a variety of factors that can be managed to align the needs of the team. Given that overall effectiveness of communication in virtual teams is usually lower than it is with face-to-face teams, it is imperative that team organizer(s) select the best tools available to them and oversee meeting logistics within the confines of their organizational resources. Videoconferencing, for example, is as close to face-to-face communication that virtual teams can experience due to synchronicity and availability of visual cues. Brodsky (2020) found that it is best for virtual teams to use richer communication tools like Zoom, Skype, and Google Meet. Microsoft teams is another communication and online learning platform that teams have started utilizing (Microsoft, 2018). Virtual teams can also communicate through live audio which is typically acceptable only when virtual teams are small since the flow of communication can be challenging with large teams (Griffin & Moorhead, 2007). E-mail and instant messaging are less rich communication tools that virtual teams commonly use to communicate (Penttila, 2005). This form of communication presents some additional challenges due to team members inability to see each other, hear each other, and not being able to communicate at the same time which can cause issues with the flow of communication (Purvanova, 2014). With these drawbacks to virtual communication, it is logical to assume that face-to-face teams will almost always be more efficient and foster better interpersonal relationships than virtual teams.

Some of the challenges that virtual teams face aside from their approach to communicating is difficulty with coordination, confusion, and misunderstanding (Purvanova, 2014). These challenges can decrease the level of trust in the group as well as cohesion and commitment issues. Even though these challenges exist, many of these teams have overcome them and were still able to create sought-after products (Purvanova, 2014). Companies such as Boeing, IBM, Century Link, and Hewlett-Packard have had great success with using virtual teams. This shows that there is a place for virtual teams if they can be put together and managed correctly.

As described earlier, some meta-analyses make a strong argument that virtual teams are not as effective and efficient as face-to-face teams because of their lower richness of communication. On the other hand, there have been some field and case studies on virtual teams from business organizations that make strong arguments for the use of virtual teams. Typically, virtual teams are made up of 12 to 13 highly skilled professionals who work together on tasks or problems through asynchronous technologies for roughly 1 to 2 years (Purvanova, 2014). Many of the experimental studies conducted on virtual teams use groups of only three to four members of student participants and give them a task to complete in about an hour. Purvanova (2014) suggests that these experimental studies do not accurately replicate or simulate how virtual teams' form, develop, and function in business organizations.

These mixed findings show that there is still a lot of research to be done on virtual teams. One challenge that virtual teams face to be effective is how they deal and resolve team conflicts. Therefore, in this study I examined the effects of conflict on culturally heterogenous virtual teams, and if conflict resolution skills can minimize these effects.

Conflict

Conflict can be defined as the "the process resulting from the tension between team members because of real or perceived differences" (De Dreu & Weingart, 2003, p. 741). Both social identity and self-categorization theories forecast that teams made up of individuals from diverse social categories will have more relational conflict and be less cooperative than teams made up of individuals from the same social category (King, Hebl, & Beal, 2009). This potential conflict can come from less networking, having less in common, and having difficulty understanding other viewpoints and perspectives. Virtual teams are particularly susceptible to conflict because they typically have fewer opportunities to work through and find common ground with other team members.

There are multiple types of conflict such as task, emotional, and status conflict that teams may face. These types of conflict have the potential to be constructive or destructive. *Task conflict* happens when team members cannot come to an agreement on task-related issues (Jehn, 1994). This includes

procedures, goals, and decisions. Task conflict is often negatively related to team functioning and affective outcomes (De Dreu & Weingart, 2003). When trust for a team is low, relationship conflict and task conflict increase (Simons & Peterson, 2000). Some research however shows that teams experiencing task conflict increase their communication to try to work out the disagreements and find common ground (Bantel & Jackson, 1989). This added communication leads to a better understanding of alternatives which can increase the quality of the decision making and the performance of the team.

In contrast, *emotional or relational conflict* occurs when there are disagreements related to personal taste or interpersonal style. Interpersonal conflict is "a dynamic process that occurs between interdependent parties as they experience negative emotional reactions to perceived disagreements and interference with the attainment of their goals" (Barki & Hartwick, 2004, p. 216). Previous research has identified interpersonal conflict to be one of the largest reducible organizational costs and the single most important workplace stressors for organizations to address (Dana, 1999). Interpersonal conflict is characterized by negative feelings like anger, frustration, and distrust. This conflict can have a strong impact on team effectiveness by decreasing team member satisfaction, intent to stay on the team, and performance (Jehn, 1995).

Status conflicts may arise when team members use their status or status of others to compete using tactics like forming alliances or not accepting information from others. Status conflict can lead to an unhealthy form of

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competition since the intention is to create an environment conducive to the needs of those perceived to have attained status within the group. Task and relationship conflict do not inherently create the same type of competition, because those forms of conflict do not manifest over the entire team network. Status conflict will likely affect the process of decision making within the team.

Interdependence is another factor that can increase conflict. Interdependence is the degree to which individuals need to work together to complete a task (Cropanzano & Ambrose, 2015). Low interdependent tasks allow team members to work on parts of a task separately, whereas highly interdependent tasks involve the use of every team members expertise or ideas to make decisions (Khademi, Schmid Mast, & Frauendorfer, 2020). Highly interdependent teams may have higher levels of both relational and task conflict due to how often they communicate and rely on each other.

Ideally, the conflict that teams face will be constructive. Constructive conflict comes from seeking out other opinions, openly confronting differences, and evaluating other options (Kirchmeyer & Cohen, 1992). Conflict can provide the organization and its employees the occasion to view situations from another's perspective (Lacey, 2000). This provides organizations with an opportunity to maximize the potential positive outcomes that can come from conflict (Barclay & Wolff, 2011). Teams that have constructive conflict will have high task conflict and low relational conflict (King et al., 2009).

Destructive conflict in the workplace is costly to both the organization and to the individual members of the conflict. Destructive conflict can also cause a decrease in the productivity and performance of individual employees which can cause an increased financial burden for the organization. Destructive conflict can lower job motivation and potential worker health issues as well as an increase in absenteeism (Barclay & Wolff, 2011). Philchuk and Vanderhurk (2004) found that unresolved conflict between employees may spill over to co-workers who might be stakeholders in the outcome, thus causing stress among additional workforce members.

Conflict can arise for group members if some view a member's contributions as noncontributory to the project, while others see it as argumentative. A good example for this is a study by Barclay and Wolff (2011) on workplace conflict that used a scale which included a measurement for going along (GA). They found that if members are aware of the other's GA ratings, each may have a more positive perspective of the other. "For example, if Jane understands that Sally is not trying to be argumentative but merely additive to the process of creating best practices policies for the company, Jane may be able to appreciate Sally's opinionated nature. Likewise, being aware of Jane's inclination to avoid disagreement may help Sally to be more encouraging to Jane to contribute to the meeting" (Barclay & Wolff, 2011, p. 130).

The form of communication can also have an impact on potential conflict. Direct communication involves speech acts that are straightforward and clear of

confusion of what the intent is. Indirect communication involves hints or assumptions that the message is received (Holtgraves, 1997). These cues can include eye contact, tone of voice, distance between speaker and listener and other nonverbal behaviors that give both the speakers and listeners information to help understand the communication. Electronic communication can make it difficult for both parties to pick up on all the nonverbal signals which can be key to preventing misunderstandings. Straus and McGrath (1994) found that teams that relied on electronic communication had a tougher time understanding each other than teams that utilized face-to-face communication.

Some studies have found that conflict increases with physical distance and can be an issue for geographically distributed teams (Cramton, 2001). Conflict is a normal part of any day in any workplace, but when people with different cultural orientations interact, complications and misunderstandings are more likely to happen (Brew & Cairns, 2004). It is vital that these cultural differences are understood so that the employee interactions can be productive and not destructive to the task at hand.

Even though these cultural differences can lead to increased team functioning due to information elaboration, the outcomes can decrease when informational diversity mixes with other diversity dimensions. These subgroups may potentially lead to team members not trusting each other or being less motivated to work together. A lack of trust and motivation leads to less commitment to the group, increasing interpersonal tensions and conflict, and

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lowered communication. If individuals think that diversity is beneficial to the project, diversity is positively related to group identification. If individuals think that diversity is not beneficial, diversity is most likely negatively related to identification (Homan et al., 2007).

Many conflict researchers assert that culture is vital in molding people's perceptions, attitudes and appraisals of conflict and its management (Jandt & Pedersen, 1996). These differences may lead to an increase in conflict, but also have the potential to be constructive if handled appropriately. Differences between team members may also play into how much conflict the team faces.

Heterogeneity

Virtual teams can be very diverse since they may be composed of members from all over the world. "Over time, conceptualizations of diversity have broadened to go beyond race, gender, and functional background to include deeper-level characteristics such as values and personality" (King et al., 2009, p. 273). There are many dimensions for how a team can be diverse including task-oriented dimensions, relation-oriented dimensions, as well as informational diversity which relates to a person's perspectives and knowledge. These differences in diversity may cause different types of conflict.

Task-oriented dimensions of diversity include educational level, department membership, knowledge, skills, and abilities (King et al., 2009). Relation-oriented dimensions of diversity include sex, age, race, values, and

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personality. Some of these are observable and considered to be at the surface level such as age, sex, and race/ethnicity. Others are at a deeper level and cannot be easily observed such as attitudes, beliefs, values, knowledge, skills, and abilities.

