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ORIGINAL RESEARCH

The Effect of Empathy on Team Members' Moqi in Virtual Teams: A Moderated Mediation Model

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Purpose: Moqi can help team members facilitate communication without all interlocutors present, so the researchers speculate it can be an efficient communication tool for virtual teams to compensate for its lack of synchronous communication and in-person contact. However, the only study on the predictors of team members' moqi believed that shared understandings could only arise from team tasks. Based on social exchange theory, the current study emphasizes the social and emotional benefits exchanged among team members and explores moqi-making among virtual team members through a lens of relationship-building.

Methods: With a two-wave time-lagged survey design, a total of 381 team members from 86 virtual teams in China participated in the study. Hierarchical regression analysis was performed to test the hypotheses.

Results: Results confirmed that virtual team members' empathy is conducive to their experiences of high-quality interpersonal relationships (HQIR) and moqi. Relationship closeness positively moderates the link between empathy and experiences of HQIR and the mediating effect.

Conclusion: This study helps unveil the significance of compassionate communication and life-giving connections in cultivating virtual team members' moqi and offers meaningful insights for facilitating virtual collaborations.

Keywords: empathy, moqi, high-quality interpersonal relationship, relationship closeness, virtual teams

Introduction

Virtual teams are distributed in different geographic locations and collaborate to achieve a common objective using information and communication technologies (ICTs).[1] The concept stems from a dynamic network designed to efficiently and flexibly navigate resources across boundaries or even international borders.[2] Communication in virtual teams often experiences delays in responses without all members being present simultaneously. Opportunities for synchronous interactions and direct observations are limited during virtual work. Problems associated with virtuality suggest the need to explore an alternative way to supplement asynchronous communication in a virtual context.

Moqi is a tacit understanding of individuals without explicit communication.[3] Thought coordination or tacit understanding of one another's implicit messages is possible without both interlocutors' presence at the highest level of moqi or when they have collected sufficient contextual information regarding others' preferences and needs.[4] Given the potential of moqi in navigating relationship-building and its adaptability to communication environments with varying degrees of synchronization and physical distance, the researchers speculate that team members' moqi is an efficient communication tool in virtual teams. Members' implied meanings from previous interactions in a virtual environment can represent clues for extracting meanings from work messages in the future.

Researchers have been probing the predictors of moqi, but they primarily focused on moqi across hierarchical tiers. Zheng et al argued that subordinates' moqi is common in high-context and high-power distance cultures since employees accept unequal power distributions with their supervisors and are expected to interpret ambiguous and implicit cues.[3]

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Scholars have found empirical support for this rationale, as the desire to access restricted benefits from supervisors and fulfill their expectations motivates employees to constantly look for information cues.[5,6]

The available findings on team members' moqi cannot provide a framework that sufficiently explains how tacit understanding among employees can be fostered. Zhang et al's study is the only one that discussed antecedents of team members' moqi, indicating the role of task interdependence and team collaboration in team contexts.[7] They claim that virtual team members primarily bond over tasks due to a lack of face-to-face contact. The limited findings on the predictors of team members' moqi underestimate the relationship-building process in virtual teams. Thus, the present research aims to further reveal the mechanisms underlying the forming of team members' moqi in a virtual context that is not driven by power differentials and task characteristics.

To answer such a question, the current study employed an integrative review method to provide an overview of moqi and proposed a moqi-making mechanism from the perspective of relationship-building. Since this study focused on shared understandings that arise among team members, prior research on connections-building in horizontal relationships was included in the analysis. Keywords including subordinates' moqi, team members' moqi, shared understandings, tacit understandings, and team member relationships were entered into two electronic databases, including Web of Science and Google Scholar. The concept of moqi was first empirically tested in 2017,[8] so all research on this topic was included in the literature analysis to fully capture the conceptualization and the research gaps. Studies investigating the effect of team-member exchange on performance outcomes were excluded since they deviated from team members' emotional reactions.

After reviewing and summarizing past empirical evidence, the researchers synthesize the findings and identify two factors leading to tacit understandings among virtual team members. First, insights from empathetic care in a clinical setting are highly relevant to understand moqi-making among team members. Individuals' perceptions of and behavior toward coworkers largely depend on their understanding of others' emotional states.[9] The more one can empathize or identify with others, the fewer barriers to building relationships.[10] Empathy is considered an essential skill for healthcare providers since physicians with empathic communication abilities are more likely to form partnerships with their patients, promoting medication adherence and patient satisfaction.[11] Therefore, the capacity to share others' emotions may play a part in explaining how individuals with limited contact create shared meanings.

