




“Causes of intra-organization conflict: Telecommuting triggered by the epidemic”

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CAUSES OF INTRA-ORGANIZATION CONFLICT: TELECOMMUTING TRIGGERED BY THE EPIDEMIC

Abstract

The COVID-19 pandemic has made many companies in China adopting telecommuting to continue their operations. Like traditional office work, telecommuting requires communication and cooperation to complete the work, and getting along with others means the possibility of conflict. Therefore, conflict can also occur in telecommuting. The purpose of this paper is to analyze telecommuting based on conflict process theory and build a model to test the hypothesis. Quota sampling and convenience sampling are used to conduct online questionnaires, and quantitative research methods are used to analyze the collected data and provide solutions. To this end, 282 Chinese respondents from different service industries completed online questionnaires. Through empirical analysis, the results show that telecommuting has a significant negative relationship with inter-role conflict and interpersonal conflict but has a significant positive effect on stress. In addition, interpersonal conflict, stress, and inter-role conflict have significant positive impacts on affective conflict. Similarly, interpersonal conflict and stress have significant positive effects on cognitive conflict. However, the relationship between inter-role conflict and cognitive conflict, cognitive conflict, and affective conflict is not significant. Thus, the results provide suggestions for managers on how to manage telecommuters and key factors that need to be considered. It also provides a new way for other scholars to study telecommuting.

Keywords

conflict, management, organization behavior, employees, relationship

JEL Classification

D74, M10

INTRODUCTION

A conflict has been treated as a universal social phenomenon, and it frequently affects the processes and outcomes of many individuals and organizations (Pondy, 1967; Thomas, 1992). Scholars agree that conflict shares a generic format, which, as with any social process, has causes, a core process, and results or effects. Some scholars have summarized causes from the empirical research of previous literature. These were individual characteristics, issues, and interpersonal factors. Interpersonal factors include the research hotspots of a perceptual interface, communication, behavior, and structure (Wall & Callister, 1995). Other scholars have supplemented these foundations with, for example, stress (Derr, 1975) and inter-role conflict (Kopelman et al., 1983).

The COVID-19 pandemic has forced many organizations to change their traditional way of working in the office. The Chinese government encouraged employers to allow their employees to use telecommuting to enable their business operations to continue (State Council Information Office, 2020). However, telecommuting causes many problems. Electronic media were no contextual cues, emotional feelings, or non-verbal explanations, and also limited information inter-



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action, resulting in the deterioration of important relationships (Daft & Lengel, 1986). When employees live and work in the same physical space, the line between personal life and work can become blurred (Ashforth et al., 2000). The conflict between family roles and work roles can also make it difficult for remote employees to devote themselves to work, leading to extended working hours and a decrease in time for rest. Thus, stress in one role may create conflict between that role and another (Kopelman et al., 1983) and increase work stress (Igarria & Guimaraes, 1999). The same factors that can cause conflict within an organization can be found in telecommuting.

The study focuses specifically on telecommuting and aims to offer pragmatic suggestions to managers and organizations in China for future progress from the perspective of handling conflict. This paper is based on the theoretical definition of matching and combination; it matches the effects of telecommuting with the causes of conflict to form a framework for antecedent analysis. This framework focuses on the analysis of antecedents in the process of conflict.

1. LITERATURE REVIEW

1.1. Telecommuting, interpersonal conflict, stress, and inter-role conflict

Telecommuting is an alternative workstyle for workers who daily perform tasks in a primary or central workplace. Such employees have opted to use electronic equipment outside the conventional workplace to complete tasks normally undertaken in the office (Bailey & Kurland, 2002; Feldman & Gainey, 1997; Nilles, 1994). Working outside the conventional workplace has usually meant working from home (Hill et al., 1998). Face-to-face communication has been recognized as a highly effective form of information interaction. Fewer opportunities for face-to-face communication resulted in a reduction in the quality and frequency of communication between remote workers and others (Daft & Lengel, 1986). It was found that telecommuting could result in a deterioration of the relationships between managers and employees and that poor communication often was the cause of interpersonal conflict (De Dreu & Gelfand, 2008; Lau & Cobb, 2010). Telecommuting could reduce the stress associated with commuting to work (Gajendran & Harrison, 2007). In addition, because coming into the office late could create a bad reputation for an employee, the pressure of having to show up on time could also cause stress (Pierce & Newstrom, 1980). Because telecommuting affects the physical, social, and psychological environment of a workplace, the advantages of increased telecommuting could be offset by the challenges it creates and the resources it depletes,

such as losing social-emotional support, managing job stressors, and time spent coordinating relationships, all of which can cause increased strain (Crawford et al., 2010; Sewell & Taskin, 2015). Some scholars initially believed that telecommuting was an excellent way to work because it brought about harmony between family and work roles (Hill et al., 1998). However, other scholars considered telecommuting could blur the line between work and family, thereby exacerbating conflict (Igarria & Guimaraes, 1999; Standen et al., 1999).

On the one hand, telecommuting provided employees more flexibility in arranging their work and life schedules and could reduce family conflict brought on by work (family-work conflict) (Kirchmeyer, 1995; Raghuram & Wiesenfeld, 2004). The reduction in commute time could lead to more time for family activities (Greenhaus & Beutell, 1985). On the other hand, work and family might share the same space and time, blurring the boundary between work and family, thus increasing mutual permeability (Edwards & Rothbard, 2000; Nippert-Eng, 1996). On an individual level, being in a family (work) role made it more difficult to be in a work (family) role.

