The Relationship Between Leader-Member Exchange and Job Satisfaction: The Mediating Role of Work Alienation

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Abstract: The aim of this study is to examine the relationship between leader-member exchange and job satisfaction among the academic staff in the Iraqi technical colleges and institutes and evaluate the mediation effect of work alienation. A quantitative approach and survey instruments were adopted in this study. The total number of returned questionnaires was 419 from a total of 750 questionnaires. Structural Equation Modeling (SEM) was employed to test the mediating effect of work alienation. The results revealed that work alienation partially mediated the relationship between leader-member exchange and academic job satisfaction among the academic staff in Iraqi technical colleges and institutes.

Keywords: Technical colleges and institutes, leader-member exchange, work alienation, job satisfaction, Structural Equation Modeling (SEM)

INTRODUCTION

The quality of the relationship between a superior and his or her subordinates is an important topic within organizational leadership literature concerning organizational outcomes (Li et al., 2012; Wang et al., 2008). Moreover, previous studies showed that Leader-Member Exchange (LME) positively affects job satisfaction (Brimhall et al., 2014; Golden and Veiga, 2008).

In addition, low level of leader-member exchange was extrapolated to have strong effect on out-group members and may result in their experiencing high levels of Work Alienation (WA) (Madlock and Martin, 2011). However, there is a scarcity of studies conducted under the setting of Iraqi higher education institutions. The present study attempts to overcome this issue by probing into the relationship between leader-member exchange, Work Alienation (WA) and Job Satisfaction (JS) in Iraqi technical colleges and institutes. Therefore, this study aims to examine the effect of the mediating role of work alienation on the relationship between leader-member exchange and job satisfaction.

Literature review: The exchange or the relationship with one’s immediate leaders is considerably one of the most important social interactions established within an organization (Liden et al., 2000).

Partnerships are interpreted as relationships that have transcended beyond the downward influence of a superior on a subordinate to a mutually advantageous and mutually influential dynamic (Graen and Uhl-Bien, 1995). These relationships differ in terms of the quality of the exchange (Aldag and Kazuahara, 2002) and this causes the formation of “in group” and “out-group” within work units with high quality exchanges or “in-group” (Graen and Cashman, 1975).

Job satisfaction refers to the general feelings that an individual has towards his or her job and the feelings can be either negative or positive (Spector, 1997). Lack of job satisfaction may cause a low level of productivity and a higher level of absenteeism, occupational accidents, mental and physical health problems (Alniacik et al., 2013). Moreover, high level of job satisfaction increases productivity while job dissatisfaction decreases the productivity and performance of the employee (Colakoglu and Atabay, 2014). Job satisfaction is the attitude that an employee adopts towards his or her job (Robbins et al., 2003).

For the purpose of this study job satisfaction operationalized as an an extent to which one feels positively or negatively about the intrinsic and extrinsic aspects of one’s job (Bhuiyan and Mengue, 2002).

Work alienation psychologically splits an employee from the work and the working place and establishes itself as reduced job involvement and a nonexistence of organizational identification (Armstrong-Stassen, 2006). The concept of Work Alienation (WA) suggests that some work constructs and procedures such as centralized...
control over work processes, routine have not given much job autonomy to workers (Sarro et al., 2002; Seeman, 1995). For the purpose of this study, work alienation is defined as a disagreement of the perceptions of employees' of objective task situations along specific dimensions (self-expression, control and purpose) and their expectations concerning these dimensions. The expected outcome should be a feeling of powerlessness, meaninglessness and a sense of self-estrangement.

Hypotheses development: The theoretical model proposed in this study illustrated in Fig. 1 goes further to explain the relationship between leader-member exchange and job satisfaction and the mediating role of work alienation.