Another way a team can be diverse is the information that they bring to the team. Informational diversity can stem from differences in knowledge and perspectives (Homan et al., 2007). Informationally diverse groups are usually diverse in other areas like gender, ethnicity, and age. These differences can lead to more conflicts, and a negative team climate which can decrease involvement in task relevant information (Earley & Mosakowski, 2000). King et al. (2009) found that informational diversity (heterogeneity regarding education and functional area) was related to task conflict, and social category diversity (heterogeneity regarding gender and race) was related to relational conflict. In addition, diversity in values was related to greater task, process, and relational conflict. King et al. (2009) also found that functional diversity was related with task conflict, and diversity in ethnicity and organizational tenure were correlated with emotional conflict.

Contrastingly, a study conducted by Homan et al. (2007) found that informational diversity has the potential to increase group functioning even if the teams are diverse in other areas. Informational diversity can lead to increases in discussions and trading ideas pertaining to the team's task (Van Knippenberg, De Dreu, & Homan, 2004). Informational diversity can prompt members of teams

to expand task relevant information and use the information to make decisions. If informational diversity is going to be beneficial, teams need to be willing to trade and expand on information that other team members offer (Homan et al., 2007).

While data shows that task conflict can be amplified due to heterogeneity, one potential positive to bear in mind is that the effects of intergroup differences can change over time. Intergroup differences that are prominent at the beginning of relational interactions become less critical over time (King et al., 2009). The effects that time has on the group's cohesions may also depend on the type of diversity in the group. A study by King et al. (2009) found that the effect of surface-level diversity weakened overtime and that the effects of deep-level diversity were strengthened.

Barsade et al. (2000) found that heterogeneity in affect was associated with increases in task and emotional conflict, as well as lower levels of cooperation. This study confirms that group affective composition can influence both cooperation and conflict. Barsade et al. (2000) found that the negative effects of demographic diversity were the highest for new members of the group and for new groups. They also found that the effect of diversity on cooperation when a group had time to develop was positive. The results of their study supported their hypotheses and imply that the effect of demographic heterogeneity led to decreased cooperation within the group, but these effects decreased over time (King et al., 2009).

The way that individuals perceive their own social category distinctions can also affect how well they will confront and resolve conflict. Evident social category differences can expand the possible concerns with how an individual is viewed by others which can lead to cooperative actions to manage impressions of co-workers and managers (King et al., 2009). Even in conditions in which differences are highlighted, heterogeneity might create seemingly cooperative interactions.

Power distance, uncertainty avoidance, future orientation, gender egalitarianism, humane orientation, and performance orientation are also ways that team members can differ. Power distance is the level that members of a team or group expect power to be allocated equally (House et al., 2004). When an organization is high in power distance, the hierarchy is important to how privileges are distributed (Peretza et al., 2015). High level members usually keep their advantage in status and power and have strong in-group relationships. These types of organizations are more concerned with maintaining the status quo which lowers the social mobility of groups. The lower the perceived power distance the stronger the effort to reduce power gaps and the higher the power distance the weaker the effort aimed at reducing power inequalities (Coultas et al., 2011). Employees high in power have the ability to shape others' attitudes, values, and behaviors (Varela et al., 2008).

Uncertainty avoidance is the degree that a society or group depends on social norms to reduce the unpredictability of future situations (House et al.,

2004). Societies high in uncertainty avoidance typically construct practices that avoid ambiguity (Peretza et al., 2015). They are more likely to resist change or alternative perspectives.

Future orientation is the extent that organizations participate in future-oriented behaviors such as preparing and investing in the future (House et al., 2004). Societies that are high in future orientation place greater importance in preparing the workforce for future needs. Societies that are low in future orientation focus on immediate needs and short-term goals (Peretza et al., 2015).

Gender egalitarianism is the degree that societies or organizations take to reduce differences in gender roles (Peretza et al., 2015). This includes the acceptance of women in positions of power, minimal occupational sex segregation and the willingness to give women more influence with decision making. Societies that have low gender egalitarianism have more defined sex roles, and higher sex segregation.

Humane orientation refers to the length that individuals in societies or organizations inspire and support individuals to be fair, altruistic, and kindhearted (Peretza et al., 2015). Societies that have high humane orientation are more likely to support sensitivity to all forms of discrimination, while societies low in humane orientation are less likely to place emphasis on being sensitive to discrimination (Peretza et al., 2015).

Performance orientation is the degree to which a community promotes and supports excellence (Peretza et al., 2015). High performance orientation

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societies see importance in competitiveness and are less likely to focus on training and development and see feedback as being essential for performance improvement. Low performance orientation societies value social relationships and harmony over performance improvement and see feedback as too judgmental.

There are many differences between cultures that can lead to potential conflict between team members and these differences in virtual teams may stem from the cultures that they are from. The two main cultures that get compared are individualistic and collectivistic. Research on collectivist cultures tend to focus on the relationship between indirect communication and face concern. Holtgraves (1997) found that conflict management styles are different for individualistic or collectivistic societies.

There is an accepted idea that cultural values are normally shared by members of a society and are passed down from older to younger members (Hofstede, 1991). The general cultural values that people have are individualism/collectivism, power distance, uncertainty avoidance, future orientation, gender egalitarianism, humane orientation and performance orientation (Peretza et al., 2015). East Asian societies are classified as collectivist, whereas those from the West, including Australia, are associated with individualism.

Highly collective societies emphasize collective action and equal distribution of resources (Peretza et al., 2015). Some ways that collectivism is

defined is through words like pride, loyalty, and commitment to an organization. Organizations located in collectivistic societies will be more likely to focus on group commonality and may not see any importance in having unique individuals. A consciousness of collectivity means that group goals prevail over individual ones (Coultas et al., 2011).

High individualism societies encourage individual differences, even if it may lower their group loyalty (Peretza et al., 2015). Individualistic societies support the importance of personal needs and attitudes that lead to social behavior. People in individualistic societies are typically more open to change and new experiences than collectivistic societies. This can also lead to the pursuit of controlling resources and others for one's own benefit and not for the benefit of the group.

In response to the question of which "attitudes" have the biggest impact on how employees interact, Hofstede (2001) believes that high power distance and collectivism have the greatest effect on how employees interact. Alternatively, low power distance and individualistic environments generate conditions that produce unbiased evaluations (Hofstede, 1983). Low power distance and individualistic employees focus on their jobs and goals rather than their work relationships which can lead to task related issues (Varela et al., 2008). As a cultural value, power distance captures how individuals' reactions to power asymmetries differ across regions. These differences can be studied by placing

these reactions in a continuum where HPD and LPD represent two opposite poles (Hofstede, 2001).

Another element of life that is critical to the success or failure of teams are values. Values are more than ethics, morals, and virtues; they are the foundation in how people think, act, and feel (Mashlah, 2015). Values have a vital role in how we make decisions, choose preferences, build our perceptions, and lead and drive both individuals and groups (Mashlah, 2015). Understanding employee's values can increase our awareness in why people think, act, and feel in the workplace. This can lead to conflict from the difference between openness to change values and conservation values. People with openness to change values emphasize openness to new experiences through autonomy of thoughts and actions, or through novelty and excitement. This creates conflict with conservation values that emphasize routine and sticking with the status quo. This includes commitment to traditional beliefs and customs, sticking to social norms and expectations, and preference for stability and security.

Self-enhancement and self-transcendence values can also potentially cause conflict. Self-enhancement values align with individualistic cultures and the pursuit of self-interest by attempting to gain control over people and resources, or by showing ambition that leads to attaining success. Self-enhancement values conflict with self-transcendence values that show acceptance, concern, or care for others.

An explanation for inconsistency across studies of workgroup diversity is the variability in tasks. Some studies are performed on workgroups exhibiting tightly controlled decision-making paradigms such as one would find in laboratory settings, whereas others examine the creative outputs of market research and product development teams, while still others consider student groups working on course projects. The type of team, or at least the degree to which the tasks of a team require particular inputs, processes, and outcomes, likely alters the effects of diversity (King et al., 2009).

Distance

Distance can create potential problems like multiple time zones which can make finding meeting times or working together challenging (Brew & Cairns, 2004). This can lead to annoyance if team members are working together, and the other team members are unavailable to discuss task-related issues. Geographically distributed teams can also have problems with misinterpretations and working out task-related problems. Therefore, distance between team members increase the probability that these problems lead to major conflict.

Another issue that can be caused by physical distance is decreased awareness among group members. Mutual awareness is important for the effectiveness of the group, but also challenging for groups with physical distance to preserve (Dourish & Bellotti, 1992). Cramton (2001) found that team members of teams with physical distance had problems with understanding exactly what

each other were working on, and that they depended on each other to supply contextual cues. Group members do not always supply these cues which provide needed information on what they are working which leads to misunderstandings and most likely conflict (Brew & Cairns, 2004).

