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Procedia - Social and Behavioral Sciences 129 (2014) 282 – 288

Procedia
Social and Behavioral Sciences**ICIMTR 2013**International Conference on Innovation, Management and Technology Research,
Malaysia, 22 – 23 September, 2013**Characteristics of Crisis and Decision Making Styles: The
Mediating Role of Leadership Styles**Abdullah Alkharabsheh,^{a*} Zainal Ariffin Ahmad,^b Abdulrhman Kharabsheh^c^{a,b}Graduate Business School, College of Graduate Studies, Tenaga Nasional University (UNITEN), Jalan Ikram-Uniten, 43000
Kajang, Selangor, Malaysia,^cJordanian Armed Forces, Tabrbour, Amman City Center. 19628**Abstract**

This paper investigates the mediating role of leadership styles on the relationship between characteristics of crisis and decision making styles. Whereas previous literature has linked decision making to crisis, there is a dearth of research linking characteristics of crisis and decision making styles and the role of leadership styles in this relationship. This study of 847 Jordanian Civil Defense officers found that both transformational and transactional leadership styles have partial mediation effects on the relationship between characteristics of crisis and decision making styles. The findings of this study challenge the notion that during crisis, transformational leaders are more effective than their transactional counterparts and calls for future studies on the integration between the two leadership styles.

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Selection and peer-review under responsibility of Universiti Malaysia Kelantan

Keywords: Characteristics of crisis, leadership styles, decision making styles ;

1. Introduction

Crisis leadership denotes a set of actions undertaken by a leader to bring about immediate change in people's behavior and beliefs as well as to achieve needed outcomes (Gardner and Laskin, 1995). In a crisis situation, a leader provides "stability, reassurance, confidence, and a sense of control" (Lussier and Achua, 2004, p. 382). Hadley, Pittinsky, Sommer and Zhu (2011) argue that leaders in crisis situations are under severe time pressure and lack the time to effectively acquire, secure, and process information.

* Corresponding author. Tel.: +6-019-253-5564.
E-mail address: abd.leth@yahoo.com.

Designated leadership style for crisis should build trust in the leader, build self and collective efficacy, and allow the leaders to make the right decision sometimes with very little information (Berson and Avolio, 2004). Argyris and Schön (1978) argue that in crisis conditions, professionals encounter crucial scenarios of decision making that require split second action. As such, the pressures of making life-impacting, timely and informed decisions establish an environment needing immediacy and common information. Boin, Hart and McConnell (2009) suggest that the decisions taken under crisis conditions encircle uncertainty. Vera and Crossan (2004) argue that no leadership style is appropriate for all situations, and selecting the wrong leadership style could lead to ineffective leadership. Thus, this paper investigates whether leadership styles mediate the relationship between crisis and decision making styles.

2. Literature Review

Pearson and Clair (1998) suggest ambiguity and urgency are the two core elements that define a crisis and they affect the ability and effectiveness of leaders to assess information and make decisions. Crisis comprises two major characteristics, namely, response uncertainty and time pressure (Billings, Milburn and Schaalman, 1980). Whereas some studies have linked decision making to crisis (Schraagen and Ven, 2008; Sommer and Pearson, 2007; Sayegh et al., 2004; Hart, Rosenthal and Kouzmin, 1993; Kassam, Koslov and Mendes, 2011; Dinur, 2011), a few qualitative studies have linked crisis to decision making (Hittle and Leonard, 2011; Edland and Svenson, 1993; Maule et al., 2000; Rastegary and Landy (1993).

Kouzes and Posner (2007) illustrate that in vague situations like a crisis, the relationship-oriented leaders function well and possess loyal following due to that they are usually participative, open, and tend to provide their followers with motivation to resolve problems in innovative ways. This augurs well with transformational leadership which is one of two leadership styles espoused by Avolio and Bass (1995). Transformational leadership goes beyond exchanging of reward for desired performance by developing, intellectually, and inspiring followers to transcend their own self-interests for a higher collective purpose. Kelly (2005) argues that the most effective leadership style in time of crisis is transformational leadership because they are quick to respond to change. On the other hand, transactional leadership focused on exchanges rewards and promises of rewards for performance between leader and followers. It is responsive to the immediate self-interest of followers. Zohar and Luria (2004) argue that transactional leadership style will reflect positively on the outcome when dealing with crisis as transactional style enables the organization to carry out more complex operating procedures.