Based on the theoretical model, the following hypotheses are proposed to examine the relationship among LMX, WA and JS. Collins revealed that the quality of the LMX relationship has significant and direct linear relationship with job satisfaction. Epitropaki and Martin (2005) also found that LMX strongly influences the level of job satisfaction. Janssen and Yperen (2004) examined the relationship between leader-member exchange and job satisfaction; the researchers surmised that LMX was positively related to job satisfaction.

According to Siron et al. (2015a), although the relationship between leadership and job satisfaction that has been studied in a broad range of fields and in an equally multifarious settings, few of these studies focus on this relationship in the context of higher education organizations (Rizi et al., 2013). Therefore, this study hypothesizes that:

- **H₁**: There is a significant relationship between leader-member exchange and job satisfaction among the academic staff in the Iraqi technical colleges and institutes.

Previous work on LMX suggests that the followers are affected by the essence of the exchange with their leader (Dansereau et al., 1975). Work relationship is another variable that may effects alienation (Nair and Vohra, 2010). Furthermore, low levels of LMX was extrapolated to have strong effect on out-group members and may resulted in their experiencing high levels of Work Alienation (WA) (Madlock and Martin, 2011). Therefore, this study hypothesizes the following:

- **H₂**: There is a significant relationship between leader-member exchange and work alienation among the academic staff in the Iraqi technical colleges and institutes.

While Efraty et al. (1991) argued that alienation increases need deprivation which in turn decreases job satisfaction. Hirschfeld and Feild (2000) stated that work alienation seemed to lower the level of organizational commitment, job involvement and job satisfaction. Sirin et al. (2011) found a significant negative relationship between work alienation and job satisfaction. A study conducted by Siron et al. (2015b) confirmed that work alienation and job satisfaction have significant relationship. Therefore, this study hypothesizes the following:

- **H₃**: There is a significant relationship work alienation and job satisfaction among the academic staff in the Iraqi technical colleges and institutes.

In this study, work alienation is posed as a mediator between leader-member exchange and job satisfaction. On one hand, leader-member exchange is considered as a variable that may influences work alienation significantly (Nair and Vohra, 2010; Madlock and Martin, 2011). In addition, Sirin et al. (2011) determined a significant negative relationship between work alienation and job satisfaction. Furthermore, to the best of the researcher's knowledge, previous studies have not look at the mediating role of work alienation on the relationship between LMX and JS. Therefore, this study address the gap between as it is hypothesizes that:

- **H₄**: Work alienation mediates the relationship between leader-member exchange and job satisfaction among the academic staff in the Iraqi technical colleges and institutes.
MATERIALS AND METHODS

The academic staffs holding a degree of master and PhD from 18 Iraqi technical colleges and institutes were invited to take part in this study. Therefore, the population of this study (N = 1,781) of the academic staff. The ratio 10:1 as suggested by Kline (2011), the sample size (n = 750) have been chosen to get a sample large enough to achieve the statistical significance and a good model fit in the Structural Equation Modeling (SEM). Therefore, in this study, a total of 750 academic staff have been selected to take part. Leader-Member Exchange (LMX) is operationalized as quality of the working relationship between leaders and faculty members in higher education (Alabi, 2012). This is an extension of the definition of LMX by Liden and Maslyn (1998). In the context of higher education, Lo et al. (2009) and Alabi (2012) adopted the measurement of Liden and Maslyn (1998) 12-item LMX scale to assess the quality of relationship between leaders and faculty members.

In this study, work alienation is operationalized as a discrepancy between the employees’ perceptions of objective task conditions along specific dimensions (control, purpose and self-expression) and their expectations regarding these dimensions. The expected outcome should be a feeling of powerlessness, meaninglessness and a sense of self-estrangement. Work alienation measurement was originally developed by Mottaz (1981) and included the dimensions of powerlessness, meaninglessness and self-estrangement. In the context of education, Mendoza and Lara used the work alienation measurement previously developed by Mottaz (1981). It had 21 items to assess work alienation among the teachers working in high schools in Spain. Therefore, in the current study, the work alienation measure constructed by Mottaz (1981) was adapted.

