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Diverse Group Effectiveness:

Co-occurrence of Task and Relationship Conflict, and Transformational Leadership

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¹Buckinghamshire New University, ²Al-Muthanna University, ³University of Karbala

3rd August 2021
Personal Perspective – Dr Kevin Maher

• Head of Academic School (‘Faculty’) of Business, Law and Computing
• Buckinghamshire New University – a small vocational university in the United Kingdom
• 30 permanent staff + 15 part-time staff; a diverse group in terms of gender, nationality, ethnicity, age, subject expertise, experience, working style and preferences
• As a manager, I am interested in effectively managing work of individuals and teams, towards strong performance and outputs (and work-life balance!)
• Supervisor of Mohanad Dahlan (PhD student)
Motivation – Analysis of the literature

- Group-based work is crucially important for the successful operation of organisations

- Workforce diversity has then inspired research to examine the relationship between group diversity and group processes and outcomes (Horwitz & Horwitz, 2007)

- Studies examining main effect relationships between diversity and group outcomes have reported mixed results - cumulative findings have been weak and inconsistent, so there remains some lack of clarity (Ayoko & Konrad, 2012; Bell et al., 2011; Harrison & Klein, 2007; Horwitz & Horwitz, 2007; Jackson et al., 2003; Leung et al., 2008; Mannix & Neale, 2005; Neumeyer & Santos, 2020; Shin & Zhou, 2007; Valls et al., 2016; Van der Vegt & Bunderson, 2005; Van Dijk, 2017; Van Veelen & Ufkes, 2019; Van Knippenberg et al., 2004)
The study’s objectives/intentions

1. Offering a fresh treatment of the association between diversity and workgroup effectiveness

2. Emphasising the centrality of the harmful effects of the co-occurrence of task and relationship conflicts (CTRC) on this association

3. Highlighting the potential influence of transformational leadership (TFL) in decreasing this harmful effect
The diagram illustrates a hypothesised model of workgroup diversity leading to group effectiveness. Key components include:

- **Workgroup Diversity**
  - Cognitive diversity
  - Demographic diversity

- **Group Effectiveness**
  - Performance
  - Viability

This model is attributed to M. Dahlan, A. Al-Atwi, E. Alshaibani, A. Bakir and K. Maher; 3rd August 2021.
**Hypothesised model**

**Input**
- WORKGROUP DIVERSITY
  - Cognitive diversity
  - Demographic diversity

**Process**
- CTRC (CO-OCCURRENCE OF TASK AND RELATIONSHIP CONFLICT)
  - Mediator - somewhat explains the relationship

**Output**
- GROUP EFFECTIVENESS
  - Performance Viability

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M. Dahlan, A. Al-Atwi, E. Alshaibani, A. Bakir and K. Maher; 3rd August 2021
**Figure 1 - Hypothetical model**

**Moderator**
- affects the strength and direction of the relationship

**Mediator**
- somewhat explains the relationship

**TFL**
(TRANSFORMATIONAL LEADERSHIP)

**CTRC**
(CO-OCCURRENCE OF TASK AND RELATIONSHIP CONFLICT)

**GROUP EFFECTIVENESS**

**WORKGROUP DIVERSITY**

Cognitive diversity
Demographic diversity

**GROUP EFFECTIVENESS**

Performance
Viability

C. Dahlan, A. Al-Atwi, E. Alshaibani, A. Bakir and K. Maher; 3rd August 2021
Objective 1

• Offering a fresh approach for looking at diversity and its consequences
  • Information processing perspective (cognitive diversity) suggests benefits in terms of variety of skills and knowledge, creativity, problem solving, and enhanced performance (e.g., Chi et al., 2009; Tyran & Gibson, 2008; Van Knippenberg & Schippers, 2007)
  • Social categorisation perspective (demographic diversity) suggests undermining factors, such as lack of cohesion, weak communication, personal conflicts (Williams & O’Reilly, 1998)

• Both of these perspectives were appropriately considered when investigating relationships between diversity and two defined components of group effectiveness - group performance and group viability (McGrath, 1984; Sundstrom et al., 1990)
Objective 2

• Researchers have explored processes that have mediated the relationship between group diversity and group effectiveness (group performance and group viability), highlighting dimensions such as learning behaviour, communication, conflict, identification, cohesion, but the picture is still incomplete (e.g., Bui et al., 2019; Kearney & Gebert, 2009; Marlow et al., 2018; Tekleab et al., 2016; Valls et al., 2016; Van der Vegt & Bunderson, 2005)

• This research addresses an omission in the published literature concerning the co-occurrence of task and relationship conflict (CTRC) within a group, and its mediating impact

• CTRC is treated as a single bivariate construct within the research methodology and analysis
Objective 3

- Published studies on leadership attributes and behaviours but limited work about the influence of leadership on group processes and outcomes (e.g., Avolio & Yammarino, 2002; Nishii & Mayer, 2009; Ospina & Foldy, 2009)

- Some studies report inspiration and communication of vision as positive leader contributions that mitigate conflict (e.g., Ayoko & Callan, 2010; Ayoko et al., 2008, 2012; Gibson & Vermeulen, 2003; Marlow et al., 2018; Nishii & Mayer, 2009; Stewart & Johnson, 2009)

