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Conflict Resolution with Constructive Controversy, Team Performance: A Meta-Analysis

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ABSTRACT

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Current meta-analysis investigates how conflict management plays vital role to articulate positive side of conflict and enhance the team performance. According to criteria, 30 studies empirically analyzed on the topic the constructive controversy and its impact on conflict resolution among team members. Correlation values were taken from studies (2001 to 2010) for analysis. Result shows positive significant relationship exist between constructive controversy and team performance. Findings further revealed team performance increases when conflicting issues solved through cooperation, positive attitudes actively participation of team members.
KEYWORDS: Conflict Management, Constructive Controversy, Team Performance

INTRODUCTION

An individual can't lead the organization alone to the top of the success on the basis of his individual efforts. To bring innovation, creativity, competence and effectiveness in organizational processes, team work is mandatory. Market competition and globalization compelling organizations to promote the teamwork to achieve its targets and objectives. The concept of teamwork gained attention from the recent years due to rapid changing in technology and market trend. Team oriented culture is progressively developed in profitable organizations due to rapid change absorbing capacity and prevailing tradition in competing organization. Conflict is becoming a huge obstacle in promotion and managing of teamwork in organizations . For individuals working in teams, conflicts are known as those differences among team members which are critical to performance and unavoidable. It's prime concern for the organizations to manage conflict in a way that it becomes useful for the team rather than detrimental because critics from team members affect team performance. There are different types of conflicts which affect team performance but broadly divided into task conflict, relationship conflict and process conflict . Conflict management decides either conflict would be functional or dysfunctional but in the past decades, studies suggest conflict as dysfunctional and always bring destruction and negatively affect the team performance (De Dreu, 2003). A concept of 'constructive controversy' introduced in recent years refers conflicts issues always end up over something productive once positive critique is done (Deutsch, Coleman, and Marcus, 2011; Tjosvod, 1998).
A team works more efficiently and successfully which manages internal disagreements timely through positive controversy without making any disruptive decisions. Critic plays very important role in team and for organizational development when it's done in positive manner. However, organizations are currently facing dilemma to promote conflict in positive manner as it brings creativity and innovation. Conflict is inevitable within organizations and it becomes worse when not handle properly.

This meta-analysis helps to understand the functional approach of conflict resolution (constructive controversy) within the teams or groups. This study also covers a proposed gap by In an earlier meta-analysis conducted on task conflict and relationship conflict in context of team performance and team member satisfaction, **De Dreu and Weingart (2003)** concluded a positive side of conflict should be examined because generalizability of earlier findings is difficult on every conflict. They further highlight the need to investigate whether constructive controversy in conflict management has positive relationship with team performance or not. They also directed there is need to conduct research over raised issue because in some types of task, conflicts positively improve the performance.

This study has four objectives: First, to articulate positive side of conflict that has potential to increase productivity and makes organization successful. Second, to highlight those factors which positively contribute to promote the culture of constructive criticism within team. Third, to combine the results of previous studies in this field to show comprehensive picture of conflict. Fourth, to measure the positive effects of constructive conflict management over the teams' performances. This study analyzes the earlier results to find the inclination of conflict towards positivity or negativity of organizational outcomes. For this purpose the constructive controversy is being studied along with its outcomes in organizational work setting.

LITERATURE REVIEW

One of core arguments of cooperation and competition theory is, team member's interactions and conflict management are largely influenced by the perceptions of individual members that how much their goals are related for mutual benefits . Deutsch visualized the concept of cooperation and competition among team members and its different effects over teams and team members. He developed goal interdependence theory of cooperation and competition on experimental findings of different small work groups. The theory concludes that different situations of work settings effects either team member work cooperatively or competitively.

Antecedents of Conflict

Trust, task interdependence and level of communication are antecedents which if not handled carefully can provoke a higher level of conflict and encourage team members not to support constructive approach of conflict management. Trust has its own significance in literature but it also plays a critical role in team's processes. Research studies revealed interdependence of team members in task completion raise conflict in teams. Moreover, communication within team members also plays a significant role in outlining and resolving different conflicts raise during work.