1.2. Interpersonal conflict, inter-role conflict, and stress

Although the relationship between interpersonal conflict in the office and occupational stress has not been mentioned explicitly in the literature, more and more evidence suggests that one of the more considerable stress may be interpersonal conflict (Keenan & Newton, 1985; Spector & Jex,

1998). Employees wanted to be recognized and appreciated by their coworkers, and this helped them have a positive attitude (Fiske, 1992). From this perspective, conflict with colleagues can be stressful in and of itself because it can upset the balance and reduce social status by damaging one's image in the eyes of his or her colleagues (Frone, 2000). Howard (2008) summarized predecessors' works (Boyar et al., 2003; Greenhaus & Beutell, 1985) by stating that work-family conflict and family-work conflict represented a type of conflict between roles. Conflict could be seen as the degree to which an individual perceives stress from incompatible roles (Kopelman et al., 1983). The main causes of job stress were the clash between work and non-work roles and the resulting role overload (Frone et al., 1992; Judge et al., 1994). Along the same lines, the requirements that the other role cannot fulfill would turn into stress, and when meeting the requirements of one role, it is hard to satisfy the need of another role (Frone et al., 1992; Judge et al., 1994).

1.3. Conflict process theory and telecommuting

Pondy (1967) described the conflict as a dynamic process that contains five stages: begin with latent conflict, and end up with conflict aftermath. The first stage, latent conflict, consists of competition for scarce resources, drives for autonomy, and divergence of subunit goals, and is influenced by the external environment. Robbins and Judge (2013) detailed this stage into communication, structure, and personal variables. Likewise, Wall and Callister (1995) showed the antecedent set of conflict, including individual characteristics, interpersonal factors, and issues. Derr (1975) noted that organizational conflict occurred due to mounting individual stress. Communication was an essential part of interpersonal factors, and poor communication would lead to interpersonal conflict (Pondy, 1967). Several academics reported that when employees were busy with their own lives, which made life incompatible with work, a conflict between role expectations was inevitable (Frone et al., 1992; Gutek et al., 1991). While outlining the link between work-individual conflict and its consequences, organizational conflict was organization-related conflict occurring inside and outside the workplace, which is also the scope of

conflict discussed in this paper, while family-work conflict was essentially the conflict caused by role transition (Boyar et al., 2003; Greenhaus & Beutell, 1985). These interpersonal conflicts related to communication, inter-role conflicts related to individual's work and family, and personal stress were all consistent with the factors caused by telecommuting. Perceived conflict differs from felt conflict in that the former refers to the awareness and acceptance of the potential conflict. In contrast, the latter refers to the awareness of the potential conflict resulting in anxiety, frustration, and other emotions (Pondy, 1967). Jehn (1995) stated that cognitive conflict was negatively correlated with affective conflict, while Simons and Peterson (2000) found a positive correlation between cognitive conflict and affective conflict. Cognitive conflict was functional, task-oriented disagreement at work (Jehn, 1994). In other words, cognitive conflict could be beneficial, and divergence in the way of viewing and completing tasks can improve the quality of decision-making by managers (Cosier & Dalton, 1990). In addition, Amason and Sapienza (1997) explained that when cognitive conflict was likely to take its toll, individuals may have cognitive disagreement. At that point, the disagreement was no longer within the scope of cognition, but within the subconscious with personal emotions at the expense of others, which could lead to affective conflict. Affective conflict was nonfunctional and occurred when feelings and emotions were incompatible. Collectively, affective conflict has a negative impact on an organization's team performance and members' satisfaction (Dimas & Lourenço, 2015), reducing organizational loyalty and commitment (Amason, 1996; Jehn, 1995).

Those offended would launch personal attacks against the dissenter, whose actions they believed were personally motivated and, in doing so, will provoke more affective conflict. In addition, progression from the perceived conflict stage to the felt conflict stage to manifest conflict was a significant qualitative change process, and progression from awareness to behavior was the pressure point where most conflict resolution programs were applied (Pondy, 1967). Finally, when conflict still occurs with consciousness, it can be resolved by appropriate methods to prevent intention from behavior (Robbins & Judge, 2013).

1.4. Mediating role of interpersonal conflict and inter-role conflict

Baron and Kenny (1986) generalized the causal step approach. The Sobel test designed by Sobel (1982) was often used as a complement to Baron and Kenny (1986)'s method, rather than as a substitute. However, the Sobel test has a major disadvantage. The indirect effect needs to be normal, but the general sample distribution is usually abnormal, so 1.96 was inaccurate in judging the mediation effect. Because bootstrapping could be used to replace and solve the problems (Fritz & MacKinnon, 2007; Preacher & Hayes, 2004, 2008), it was used in this study. The endpoints could be adjusted to yield a bias-corrected confidence interval. Mediating would exist if there is no zero between the upper and lower bound. According to the literature review, telecommuting can cause interpersonal conflict, stress, and inter-role conflict. Moreover, interpersonal conflict and inter-role conflict were also sources of stress.

2. AIMS, STUDY FRAMEWORK AND HYPOTHESES

The aim of this paper is to show whether there is a link between telecommuting and conflict. Specifically, factors related to communication,

stress, and role transit caused by telecommuting may develop into harmful affective conflict and beneficial cognitive conflict. The results will provide a new management idea for managers to manage telecommuters and guide conflict into beneficial cognitive conflict by using conflict management methods. Then, the study designs a framework to analyze all the variables (Figure 1).