Based on the literature analysis related to social exchange theory, another contributing factor to team members' moqi is mutually responsive relationships. With an understanding of others' emotional responses to events, such a person can know when and how to offer support to those in need and thus create opportunities for reciprocity.[12] When virtual team members exhibit empathy toward one another, the sense of interdependence in the team possesses great potential to establish meaningful relationships. According to the rule of reciprocity, each party in the relationship feels obligated to return the benefits they have received from others.[13] Therefore, in experiencing high-quality interpersonal relationships (HQIR) in virtual teams, employees are likely to respond in kind. For example, they may reciprocate by sharing their thoughts and gathering information regarding coworkers' expectations during virtual collaboration. Based on the discussion above, the present study integrates social exchange theory and argues that the ability to perceive and feel concern for others' emotions enables employees to establish meaningful relationships in virtual teams, motivating them to create shared meanings.

Bridging understanding with physically remote others can be very challenging. Various factors beyond employees' professional knowledge and capability affect the effectiveness of technologies-mediated communication, such as members' familiarity with one another and their preferences for ICTs.[14] In this case, perceived closeness can alleviate anxiety and distress[15] and elicit positive affect,[16] helping employees cope with uncertainty and restricted deep contact in virtual teams. Empirical evidence suggests that relationship closeness is associated with interpersonal trust[17] and collaboration.[18] The presence or absence of such perceived closeness contributes to employees' emotional and behavioral responses to other coworkers.[19] Thus, researchers incorporate relationship closeness among virtual team members to clarify the boundary condition between empathy and HQIR in virtual teams.

In summary, drawing upon social exchange theory, the current study aims to build on the conceptualization of team members' moqi and specify an underlying mechanism for achieving such a shared contextualized understanding in virtual teams. By demonstrating if and how moqi can be derived from sharing others' emotional states and constructive

relationships, this study offers significant insights for mitigating the communication gaps in virtual work. It can shed light on the potential of team members' moqi in a context where interpersonal communication is often asynchronous and technology-mediated.

Theories and Hypotheses

Moqi

Employees develop subordinates' moqi when they accurately interpret supervisors' intentions without verbal explanations.[8] Studies have demonstrated that a tacit understanding of supervisors' implicit messages can enhance knowledge-sharing[3] and empowerment.[20] The tacit understanding enables employees to translate the implicit instructions of their supervisors into actual work without undermining power dynamics.

Moqi can also exist among team members. Coworkers within teams are less confined by power differentials than in hierarchical relationships. They obtain moqi by sharing a deep understanding of one another.[4] Past experiences allow employees to develop strategies for dealing with uncertainties.[21] Similarly, past interactions inform communicators of salient meanings intended in messages.[22] Team members are equipped to identify the pattern between the coworkers' literal language and the messages implied. Accordingly, team members' moqi reflects a state where team members tacitly comprehend others' work expectations, intentions, and preferences through nonverbal cues.[7]

When the meaning of the messages is highly ambiguous, and at least one party withholds specific information, tacit understanding serves as a tool for communicators to break through language barriers and extract valuable information through non-verbal cues.[8] Since communicators' unspoken consensus can be specific to communication context and targets[4] and cannot be fully conveyed to others through words,[23] it is difficult for outsiders to imitate.[24] Thus moqi is a resource unique to the communicators involved and requires an exceptional ability to capture information.[25]

Empathy and Team Members' Moqi

Scholars recognize empathy as a multidimensional construct reflecting both affective and cognitive components.[26] Affective empathy is conceptualized as experiencing others' emotions,[27] and cognitive empathy refers to understanding others' feelings.[28] These components serve different roles in predicting individuals' prosocial responses.[29] In line with many scholars who consider empathy having emotional and cognitive dimensions,[30,31] the present study defines empathy as an ability to understand or experience others' emotional states. Empathy is a skill or ability to be trained and acquired, which differs from moqi, a state of shared understanding among team members.

Despite all the benefits, using ICTs increases perceived risks and uncertainty.[32] Moreover, employees' dispositions affect work outcomes in a virtual context. For instance, a team culture of responding promptly to messages and the ability to adopt the appropriate technology to facilitate communication is considered significantly more critical in determining virtual team collaboration than co-located teams.[33] Therefore, to improve effectiveness and collaboration in virtual teams, it is necessary to recognize team members as individuals and gain insights into their preferences and intentions.

Empathy triggers the motivation to focus on the other during interactions.[34] It requires one to be reflective and attentive during socialization.[35] In a clinical setting, patients disclose more information to highly empathic physicians,[36] which is essential for contextual cues giving and receiving. Clinician-expressed empathy leads to a comprehensive understanding of information.[37] Based on these findings in a health communication context, an other-orientation can be imperative for moqi emergence, especially during virtual collaboration with geographic distance as well as potential language and cultural barriers. Concentrating on coworkers' interests, employees are prepared to facilitate interactions by attending to others' specific needs.[38] With a desire to understand others' feelings and experiences, team members are likely to search for meanings in their virtual interactions.