Trust

Trust can be described as the feeling of depending on those people where you could discuss your different issues and problems while expecting support from them . Interpersonal trust facilitates coordination and cooperation among employees in the social formal or informal gatherings . When employees have strong trusting relationships they don't feel any need to monitor each other's activities and demonstrating work schedules. Other significant definitions interpret trust as a common approach or eagerness in relation to next person and the community classification in which they drive because trust smooth the progress of social interactions it is significant for team's processes . A number of theorists documented the magnitude of risk regarding the understanding of trust . Recent researches suggest types of interpersonal relations within team members significantly affect their coordination patterns for

needed resources in team growth . Levels of trust vary team to team depending on their frequency of interactions with team members but trusting relationship among members is building block for effective performance. During the conflict, it's important to increase the trust level for cooperative solutions and to remove the barriers in team's progress . Though trust in any type of team is critical even in virtual teams .

Rather than positive outcomes of trust, field studies also explored negative side of high level of trusting relationships within teams and organizations . Freedom of doing task on their own determination could be harmful for team performance particularly when monitoring is not considering important. We believe trust is important for positive resolution of conflict but mixed results in literature compelled to investigate trust further in conflict resolution. For example, experimental results of field study show high level of trust and freedom to perform tasks or duties lead to the lower team performance . On the other hand, teams perform effectively in low trust level and members are free to perform tasks according to their own designed method. Though some studies also end up with the results teams with higher trust among members experience less (destructive) conflicts .

Task Interdependence

Task interdependence can be understood as the mandatory level of cooperative dealings among team members to perform assigned task efficiently . Task interdependence has been studied frequently as a strong component of effective team structure but it is successful when employees have trust and cooperate with each other . Team members don't prefer to be dependent when there is competitive environment among team members and members don't share knowledge or insights to be competitive. Task interdependence critically interrupts team performance when conflicts are not solved with positive and constructive discussion(s). Therefore, scholars identified task interdependence is beneficial when conflicts handled with cooperative approach and in return it increases team performance . Earlier studies demonstrated cooperative goals, goal or task interdependence motivate employees to interpret their divergent observations directly to improve the final output of the team. However, cooperative goals play prime role for endorsement of constructive controversy . Results report that strength of cooperation among team members or/and team's performance is highly dependent over the tendency of task interdependence demanded from team members .

Communication

It's essential in teams to determine how they will communicate and interact with each other to reduce the probability of conflict. Researchers also found proper communication among team members on issues makes teams more creative and inventive .Mostly two types of basic communication styles use in teams/workgroups to interact: One is face to face communication and the other through mediators like computer and phone. Various studies conducted to explore which mode of communication is more significant for the cooperation among members. Balliet (2009) concluded face to face communications either formal or informal is more beneficial rather than other modes like mail or messages. Later, Balliet (2010) confirms in a meta-analytical review face to face interactions made teams more cooperative and supportive to illustrate their apprehensions about issues and focus on the problems rather than long discussions through online computerized messages. Communication is basically a within team practice comprises on formal and informal behavioral moments among team members. It develops understanding between isolated team players and facilitate them to transfer their knowledge and issues related information more courteously within teams . Informal communication reduces conflict among groups because informal sessions assist group members to understand other member(s)

through informal patterns that help to minimize or remove conflict before it gets worst . In a study conducted with construction troop to evaluate the communication and clashes, Aveiga et al. (2011) concluded communication gaps increased the chances of conflicts within team members. Koza and Dant (2007) confirmed through a model that communication tackle disagreements to improve financial and relational performance. Moreover, relational performance affect by the chosen approach for conflict resolution as well as the financial performance depends on the selected communication.