This paper develops the following hypotheses:

- H1: *Telecommuting is negatively related to interpersonal conflict.*
- H2: *Telecommuting is positively related to stress.*
- H3: *Telecommuting is negatively related to inter-role conflict.*
- H4: *Interpersonal conflict is positively related to stress.*
- H5: *Inter-role conflict is positively related to stress.*
- H6: *Interpersonal conflict is positively related to affective conflict.*
- H7: *Interpersonal conflict is positively related to cognitive conflict.*

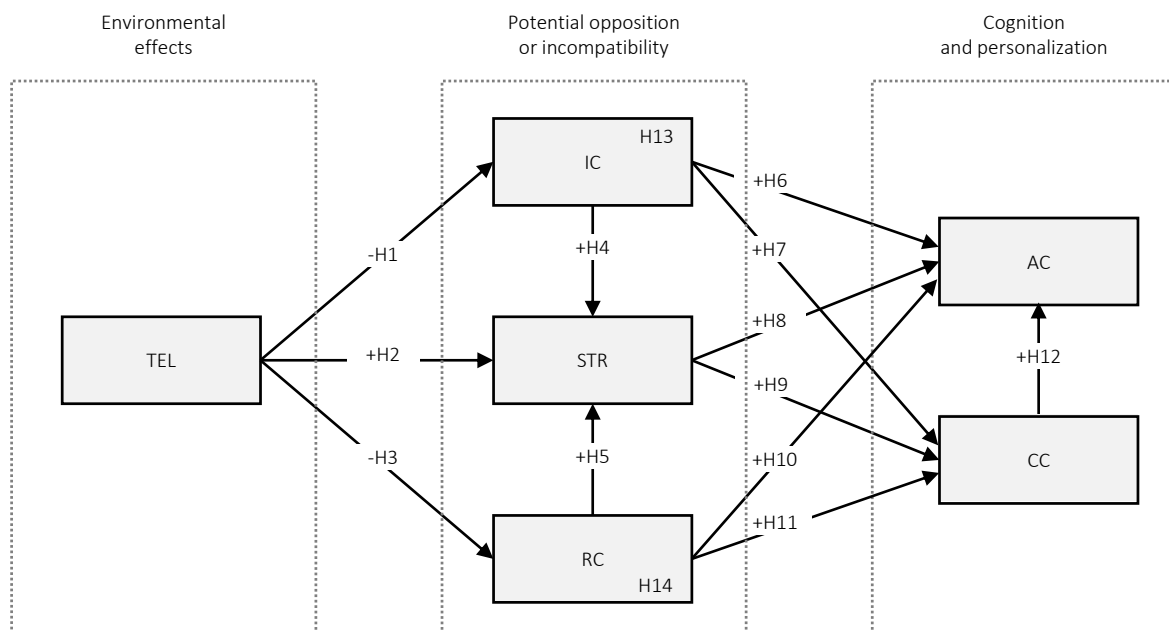


Figure 1. Conceptual framework

H8: *Stress is positively related to affective conflict.*

H9: *Stress is positively related to cognitive conflict.*

H10: *Inter-role is positively related to affective conflict.*

H11: *Inter-role is positively related to cognitive conflict.*

H12: *Cognitive conflict is positively related to affective conflict.*

H13: *Interpersonal conflict acts as a mediator between telecommuting and stress.*

H14: *Inter-role conflict acts as a mediator between telecommuting and stress.*

3. METHODS

3.1. Overview

Guided by the recommendations of Groves et al. (2009), this study uses the survey method to collect data, a widely used method due to its rapid turnaround, economy, and the standardization of data (Babbie, 2020) to study the cognitive status of participants. This paper adopted maturity scales created by Jehn et al. (1995); data acquisition was conducted through a cross-sectional web-based survey. Ethical guidelines clearance was obtained, the standard and procedures of the questionnaire survey were followed, and participants gave permission to collect data. The survey participants remained anonymous.

3.2. Participants

According to the proportion of the target industry in 2018 in the China State Statistics Bureau, this study determined the ratio of each industry, including catering (13.8%), hotel (1.9%), wholesale and retail (75.5%), and delivery industries (8.8%) in China. The sample of 282 office workers had at least one year of formal experience, were between 18 and 60 years of age and used telecommuting during the epidemic.

3.3. Instrument

The survey was initially developed to measure conflict by Jehn (1995) based on personal knowledge and current literature on the conflict process. The survey was made up of 36 items that collected demographic data and contained six variables (telecommuting, interpersonal conflict, stress, inter-role conflict, affective conflict, and cognitive conflict) that can accurately test the various assumptions under the conceptual framework. In previous studies, these tools have been shown to have acceptable levels of reliability and validity. Multi-item scales previously developed and used in Western countries were used to measure these constructs. Hence, the method of translation-back-translation was adopted in the preparation of the questionnaires, which is more suitable for the Chinese environment. Control variables included gender, age, education level, and work in industry categories because the samples came from individuals with different backgrounds. This study used the literature review, questionnaire survey, and statistical analysis methods. Two sampling methods were used in the questionnaire survey: quota sampling and convenience sampling. This study primarily used SPSS 26.0 and AMOS 24.0 software.