The association that heterogeneity and conflict have is especially prevalent as larger geographic distribution will most likely lead to an increase in cultural diversity (Mortensen & Hinds, 2001). For example, individuals of a group located in Asia will probably have different ethno-cultural composition from group members from North America (Mortensen & Hinds, 2001). The group does not have to be made up of members from all over the world or even national borders to have high cultural heterogeneity since cultures can be different from region to region within a country. Therefore, even groups where all members are from one country should expect cultural heterogeneity to be part of the group's dynamic (Mortensen & Hinds, 2001). Heterogeneity for this study will be focused on geographic cultural differences. These differences may not have a major impact on the amount of conflict the team faces if the members have good conflict resolution skills.

<div align="center">Conflict Resolution Skills</div>

When conflict arises, people will either put forth effort to overcome the conflict or find a way to avoid it. Dignath, Kiesel, and Eder (2015) found that people can adjust and find ways to avoid conflict at the same time during a task

which means that there may need to be some flexibility in how conflict situations are handled. They also found that task avoidance increased after previous task alternation. Training on how to handle conflict appropriately could lower the amount of negative conflict a team will face. This training may also need to be tailored to different situations.

Openness is valued in western societies and is typically seen as constructive, but it also needs to be employed correctly (Tjosvold & Sun, 2002). An example of this would be handling conflict openly. This may work for western societies but may not work in collectivist societies. Researchers have argued that the avoidance approach is considered to be valuable and useful in collectivist societies. Group-oriented societies value relationships and try to maintain them by trying to keep the harmony and avoid conflicts to protect social face.

The motivations behind avoiding conflict may be different in collectivistic and individualistic societies. Avoiding conflict in collectivistic societies may support relationships and help both parties. On the other hand, avoiding conflict in individualistic societies may be for selfish reasons (Tjosvold & Sun, 2002). There have been arguments made by western researchers that argue that this is normally motivated by lower levels of concern for the relationship and the problem.

One way of conflict avoidance would be to try to ignore the conflict and hope it goes away on its own. Another way could be getting the idea accepted by someone else so they can work around the person they have conflict with to

further their own interest (Tjosvold & Sun, 2002). This approach is called outflanking and is an active and goal-oriented approach to conflict avoidance. People many also conform and comply with the others decision to avoid conflict. Conforming has been found to be valued in collectivistic societies and is related to respect.

Fear of revenge may be one of the motives behind conflict avoidance. Sufficiency is another potential motive and entails the idea that one can achieve their goals and have their decision realized even if the other party does not agree or that the other party will eventually agree (Tjosvold & Sun, 2002). The research by Tjosvold and Sun (2002) shows that conflict avoidance may be helpful with repairing relationships, and that avoiding conflict can also be a helpful approach to reaffirm an established effective relationship. This suggests that avoiding conflict may be an appropriate approach to promote productivity when there is already a strong relationship.

There are many different approaches to handling conflict. Having some training or appropriate skills could decrease the negatives that both task and relational conflict can bring. Communication skills are a necessary skill when dealing with conflict. This includes being willing to hear and attempt to understand the alternative perspective in an argument (Sexton & Orchard, 2016). This dialogue allows both sides to view the argument from each other's side and gain understanding of the problem. There are training programs that help promote this type of communication.

Problem solving skills can also decrease conflict. The ability to problem solve decreases defensive behavior and shifts the focus into analyzing and making decisions (Sexton & Orchard, 2016). This may help with the amount of time that conflict is present, and the ability to move on from the conflict.

Cognitive flexibility helps people gain insight about the conflict and the people that are involved (Gilin Oore, Leiter, & Leblanc, 2015). This can happen through being able to see the conflict from someone else's perspective. This allows a person to take a look at the conflict from a broader perspective to gain understanding. Another important aspect of dealing successfully with conflict is the balance between self-interest and the interest of others (Gilin Oore et al., 2015).

Being able to regulate emotions is another useful skill when dealing with interpersonal conflict. Evidence has been found that emotion regulation skills can assist with dealing with the negative emotions that come from conflict (Gilin Oore et al., 2015). The ability to regulate emotions empowers individuals to gain valuable knowledge that task conflict introduces without magnifying negative relationship issues (Gilin Oore et al., 2015).

Mindfulness training has become a helpful method when interpersonal conflict is present. Team mindfulness is a shared belief among members of a group that interactions are distinguished by awareness and attention to events and experiences (Yu & Bruhn, 2018). Mindfulness training has been used in sports and is now being used in some organizations. This type of training may

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help decrease the negative "influences" caused by interpersonal conflict (Yu & Bruhn, 2018). Team mindfulness can sever the relationship between task and relational conflict, as well as decreasing relational conflict. (Chan & Goto, 2003).

Present Study

There has been limited research on the effects that conflict resolution skills have on conflict in the workplace, especially with virtual teams. There has been even more limited research on virtual teams outside of experimental studies. Thus, the main objective of this study was to further examine the effects that conflict resolution skills can have, specifically in combination with the impact of cultural heterogeneity.

Hypothesis 1 task conflict:

1A: Cultural heterogeneity will be positively related to task conflict.

1B: Conflict resolution skills will be negatively related to task conflict.

1C: The relationship between cultural heterogeneity and task conflict will be moderated by conflict resolution skills within virtual teams (see Figure 1 in Appendix B). When conflict resolution skills are low there will be a positive relationship between cultural heterogeneity and positive conflict. When conflict resolution skills are high there will be a slightly negative relationship between cultural heterogeneity and negative task conflict.

Emotional conflict can cause an unnecessary distraction and problems outside of the task at hand. Team members may harbor feelings about each

other that get in the way with working together on task. If team members can avoid emotional conflict and stay focused on the task, teams will work together better. Therefore, the second focal point of this study was to access the effects that conflict resolution skills can have on the amount of emotional conflict virtual teams face.

Hypothesis 2 emotional conflict:

2A: Cultural heterogeneity will be positively related to emotional conflict.

2B: Conflict resolution skills will be negatively related to emotional conflict.

2C: The relationship between cultural heterogeneity and emotional conflict will be moderated by conflict resolution skills within virtual teams (see Figure 2 in Appendix B). When conflict resolution skills are low there will be a positive relationship between cultural heterogeneity and emotional conflict. When conflict resolution skills are high there will be a slightly negative relationship between cultural heterogeneity and emotional conflict.

CHAPTER TWO

METHOD

To reduce the impact of those forced to work remotely temporarily due to Covid-19, participants were required to have worked on a virtual team for a minimum of six months to complete the survey which was just prior to the Covid-19 outbreak. If their responses were below the cutoff of six months, they were kicked to the end of the survey. If their responses were above the cutoff participants were asked to specify their age, gender, time in organization, and years of work experience. Participants were also asked to answer items on workplace interpersonal conflict, task conflict, relational conflict, and conflict resolution skills.

For the item on country of origin, participants were from 26 different countries (Australia .7%, Austria .7%, Brazil 3%, Canada 3%, Chile .7%, China .7%, Colombia .7%, Czech Republic 5.2%, Denmark .7%, Deutschland .7%, Germany .7%, India 8.9%, Ireland 1.5%, Italy .7%, Mexico .7%, Netherlands .7%, Poland .7%, Russia 1.5%, Singapore .7%, South Africa .7%, Spain .7%, Sweden .7%, Ukraine .7%, United Kingdom 3%, Uruguay .7%, USA 61.5%). The average age of participants was 41 and ranged from 22-67. 57.8% of the participants were men, and 40.7% were women. Participants had worked at their organization between six months and 24 years, and the average was 5.41 years. 13% of participants had worked virtually for 6-12 months, 14.1% had worked virtually 1-2 years, and 72.6% had worked virtually for two or more years.

The survey method was used to test the interactions hypothesized. Convenience and snowball sampling were used initially, and MTurk was used to complete the data collection. Using GPower 3.1, a power analysis was conducted with an effect size f2=.08, α err prob=.05, and power=.8 which suggested a sample size of 124 for a regression with two predictors. However, literature suggests that moderated effects are elusive and suggests that the sample size should be at least 137 (Shieh, 2008). Therefore, a sample size of 137 was obtained. Participants were also asked to answer items on workplace interpersonal conflict, task conflict, relational conflict, and conflict resolution skills.

<div align="center">Measurement</div>

At the beginning of the survey, participants were asked if they had worked on a virtual team, and how long they have worked on the team with a minimum of six months on a team required. The reason for this minimum is that team members would need to have spent enough time on the team to experience all these factors and assess them accurately. If their responses were below the cutoff of six months, they were kicked to the end of the survey. If their responses were above the cutoff participants were asked to specify their age, gender, ethnicity, time in organization, size of virtual team, years of work experience, and professional skills.

Workplace interpersonal conflict was evaluated using the Six item workplace interpersonal conflict (WICS) scale, and part of the intragroup conflict

<div align="center">25</div>

scale developed by Jehn (1995). WICS was created to measure the frequency

of conflict characteristics discovered from a previous study of interpersonal

conflict (Wright et al., 2017). The WICS is a short self-report measure and uses a

5-point Likert scale ranging from 1 = *never* to 5 = *very often*, and includes items

like "Had a disagreement with others over the work you do?" Cronbach's alpha

for workplace interpersonal conflict was .93.