In addition, resonating with others enables employees to create shared emotional experiences with coworkers.[39] Empathic individuals also engage in more authentic emotional displays and less surface acting.[40] Such genuine concern for others can reveal one's inner thoughts and true self.[41] Hence, the ability to anticipate and experience others' emotional states can increase the chance of transforming contextual information acquired from prior interactions in a virtual environment into shared meanings. Thus, the researchers hypothesize:

Hypothesis 1 (H1): Empathy is positively related to team members' moqi in virtual teams.

Mediating Role of Experiences of HQIR

Dutton and Heaphy (2003) treated HQIR as a connection that enables human flourishing and bonding.[42] They proposed two clusters to explain HQIR, one being the subjective experiences of HQIR and the other being the capacities of HQIR. The present study examines members' experiences of HQIR to reflect the characteristics of their relationships in virtual teams. Experiences of HQIR entail feelings of vitality and aliveness, positive regard, and mutuality.[42] That is, employees in HQIR are likely to feel a sense of positive energy, a sense of being known and loved, and mutual responsiveness.

Empathy plays a critical role in social interactions. Previous studies have illustrated that the ability to identify and manage emotions predicted the quality of peer relations.[43,44] In addition, although conflicts are difficult to resolve in virtual teams,[45] empathy can remedy such detrimental effects on virtual team development. Empathetic individuals are likely to cope effectively with conflicts.[46] Empathy is an essential interpersonal skill that promotes prosocial behaviors.[47] These extra-role behaviors, in turn, contribute to high social capital[48] and team cohesiveness.[49] When virtual team members can imagine the other's psychological point of view, they will likely offer assurance and suggestions in time, encouraging meaningful and caring connections.

Social exchange theory states that people act on a cost-benefit analysis, such that their actions are motivated by the expected rewards.[13] During social exchanges, both parties perceive obligations based on the others' actions.[50] In the work context, employees will repay the organization with positive work attitudes and behaviors when they perceive caring from the organization.[51,52] In other words, both parties need to act based on the principle of reciprocity to maintain the stability of the social relationship.[13] Maintaining the exchange relationship between employees requires both parties to provide the social resources the other needs.

Experiences of high-quality relationships could provide perceived social benefits for virtual team members to reciprocate. To sustain and strengthen the bonding within the team, employees reflect on current practices and seek strategies to improve work outcomes.[53] Employees are willing to invest personal energies to transfer meanings to one another in a team when they receive a sense of self-worth and competence from their relationships.[54] Therefore, virtual team members may proactively seek cues supportive of decoding others' messages in exchange for quality relationships. In stable connections, team members may feel obligated to reciprocate by searching for contextual information that reduces misunderstandings or confusion in virtual interactions. In addition, feelings of mutuality that emerge from high-quality relationships can increase the chances of self-disclosure.[55] When the vulnerability and engagement of employees are rewarded with reciprocal sharing despite the distant locations, they are supported to reach an unspoken understanding in a state of interconnectedness. Thus employees who have experienced HQIR with their virtual coworkers are motivated to support one another by establishing such shared contextualized understandings.

According to the analysis above, the researchers propose a mediation model where empathy fosters experiences of HQIR, which then develops team members' moqi in virtual teams. By demonstrating and responding to empathy, members who gain the experience of constructive relationships might be more committed to coordinating their understanding with virtual coworkers without explicit explanations.

Hypothesis 2 (H2): Experiences of HQIR mediates the positive relationship between empathy and team members' moqi in virtual teams.

Moderating Role of Relationship Closeness

Relationship closeness is a subjective perception of proximity,[56] but it can also refer to an interconnectedness among individuals at the team level. Chen and Chen (2004) indicated that trust and feeling make up relationship closeness.[57] Thus, closeness has instrumental functions, such as facilitating more engaging collaborations; it can also evoke interpersonal affections that involve positive feelings toward coworkers.[58] A close relationship encourages employee trust, collaboration, and knowledge sharing.[18] In addition, close relations can be beneficial in minimizing misunderstandings in interpersonal communication.[59] In a virtual setting, perceived closeness can stimulate inclusion and knowledge sharing[60] and benefit team performance.[61]

Since virtual team members often do not share an extended team history, they risk experiencing isolation, dissatisfaction, and role ambiguity compared to co-located teams.[62] However, individuals with access to secure support sources are

more likely to produce caregiving behavior.[63] If team members can cultivate closeness, they are more likely to return favors to secure support sources. Specifically, intimate, mutually meaningful relationships among team members can encourage them to engage in reciprocal instrumental exchanges[64] and provide emotional support.[65] Hence, with high relationship closeness, members' empathy is likely to be appreciated and reciprocated with commitment, improving team members' relationships.