Conflict Management Strategies

Earlier approach to conflict depicted that conflict is the main cause to spoil the group coordination, cooperative attitude of team members as well as distract people from achieving successful results, e.g. targeted goals . Though traditional view, drew a picture of conflict as negative act which disrupt work growth or convey negative signals/outcomes of organization performance but some researchers argue it's conflict management style that makes a conflict productive or disruptive . There are various conflict management strategies that mitigate disagreement(s) or/and transform situation(s) into positive. Yuan (2010) conducted a study on Chinese and American employees' team and disclosed a variety of conflict management strategies and their effects.
Avoiding conflict is negative approach to deal with conflict and sometimes organization's output suffer because of exploitation of conflicting views and conduct between employees over different organizational levels as Leung et al. (2002) discussed the awful effects of conflict avoidance. In a study of virtual teams, Gallenkamp et al. (2010) discussed collaborative conflict resolution moderates the "relationship conflict" and team performance as the relationship conflict has negative impact on team performance. According to the different approaches of conflict management, Kankanhalli et al. (2007) argued the way conflict resolve affects the relationship of team performance with conflict in virtual teams. Teams adopt collaborative style to resolve their disputes, find out quality solutions that ultimately increase performance.

Constructive Controversy

According to Yan et al. (2009), team performance depends on various factors, e.g., member's cooperation, cultural backgrounds, efficiency, communication skills, trust and including personality traits. When conflicts disrupt the team performance, it is ultimately harmful for the organizational success i.e. delays in achieve its targets. Positive criticism includes constructive controversy, drives to employees' and ultimately organization's betterment in positive way. For example, Daniels and Cajander (2010) discussed constructive controversy increases the learning in open ended students' group projects when they show their true cooperation within their teams. In a study on attitudes about diverse social issues, Tichy et al. (2010) indicated constructive controversy impacts on the relationship of moral developments within students of different grades. Conflict management with cooperative approach has positive relationship with identification of task interdependence within teams that increases the team performance . Hempel et al. (2009) concluded when disrupting issues resolve with cooperative conflict management approach, it helps to build the confidence and trust among team members/partners which ultimately raise the team performance. Conflicts either internal or external should not be disregarded or ignored because ineffective dealing of conflicts cause disturbance among team performance. Resolution of problematic issues in teams through constructive controversy approach provide an opportunity to increase the team performance.

Team Performance and Effectiveness

Rapid technological change and uncertainty in market compel organizations to adopt teamwork for its survival in the market to improve the company growth and meet the challenges in globalization era .

Team performance isn't the collection of separate individual performances but it is defined as the collaboration of team members working collectively and their mutual struggle for the completion of objective(s) .

Team's effectiveness suffers when conflicts get stronger among team members. Employees can't be satisfied with resulting outputs when they face conflicts among them, either relationship or task conflict. Shaw et al. (2011) indicated relationship conflict mostly highlights the task conflict and decrease performance and team members' satisfaction level in terms of effectiveness, efficiency and efficacy.

One of the major challenges for organization is dealing with conflict when conflict is defined as the difference between team members causing the clashes while decision making. Though giving out the contrary points and negotiations over them conflicts in positive manner have a lot of advantages specially it improves the decision making quality, trust among team members, team collaboration as well as the team members' performance. Open minded discussions for exchange of thoughts decrease the conflicts either relationship or task oriented conflicts and has the positive association with team performance.

METHODOLOGY

Complete grounding of initial research was done before conducting this meta-analysis as it also requires complete research layout like other researches. Basics and steps involved in meta-analysis were taken from the book "Effect Sizes" by Ellis (2010).

Data Collection

Data was collection according to defined eligibility criteria. Four databases (web of science, JSTOR, Wiley and B-on) were consulted to collect the relevant studies. Some of the studies were collected by contacting the authors through email due to unavailability or just abstract in the databases.

Eligibility criteria was set on five specifications: First, publication year must be 2001-2010 and published or unpublished papers must have required relationship for further calculations. Second, article must be published in peer-reviewed journal (for example, journal of organizational behavior, journal of applied psychology, journal of conflict resolution and international journal of conflict management). Third, studies must be in English language. Fourth, studies must be quantitative. Studies in which conflict and conflict resolution were studied on team level, group level were included. Different keywords were used to access each possible research paper available on different databases. Total 62 studies were retrieved according to the defined criteria.