Vera and Crossan (2004) argue that there is no leadership style appropriate for all the situation, and selecting the wrong leadership style could lead to ineffective leadership. Similarly, Yukl (2002) maintains that there exists no individual leadership style that fits all organizations, contexts, or situations. Further, Eberlin and Tatum (2008) and Tatum, Eberlin, Kottraba, and Bradberry (2003) have proven the relationship between leadership style (transformational, transactional) and decision-making style (comprehensive, restrictive). This study posed leadership styles as a mediator between characteristics of crisis and decision making styles Fred, Wu and Lucy (2004), Hur, Berg and Wilderom (2011), Panagopoulos and Dimitriadis (2009) and Ferres, Anthony and Connell (1998). Therefore, it is posited that:

H1: Leadership styles mediate the relationship between characteristics of crisis and decision making styles.

3. Method

In this study, the researchers adopted Billings, Milburn and Schaalman's (1980) conceptualization of crisis comprising two major characteristics, namely, response uncertainty and time pressure. Each

dimension was measured with four items on a 5-point Likert scale. All eight items were subjected to varimax principal component analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .63 and the Bartlett’s test of sphericity was significant. The researchers deleted one item under time pressure which was less than .50. Reliability analysis showed that Cronbach’s Alpha for each factor was equal or higher than .60 (Hair, Black, Babin and Anderson, 2010).

Driver (1979) defined decision making style as a customary pattern which a person employs in the process of decision making. Based on Driver (1979), decision making was conceptualized as comprehensive and restrictive decision making style with three items each. The varimax principal component analysis generated KMO of .63 and the Bartlett’s test of sphericity was significant. The internal consistency above .70 was higher than the commonly agreed upon limit for Cronbach’s Alpha of .60 and above in exploratory research (Hair, Anderson, Tatham, & Black, 1998).

The leadership style construct was measured by using Multifactor Leadership Questionnaire (MLQ) Rater 5x–short developed Avolio and Bass (1995). Twenty items for transformational and twelve items for transactional leadership styles were subjected to varimax principal component analysis. After factor analysis, the researchers deleted six items of transformational and five items of transactional that were less than .50. KMO was .68 and .79 for transformational and transactional leadership respectively and the Bartlett’s test of sphericity was significant.

The study was conducted in the Jordanian Civil Defense with a total of 847 responses. Data was collected via survey from 345 leaders about their decision making styles and 502 employees answered about their leaders’ leadership styles and characteristics of crisis. However, only 302 pairs of responses were able to be matched and useful for further analysis giving a response rate of 604/847=71.3%.

4. Results

Table 1, tabulates the summary of the correlation analysis that shows correlations between the characteristics of crisis (response uncertainty, time pressure), decision making styles (comprehensive, restrictive) and leadership styles (transformational, transactional).

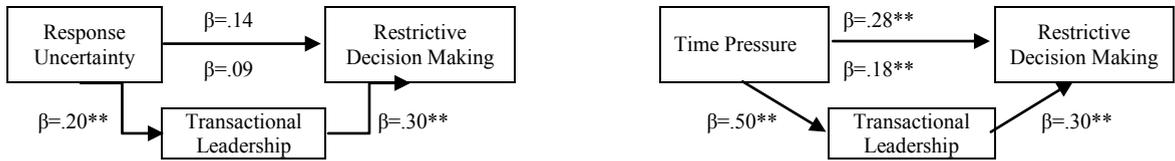
Table1: Means, Standard Deviations, Coefficients Alpha, and Correlations among Study Variables

	M	SD	1	2	3	4	5	6
1.Response Uncertainty	3.63	1.09	1					
2.Time pressure	3.68	3.77	.11	1				
3.Comprehensive	4.07	.79	-.45**	-.65**	1			
4.Restrictive	3.45	.89	.14*	.28**	-.29**	1		
5.Transformational	3.70	.73	-.25**	-.58**	.54**	-.18**	1	
6.Transactionl	3.90	.85	.20**	.50**	-.30**	.30**	-.36**	1

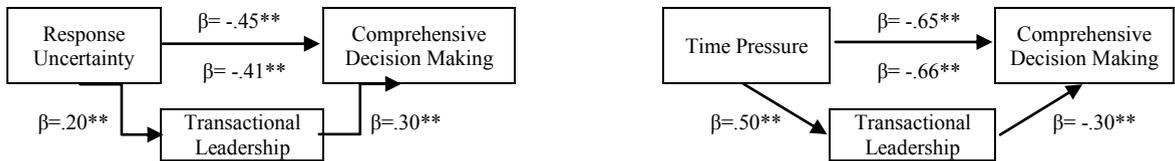
**Significance at the .01 level (2-tailed), * Significance at the.05 level (2-tailed)

The mediating effect of leadership style was tested using the three-step procedure proposed by Baron and Kenny (1986) and the three conditions of mediation were assessed. According the framework of this study, leadership style as the mediating variable has two dimensions (transformational and transactional)

and the researchers tested each one separately. Based on Baron and Kenny (1986), linear regressions were conducted and summarized in Figures 1 and 2.