The presence of geographical and psychological distance in virtual teams could harm their decision-making.[66] A lack of familiarity in virtual teams could impede sharing and integration of information.[67] Members may be less motivated to acknowledge and reciprocate others' empathic gestures when their intimacy needs are unmet. A lower level of closeness is directly related to a lack of mutual support.[68] In this case, an empathic move may not yield a favorable response. The lack of responsiveness and mutual awareness among virtual team members can undermine their interpersonal relationships. Based on the analysis above, the researchers hypothesize:

Hypothesis 3 (H3): In virtual teams, the relationship between empathy and experiences of HQIR is positively moderated by the relationship closeness among members.

As previously discussed, relationship closeness may also condition the strength of the relationship between empathy and team members' moqi through experiences of HQIR. When a high level of closeness is cultivated within virtual teams, members can accurately address coworkers' needs.[69] Having committed support from virtual coworkers, employees are motivated to strengthen their relationships, which could stimulate a deep understanding of one another. In contrast, without a sense of closeness, employees may experience distress due to others' unresponsiveness to their desires. Specifically, members' attempts at experience-sharing and perspective-taking could fail to offer support since they do not accurately address the other party's needs. As a result, relationships become draining and life-depleting, decreasing members' likelihood of reaching a mutual understanding without words in a virtual context. Thus the researchers hypothesize:

Hypothesis 4 (H4): In virtual teams, the indirect effect of empathy on team members' moqi through experiences of HQIR is positively moderated by relationship closeness.

Figure 1 presents the proposed theoretical model.

Methods
Sample and Procedure
Ten companies in Chengdu (Southern China), Shanghai (Eastern China), and Xi'an (Northern China) were contacted respectively to recruit participants since many companies in these cities facilitate their business using virtual teams. The researchers contacted the HR departments of these companies and thoroughly explained to them the purpose and procedures of the research and ensured anonymity. In the end, seven companies from Chengdu, nine in Shanghai, and another nine in Xi'an agreed to participate in the study, including six state-owned, 11 privately owned, and eight foreign-invested enterprises. Three to six teams were drawn from each company. Chosen teams are distributed in different
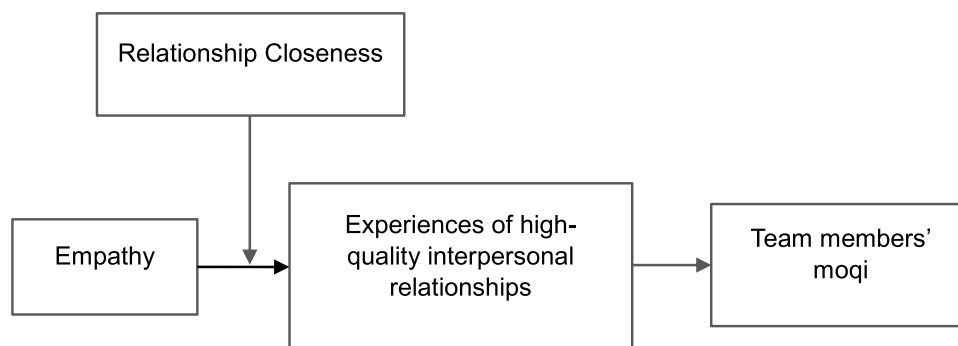

Figure 1 Proposed theoretical model.

provinces in China or across borders and communicate work through digital tools. It can also increase the sample's representativeness.

No pilot study was conducted, but the researchers made sure all scales employed in this study have been empirically tested in other research with good validity and reliability. Five researchers and five managers were also invited to assess the quality of the questionnaire and eliminate or revise any ambiguous questions.

The researchers collected survey data at two time points with a 14-day interval to reduce common method bias (CMB). Teams with more than three members are valid for questionnaire distribution; respondents can only identify with one team. The demographic information of each team, empathy, and relationship closeness were collected at time 1. A total of 425 questionnaires were distributed, with 402 returned. At time 2, the researchers collected data about experiences of HQIR and team members' moqi from teams who had participated in the last round and retrieved 393 questionnaires. Respondents in each virtual team were assigned a unique response ID to match the data after two rounds of questionnaires and maintain confidentiality.

In the end, 381 valid questionnaires were collected from 86 teams, including 26 in Chengdu, 30 in Shanghai, and 30 in Xi'an. The average size of the sample team was 5.102 people, and the average team tenure was 2.669 years. There were 26 teams from state-owned enterprises, 35 from privately owned enterprises, and 25 from foreign-invested enterprises. Of the respondents, 47% were male; 16% were 25 years old and below; 67% were 25–35; 10.5% were 36–45; 6% were 46–55; 0.5% were 56 and above; 86% completed undergraduate and higher-level education; 13% had 2 years of tenure and below; 30% for 3–5 years; 33% for 6–10 years; and 24% for 10 years and above.

Measures

The researchers adopted translation and back-translation procedures to ensure scale accuracy.[70] The translated items in Chinese were reviewed and modified by an expert in the related field. All measures were answered on a five-point Likert scale (1 = "strongly disagree"; 5 = "strongly agree").