Coding Process

Each study was reviewed thoroughly according to the pre-defined criteria and those didn't fulfill one or more specification in given criteria were discarded. Related shortlisted studies entered in a database developed by authors to manage all studies in one format. Unique numbers were assigned to each study to avoid replication or confusion. A total of 30 studies met the full requirement from 62 collected studies and taken for the final analysis.

List of selected studies along with year of publication and journal name is given in table No 1:

Study No	Article	Year	Journal Name
1	Conflict Management for Effective Top Management Teams and Innovation in China	2005	Journal of Management Studies
2	Conflict Management for Effective Top Management Teams and Innovation in China	2001	Academy of Management Journal
3	The Downside Of Self-Management: A Longitudinal Study Of The Effects Of Conflict On Trust, Autonomy, And Task Interdependence In Self-Managing Teams	2007	Academy of Management Journal
4	Team Learning from Mistakes: The Contribution of Cooperative Goals and Problem-Solving	2004	Journal of Management Studies
5	Conflict, Conflict Management and Performance in Virtual Teams	2010	Americas Conference on Information Systems (AMCIS)
6	Understanding Conflict in Geographically Distributed Teams: The Moderating Effects of Shared Identity, Shared Context and Spontaneous Communication	2005	Organization Science
7	The dynamic relationship between performance feedback, trust, and conflict in groups: A longitudinal study	2003	Organizational Behavior And Human Decision Processes
8	Conflict management between and within teams for trusting relationships and performance in China	2009	Journal of Organizational Behavior
9	Co-operative conflict management: An approach to strengthen relationships between foreign managers and Chinese employees	2007	Asia Pacific Journal of Human Resources
10	Linking Transformational Leadership and Team Performance: A Conflict Management Approach	2010	Journal of Management Studies

11	Team conflict management and team effectiveness: the effects of task interdependence and team identification	2009	Journal of Organizational Behavior
12	Too Much Of A Good Thing? Negative Effects Of High Trust And Individual Autonomy In Self-Managing Teams	2004	Academy of Management Journal
13	Corporate Board Attributes, Team Effectiveness And Financial Performance	2008	Journal of Management Studies
14	Unbundling task conflict and relationship conflict The moderating role of team goal orientation and conflict management	2010	International Journal of Conflict Management
15	The Influence of Relationship Conflict and Trust on the Transactive Memory: Performance Relation in Top Management Teams	2005	Small Group Research
16	Managing Conflict in School Teams: The Impact of Task and Goal Effectiveness Interdependence on Conflict Management and Team	2008	Educational Administration Quarterly
17	Team Training in China: Testing and Applying the Theory of Cooperation and Competition	2010	Journal of Applied Social Psychology
18	Team Effectiveness in China: Cooperative Conflict for Relationship Building	2005	Human Relations
19	Innovation by Teams in Shanghai, China: Cooperative Goals for Group Confidence and Persistence	2009	British Journal of Management
20	When Too Little or Too Much Hurts: Evidence for a Curvilinear Relationship Between Task Conflict and Innovation in Teams	2006	Journal of Management
21	Increasing Learning &Time Efficiency in Interorganizational New Product Development Teams	2010	Journal of Product Innovation Management

22	Team Goal Commitment and Team Effectiveness: The Role of Task Interdependence and Supportive Behaviors	2005	Group Dynamics: Theory, Research, and Practice
23	Stimulating the Potential: Creative Performance and Communication in Innovation Teams	2004	Creativity And Innovation Management
24	Effectiveness of Chinese Teams: The Role of Conflict Types and Conflict Management Approaches	2006	Management and Organization Review
25	Conflict Management & Team Effectiveness in China: The Mediating Role of Justice	2002	Asia Pacific Journal of Management,
26	Trust within teams: The relation with performance effectiveness	2001	European Journal Of Work And Organizational Psychology
27	Managing relationship conflict and the effectiveness of organizational teams	2001	Journal of Organizational Behavior
28	Cooperative Outcome Interdependence, Task Reflexivity, and Team Effectiveness: A Motivated Information Processing Perspective	2007	Journal of Applied Psychology
29	Cooperative Goals, Leader People and Productivity Values: Their contribution to Top Management Teams in China	2006	Journal of Management Studies
30	Teamwork Quality and the Success of Innovative Projects: A Theoretical Concept And Empirical Evidence	2010	Organization Science