Task conflict was measured using part of the eight-item intragroup conflict

scale developed by Jehn (1995). This intragroup conflict scale measures both

relational and task conflict. This scale has been used in many studies to measure

task conflict and had a Cronbach's alpha of .89. The four task conflict items were

used for this study. The scale uses a 5-point Likert scale ranging from 1 = *none*

and 5 = *A lot*. An example item is "How many disagreements over different ideas

were there?" The full scale can be found in Appendix A.

Three scales were used to measure conflict resolution skills.

Communication competence was measured using the 10 item Interpersonal

Communication Competence Scale developed by Rubin and Martin (1994). An

example item from this scale is "I allow my friends to see who I really am."

Problem-solving skills were measured using the eight item Problem-Solving Skills

Scale developed by Maydeu-Olivares and D'Zurilla (1997). An example item from

this scale is "When a solution to a problem has failed, I do not examine why it

didn't work." Self-efficacy in resolving team conflict was measured using the six-

item subscale of the Team Self-Assessment Questionnaire (TSAQ) (Stone &

Bailey, 2007). An example from this scale is "When faced with a serious conflict or disagreement, I was able to help my team resolve the disagreement or conflict." Conflict resolution education and training were measured by asking participants to rate their perceptions of how sufficient they think their previous education and training in conflict resolution was. A 5-point Likert-type scale was used for the items measuring conflict resolution skills ranging from 1 = *strongly disagree* and 5 = *strongly agree*. Higher scores suggested higher communication competence, higher problem-solving ability, higher self-efficacy in resolving team conflict, and higher belief in the sufficiency of their conflict resolution education and training. Cronbach's alpha for the combination of all these scales was .83. All items for all scales can be found in Appendix A.

Cultural heterogeneity was measured by asking participants to rate how culturally diverse they think their team is from 1 = *Low* to 3 = *High*. Participants were then asked considering the country of origins of their virtual team members: what percentage of team members are from countries outside of the United States, and what percentage of team members speak different languages. Those that responded between 0%-33% were coded 1 for low, 34%-66% were coded 2 for medium, and 67%-100% were coded high. Finally, participants were asked, "to what extent are the members of your team from different cultures?" Cronbach's alpha for this scale was .76.

Interdependence was measured using the four item Reciprocal Interdependence Scale created by Pearce and Gregersen (1991). A 5-point

Likert type scale will be used with 1 = *strongly disagree* and 5 = *strongly agree*.

An example from this scale is "I frequently must coordinate my efforts with

others." Cronbach's Alpha was .77. This scale was added to see if

interdependence could have a significant impact on the effects of cultural

heterogeneity on task and relational conflict.

Team effectiveness was measured using the 16-item team effectiveness

scale designed by Lurey and Raisinghani (2001) which had a Cronbach's Alpha

of .83. This measure uses a 7-point Likert type scale with 1= *strongly disagree*

and 7= *strongly agree*. An example from this scale is "Generally, my team

completes its work on time." Items for this scale can be found in Appendix A.

CHAPTER THREE:

RESULTS

The analysis initially had 164 total responses, but some responses were incomplete. The incompletes were removed, and 137 responses were kept which met the power requirement. A moderated multiple regression with centered variables was conducted with task conflict, and relational conflict as dependent variables. Littles MCAR test was run and there was no missing data. Durbin-Watson test was used to test if residuals are independent. Durbin-Watson=-1.89 so we can assume residuals are independent (>1). Multicollinearity and singularity were analyzed using a bivariate correlation matrix which showed that none of the correlations were larger than .9 which meant that the assumptions were met. Univariate and multivariate outliers were checked using the Mahalanobis distance. The chi-square cutoff at .05 was 5.99. There were two responses that were above that cutoff. One was 12.04, and the other was 13.22. Both were removed. A line graph showed that the data clustered evenly around the line, so data was normal. A regression plot showed that the data was evenly distributed around the mean, so the assumption of homoscedasticity was met.

Table 1. Descriptive Statistics

	Mean	Median	Std. Deviation	Minimum	Maximum
Emotional Conflict	2.06	1.91	.710	1.00	4.45

Task Conflict	2.79	2.75	.780	1.00	4.75
Conflict Resolution Skills (CRS)	3.85	3.83	.373	2.88	4.79
Heterogeneity	2.01	2.00	.591	1.00	3.00
Interdependence	4.26	4.25	.606	2.25	5.00
Effectiveness	5.60	5.63	.601	3.75	7.00

Emotional conflict had a mean of 2.06 which suggests that Emotional Conflict was low across the sample. Task conflict had a higher mean (2.79) than Emotional Conflict (2.06). These were both on a 1-5 scale, so task conflict had a higher value for the participants of this study based on the means. Conflict resolution skills had a low amount of variability with a Std. Deviation of .373. The mean for heterogeneity was 2.01 which was in the middle of the range. Interdependence had a high mean of 4.26 with a maximum of 5, and a std. deviation of .606 which is also high. Effectiveness had a high mean (5.60) and a high minimum (3.75).

Table 2. Intercorrelation Matrix

Measure		1	2	3	4
Emotional Conflict	Pearson Correlation	1			
Task Conflict	Pearson Correlation	.599**	1		
Conflict Resolution Skills	Pearson Correlation	-.241*	.010	1	

Heterogeneity	Pearson Correlation	-.030	.132	.116	1

**Correlation is significant at the .001 level. N=137

Task Conflict Hypotheses

Bivariate correlations were used to test the predictions for hypotheses 1A and 1B. It was predicted that cultural heterogeneity would be positively related to task conflict, and that conflict resolution skills would be negatively related to task conflict. Hypothesis 1A was not supported because cultural heterogeneity (M=2.01, SD=.59) was not a significant predictor of task conflict, (M=2.79, SD=.78), r(137)= .13 , p>.05. Hypothesis 1B was not supported because conflict resolution skills (M=3.85, SD=.37) were not a significant predictor of task conflict (M=2.79, SD=.78), r(137)= .01, p>.05. The prediction for hypothesis 1C was tested using IBM SPSS statistics 26 and Hayes' PROCESS Procedure for SPSS Versions 3.4. The moderated analysis showed that Hypothesis 1C was not supported. The overall regression model was *Multiple R*= .152, R^2= .023, F(3, 131)= 1.034, p>.05. Cultural heterogeneity was not a significant predictor of task conflict, b= .1766, t(131)= 1.539, p>.05. Conflict resolution skills were not a significant predictor of task conflict, b= -.009, t(131)= -.0489, p>.05. The relationship between cultural heterogeneity and task conflict moderated by conflict resolution skills was not significant, b= .272 t(131)= .865, p>.05.

Table 3. Task Conflict

	b	SE B	t	p
Constant	2.784 [2.650, 2.918]	.068	41.196	p<.05
Heterogeneity (centered)	.1766 [-.050, .404]	.115	1.539	p>.05
CRS (centered)	-.009 [-.369, .894]	.182	-.049	p>.05
Interaction	.272 [-.350, .894]	.314	.865	p>.05

Relational Conflict Hypotheses

Bivariate correlations were used to test the predictions for hypotheses 2A and 2B. It was predicted that cultural heterogeneity would be positively related to emotional conflict, and that conflict resolution skills would be negatively related to emotional conflict. Hypothesis 2A was not supported because cultural heterogeneity (*M*=2.01, *SD*=.59) was not a significant predictor of emotional conflict (*M*=2.06, *SD*=.71), r(137)= -.03, p>.05. Hypothesis 2B was supported. Conflict resolution skills (*M*=3.85, *SD*=.37) were a significant predictor of emotional conflict (*M*=2.06, *SD*=.71), r(137)= -2.41, p<.05. The prediction for hypothesis 2C was tested using IBM SPSS statistics 26 and Hayes' PROCESS Procedure for SPSS Versions 3.4. Overall model: *Multiple R*= .245, *Multiple R²*= .059, *F*(3,131)= 2.734, p<.05. Cultural heterogeneity was not a significant predictor of emotional conflict *b*= -.003, *t*(131) = -.025, p>.05. Conflict resolution skills were a significant predictor of emotional conflict *b*= -.457, *t*(131) = -2.81,

p<.05. Hypothesis 2C was not supported because the moderated analysis
showed that the relationship between cultural heterogeneity and emotional
conflict moderated by conflict resolution skills was not significant, b= .103,
t(131)= .366, p>.05.

Table 4. Relational Conflict

	b	SE B	t	p
Constant	2.060 [1.940, 2.179]	.060	34.114	p<.05
Heterogeneity (centered)	-.003 [-.205, .200]	.103	-.025	p>.05
CRS (centered)	-.457 [-.778, -.1357]	.162	-2.81	p<.05
Interaction	.103 [-.453, .658]	.2808	.366	p>.05

Additional Analyses

A hierarchical regression was used to analyze the relationships between
interdependence, task conflict, and conflict resolution skills. IBM SPSS Statistics
26 and Hayes' PROCESS Procedure for SPSS Versions 3.4 were used to
assess the relationships. It was found that there was a significant relationship
between Interdependence and task conflict b=.288, t(128) = 2.401, p <.05. The
overall model was *Multiple R*=.283, R^2=.080, F(6,128)=1.83, p>.05. The
moderated analysis shows that this relationship is not significant, b=.183, 95% *CI*
[-.435, .802], t=.587, p>.05.