Empathy among members was measured with a 10-item scale developed by Tian and Robertson (2017).[31] A sample item included: "Putting myself in other people's shoes is difficult for me sometimes". The Cronbach's α for the scale was 0.82. The mean R_{wg} value was 0.90, above 0.70, suggesting that aggregating individual empathy ratings to the team level is appropriate.[71] The ICC1 and ICC2 values of empathy were 0.24 and 0.58, respectively, which were deemed appropriate.[72]

A seven-item scale developed by Carmeli et al was adopted to capture team members' experiences of HQIR.[73] A sample item included: "I think my colleagues understand me". The Cronbach's α for the scale was 0.90. The mean R_{wg} value was 0.90. The ICC (1) and ICC (2) values of the variable were 0.32 and 0.68, respectively.

Relationship closeness was measured with a nine-item scale developed by Chen and Peng (2008).[58] A sample item included: "We support and cooperate with one another in our work". The Cronbach's α for the scale was 0.90. The mean R_{wg} value was 0.89. The ICC (1) and ICC (2) values of relationship closeness were 0.28 and 0.63, respectively.

Team members' moqi was measured with an eight-item scale.[7] A sample item included: "Without explicit verbal communication or overt cues from my team members, I can understand their task requirements at work". The Cronbach's α for the scale was 0.93. The mean R_{wg} value was 0.92. The ICC (1) and ICC (2) values of moqi were 0.31 and 0.67, respectively.

Team tenure positively affects team effectiveness.[74] It also allows team members to accumulate information regarding one another,[32] which could affect relationship-building and moqi emergence. Team size can negatively impact group experience,[75] so team tenure and team size were controlled for in this study. Firm ownership was also controlled to rule out its influence on employee relations climate.[76]

Results
Confirmatory Factor Analysis (CFA)

Before testing the hypotheses, the researchers performed CFA to evaluate the convergent and discriminant validity of the four latent variables: empathy, experiences of HQIR, relationship closeness, and team members' moqi. In addition to the

baseline model (Model 1), we examined three alternative models (Models 2, 3, and 4). As presented in Table 1, the four-factor model showed a significantly better fit (chi-square [χ^2] = 255.89, degree of freedom [df] = 48, root mean square error of approximation [RMSEA] = 0.08, Tucker–Lewis index [TLI] = 0.95, and comparative fit index [CFI] = 0.96) than the alternative models.

CMB Test

Given that empathy, experiences of HQIR, relationship closeness, and team members' moqi were assessed using self-reported measures, the researchers first applied Harman's single-factor test to determine the influence of common method variance (CMV). According to the exploratory factor analysis results, the eigenvalues of the three factors were all greater than 1, and the total contribution rate was 69.467%. Among them, the variance explained by the first factor was 31.679%, less than 50%, which indicates that the research does not suffer from CMV.[77]

The researchers also used a separate CFA model to examine the effect of CMB.[78] The average variance explained by the method factor was 24.22%, below the 25% median reported by Williams et al.[79] Thus, little evidence proves that CMV exists in this current study.

Hypotheses Testing

Means, standard deviations (SDs), and correlations among variables are presented in Table 2. The results showed significant correlations among empathy, relationship closeness, experiences of HQIR, team members' moqi, and control variables, which provided preliminary support for the proposed hypotheses.

Statistical data analysis was conducted in Mplus 7.0 software. H1 posits that empathy is positively related to team members' moqi. In Model 4 of Table 3, the results suggested that after controlling for team-level control variables, empathy was positively associated with team members' moqi (β = 1.411, $p < 0.01$), supporting H1.

H2 states that empathy has a positive indirect effect on team members' moqi via experiences of HQIR. A SEM analysis (Table 4) with a 95% confidence interval (CI) (bias-corrected confidence interval excludes zero) indicated that

Table 1 Measurement Model Comparisons

Model	Factor	χ^2	df	χ^2/df	TLI	CFI	RMSEA
Model 1	Four factors	255.885	48	5.331	0.946	0.963	0.078
Model 2	Three factor[a]	302.848	51	5.938	0.886	0.912	0.114
Model 3	Two factor[b]	845.309	53	15.949	0.656	0.724	0.198
Model 4	One factor[c]	1239.977	54	22.963	0.495	0.587	0.240

Notes: N = 86 (team level). [a]Empathy and experiences of HQIR combined. [b]Empathy, experiences of HQIR, and relationship closeness combined. [c]Empathy, experiences of HQIR, relationship closeness, and team members' moqi combined.
Abbreviations: TLI, Tucker–Lewis index; CFI, comparative fit index; RMSEA, root mean square error of approximation.