3.4. Procedure

First, under the allocation ratio of quota sampling for each industry and convenience sampling, designing the questionnaire via Wenjuanxing, a functional platform similar to Amazon Mechanical Turk bot, and distributed via social media platforms WeChat and Tencent QQ. 310 questionnaires were received, of which 282 (91%) were valid. The study analyzed the resulting data and calculated descriptive statistics to identify frequencies. SPSS was used for internal consistency analysis to test the reliability of the questionnaire. AMOS was used to conduct confirmatory factor analysis to verify the validity of the questionnaire. Finally, structural equation modeling (SEM) was used to construct the model to test the relationship between variables and the mediating effect.

3.5. Measurement

Telecommuting was measured using five items with a 5-point Likert scale designed by Ortiz Mendoza et al. (2020). The Internal Consistency

Reliability (alpha coefficient) (ICR) of the measures of telecommuting was 0.870.

To measure interpersonal conflict, a total of 23 items from two dimensions of the Conflict Communication Scale (CCS), which was designed by Goldstein (1999), were used as a subscale and accompanied by a 5-point Likert scale. The ICR of the measures of interpersonal conflict was 0.905.

The most widely used psychological tool, Perceived Stress Scale (PSS), was used to measure stress perception (Cohen et al., 1994). It measures the degree to which life situations are rated as stressful. A 5-point Likert scale was used. The ICR of the measures of stress was 0.869.

Family-work conflict and work-family conflict were the determinants of inter-role conflict. In addition, inter-role conflict refers to the conflict between work role and family role. As a result, this paper adopted the scale in which Netemeyer et al. (1996) summarized the scale obtained by predecessors, which was divided into the dimensions of work and family. There were 10 items, which used a 5-point Likert scale. The ICR of the measures of inter-role conflict was 0.888.

Affective and cognitive conflicts were operationalized by the scales developed by Jehn (1995). The existence of conflict was measured on a 5-point Likert scale through eight items. Higher scores indicated higher levels of affective and cognitive conflict. The ICR of the measures of these were 0.797 and 0.849, respectively.

4. RESULTS

4.1. Demographic variables

Table 1. Respondents' statistics

Indicators	Category	N.	Percentage
Gender	Male	150	53.2%
	Female	132	46.8%
Age	20-29	89	31.6%
	30-39	82	29.1%
	40-49	71	25.2%
	Above 50	40	14.2%
Level of education	High school	73	25.9%
	University	165	58.5%
	Graduate student	44	15.6%

Indicators	Category	N.	Percentage
Industry	Catering	46	16.3%
	Hotel	5	1.8%
	Wholesale and retail	207	73.4%
	Transportation, warehousing, and postal	24	8.5%

4.2. Reliability analysis

Reliability analysis criteria indicate that the higher the Cronbach's α value, the higher the reliability of the questionnaire. Table 2 shows the reliability analysis results of SPSS. The reliability coefficient of Cronbach's α of the six research variables are the following: telecommuting (TEL) 0.870; interpersonal conflict (IC) 0.950; stress (STR) 0.869; inter-role conflict (RC) 0.888; affective conflict (AC) 0.797; and cognitive conflict (CC) 0.849. The value of each variable is greater than 0.7, indicating that the reliability analysis reaches the standard, and the data is real and reliable; that is, the research samples truly reflect the problem. The deleted Cronbach's α coefficient of each item is less than the Cronbach's α coefficient of the variable, indicating that the item does not need to be corrected. To sum up, the reliability of the scale meets the reliability quality requirements.

Table 2. Analysis of reliability

Variable	Corrected item-total correlation	Cronbach's alpha if item deleted	Cronbach's alpha
TEL1	0.697	0.844	0.870
TEL2	0.731	0.834	
TEL3	0.763	0.820	
TEL4	0.725	0.834	
IC1	0.684	0.894	0.905
IC2	0.727	0.890	
IC3	0.731	0.890	
IC4	0.701	0.892	
IC5	0.729	0.890	
IC6	0.736	0.889	0.869
IC7	0.717	0.891	
STR1	0.751	0.826	
STR2	0.692	0.846	
STR3	0.566	0.870	
STR4	0.756	0.827	0.869
STR5	0.729	0.834	

Table 2 (cont.). Analysis of reliability

Variable	Corrected item-total correlation	Cronbach's alpha if item deleted	Cronbach's alpha
RC1	0.662	0.874	0.888
RC2	0.626	0.878	
RC3	0.644	0.876	
RC4	0.773	0.860	
RC5	0.651	0.875	
RC6	0.646	0.876	
RC7	0.763	0.861	
AC1	0.651	0.715	0.797
AC2	0.689	0.672	
AC3	0.588	0.782	
CC1	0.632	0.831	0.849
CC2	0.725	0.791	
CC3	0.713	0.797	
CC4	0.679	0.811	

4.3. Validity analysis

The validity of the overall questionnaire was verified by Kaiser-Meyer-Olkin (KMO) and Bartlett's tests. The value of KMO is 0.902 in Table 3, which is greater than the standard value of 0.6 for judgment. Bartlett's test showed that the p-value was 0.000, which is less than 0.05, indicating that the questions were effective and suitable for exploratory factor analysis.

Table 3. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.902	
Bartlett's Test of Sphericity	Approx. Chi-Square	4485.617
	df	435
	Sig.	0.000

Then, principal component analysis was used to extract the principal components of variables, and the factor with an eigenvalue greater than 1 was extracted after rotation by maximum variance method. As shown in Table 4, six factors with eigenvalues greater than 1 were extracted from all the items. The explanatory ability of each of the six factors was 15.460%, 14.876%, 11.464%, 9.789%, 9.535%, and 5.965%, respectively, which explains more than 60% of the variables, up to 67.094%. In turn, it also reflects the reasonable scale's dimension design. At the same time, the load values of

each index item on their respective factors were greater than 0.5 (see Table 4), and the load values on the other factors were less than 0.4, indicating that the scale had good validity.