Table 5. Interdependence, Task Conflict, Conflict Resolution Skills

	b	SE B	t	p
Constant	1.888 [.188, 3.589]	.860	2.187	p<.05
Heterogeneity (centered)	.197 [-.0230, .423]	.115	1.720	p>.05
CRS (centered)	-.052 [-.475, .370]	.214	-.245	p>.05
Interaction	.183 [-.435, .802]	.313	.587	p>.05
Interdependence (centered)	.288 [.051, .525]	.120	2.401	p<.05
Effectiveness (centered)	-.098 [-.361, .166]	.133	-.733	p>.05

A hierarchical regression was used to analyze the relationships between interdependence, relational conflict, and conflict resolution skills. IBM SPSS Statistics 26 and Hayes' PROCESS Procedure for SPSS Versions 3.4 were used to assess the relationships. Interdependence was found to have a significant relationship with relational conflict b= .255, t(128) = 2.664, p<.05. Effectiveness had a significant negative relationship with relational conflict b= -.248, t(128) = -2.341, p<.05. The overall model was *Multiple R*=.542, R^2=.294, F(6,128)= 8.891, p<.05. The interaction of this was not significant, b= -.093, t(128)= -.374, p>.05.

Table 6. Interdependence, Relational Conflict, Conflict Resolution Skills

	b	SE B	t	p
Constant	1.705 [.349, 3.060]	.685	2.488	p<.05
Heterogeneity (centered)	.084 [-.097, .265]	.091	.921	p>.05
CRS (centered)	-.257 [-.594, .080]	.170	-1.508	p>.05
Interaction	-.093 [-.586, .400]	.249	-.374	p>.05
Interdependence (centered)	.255 [.066, .444]	.096	2.664	p=.009
Effectiveness (centered)	-.248 [-.458, -.038]	.106	-2.341	p=.021

A hierarchical regression was used to analyze the relationships between relational conflict, task conflict, and conflict resolution skills. IBM SPSS Statistics 26 and Hayes' PROCESS Procedure for SPSS Versions 3.4 were used to assess the relationships. The overall model was *Multiple R*= .615, R^2= .378, F(3,131)= 26.530, p<.05. It was found that 38% of the variance in relational conflict can be explained by task conflict and conflict resolution skills. Task conflict had a significant relationship with Relational Conflict. *B*= .513, *t*(131)= 8.179, p<.05. Conflict resolution skills had a significant negative relationship with relational conflict, *b*= -.478, *t*(131)= -3.634, p<.05. Task conflict did not predict relational conflict when conflict resolution is the moderator, *b*= -.168, *t*(131)= -.993, p>.05.

Table 7. Relational Conflict, Task Conflict, Conflict Resolution Skills

	b	SE B	t	p
Constant	2.062 [1.966, 2.159]	.049	42.315	p<.05
Task Conflict	.513 [.389, .638]	.063	8.179	p<.05
CRS	-.478 [-.738, -.218]	-3.634	3.634	p<.05
Interaction	-.168 [-.504, .167]	.170	-.993	p>.05

A hierarchical regression was used to analyze the relationships between effectiveness, task conflict, and conflict resolution skills. IBM SPSS Statistics 26 and Hayes' PROCESS Procedure for SPSS Versions 3.4 were used to assess the relationships. There was a significant relationship between effectiveness, task conflict, and conflict resolution skills. 26% of the variance in effectiveness can be explained by task conflict and conflict resolution. The overall model was *Multiple R*= .508, R^2= .258, $F(3,131)$= 15.181, p<.05. Task conflict was not found to have a significant relationship with effectiveness, b= -.025, $t(131)$= -.429, p>.05. Conflict resolution skills had a significant positive relationship with effectiveness, b= .813, $t(131)$= 6.692, p<.05. The interaction between task conflict and effectiveness was not significant when moderated by conflict resolutions skills, b= -.057, $t(131)$= -.362, p>.05.

Table 8. Effectiveness, Task Conflict, Conflict Resolution Skills

	b	SE B	t	p
Constant	5.600 [5.510, 5.688]	.045	124.211	p<.05
Task Conflict	-.025 [-.140, .090]	.058	-.429	p>.05
CRS	.813 [.573, 1.054]	.122	6.692	p<.05
Interaction	-.057 [-.367, .253]	.157	-.362	p>.05

A hierarchical regression was used to analyze the relationships between effectiveness, relational conflict, and conflict resolution skills. IBM SPSS Statistics 26 and Hayes' PROCESS Procedure for SPSS Versions 3.4 were used to assess the relationships. There was a significant relationship between effectiveness, relational conflict, and conflict resolution skills. 29% of the variance in effectiveness can be explained by relational conflict and conflict resolution skills. The overall model was *Multiple R*= .542, R^2= .294, *F*(3,131)= 18.148, p<.05. Relational conflict had a significant negative relationship with effectiveness, *b*= -.143, *t*(131)= -2.198, p<.05. Conflict resolution skills had a significant positive relationship with effectiveness, *b*= .759, *t*(131)= 6.187, p<.05. The interaction between effectiveness and relational conflict when moderated by conflict resolution skills was not significant, *b*= .204, *t*(131)= 1.053, p>.05.

Table 9. Effectiveness, Relational conflict, Conflict Resolution Skills

	b	*SE B*	*t*	*p*
Constant	5.612 [5.532, 5.702]	.046	122.895	p<.05
Relational Conflict	-.143 [-.272, -.014]	.065	-2.198	p<.05
CRS	.759 [.516, 1.002]	.123	6.187	p<.05
Interaction	.204 [-.180, .589]	.194	1.053	p>.05

A hierarchical regression was used to analyze the relationships between effectiveness, relational conflict, and interdependence. IBM SPSS Statistics 26 and Hayes' PROCESS Procedure for SPSS Versions 3.4 were used to assess the relationships. There was a significant relationship between effectiveness, relational conflict, and interdependence. 22% of the variance in effectiveness can be explained by relational conflict and interdependence. The overall model was *Multiple R*= .465, R^2=.216, F(3, 131)= 12.038, p<.05. Relational conflict was a significant negative relationship with effectiveness, *b*= -.267, *t*(131)= -4.07, p<.05. Interdependence had a significant positive relationship with effectiveness, *b*=.359, t(131)= 4.636, p<.05. The interaction between effectiveness and relational conflict when moderated by conflict resolution skills was not significant, *b*=.127, *t*(131)= .973, p>.05.

Table 10. Effectiveness, Relational Conflict, Interdependence

	b	SE B	t	p
Constant	5.596 [5.504, 5.688]	.046	120.542	p<.05
Relational Conflict	-.268 [-.397, -.137]	.067	-4.065	p>.05
CRS	.359 [.206, .512]	.077	4.636	p<.05
Interaction	.127 [-.131, .385]	.131	.973	p>.05

CHAPTER FOUR

DISCUSSION

The present study was aimed at understanding the impact that conflict resolution skills can have on conflict experienced within culturally heterogenous virtual teams. Specifically, this study examined the moderating role of conflict resolution skills on task and relational conflict within virtual teams. Additional analyses were conducted to measure the impact that interdependence and team effectiveness can have on task conflict, relational conflict, conflict resolution skills, and cultural heterogeneity.

Hypothesis 1 stated that cultural heterogeneity would be positively related to task conflict, conflict resolution skills would be negatively related to task conflict, and the relationship between cultural heterogeneity and task conflict will be moderated by conflict resolution skills. Hypothesis 1 was not supported.

Hypothesis 2 was partially supported. Cultural heterogeneity was not a significant predictor of emotional conflict. I found that conflict resolution skills were a significant predictor of relational conflict. The relationship between cultural heterogeneity and emotional conflict was not moderated by conflict resolution skills within virtual teams. The results of hypothesis 2 suggest that conflict resolution skills could be a useful tool when attempting to decrease relational conflict.

To add to the initially proposed study, I conducted additional analyses to see if there were any significant relationships between relational conflict, task

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conflict, conflict resolution skills, heterogeneity, interdependence, and effectiveness. Effectiveness had a significant negative relationship with relational conflict which supports the research that relational conflict can be detrimental to the team (Jehn, 1995). Effectiveness did not have a significant relationship with task conflict. Interdependence had significant relationships with relational conflict, task conflict, and effectiveness. These relationships were all positive which indicates that interdependence could be constructive or destructive depending on how much relational and task conflict is present.

Theoretical Implications

This study contributes to existing research on the role that conflict resolution skills play with the types of conflict that culturally heterogenous teams face. Sexton and Orchard (2016) found that problem solving skills decreased conflict. I found this to be true for relational conflict, but that was not the case for task conflict. It may be that high conflict resolution skills may also increase positive task conflict if the team members see the benefits from conflict and know how to navigate conflict.

Cultural heterogeneity was not a significant predictor of task conflict which does not align with the current research that conflict increases with an increase in physical distance, and with cultural differences (Cramton, 2001; Brew & Cairns, 2004). It should be stated that a different measure for cultural heterogeneity could potentially change this relationship. The relationship between cultural

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heterogeneity and task conflict were not significant when moderated by conflict resolution skills. This could be different if a better measure for cultural heterogeneity was used since I did not capture high variability on cultural heterogeneity.