Table 2 Descriptive Statistics and Variable Correlations

Variable	Mean	SD	1	2	3	4	5	6
1. Team size	4.418	1.745						
2. Team tenure	2.730	0.700	−0.214*					
3. Empathy	4.824	0.322	−0.139	0.061				
4. Experiences of HQIR	5.533	0.558	−0.033	0.125	0.293**			
5. Relationship closeness	5.373	0.476	−0.217*	0.225*	0.640**	0.582**		
6. Team members' moqi	5.564	0.596	−0.063	0.195	0.362**	0.610**	0.532**	

Notes: N = 86 (team level); *$p < 0.05$, **$p < 0.01$.
Abbreviation: HQIR, high-quality interpersonal relationship.

Table 3 Regression Results

Variable	Experiences of HQIR		Team Members' Moqi	
	Model 1	Model 2	Model 3	Model 4
Team size	0.008	0.047	0.001	0.004
Team tenure	0.063	−0.095	0.084	0.100
Empathy	0.953*	0.304*		1.411***
Relationship closeness		2.009*		
Empathy × relationship closeness		0.126*		
Pseudo R^2	0.031	0.035	0.009	0.010

Notes: $N = 381$ (individual-level); $N = 86$ (team level); *$p < 0.05$, ***$p < 0.001$; Unstandardized regression coefficients were reported.
Abbreviation: HQIR, high-quality interpersonal relationship.

Table 4 Indirect Effect Test Results

Path	Estimate	s.e.	95% CI
Empathy → Experiences of HQIR	1.658**	0.578	[0.526, 2.790]
Experiences of HQIR → Team members' moqi	1.300***	0.071	[1.160, 1.439]
Empathy → Experiences of HQIR → Team members' moqi	2155***	0.675	[0.832, 3.478]

Notes: $N = 86$ (team level); **$p < 0.01$, ***$p < 0.001$; Unstandardized regression coefficients were reported.
Abbreviation: HQIR, high-quality interpersonal relationship.

the indirect effect, with experiences of HQIR as a mediator, was significant (95% CI = [0.832, 3.478]), thus supporting the mediation model proposed in H2.

H3 predicts that relationship closeness has a positive moderating effect on the relationship between empathy and experiences of HQIR, which is supported by the significant regression coefficient in Model 2 (β= 0.126, $p < 0.05$) shown in Table 3.

Figure 2 illustrates that relationship closeness positively moderated the relationship between empathy and experiences of HQIR. The results of the simple slope test revealed that empathy had a nonsignificant positive effect on experiences of
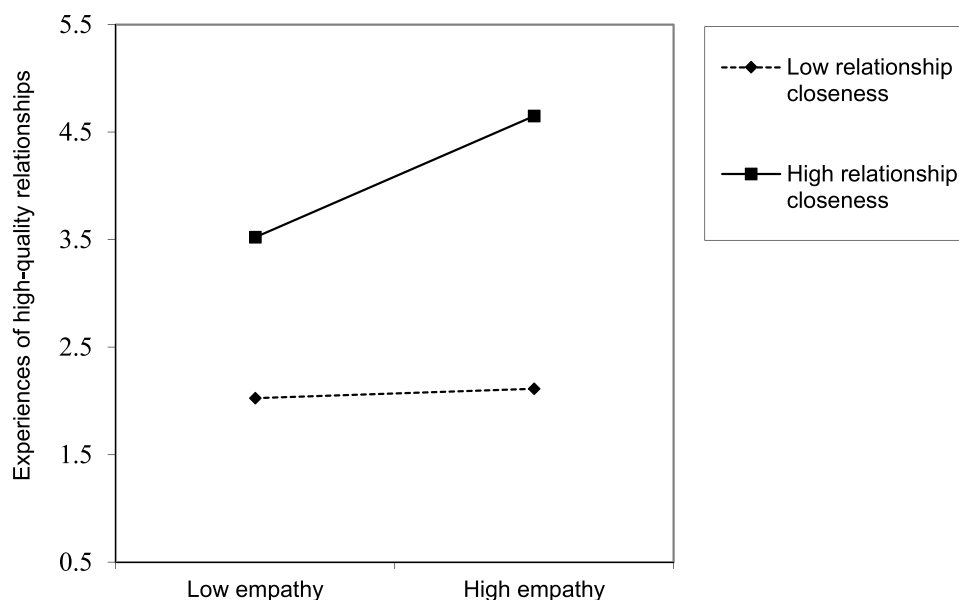

Figure 2 Moderating role of relationship closeness.

Table 5 Moderated Mediation Path Analysis Results

	Empathy (X) → Experiences of HQIR (M) → Moqi (Y)			
	First Stage (P_{MX})	Second Stage (P_{YM})	Indirect Effect ($P_{MX} \times P_{YM}$)	95% CI
Relationship closeness (−SD)	0.365	0.511*	0.187	[−0.326, 0.868]
Relationship closeness (+SD)	0.530*	0.511*	0.271*	[0.261, 0.635]
Difference	0.165*	0	0.084*	[0.028, 0.102]

Notes: N = 86 (team level); *p < 0.05; Unstandardized regression coefficients were reported.
Abbreviation: HQIR, high-quality interpersonal relationship.