Table 4. Rotated component matrix

Variable	Component					
	1	2	3	4	5	6
TEL3	-	-	-	0.875	-	-
TEL2	-	-	-	0.824	-	-
TEL4	-	-	-	0.823	-	-
TEL1	-	-	-	0.816	-	-
IC3	0.791	-	-	-	-	-
IC5	0.791	-	-	-	-	-
IC2	0.790	-	-	-	-	-
IC6	0.778	-	-	-	-	-
IC1	0.770	-	-	-	-	-
IC7	0.762	-	-	-	-	-
IC4	0.745	-	-	-	-	-
STR5	-	-	0.805	-	-	-
STR4	-	-	0.803	-	-	-
STR1	-	-	0.795	-	-	-
STR2	-	-	0.735	-	-	-
STR3	-	-	0.721	-	-	-
RC4	-	0.823	-	-	-	-
RC7	-	0.786	-	-	-	-
RC1	-	0.770	-	-	-	-
RC5	-	0.762	-	-	-	-
RC6	-	0.741	-	-	-	-
RC3	-	0.724	-	-	-	-
RC2	-	0.711	-	-	-	-
AC1	-	-	-	-	-	0.736
AC2	-	-	-	-	-	0.732
AC3	-	-	-	-	-	0.607
CC4	-	-	-	-	0.825	-
CC2	-	-	-	-	0.821	-
CC3	-	-	-	-	0.814	-
CC1	-	-	-	-	0.733	-
Eigenvalues	7.853	4.110	2.972	2.353	1.812	1.028
% of variance	15.460	14.876	11.464	9.789	9.535	5.965
Cumulative %	15.460	30.336	41.800	51.589	61.124	67.094

First, the structural model was verified using the data collected by the validation measures. AMOS 24.0 was used to calculate the overall fit of the model. The values obtained were within the generally accepted range. Root mean square error of approximation (RMSEA) was 0.023, which is lower than the suggested value of 0.08. Chi-square/degree of freedom (DF) was 1.144, also within the