Cultural heterogeneity for this study was not positively related to emotional conflict which does not support past research (Brew & Cairns, 2004; Cramton, 2001). Again, the outcome of this could be different with the use of a different cultural heterogeneity scale. The relationship between cultural heterogeneity and emotional conflict were not significant when moderated by conflict resolution skills. This again could have a different outcome if a scale with a higher reliability was used and a more diverse population was sampled.

Interdependence caused an increase in both task and relational conflict. However, Interdependence was found to have a positive impact on effectiveness. These findings support the research by Barclay and Wolff (2011) which found that task and relational conflict are not always bad and can relate to more effectiveness. Another interesting, but concerning finding was that task conflict had a positive relationship with relational conflict. King et al. (2009) concluded that constructive conflict happens when task conflict is high, and relational conflict is low. Similarly, de Wit et al. (2012) found that task conflicts are less likely to have negative effects on group outcomes. Relational conflict is the most detrimental, so it is important if they both exist for relational conflict to be low.

Past researchers have found that conflict resolution skills have the potential to decrease negative emotions that come from conflict and empower individuals to gain knowledge that comes from task conflict without focusing on negative relation conflict (Gilin Oore, et al., 2015). For this study conflict resolution skills had a strong positive relationship with effectiveness increasing the important role that conflict resolution skills can play with the success of virtual teams. These areas should continue to be researched with an emphasis on specific conflict resolution skills.

Practical Implications

This study supports research by Gilin Oore et al. (2015) that conflict resolution skills decrease relational conflict. Chan and Goto (2003) also found that team mindfulness can remove the relationship between task and relational conflict and decrease relational conflict. Since conflict resolution skills also increased effectiveness, nationwide and worldwide organizations could benefit from culturally heterogenous teams, and conflict resolution skills could be a main training area if an organization wants to implement successful heterogenous virtual teams. Conflict resolution skills training could be a more affordable route than the time wasted having to mitigate conflict and could lead to more successful culturally heterogenous virtual teams.

Task conflict and effectiveness did not have a significant relationship which supports the meta-analysis conducted by de Wit et al (2012) which found

that task conflict and group performance had neither a negative nor positive relationship. This study also showed that effectiveness decreases when relational conflict is present which aligns with the research by De Dreu (2006) who found that relational conflict can decrease group performance. Destructive conflict is costly to the individual team members and can potentially be destructive to the entire team. Specifically, this destructive conflict can lead to lower job motivation, team member health issues, and potentially absenteeism (Barclay & Wolff, 2011). Destructive conflict is also costly to the organization financially due to the decrease in productivity and performance. Organizations planning to utilize culturally heterogenous virtual teams should consider all supported research to avoid destructive conflict, and to keep relational conflict low.

Limitations and Future Research Directions

This study had certain limitations that created constraints on the accuracy of the results. Culturally heterogeneity was not found to be positively related to task conflict. This could have been caused partially by the lack of variability in the heterogeneity measure. For example, standard deviation for Question 13.1 before changing the scale from 0-100 to 1-3 was 30.85, and standard deviation for questions 13.2 was 30.4. The lack of variability for the heterogeneity scale had an impact on the hypotheses, and a more sensitive scale would have led to more valuable findings.

This correlational study relied on self-reports of conflict and heterogeneity. The amount of time that some participants spent on the survey did not seem sufficient for thought out responses. The mean for the measure of conflict resolution skills was high which may stem from individuals believing they have exceptional conflict resolution skills, even if they do not. Another problem with self-reports was that the perceptions of heterogeneity could also have been skewed if the participants of this survey have never met their fellow team members face-to-face or know them well enough to know what country they are from.

There was also a lack of context on organizational practices relation to conflict resolution. Although data collection excluded those working virtually due to covid-19 restrictions, the implications of further study on the topic could be vast as workplace structure has shifted significantly from 2019 to the 2020-21 years. In the year following the completion of the data collection and analysis, hundreds of thousands of workers transitioned to virtual jobs/teams due to covid-19 and virtual jobs became commonplace and a household topic of conversation. Not only has covid-19 impacted the workplace significantly in this past year, but it has also transformed the face of work as we know it as many companies have now realized both the practical ease of implementation of a virtual workforce and the benefits (cost reduction, etc.) of having virtual workers. It is likely that many companies may choose to continue to keep several departments virtual on a permanent basis moving forward.

Another limitation from this study is that it included individuals from many different teams and organizations. A future study could use individuals from the same group to increase accuracy which could lead to a better understanding of the impact on conflict resolution skills on both task and relational conflict. A study could also use participants from a single organization since the culture and climate of the organization they work for will be similar.

Research on cultural heterogeneity should increase due to organizations putting a larger emphasis on diversifying the workplace. Cultural heterogeneity could potentially impact in-group and out-group feelings, trust, and perceptions of the roles within the team. These differences could have many different positives and negatives and should be explored.

Another topic that should be researched in the future is the role that interdependence plays. Interdependence had a significant relationship with both task conflict and relational conflict, and with effectiveness. Understanding the reasons why interdependence can be a positive or negative could have a great impact on how tasks are delegated and if tasks get done more effectively or efficiently when team members work together or on their own.

Conclusion

In this study I documented relationships between task conflict, relational conflict, conflict resolution skills, heterogeneity, interdependence, and effectiveness. Findings supported research that establishes conflict resolution skills reducing

relational conflict and increases effectiveness. Based on this research,

organizations looking to utilize culturally heterogeneous virtual teams should

consider conflict resolution skills training to decrease the chance of negative

within team conflict.

APPENDIX A

SURVEY SCALES

How old are you? (age)
Are you male or female? (gender)
How long have you worked at your organization? (company tenure)
How long have you worked in a virtual team? (virtual tenure)
What is country of origin? (nationality)

Workplace Interpersonal Conflict Scale (Wright et al., 2017)
(alpha=0.928)
1. Felt like you were treated unfairly by others at work?
2. Had a disagreement with others over the work you do?
3. Been shown a lack of respect or felt underappreciated by others at work?
4. Been treated with hostility or rude behavior by others at work?
5. Had others yell at you at work?
6. Been blamed or criticized for something that was not your fault by others at work?
7. How much emotional conflict was there among the members of your group?
8. How much anger was there among the members of the group?
9. How much personal friction was there in the group during decisions?
10. How much were personality clashes between members of the group evident?
11. How much tension was there in the group during decisions?

Task Conflict
Intragroup Conflict Scale (Jehn, 1995)
(alpha=0.890)
1. How much disagreement was there among the members of your group over their opinions?
2. How many disagreements over different ideas were there?
3. How many differences about the content of decisions did the group have to work through?
4. How many differences of opinion were there within the group?

Conflict Resolution Skills
Interpersonal Communication Scale (Rubin & Martin, 1994)
Problem-Solving Skills Scale (Maydeu-Olivares & D'Zurilla, 1997)
Team Self-Assessment Questionnaire (Stone & Bailey, 2007)
(alpha=0.834)
1. I allow my friends to see who I really am.
2. I can put myself in others' shoes.
3. I am comfortable in social situations.
4. When I've been wronged, I confront the person who wronged me.
5. My conversations are pretty one-sided.

6. My conversations are characterized by smooth shifts from one topic to the next.
7. My friends can tell when I'm happy or sad.
8. My communication is usually descriptive, not evaluative.
9. My friends can tell when I'm happy or sad.
10. I accomplish my communication goals.
11. When a solution to a problem has failed, I do not examine why it didn't work.
12. After following a course of action to solve a problem, I compare the actual outcome with the one I anticipated.
13. When I have a problem, I think of as many possible ways to handle it as I can until I can't come up with any more ideas.
14. When considering solutions to a problem, I do not take the time to assess the potential success of each alternative.
15. When confronted with a problem, I stop and think about it before deciding on a next step.
16. When making a decision, I compare alternatives and weigh the consequences of one against the other.
17. I try to predict the result of a particular course of action.
18. When thinking of ways to handle a problem, I seldom combine ideas from various alternatives to arrive at a workable solution.
19. When faced with a serious conflict or disagreement, I was able to help my team resolve the disagreement or conflict.
20. When faced with a serious conflict or disagreement, I contributed greatly to the resolution of my team's disagreement or conflict.
21. When faced with a serious conflict or disagreement, I was more competent in resolving the team disagreement or conflict than my teammates.
22. When faced with a serious conflict or disagreement, I knew how to bring my team to a resolution of the team disagreement or conflict.
23. When faced with a serious conflict or disagreement, I had very good skills that helped my team resolve the team disagreement or conflict.
24. When faced with a serious conflict or disagreement, I attempted to move my team to a resolution.

Heterogeneity Scale (alpha=.764)
1. How would you rate how culturally diverse your team is? (anchored scale)
   Low   Medium   High
2. Considering the country of origins of your virtual team members:
   What percentage of team members are from countries outside of the United States?
   What percentage of your team members speak a different language?
3. To what extent are the members of your team from different cultures?

Reciprocal Interdependence Scale (Pearce & Gregersen, 1991)
(alpha=0.769)
1. I frequently must coordinate my efforts with others.
2. My own performance is dependent on receiving accurate information from others. 4.
3. The way I perform my job has a significant impact on others.
4. My work requires me to consult with others fairly frequently.