HQIR (β = 0.044, p > 0.005) in the context of a low relationship closeness (−SD). Empathy had a significant impact on experiences of HQIR (β = 0.560, p <0.05) in the context of a high relationship closeness (+SD). The difference between the two groups was significant (β = 0.516, p < 0.05). Thus, H3 was supported.

H4 states that relationship closeness strengthens empathy's indirect effect on moqi via HQIR experiences. It was tested in Mplus7.0. Moderated mediation is justified when hypothesized relationships significantly vary at different moderator levels. According to the results of bias-corrected bootstrapping using 2000 iterations in Table 5, the indirect effect of empathy on moqi via experiences of HQIR was insignificant (p > 0.05, 95% CI = [−0.326, 0.868]) at a low relationship closeness level and significant (p < 0.05, 95% CI = [0.261, 0.635]) at a high relationship closeness level. The indirect effect differed significantly at different relationship closeness levels (β = 0.084, p < 0.05, 95% CI = [0.028, 0.102]). Thus, H4 was supported.

In general, all the research hypotheses were supported. The empathy virtual team members exhibit has a strong and positive relationship with their moqi. Specifically, experiences of HQIR mediates the empathy-moqi relationship. Empathy's indirect effect on team members' moqi is stronger when perceived closeness is high.

Discussion

Based on social exchange theory, this study explored how moqi can be cultivated among team members and in an environment where communication is mainly technology-mediated. The researchers found that despite the various communication barriers in virtual teams, empathic responding enhances employees' experiences of positive regard and mutuality in interactions. Experiences of HQIR, in turn, foster shared contextualized understanding of team members. The results also indicate that the perceived proximity among virtual team members is an essential condition for acknowledging others' feelings to cultivate an accurate interpretation of others' implied meanings.

The results counter the previous study on team members' moqi suggesting that moqi-making can only be facilitated by team tasks.[7] The current study implies that despite the physical distance and a lack of in-person contact among virtual team members, they can reach shared understandings through quality relationships in which they feel cared for and valued. By adopting a relationship-oriented lens, this study demonstrates that acknowledging and sharing others' emotional states through constructive relationships can be conducive to virtual team members' moqi.

The results imply that relationship closeness provides accessible and responsive support in navigating virtual communication. It is consistent with previous findings that perceived distance does not represent the actual distance.[80] Since perceived relationship closeness reflects a sense of security,[81] achieving perceptions of proximity could be a valuable asset for virtual teams to facilitate relationships and shared understanding in dispersed locations or sometimes in a limited timeframe.

In sum, this research demonstrated that virtual team members who can resonate with their peers establish tacit understandings of one another through experiences of HQIR. A sense of closeness among virtual team members can increase their chances of turning perspective-taking into shared understandings without words. Specifically, this work expanded theoretical lenses for examining how an accurate interpretation of team members' implied meanings can be achieved by strengthening interpersonal awareness and engagement. This research will inspire future investigations

into how meaningful communication can lead to deep connections and a shared contextualized understanding of coworkers in a virtual environment. Furthermore, as virtual teams face various constraints and lack the physical experience of co-located teams, this study highlights what a healthy context should be composed of to cultivate team members' moqi.

Theoretical Contributions

The study contributes to understanding team-building and team communication in a virtual context. Since virtual work often occurs in spatially dispersed locations without consistent and physical supervision, the self-managing nature of virtual teams calls for establishing dynamic shared understandings of tasks and coworkers.[82] The virtuality of teams creates the need for such understandings and yet simultaneously makes building connections without in-person contact rather difficult. This study demonstrates that only by tending to virtual coworkers' changing emotions and vulnerabilities can team members survive the paradoxical scenario. Thus fostering empathy becomes a viable strategy for counteracting the challenges associated with virtuality and the negative effects of adopting ICTs. The results enrich the knowledge of how recognizing and experiencing the emotions of one another could benefit employees' emotional, affective, and behavioral experiences and their meaning-making during virtual collaborations.

The present study broadens the understanding of the predictors of team members' moqi. Previous research on subordinates' moqi suggests good leadership practices cultivate tacit understanding.[6] These studies assume that the restricted resources of those in power do not shape employees' motivation to seek implicit cues. This study extends previous research on the mechanism of moqi-making and employs social exchange theory as a valuable framework to investigate team members' moqi. Social exchange literature mainly focuses on the relationship between employees and their organizations, where employees enhance their commitment or engagement in exchange for organizations' rewarding treatment.[83] However, biases can arise from analyzing such relations across status tiers, so differentiating between member reciprocity[84] and moral obligation becomes difficult.[85] In contrast, the current study emphasizes the social and emotional benefits exchanged among team members. Their accurate understandings of peers are driven by fulfilling connections rather than power differentials. It takes previous exchanges that revolve around sharing, understanding, and acknowledging to decode coworkers' messages.