Next step was the coding of selected studies. An online coding sheet was developed to code all these studies. Coding sheet included specific necessary heads, i.e. study ID, year, authors and type of publication was next head of the coding sheet. Other required heads included journal name, elements of study, country of origin of study. In next few heads we defined organization, study type, sample of study and outcome. An option in databases was available as "required questions" and it was marked after developing the required heads of coding sheet so if by mistake any head does not enter then paper won't be further coded that minimizes chances of incomplete information.

After entering the required heads of study in coding sheet, optional heads were also entered to briefly describe information about the coded study. Optional heads included name of the

independent variable, dependent variable, instrument(s) used in study and reliability instrument. All these heads were main consider heads of coding sheet for main theoretical and results information.

For statistical calculation next head was generated named group comparison. In this head further sub heads were created, i.e. columns for sample, independent variable mean and standard deviation, dependent variable mean and standard deviation. Last head of the coding sheet was independent-dependent variable (IV-DV) correlation value for which we used for this meta-analysis.

No study was found in which reported results were through the family so no conversion software is adopted. All studies results were explained through common estimator "r".

Calculator Development

Data from coding sheet added in calculator under the columns of ID, year, outcome, sample, instrument reliability and correlation.

Calculations for Average Effect Size

After completing the given steps efficiently, we have a database in which all necessary information was aligned to conduct analysis.

Step No 1

In first step we collect the effect size, therefore, we dealt with missing values of reliability through adding all provided reliabilities of observations and then it was divided to total number of observations which were 128. Then we left with the mean value of collected reliabilities. In all missing reliabilities we adjust this calculated value.

Step No 2

To find out K value, in next step we calculated sum of sample through adding the samples of total studies. A simple method was followed to collect effect size is to take the average of correlations of the studies but it has the sampling error and measurement error.

Step No 3

Then for the average value of correlations, we added up all the correlation values "r" of each observation and divided it to total number of observations.

Step No 4

After calculating the average correlation value, next we removed the measurement error by calculated "*weighted mean corrected for measurement error*". Each correlation of every study was divided from the square root of reliability value then multiply with sample sizes of individual study $(\sqrt[r]{\alpha})$. Finally, we divided the value with the total sample size to remove the measurement error. Basically weighted mean effect size explains the correlation between two variables

$$\hat{r} = \frac{n_i r_i}{n_i}$$

(1)

Step No 5

In the next step, we removed sampling error. First we multiply each weighted mean with its sample size separately and then divided the value from total number of sample size. The generated value was the corrected value of corrected "r" value with no measurement and sampling error.

$$\bar{r} = \frac{n_i r_i}{n_i} \tag{2}$$

Calculate the Statistical Significance of the Mean

This phase was important to measure the significance of the relationship(s). Studied variables z-score was calculated using the formula given below. To obtain the z-score value, we firstly calculate variance and standard error of the data.

<u>Step No 1</u>

First, variance of sample correlations was computed:

$$\text{Var} = n_i (r_i - \bar{r})^2 \tag{1}$$

The value obtained from square multiply with the study sample separately which is, $n_i (r_i - \bar{r})^2$. In next step to calculate variance total sum of above given value get divided by the total number of sample.