(a) response uncertainty and restrictive decision making; (b) time pressure and restrictive decision making



(c) response uncertainty and comprehensive decision making; (d) time pressure and comprehensive decision making

Figure 1: Graphical Summary of the Mediated Regression Analysis for Transactional Leadership (a –d)

Significance at: * $p < .05$, ** $p < .01$

As shown by Figure1, whereas the relationship between response uncertainty and restrictive decision making was not significant, transactional leadership style was found to mediate the relationship between response uncertainty ($\beta = -.41, p < .01$) and comprehensive decision making style. Transactional leadership style was also found to mediate the relationship between time pressure and restrictive decision making style ($\beta = .18, p < .01$) and comprehensive decision making style ($\beta = -.66, p < .01$).

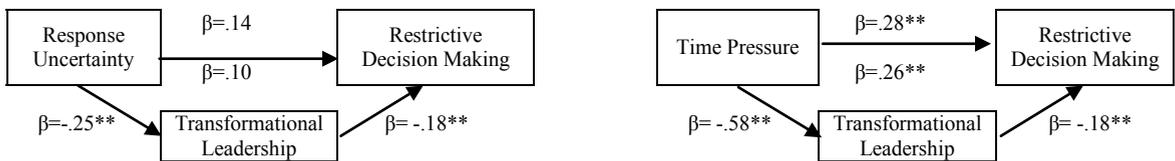
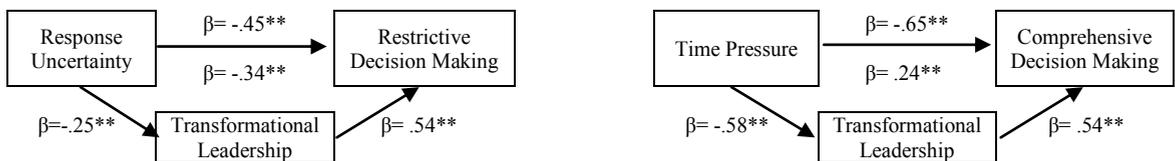


Figure2: (a) response uncertainty and restrictive decision making; (b) time pressure and restrictive decision making



(c) response uncertainty and comprehensive decision making; (d) time pressure and comprehensive decision making

Figure 2: Graphical Summary of the Mediated Regression Analysis for Transformational Leadership (a –d)

Significance at: * $p < .05$, ** $p < .01$

In Figure 2, the relationships between response uncertainty and restrictive decision making were not significant. However, transformational leadership played a partial mediation role between response uncertainty and comprehensive ($\beta=-.34$, $p<0.01$) decision making. Transformational leadership was also found to partially mediate the relationship between time pressure and restrictive ($\beta=.26$, $p<0.01$) as well as comprehensive decision making style ($\beta=.24$, $p<0.01$).

5. Discussion

The findings of this study suggest that the employees of the Jordanian Civil Defense perceived their leaders as practicing transactional leadership and employing restrictive decision making when faced with time pressure during crisis. As suggested by Zohar and Luria (2004), transactional style is associated with rigid structure and the JCD leaders closely supervise their employees which enable them to carry out more complex operating procedures during urgency. As suggested by Heath (1998), centralized authority allows for fast decision making and comprehensive grasp of the crisis occurrence. The study also found transformational leadership style mediates the relationship between characteristics of crisis and comprehensive decision making style as suggested by Tatum et al. (2003) that transformational leaders appear to prefer comprehensive decision making style and that transactional leadership leaders prefer restrictive decision making style.

Jadwinski (2006) argues that an appropriate leadership style for crisis could improve a leader's decision making, and could result in decreased property loss and victim fatalities especially in protecting public safety in the case of the Jordanian Civil Defense. The findings of this study also found partial support for Kelly's (2005) argument that transformational leadership is effective in time of crisis. Yukl (2002) argues that no individual leadership style that fits all organizations, contexts, or situations.

This study was limited to leadership and decision making styles of leaders in one public safety organization in Jordan. The study can be replicated to other public safety organizations such as the police, military or ambulatory services. Future studies should investigate whether transactional leadership, while useful during crisis, might not be effective unless it is integrated with transformational leadership as suggested by Bass (1998) who proposed that the most effective leader is the one that integrate both task and relation oriented approaches.

6. Conclusion

In conclusion, the findings of this study found that both transformational and transactional leadership styles play partial mediating role in the relationship between characteristics of crisis and decision making styles among Jordanian Civil Defense officers. However, this findings challenge the notion that transformational leaders are more effective than their transactional colleagues during crisis and call for further research to investigate whether there is a need to integrate transactional and transformational leadership styles.

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