- Very few empirical studies have looked at moderating influence of transformational leadership in the context of diversity and performance (e.g., Kearney & Gebert, 2009; Shin & Zhou, 2007)

- This new research argues that team leaders exhibiting transformational leadership (TFL) can moderate the interference of Co-occurrence of Task and Relationship Conflict (CTRC) upon group performance
Methodology

• Questionnaire distributed to faculty members at three private universities in the Middle East (Iraq, Saudi Arabia, and Bahrain)

• Participants gave responses to questions or statements, which afforded some measures of cognitive diversity, relationship conflict, task conflict, TFL, group performance, group viability, several demographic and control variables.

• The final sample comprised 354 faculty staff across 56 departments (79.5% response rate).

• Sample demographic data: 54% male, 70.5% PhDs, average age / 39.8 years, average organizational tenure / 4.3 years.
Examples

• Diversity
The members of our department differ in their ways of thinking

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<tr>
<td>1</td>
<td>Strongly Disagree</td>
<td>2</td>
<td>Disagree</td>
<td>3</td>
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• Transformational leadership
Our group leader emphasises the importance of having a collective sense of mission when working in the group as a whole

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<tbody>
<tr>
<td>1</td>
<td>Not At All</td>
<td>2</td>
<td>On Occasion</td>
<td>3</td>
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# Table 2 - Descriptive statistics

| Variable                      | Means | SD   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
|-------------------------------|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. Group size                 | 6.32  | 4.81 | 1   |     |     |     |     |     |     |     |     |     |     |
| 2. Task interdependence       | 3.84  | 0.62 | 0.00| 1   |     |     |     |     |     |     |     |     |     |
| 3. Cognitive diversity        | 2.99  | 0.71 | 0.01| -0.12| 1   |     |     |     |     |     |     |     |     |
| 4. Transformational leadership| 2.24  | 0.64 | -0.11| 0.02| -0.08| 1   |     |     |     |     |     |     |     |
| 5. Task conflict              | 2.53  | 0.61 | -0.14| 0.09| 0.33*  | -0.16| 1   |     |     |     |     |     |     |
| 6. Relationship conflict      | 2.07  | 0.62 | 0.01| 0.12| 0.27*  | -0.27*  | 0.29*  | 1   |     |     |     |     |     |
| 7. Co-occurrence              | 0.57  | 0.24 | -0.19| -0.08| 0.28*  | -0.18 | 0.01 | -0.01| 1   |     |     |     |     |
| 8. Demographic diversity      | 0.37  | 0.13 | 0.34**  | -0.15| -0.11| -0.05| -0.18| 0.07| 0.09| 1   |     |     |     |
| 9. Group performance          | 3.17  | 1.16 | 0.08| 0.05| -0.16| 0.20| -0.01| -0.08| -0.54**  | -0.13| 1   |     |     |
| 10. Group viability           | 2.63  | 0.90 | 0.19| 0.14| -0.30*  | 0.01| 0.02| -0.03| -0.45**  | -0.24| 0.10| 1   |

**Notes:** $n=56$ groups. **$p<0.01$; *$p<0.05$.**
Tests of hypotheses

• We used hierarchical regression analyses and MedCurve SPSS macro (Hayes and Preacher, 2010) to test several hypotheses

• Of the THIRTEEN hypotheses investigated
  • Statistical analysis SUPPORTED – NINE hypotheses
  • Statistical analysis DID NOT SUPPORT – FOUR hypotheses
  • THREE of the supported hypotheses are highlighted here
• Hypothesis 1A - Cognitive diversity has a curvilinear U-shaped effect on group performance (Supported) (H1a: B= 1.08, p<0.01)

Figure 2
Hypothesis 3A - Cognitive diversity has a curvilinear inverted U-shaped effect on CTRC (Supported) ($H3a: B= −0.17, p<0.01$)

Figure 3
Hypothesis 6A – TFL moderates a curvilinear relationship between cognitive diversity and CTRC) **(Supported)** ($H6a$: $B= -0.18$; change in $R^2=0.12$, $p<0.05$)

![Figure 4](image)
Conclusion

• This study provided new perspectives on the relationship between group diversity and group performance

• Curvilinear relationships:
  • between cognitive diversity and group performance
  • between cognitive diversity and Co-occurrence of Task and Relationship Conflict (CTRC), with CTRC having a mediator role

• Transformational leadership (TFL) has a (moderator) role to play such that it can mitigate, limit, avoid or manage the potential task conflict and relationship conflict within cognitively diverse groups
Implications

- Important messages for organisations who are targeting high performance of teams and departments
  - A moderate level of diversity can impact negatively on team effectiveness; low and high levels of cognitive diversity can be associated with relatively strong group performance and relatively low levels of conflict
  - Noting the potential benefits of harnessing cognitive diversity towards creativity, innovation and problem-solving
  - Transformational leadership and good management can mitigate conflict and inspire positive team performance
  - Consideration must then be given to the composition of teams and the recruitment and training of team leaders