 Team Effectiveness Scale (Lurey & Raisinghani, 2001)
(alpha=0.828).
1. My team members and I respect each other.
2. In my team, members' morale is high.
3. My virtual team members share knowledge from work experience with each other.
4. I share my expertise from my education or training with other team members.
5. I am successful in transferring what I've learned to my team.
6. In carrying out our duties, my team members and I try to act as consultants to each other.
7. My team members and I regulate activities with each other.
8. Generally, my team is most concerned with finding the best solution.
9. My team members and I build on each other's ideas.
10. My team members and I coordinate actions and decisions well.
11. In my team, work items I depend on are changed without my knowledge.
12. My virtual team frequently faces problems deciding which member has responsibility for a work item.
13. Generally, my team completes its work on time.
14. Generally, my team completes its work within the budget.
15. I enjoy being a member of this team.
16. In the future, I would be interested in participating in another virtual team.

Hetereogeneity scale developed by Kellen Dohrman.

Jehn, K. A. (1995). A Multimethod Examination of the Benefits and Detriments of

Intragroup Conflict. *Administrative Science Quarterly*, 40, 256–282.

Lurey, J. S., & Raisinghani, M. S. (2001). An Empirical Study of Best Practices in

VirtualTeams. *Information & Management*, *38*(8), 523–544.

Maydeu-Olivares, A., & D'Zurilla, T. J. (1997). The factor structure of the problem

solving inventory. *European Journal of Psychological Assessment*, 13(3),

206–215.

Pearce, J.L. and Gregersen, H.B. (1991). Task Interdependence and Extra Role

Behavior: A Test of the Mediating Effects of Felt Responsibility. *Journal of

Applied Psychology*, 76, 838-844.

Rubin, R. B., & Martin, M. M. (1994). Development of a measure of interpersonal

communication competence. *Communication Research Reports*, 11(1),

33–44.

Stone, R. W., & Bailey, J. J. (2007). Team conflict self-efficacy and outcome

expectancy   of business students. *Journal of Education for Business*, 82,

258–266.

Wright, R. R., Nixon, A. E., Peterson, Z. B., Thompson, S. V., Olson, R., Martin,

S., &   Marrott, D. (2017). The Workplace Interpersonal Conflict Scale: An

alternative in conflict assessment. *Psi Chi Journal of Psychological

Research*, 22(3), 163-180.

APPENDIX B
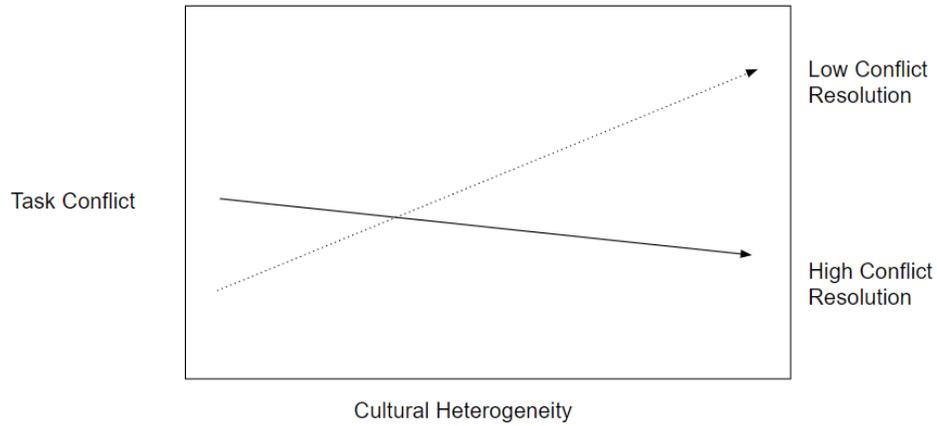
MODELS
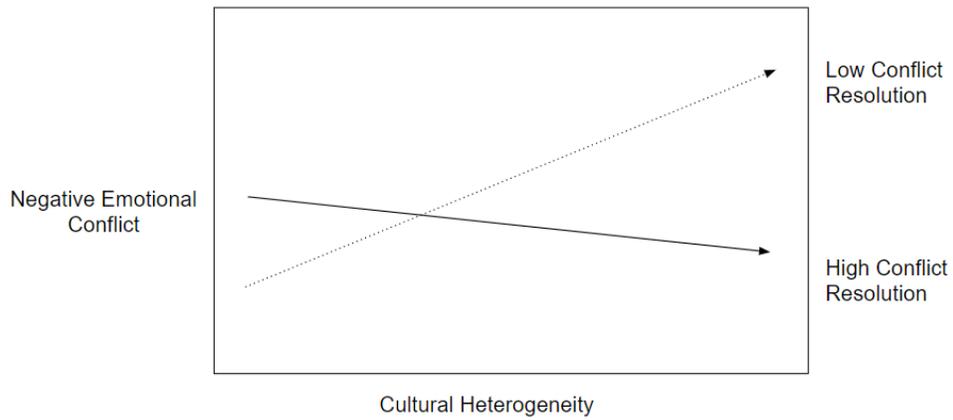
Figure 1. Task Conflict Hypotheses

Task Conflict

Low Conflict
Resolution

High Conflict
Resolution

Cultural Heterogeneity

Figure 2. Relational Conflict Hypotheses

Negative Emotional
Conflict

Low Conflict
Resolution

High Conflict
Resolution

Cultural Heterogeneity

Figure 3 – Supported Hypothesis 2B

Emotional Conflict

Conflict Resolution Skills
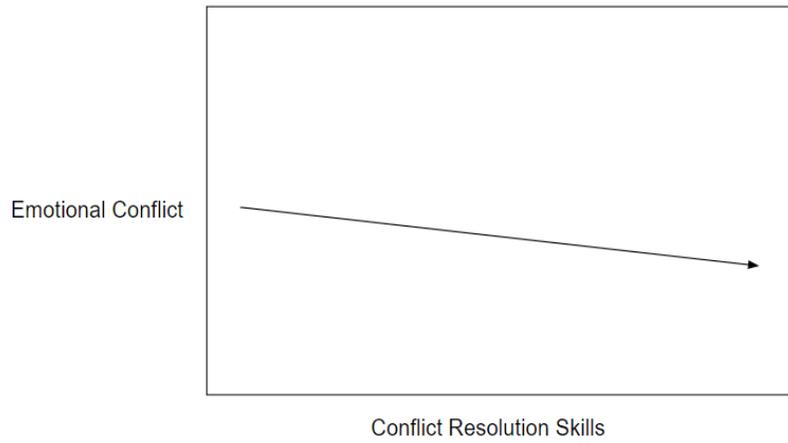
APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

April 17, 2020

CSUSB INSTITUTIONAL REVIEW BOARD

Administrative/Exempt Review Determination

Status: Determined Exempt

IRB-FY2020-295

and Janelle Gilbert

Department of CSBS - Psychology

California State University, San Bernardino

5500 University Parkway

San Bernardino, California 92407

Dear Janelle Gilbert :

Your application to use human subjects, titled "Cultural Values and

Conflict Resolution Skills " has been reviewed and approved by the Chair

of the Institutional Review Board (IRB) of California State University, San

Bernardino has determined that your application meets the requirements

for exemption from IRB review Federal requirements under 45 CFR 46. As

the researcher under the exempt category you do not have to follow the

requirements under 45 CFR 46 which requires annual renewal and documentation of written informed consent which are not required for the exempt category. However, exempt status still requires you to attain consent from participants before conducting your research as needed. Please ensure your CITI Human Subjects Training is kept up-to-date and current throughout the study.

Your IRB proposal (**FY2020-295**) is approved. You are permitted to collect information from **[137]** participants for **[No Compensation]** from **[qualtrics]**. This approval is valid from **4/17/2020**.

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required.

Your responsibilities as the researcher/investigator include reporting to the IRB Committee the following three requirements highlighted below. Please note failure of the investigator to notify the IRB of the below requirements may result in disciplinary action.

- Submit a protocol modification (change) form if any changes (no matter how minor) are proposed in your study for review and approval by the IRB before implemented in your study to ensure the risk level to participants has not increased,
- If any unanticipated/adverse events are experienced by subjects during your research, and

- Submit a study closure through the Cayuse IRB submission system when your study has ended.

The protocol modification, adverse/unanticipated event, and closure forms are located in the Cayuse IRB System. If you have any questions regarding the IRB decision, please contact Michael Gillespie, the Research Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

If you have any questions regarding the IRB decision, please contact Dr. Jacob Jones, Assistant Professor of Psychology. Dr. Jones can be reached by email at Jacob.Jones@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

Best of luck with your research.

Sincerely,

Donna Garcia

Donna Garcia, Ph.D., IRB Chair

CSUSB Institutional Review Board

DG/MG

REFERENCES

Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting

interactions. Newbury Park: Sage.

Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in

banking: Does the composition of the top team make a difference?

Strategic Management Journal, 10, 107–124.

Barclay, S. R., & Wolff, L. A. (2011). When lifestyles collide: An Adlerian-based

approach to workplace conflict. *The Journal of Individual

Psychology*, *67*(2), 122–135.

Barki, H., & Hartwick, J. (2004). Conceptualizing the construct of interpersonal

conflict. *International Journal of Conflict Management*, 15(3), 216-244.

Barsade, S. G., Ward, A. J., Turner, J. D. F., & Sonnenfeld, J. A. (2000). To your

heart's content: A model of affective diversity in top management teams.