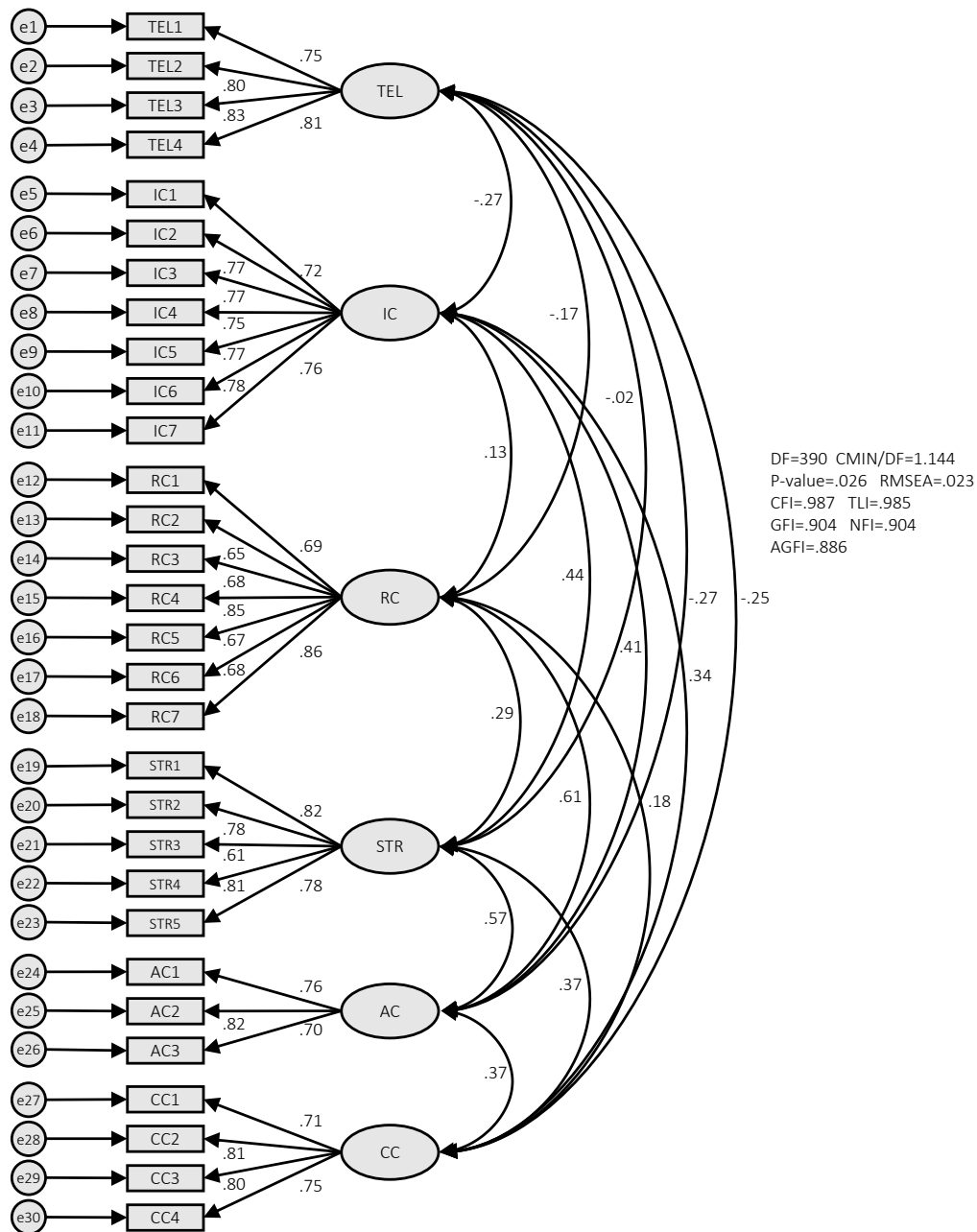


Figure 2. Confirmatory factor analysis model

accepted range. Comparative fit index (CFI) was 0.987, and Tucker-Lewis index (TLI) was 0.985, both higher than the recommended estimated value of 0.90. Goodness of fit index (GFI) was 0.904, normed fit index (NFI) was also 0.904, and adjusted goodness of fit index (AGFI) was 0.886, all values above the suggested estimates of 0.80. Therefore, the results showed a valid model fit.

According to Confirmatory Factor Analysis results, item loadings exceed the standard value

of 0.6. then, based on the items loading, CR and AVE were used to evaluate the construction reliability and convergence validity of the data. CR above 0.5 indicated good convergence validity, while AVE was greater than 0.7, indicating that the latent variable had good construction reliability. In this study, the CR value is between 0.801 and 0.917, meaning that the internal consistency reliability quality is up to standard. The AVE value is between 0.535 and 0.734, meaning that all items in each latent variable explain the potential variable consistently.

Table 5. Results of the confirmatory factor analysis

The path	Std. estimate	S.E.	C.R.	P	CR	AVE
TEL1 ← TEL	0.812	0.051	18.945	***	0.917	0.734
TEL2 ← TEL	0.888	–	–	–		
TEL3 ← TEL	0.868	0.052	21.933	***		
TEL4 ← TEL	0.856	0.043	21.222	***		
IC1 ← IC	0.728	0.062	12.704	***	0.909	0.587
IC2 ← IC	0.773	0.063	13.636	***		
IC3 ← IC	0.776	–	–	–		
IC4 ← IC	0.753	0.066	13.219	***		
IC5 ← IC	0.775	0.061	13.684	***		
IC6 ← IC	0.789	0.063	13.976	***		
IC7 ← IC	0.769	0.067	13.549	***		
STR1 ← STR	0.816	0.066	14.094	***	0.873	0.581
STR2 ← STR	0.776	–	–	–		
STR3 ← STR	0.612	0.062	10.203	***		
STR4 ← STR	0.809	0.059	13.955	***		
STR5 ← STR	0.779	0.058	13.374	***		
RC1 ← RC	0.693	0.061	12.936	***	0.888	0.535
RC2 ← RC	0.654	0.062	11.982	***		
RC3 ← RC	0.678	0.061	12.558	***		
RC4 ← RC	0.848	–	–	–		
RC5 ← RC	0.674	0.065	12.468	***		
RC6 ← RC	0.683	0.061	12.686	***		
RC7 ← RC	0.858	0.059	17.599	***		
AC1 ← AC	0.756	0.071	12.425	***	0.801	0.574
AC2 ← AC	0.820	–	–	–		
AC3 ← AC	0.691	0.077	11.356	***		
CC1 ← CC	0.706	0.070	11.863	***	0.850	0.586
CC2 ← CC	0.809	–	–	–		
CC3 ← CC	0.796	0.070	13.454	***		
CC4 ← CC	0.747	0.069	12.620	***		

Note: *** p < 0.001, standard error (S.E.), composite reliability (CR), average variance extraction (AVE).

Table 6. Correlation analysis

Variable	TEL	IC	STR	RC	AC	CC
TEL	1	–	–	–	–	–
IC	-0.235**	1	–	–	–	–
STR	-0.019	0.388**	1	–	–	–
RC	-0.131*	0.096	0.235**	1	–	–
AC	-0.231**	0.358**	0.478**	0.519**	1	–
CC	-0.219**	0.304**	0.319**	0.138*	0.297**	1

Note: ** Correlation is significant at the 0.01 level; * Correlation is significant at the 0.05 level.

4.4. Hypotheses testing

The collected data are used to verify the structural model. The overall fitting index of the model is acceptable because the results are within the generally accepted values. Chi-square/DF was 1.254, standardized root mean square residual (SRMR) was 0.055, RMSEA was 0.030, CFI was 0.976, TLI was 0.974, GFI was 0.897, AGFI was 0.878, and NFI was 0.894. The data show that the model fits well, and the research model is infinitely close to the real situation, reflecting the overall level. Therefore, this study enters into the calculation of path coefficients.

Table 7. Fitting index

Fitting index	Acceptable range	Measured value
CMIN	–	523.505
DF	–	395
CMIN/DF	< 3	1.254
SRMR	< 0.08	0.055
RMSEA	< 0.08	0.030
CFI	> 0.9	0.976
TLI(NNFI)	> 0.9	0.974
GFI	> 0.8	0.897
AGFI	> 0.8	0.878
NFI	> 0.8	0.894

Table 8 showed that most of the calculated path coefficients were significant. The results indicated that the TEL had a significant negative association with IC ($H1: \beta = -0.34, p < 0.001$). Therefore, $H1$ was accepted. TEL had a positive association with STR ($H2: \beta = 0.16, p < 0.05$). Therefore, $H2$ was accepted. TEL had a significant negative association with RC ($H3: \beta = -0.21, p < 0.001$). Therefore, $H3$ was accepted.