This study also advances the literature on developing team members' moqi by clarifying the boundary condition of the empathy effect in virtual teamwork. The findings are consistent with the literature on closeness in teams, which demonstrates that the perceived relationship quality attracts and creates resources for team members. Past studies validated that close relationships determine individuals' decisions in maintaining relationships.[86] Relationship closeness also encourages more emotions to be expressed and exchanged.[87] The current study expands this literature by suggesting that coworkers' dispersed locations in virtual teams do not hinder their behaviors from securing social support. Accordingly, the results contribute to attachment theory, associating employees' connection-seeking behavior with their chances of survival in a virtual context. Perceived relationship closeness provides employees with confidence in unfailing sources of support from distant coworkers. Employees are more motivated to facilitate information transfer and meaning-creating activities in virtual teams with those who can accurately respond to their needs.

Practical Contributions

First, empathic interventions may lead to long-term benefits for virtual teams. The findings of this study suggest that moqi is a dynamic and evolving state that fluctuates as team members' empathy level varies, develops, and relationships progress. Hence, employees should be trained to adjust their empathic responses based on the other party's feedback[38] so that empathic communication becomes an ongoing learning process. In addition to empathic ability, empathic motivation should also be addressed in virtual teams.[86] Fostering a team culture where members feel inspired to care for others and respond to others' vulnerabilities regardless of the physical distance is crucial. Virtual team members must believe that their empathic messages are needed for others to overcome difficulties in team development.

Second, subjective experiences of HQIR are an important bridging factor. Virtual teams can benefit from conveying a sense of positivity and acknowledgment to members. They should also build an inclusive team where members achieve belongingness and uniqueness simultaneously.[88] This way, employees can feel safe and empowered to contribute their

unique experiences and perspectives to the team, both task-related and personal. For employees who have yet to work as a team, raising the awareness of positive regard and mutuality can be constructive in inviting virtual collaborations. Being able to voice authentic opinions can also expand members' repertoire of contextual cues, raising virtual team members' moqi.

Finally, interdependence among members is a regulation mechanism through which both parties benefit from their dedication to the relationship. High relationship closeness suggests members can trust one another for resources and affection.[58] Sources of support should always be available to members of virtual teams regardless of geographical and communication barriers. Some practices include holding regular team training as a professional development opportunity or organizing regular consultation sessions ranging from informal to formal with the team and individuals. Future research may consider the effect of incongruent perceptions of relationship closeness on developing virtual team members' moqi.

Limitations and Future Directions

This study also has some limitations that must be addressed. First, the data of this research were self-reported, increasing the potential for social desirability bias and CMB.[89] Although the bias should have mainly been mitigated in the current study due to the two-wave design,[78] future research may collect data from different sources to further increase model validity. In addition, the research design is inadequate to address the dynamic relationship between empathy and team members' moqi in the long term. Thus, alternative experimental or longitudinal methods should be adopted in the future, which can help gauge the true impact of empathy on team members' moqi. Chen and Cole (2022) suggested that moqi can be achieved either from interactions or perceived similarity.[4] Future research could adopt an experimental design in which dyads are assigned to different conditions so that the researchers could closely observe the pattern of the coordinating process between encoding and decoding.

The scale used to capture relationship closeness was proposed and validated based on the indigenous Chinese concept of guanxi and renqing. In this context, coworkers' relationship combines instrumental and affective ties.[58] The positive impact of coworker guanxi on group outcomes in Chinese organizations has been validated.[90,91] However, Wang (2019) suggested that relationships in the Western context are grounded in cognition at the rational level, whereas the Chinese determine their guanxi using a level of perceived emotional connection.[92] As a result, both groups may experience difficulties building relationships in the other context. Therefore, whether the findings of this study could be generalized to another cultural context requires further elaboration. Future research could attempt to conduct a comparison in different cultural contexts, adding a cross-cultural understanding of guanxi-based relationship closeness and moqi.

Furthermore, this work is based on the assumption that team members' moqi can be a practical tool for individuals in virtual teams to decode high-context messages.[19] However, tacit knowledge transfer can cause knowledge asymmetry,[93] and tacit approval of deceptive communication could cause unethical behaviors.[94] Thus whether and how team functioning is supported or compromised through a tacit understanding of team members' intentions remains unclear. Future studies may elaborate on the effect of moqi on relationships and behaviors.

Data Sharing Statement

The data presented in this study are available on request from the corresponding author.

Institutional Review Board Statement

Ethical approval was obtained by the ethics review board at the University of Electronic Science and Technology of China in 2021 before the research began. All subjects completed written informed consent in accordance with the Declaration of Helsinki. Research respondents were ensured confidentiality and anonymity. All participation was voluntary. Appropriate steps were taken to protect the rights and welfare of human research subjects, as requested by the university ethics review board.

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Disclosure
The authors report no conflicts of interest in this work.

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