<u>Step No 2</u>

After calculating the variance, we calculated standard deviation in two steps

1.   First average variance was divided by total number of studies.
2.   In second step, square root was taken of that value to calculate standard error.

$$SE_{\bar{r}} = \sqrt{\frac{V_r}{k}} \tag{2}$$

<u>Step No 3</u>

In last step, we calculated the Z score by dividing the mean effect size with the calculated number of standard error.

$$z = \frac{|\bar{r}|}{SE_{\bar{r}}} \tag{3}$$

The value explains the magnitude of effect either it is significant or not but if the calculated value of z-score greater than 2.58, the relationship is said to be significant.

Moderator Analysis

Q statistic is used for the moderator analysis, to check either different situations or variables moderate the relationship of each study or not. The critical value of Q-statistics is 5.991 and if the value increases from this threshold, means different situations affecting the relationship of study. Q statistic was analyzed through:

$$\tag{1}$$

$$Q = (n_i - \bar{r})(r_i - \bar{r})^2$$

RESULTS

Results computed with above mentioned statistical process are presented in figure 1 and 2:

Figure 1: Constructive Controversy with Team Performance

Corrected Correlation of Relationships

	Constructive Controversy					Team Performance				
	K	N	R	r_c	CI	K	N	r	r_c	CI
Constructive Controversy						30	1637	0.24	0.28	0.21, 0.32
Team Performance	30	1637	0.24	0.28	0.21, 0.32					

.r is sample correlation without removing errors, r_c is sample weighted mean after removal of sampling error and measurement error; K is the number of studies taken in analysis from which observations are derived; N is the combined sample size of the total observations taken in analysis.

Figure 2: Individual constructs of Constructive Controversy with Team Performance

Corrected Correlation of Relationships

	K	N	R	r_c	CI
Trust	19	2280	.26	.3	0.15,0.37
Communication	12	3304	.65	.11	0.07,0.14
Task interdependence	24	1765	.17	.2	0.17,0.19

r. is sample correlation without removing errors, r_c is sample weighted mean after removal of sampling error and measurement error; K is the number of studies taken in analysis from which observations are derived; N is the combined sample size of the total observations taken in analysis.

The results in Fig 1 and 2 are interpreted through three robust statistical tools included correlation among variables, significance level of the variables and confidence interval as indicated by for meta-analysis.

Results explain constructive controversy has a positive relationship with team performance. When employees do open minded discussions, team performance of team will be higher. Figure 1 shows constructive controversy is correlated with team performance as r = 0.28, which means constructive controversy effects the team performance. In this tale, z-value is calculated to find out the significance of the relationship which is 7.23 > 2.58, means this relationship is significant.

Figure 2 explains the correlation among the trust and team performance is supported (N=2280, rc = 0.257, z-value 4.5 > 3.0). It shows, trust has positive and significant relationship with team performance. While relationship among communication and team performance is supported by (N=3304, rc = 0.11, z-value 5.61 > 3.0). It shows a positive and significant relationship between communication and team performance. Also positive relationship found between task interdependence and team performance (N=1765, rc = 0.18, z-value 30 > 3.0).

DISCUSSION

Different strategies, policies and guidelines are developed to properly address the issues raised in teams which harm the team performance. In this regard conflict resolution strategy, which is constructive controversy plays an important role. Organizations trying to motivate employees to develop constructive controversy style to solve out issues. Team members discuss their viewpoints positively if they have mutual trust and no communication barriers. Researchers found productiveness of conflicts and the role of conflict management in team's performance and ultimately the overall organization performance .

Conflict management styles' impact vary in different situations. However, studies reveal cooperative conflict management approach boost up the team performance in most cases (Tjosvold, 1998). Either the conflict is intergroup conflict, interpersonal conflict or conflict between team's dynamics of conflict mold the conflict towards constructive conflict or destructive conflict, to avoid destructive conflicts organizations should work over the causes and interaction patterns for that kind of conflict .

Type of conflicts (either interpersonal, intergroup or between team dynamics) also mold the conflict to the constructive or destructive. Therefore, to avoid the destructive conflicts organizations should work over the causes and interaction patterns to understand the conflict's type .