IC had a significant positive association with STR ($H4: \beta = 0.46, p < 0.001$). Therefore, $H4$ was accepted. RC had a significant positive association with STR ($H5: \beta = 0.26, p < 0.001$). Therefore, $H5$ was accepted. RC had a significant positive association with AC ($H6: \beta = 0.19, p < 0.01$). Therefore, $H6$ was accepted. RC had a significant positive association with CC ($H7: \beta = 0.24, p < 0.01$). Therefore, $H7$ was accepted. STR had a significant positive association with AC ($H8: \beta = 0.31, p < 0.001$). Therefore, $H8$ was accepted. STR had a significant positive association with CC ($H9: \beta = 0.24, p < 0.01$). RC had a significant positive association with AC ($H10: \beta = 0.49, p < 0.001$). Therefore, $H10$ was accepted. However, RC was not significantly correlated with CC ($H11: \beta = 0.08, p > 0.05$). Therefore, $H11$ was not accepted. Similarly, CC was not significantly cor-

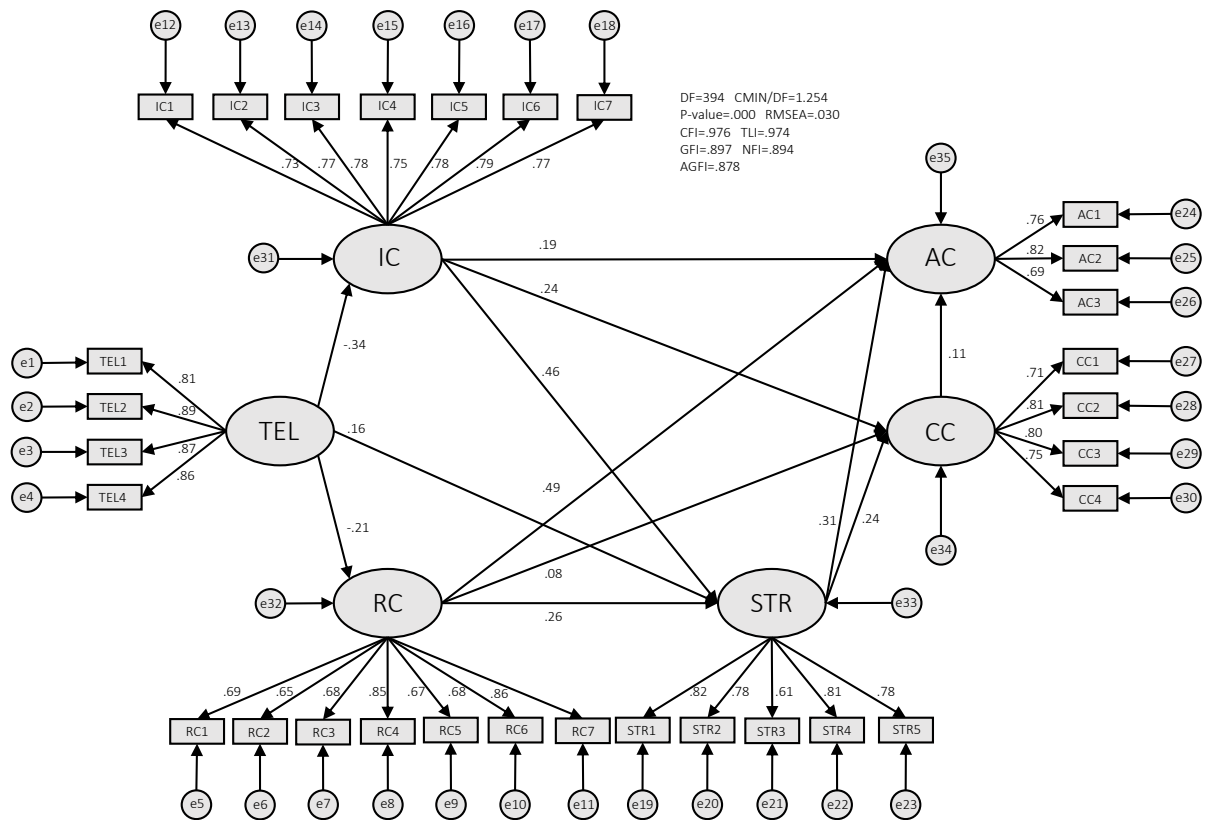


Figure 3. Structural model of the study

Table 8. Test results

Path relationship	Estimate	S.E.	C.R.	P	Results
TEL → IC	-0.375	0.071	-5.262	***	Supported
TEL → STR	0.144	0.061	2.360	0.018	Supported
TEL → RC	-0.211	0.064	-3.321	***	Supported
IC → STR	0.385	0.060	6.470	***	Supported
RC → STR	0.243	0.059	4.086	***	Supported
IC → AC	0.128	0.042	3.022	0.003	Supported
IC → CC	0.168	0.052	3.251	0.001	Supported
STR → AC	0.258	0.055	4.688	***	Supported
STR → CC	0.205	0.065	3.148	0.002	Supported
RC → AC	0.376	0.047	8.085	***	Supported
RC → CC	0.066	0.053	1.256	0.209	Not Supported
CC → AC	0.101	0.059	1.716	0.086	Not Supported

Note: *** p < 0.001.

related with AC ($H12: \beta = 0.11, p > 0.05$). Therefore, $H12$ was not accepted. The study concluded that the hypothesized model was acceptable.