Administrative Science Quarterly, 45, 802 – 836.

Brew, F. P., & Cairns, D. R. (2004). Styles of managing interpersonal workplace

conflict in relation to status and face concern: A study with Anglos and

Chinese. *International Journal of Conflict Management*, *15*(1), 27–56.

Brodsky, A. (2020, July 16). Virtual surface acting in workplace interactions:

Choosing the best technology to fit the task. *Journal of Applied

Psychology.*

Chan, D. K.-S., & Goto, S. G. (2003). Conflict resolution in The culturally

diverse workplace: Some data from Hong Kong employees. *Applied

Psychology: An International Review*, 52(3), 441-460.

Coultas, C. W., Bedwell, W. L., Burke, C. S., & Salas, E. (2011). Values sensitive

coaching: The DELTA approach to coaching culturally diverse

executives. *Consulting Psychology Journal: Practice and Research*, *63*(3),

149– 161.

Cramton, C. D. (2001). The mutual knowledge problem and its consequences in

geographically dispersed teams. *Organization Science*, 12, 346–371.

Cropanzano, R., & Ambrose, M. L. (Eds.). (2015). The oxford handbook of

justice in the workplace. New York, NY: Oxford University Press.

Dana, D. (1999). Measuring the financial cost of organizational conflict. San

Diego, CA: *MTI Publications*.

De Dreu, C. K. W. (2006). When too little or too much hurts: Evidence for a

curvilinear relationship between task conflict and innovation in teams.

Journal of Management, 83–107.

De Dreu, C. K. W., & Weingart, L. R. (2003). Task and relationship conflict,

team performance, and team member satisfaction: A meta-

analysis. *Journal of Applied Psychology*, *88*, 741–749.

De Wit, F. R. C., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup

conflict: A meta-analysis. *Journal of Applied Psychology*, *97*(2), 360–390.

Dignath, D., Kiesel, A., &Eder, A. B. (2015). Flexible conflict management:

Conflict avoidance and conflict adjustment in reactive cognitive control.

Journal of Experimental Psychology: Learning, Memory, and Cognition,

41(4), 975-988.

Dourish, P., & Bellotti, V. (1992). Awareness and coordination in shared

workspace. *Proceedings of the conference on Computer Supported

Cooperative Work* (pp. 107–114). New York: ACM.

Earley, P. C., & Mosakowski, E. (2000). Creating hybrid team cultures: An

empirical test of transnational team functioning. *Academy of Management

Journal*, *43*, 26–49.

George, J. M. (1992). Extrinsic and intrinsic origins of perceived social loafing in

organizations. *Academy of Management Journal*, 35, 191–202.

Gilin Oore, D., Leiter, M. P., & LeBlanc, D. E. (2015). Individual and

organizational factors promoting successful responses to workplace

conflict. *Canadian Psychology/Psycholgie Canadienne*, 56(3), 301-310.

Global Workplace Analytics. (2020). Work-at-Home after covid-19-our forecast.

Retrieved from https://globalworkplaceanalytics.com/work-at-home-after-

covid-19-our-forecast.

Griffin, R. W., & Moorhead, G. (2007). Organizational behavior: Managing people

and organizations (8th ed.). Boston, MA: Houghton Mifflin.

Heppner, P. P., & Peterson, C. H. (1982). The development and implications of a personal problem-solving inventory. *Journal of Counseling Psychology*, 29(1), 66–75.

Hofstede, G. (1983) The cultural relativity of organizational practices and theories. *Journal of International Business Studies*, 14, 2, 75 – 89.

Hofstede, G. (1991). Cultures and organizations: Software of the mind. London: McGraw-Hill.

Hofstede, G. (2001) Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations. Thousand Oaks, CA: Sage Publications.

Holtgraves, T. (1997). Styles of language use: Individual and cultural variability in conversational indirectness. *Journal of Personality and Social Psychology*, 73, 624-637.

Homan, A. C., Knippenberg, D. V., Kleef, G. A. V., & Dreu, C. K. W. D. (2007). Interacting dimensions of diversity: Cross-Categorization and the functioning of diverse work groups. *Group Dynamics: Theory, Research, and Practice*, *11*(2), 79–94.

House, R., Hanges, P, Javidan, M., Dorfman, P., & Gupta, V. (2004). Culture, leadership, and organizations: The GLOBE study of 62 societies. Thousand Oaks, CA: Sage.

Jandt, F. E., & Pedersen, P. B. (1996). Constructive conflict management: Asia Pacific cases. Thousand Oaks: Sage.

Jehn, K. (1994). Enhancing effectiveness: An investigation of advantages and disadvantages of value based intragroup conflict. *International Journal of Conflict Management*, 5, 223 – 238.

Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quarterly*, 40, 256–282.

Khademi, M., Schmid Mast, M., & Frauendorfer, D. (2020). From hierarchical to egalitarian: Hierarchy steepness depends on speaking time feedback and task interdependence. *Group Dynamics: Theory, Research, and Practice*, *24*(4), 261–275.

Kirchmeyer, C., & Cohen, A. (1992). Multicultural groups: Their performance and reactions with constructive conflict. *Group and Organization Management*, 17, 153 – 170.

King, E. B., Hebl, M. R., & Beal, D. J. (2009). Conflict and cooperation in diverse workgroups. *Journal of Social Issues*, *65*(2), 261–285.

Lacey, H. (2000). How to resolve conflict in the workplace. Hampshire, England: Gower Publishing.

Lurey, J. S., & Raisinghani, M. S. (2001). An empirical study of best practices in virtual teams. *Information & Management*, *38*(8), 523–544.

Mashlah, S. (2015). The role of people's personal values in the workplace. *International Journal of Management and Applied Science*, *1*(9)

Maydeu-Olivares, A., & D'Zurilla, T. J. (1997). The factor structure of the problem

solving inventory. *European Journal of Psychological Assessment*, 13(3),

206–215.

Microsoft. (2018). Welcome to Microsoft Teams. Microsoft Teams [Online].

Mortensen, M., & Hinds, P. J. (2001). Conflict and shared identity in

geographically distributed teams. *International Journal of Conflict

Management*, *12*(3), 212–238.

Pearce, J.L. and Gregersen, H.B. (1991). Task Interdependence and extra role

behavior: A test of the mediating effects of felt responsibility. *Journal of

Applied Psychology*, 76, 838-844.

Penttila, C. (2005). Fantastic forum. *Entrepreneur, 33*, 92–93.

Peretza, H., Levi, A., & Fried, Y. (2015). Organizational diversity programs

across cultures: Effects on absenteeism, turnover, performance and

innovation. *The International Journal of Human Resource

Management*, *26*(6), 875–903.

Philchuk, S., & Vanderhurk, M. (2004). Stress from workplace conflict. *Canadian

Underwriter*, 77(9), 40-42.

Purvanova, R. K. (2014). Face-to-Face versus virtual teams: What have we

really learned? *The Psychologist-Manager Journal*, 17(1), 2-29.

Rubin, R. B., & Martin, M. M. (1994). Development of a measure of interpersonal

communication competence. *Communication Research Reports*, 11(1),

33–44.

Sexton, M., & Orchard, C. (2016) Understanding healthcare professionals' self-efficacy to resolve interprofessional conflict. *Journal of Interprofessional Care*, 30(3), 316-323.

Shieh, G. (2008). Detecting interaction effects in moderated multiple regression with continuous variables power and sample size considerations. *Organizational Research Methods*, *12*(3), 510–528.

Simons, T. L., & Peterson, R. S. (2000). Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology*, *85*, 102–111.

Singh, S., Wang, H., & Zhu, M. (2018). Perceptions of social loafing during the process of group development. *SSRN Electronic Journal.*

Stone, R. W., & Bailey, J. J. (2007). Team conflict self-efficacy and outcome expectancy of business students. *Journal of Education for Business*, 82, 258–266.

Straus, S. G., & McGrath, J. E. (1994). Does the medium matter? The interaction of task type and technology on group performance and member reactions. *Journal of Applied Psychology*, 79, 87–97.

Tjosvold, D., & Sun, H. F. (2002). Understanding conflict avoidance: relationship, motivations, actions and consequences. *International Journal of Conflict Management*, 13(2), 142-164.

Van Knippenberg, D., De Dreu, C. K. W., & Homan, A. C. (2004). Work group

    diversity and group performance: An integrative model and research

    agenda. *Journal of Applied Psychology*, *98*, 1008–1022.

Varela, O. E., & Premeaux, S. F. (2008). do cross-cultural values affect

    multisource feedback dynamics? The case of high power distance and

    collectivism in two Latin American countries. *International Journal of*

    Selection and Assessment, *16*(2), 134–142.

Wright, R. R., Nixon, A. E., Peterson, Z. B., Thompson, S. V., Olson, R., Martin,

    S., & Marrott, D. (2017). The workplace interpersonal conflict scale: An

    alternative in conflict assessment. *Psi Chi Journal of Psychological*

    Research, 22(3), 163-180.

Yu, L., & Zellmer-Bruhn, M. (2018). Introducing team mindfulness and

    considering its safeguard role against conflict transformation and social

    undermining. *Academy of Management Journal*, 61(1), 324-347.