This meta-analysis contributes in the literature in several ways, to conclude all these researches conducted over these factors, present study demonstrates comprehensive results about the role of constructive controversy in team effectiveness. Previous results explain the role of conflict management in the effectiveness of top management team. Top management becomes more innovative if they seek to find most appropriate solutions while discussed their issues openly (through constructive controversy) . Results further explain conflict converts into productive or functional by adopting cooperative approach change and it increases the effectiveness and innovation in top management.

Previous studies validated that trust among team members, respecting others' views and developed conflict norms or approaches within teams have positive relationship with team performance . Presence of these antecedents in team make conflict functional and motivate employees to be committed regarding team performance. Another study demonstrates that trusted relationship among team members foster the team productivity because members cooperatively supports their co-member(s) in their tasks due to strong trust. They help each

other to solve their problems and this facilitation of each other develops productive relationships which ultimately affect team performance positively . Overall results of our meta-analysis also endorse, mutual trust and confidence on each other increase the team performance.

Prior research investigates how the management of task interdependence among employees affects the team performance. Employees depend on each other to perform their tasks then they have to cooperate and the frequent interaction bring them closer to understand the next person's viewpoint. Efficiently conflict resolution and high dependence level for goal achievement ultimately raise the team performance. The idea behind is, task interdependence push members to collaborate and knowledge sharing becomes necessary with other member(s) that help to increase the team productivity . Similar idea discussed by (Author) that team members' perceptions about task interdependence and their cooperation matters to improve the team performance and more effective. He indicated once member perceives that cooperation with other member(s) is a prerequisite of task then he shows more interest in sharing information, ideologies and perspectives for the task improvement . It leads to improved team performance. Cooperation while performing assigned tasks, also known as collaboration among employees diminish team's problems and increase output. An experimental study conducted on school teams by Somech (2008) revealed when team's facing task or goal interdependence, integrating conflict management style drives the team's performance towards effectiveness. Other than trust and task interdependence, another variable effects team performance is communication pattern or interactions behavior of team members. Communication pattern strengthen trust among team members and improve team performance and vice versa. Sharing views, opinions, knowledge and learning are essential features to improve the processes and well communication pattern increases the team's effectiveness . For example, when a task is assigned to a team in which they have to develop a new product, communication is highly required to make a flow among team members and reduce the probability of centralization of information to made teams more creative. Previous study conducted by finds significant relationship among high communication and team performance which means that communication pattern facilitate the team to be more creative and innovative when team work as new product development team. However, frequent interactions recuperate communications among team members and cooperative conflict management style that have positively significant relation with team performance .

When we discussed trust, communication and task interdependence contribute positively in the effectiveness of the team performance, it also have negative effects. However, little research exposed the negative effects such as high level of trust and frequent meetings for communication have negative impact on team performance and effectiveness. It is worth noting that increase in trust, communication and interaction could diminish the team performance as a famous saying, "excess of everything is bad". Therefore, an adequate level of ingredients (trust, communication and task interdependence) must be in team for performance improvement. Contrary findings suggest trust increases the team performance upto a certain level, when organization or team members start investing too much on trust then it negatively affects the teams resulting in diminishing performance and creativity level . Employee's frequent meetings make them comfortable with other co-members.

When teams overcome the hurdles regarding development of trust, effective communication and task interdependence to build cooperative behaviors, it becomes easy to deal with (task and/or relationship) conflict within team by approaching the conflict through cooperative approach. Tjosvold et al. (2004) found teams who use constructive controversy technique to solve their problems, learn from inaccurate deeds and conundrum. They openly discuss problems creating hurdle(s) in task completion and consider different views to find out the best solution and apply to improve the productivity. Focus on cooperation with constructive

controversy rather than competition, coordination among team members increases which shows positive and significant relationship .

Findings of current meta-analysis demonstrate that trust, communication and task interdependence promote constructive controversy and increase the team performance. The present study further explored constructive controversy has positive relationship with team performance. It means those teams who solve their issues through cooperative approach become more effective. Current study contributes in the literature in serval ways: First, we highlighted beyond the type of the team or conflict type, constructive controversy plays positive role in team performance. Second, stronger implementation of constructive controversy among team members leads higher team performance. Third, with the comprehensive approach our results confirm the findings that cooperative approach of conflict management increases team performance (Tjosvold, 1998).