4.5. Mediating effect analysis

The mediation total effect value of IC and RC in the relationship between TEL and STR was -0.052 , and standard error was 0.117 ; therefore, the Z value could be calculated as -0.444 . Correspondingly,

the indirect effect had a Z value of -4.000 , while the direct effect had a Z value of 1.398 . The total effect, direct effect, and indirect effect are analyzed according to the discriminant criterion of Z value greater than 1.96. The results showed that the total effect was not significant, and both Bias-Corrected and Percentile included zero between the lower and upper values of the 95% confidence interval. Then, the intermediary effect did not exist. Therefore, $H13$ and $H14$ were not supported.

Table 9. Mediating effect analysis

Path	Point estimate	Product of coefficients		Bootstrapping				Two-tailed significance
				Bias-Corrected		Percentile		
				95%CI		95%CI		
				Lower	Upper	Lower	Upper	
Total effects								
TEL-STR	-0.052	0.117	-0.444	-0.302	0.151	-0.295	0.162	0.657
Indirect effects								
TEL-STR	-0.196	0.049	-4.000	-0.306	-0.111	-0.298	-0.107	0.000
Direct effects								
TEL-STR	0.144	0.103	1.398	-0.077	0.327	-0.076	0.328	0.162

Note: Standardized estimating of 2000 bootstrap sample.

5. DISCUSSION

Through data analysis, it was found that telecommuting has a significant impact on interpersonal conflict, inter-role conflict, and stress, indicating that these variables are related. Telecommuting has a negative effect on interpersonal conflict and inter-role conflict. As Hill et al. (1998) concluded, the increase in telecommuting does not exacerbate inter-role conflict but rather alleviates it. The reason may be related to Raghuram and Wiesenfeld's (2004) suggestion of flexible working hours, which allows employees to manage their own work and life schedules. Another reason may be related to Greenhaus and Beutell's (1985) suggestion of saving commuting time. The same goes for the amount of time spent in the office gossiping, and dealing with relationships. The saving time can be used for family, which can effectively reduce the conflict caused by the role transit of employees. However, the result of this study found that telecommuting had a positive effect on stress. This result partly supports Crawford et al. (2010) and Sewell and Taskin (2015). In other words, the more frequently employees telecommute, the more stress it causes. The conclusion shows that interpersonal conflict and inter-role conflict decrease with the frequent telecommuting; then, management should focus on the control of stress.

This study found that the mediation effect of interpersonal conflict and inter-role conflict does not exist through the analysis of the mediation effect. However, there is a lot of literature indi-

cating that telecommuting, interpersonal conflict, stress, and inter-role conflict are related to each other.

In addition, this paper also found that interpersonal conflict and stress have a significant positive relationship with cognitive conflict. This is consistent with Robbins' conflict process theory. Nevertheless, the relationship between inter-role conflict and cognitive conflict is not significant. Then, interpersonal conflict, stress, and inter-role conflict have significant positive effects on affective conflict. This shows that these three variables may develop into affective conflict and rise to personal attacks due to emotional fluctuations. When interpersonal conflict, stress, and inter-role conflict develop into cognitive and affective conflict, conflict management can be used to manage the conflict. Cognitive conflict will positively affect the organization, so when cognitive conflict occurs, management focuses on correct guidance. Emotional conflict is destructive to the organization and should be avoided or reduced in time.

This study uses empirical research methods to confirm the purpose of the study that these factors induced by telecommuting are the trigger factors for conflict, and to prove the hypothesis that the interpersonal conflict, stress, and inter-role conflict associated with telecommuting can lead to cognitive and affective conflict. In addition, the results could provide companies with a new management idea that using the conflict management method may help manage the consequences of telecommuting.

CONCLUSION

The purpose of this paper is to analyze the conflict caused by the shift from traditional office work to telecommuting in the context of the COVID-19 outbreak, and to use the framework of conflict process theory to analyze the conflict caused by telecommuting. The results showed that the increased frequency of telecommuting reduced the incidence of interpersonal conflict and inter-role conflict but increased stress, and almost all of these factors developed into cognitive and affective conflict. Therefore, stress is a major concern for organizations that adopt telecommuting. Much research on conflict asserts that appropriate cognitive conflict has constructive and positive significance. In contrast, affective conflict is destructive and negative in most cases and should be avoided as much as possible. Thus, managers can refer to the conflict management method in the conflict process theory to manage the factors arising from telecommuting.

This study is limited primarily by the data sample being collected from China and a relatively small sample size. Therefore, the results might not be applicable in a broader context and in countries other than China.

Since this study was limited by being conducted in a single country, the sample was collected from only four service industries. It is suggested that future scholars employ samples from other industries and other countries, such as Western countries. Furthermore, as this study was quantitative, it is recommended that future investigations include a qualitative dimension, such as in-depth interviews, to shed more light on the particular factors contributing to the data.

AUTHOR CONTRIBUTIONS

Conceptualization: Junjun Li.

Data curation: Junjun Li.

Formal analysis: Junjun Li.

Investigation: Junjun Li.

Methodology: Zhongwu Li.

Resources: Zhongwu Li.

Software: Junjun Li.

Supervision: Zhongwu Li.

Writing – original draft: Junjun Li.

Writing – review & editing: Junjun Li.

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