This study advanced literature in several ways. First, in this meta-analysis, we calculated common effect size. During analyzing dataset and results, we considered sample and measurement to explore the true picture of relationship. To remove the biases guidelines of also followed to generate more robust results. It means the strength of relationship between constructive controversy and team performance either these two variables in apparent relationship between is statistically significant or not. Second, gaps in previous meta-analysis tried to cover that conflict can also be positive if organizations focus on the conflict handling procedure . Third, our results through common effect size provide a comprehensive view of 10 years studies in this field. Results of this meta-analysis are more consistent and significant rather than individually conducted researches in this regard . Findings of this study not only highlight how to improve the team performance but on the other hand, it suggested us that trust, communication style and task-interdependence are the among the main factors cause of conflict. Proper handling put an indirect pressure on team members to work in cooperative way.

PRACTICAL IMPLICATIONS

Organizations facing many obstacles to made teams more effective to quickly respond the global challenges. One of the main hurdles in this regard is increasing conflict situations and competitive approach of team members in team which diminish team growth and output level. This meta-analysis has practical significance and motivate organizations to get the desired results through teams and increase the overall productivity. Empirical studies performed under different research settings over different geographical regions have similar results that the way conflict is handle, highly influence to turn the conflict either constructive or obliteration. The comprehensive results of this present analysis confirm that rather than conflict itself, conflict handling process is more responsible for the team performance.

However, other factors (such as work pressure and role ambiguity) play its role in making conflict positive or negative but it's still possible to get fruitful results if teams use cooperative approach of conflict management. Organizations should develop and adopt different strategies, frameworks, procedures and also provide trainings to employees that how to handle conflict under different situations. With the commitment of management and implement the strategies properly, culture of constructive controversy is not difficult to promote in the teams. Constructive controversy is greater source to overcome the weakness of conflict and faster organizational growth.

Employees should develop trust relationship with other member through formal and informal meetings and they should also aware about the common goals of team. It is important for the top management to form a policy for compulsory meetings among teams/groups/departments and restrict frequent meetings to avoid negative outcomes. Team leaders should empower other members so they could be more creative in ideas sharing and feel more responsible at work.

The idea of empowerment and responsibility leads to cooperative approach and members prefer common goals and mutual achievements over individual benefits.

LIMITATIONS AND FUTURE DIRECTIONS

Like every other study, few limitations are associated with this study and should be taken under consideration while conducting further research in this area:

First, collected studies used in this meta-analysis were limited for a time span 2001-2010. There might be other studies conducted in the same area in that time spam but not available in the databases used for this meta-analysis. Studies conducted after 2010 did not include in this meta-analysis. An extended dataset with recent studies conducted in this field to date can bring more insight. Second, other than trust, communication and task interdependence, other variables influence the activity of constructive controversy but they are not studied like role of trainings, top management commitment, goal clarification etc. Third, moderator analysis was conducted to check factors such as demographics, gender, and age affect the studied relationship and results were positive but no further analysis was conducted to remove the impact of these factors. Lastly, overall effect of constructive controversy was measured over team performance but each factor like trust impacting team performance was not measured. Future researchers should separately analyze these effects.

Present study shows positive relationship of constructive controversy with team performance and how trust, team interdependence and communication plays its role to make team members cooperative. We encourage future researchers to include other factors affect this relationship directly or indirectly. For example, it would be interesting to measure the type of conflict, team size, and team design as these factors could directly influence the relationship. Different team categories and comparison can also bring greater insight.

CONCLUSION

This study explores a comprehensive findings how constructive controversy effects the team performance by analyzing the 10 years of studies. Employees can significantly improve team performance with one simple formula, by promoting positive critique culture in team. We conclude that trust, communication, interaction and task-interdependence collectively motivate employees to engage in constructive controversy and open discussions within team.

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