In this study, job satisfaction is operationalized as an extent to which one feels positively or negatively about the intrinsic and extrinsic aspects of one’s job (Bluian and Menguc, 2002). For the purpose of measuring job satisfaction, Weiss et al. (1967) developed the Minnesota Satisfaction Questionnaire (MSQ).

Recently, MSQ instrument was adapted by Ismail et al. (2013) to measure job satisfaction among the academics of 20 Malaysian public universities. This study considers the self-esteem needs of the academic staff in the Iraqi technical education which include the need for recognition, respect, achievement, autonomy, independence et cetera (Siron et al., 2015a, b). Furthermore, Siron et al. (2015a, b) adapted the research by Siron et al. (2007) and modified 6 items as part of job satisfaction (three items for intrinsic and three items for extrinsic job satisfaction) in addition to the 20 items of MSQ developed by Weiss et al. (1967). Therefore, 26 items were used to measure job satisfaction in this study.

RESULTS AND DISCUSSION

From a total number of 750 questionnaires, 419 questionnaires were the total number of usable questionnaires. The profiles of respondents are as follow: male (61%), female (39%), master (67%) and PhD (32%). Majority of the respondents (51%) were above 50 years old, 30-40 years (26%), 41-50 years (21%) and only (2%) <30 years. About 37% were lecturers, 35% assistant lecturers, 26% assistant professors and only 2% were professors. Two thirds 64% have above 16 years of work experience, 5-10 years (16%), 11-15 years (12%) and 7% have <5 years of working experience.

Measurement Model: This study comprised four individual Confirmatory Factor Analysis (CFA) models and an overall measurement model upon the individual ones. The 12 items were utilized to measure the four first-order constructs in leader-member exchange to calculate the four first-order constructs in leader-member exchange: Affect (AFF), Loyalty (LOY), Contribution (CON) and Professional Respect (PRR). The factor loading of all items were above the cut-off 0.5 as recommended by Hair et al. (2006). Therefore, no item was removed from the model since there was no insufficient factor loading. The overall results obtained from CFA showed that the initial measurement model for leader-member exchange fitted the data with 12 items satisfactorily. The χ2 = 45.48, df = 48 and p = 0.98. The GFI was 0.98 for the model. This value is well over the cut-off value of 0.90 as suggested by Hoyle (1995). The AGFI was 0.97 which is much larger than the recommended cut-off value of 0.80 as suggested by Chau and Hu (2001). The values of CFI, TLI and IFI were 1 the cut-off 0.90 (Bagozzi and Yi, 1988; Byrne, 1998; Hair et al., 2006; Ho, 2006). Further, the Root-Mean-Square Error of Approximation (RMSEA) was 0.000 which is sufficiently lower than the threshold value of 0.08 as recommended by Hair et al. (2010). Also, the Relative CMIN/df (0.95) was 5 which indicated that the model fitted the data very well (Bagozzi and Yi, 1988).

The model used for work alienation consisted of 21 items to measure3 first-order constructs: Powerlessness (POW), Meaninglessness (MEA) and Self-Estrangement (SST). The factor loading of 5 items (i.e., POW2, POW5, MEA7, SST1 and SST6) were below the cut-off value of 0.50. Therefore, these items were removed from their relative constructs. The revised model with 16 remaining items was again tested. The second
standardised factor loadings for all 16 items were $>0.50$ as recommended by Hair et al. (2006). The results of the goodness of fit indices of the second measurement model for work alienation showed that the discrepancy $\chi^2 = 183.83$, p-value is significant at 0.000 level. However, the absolute fit index of minimum discrepancy Chi-square p-value can be ignored if the sample size obtained for the study is $>200$ (Hair et al., 1995; Joreskog and Sorbom, 1984). The df = 101. The GFI was 0.95 which was above the cut-off value of 0.90 as recommended by Hoyle (1995). After adjustment for the degrees of freedom relative to the number of variables, the adjusted GFI (AGFI) was 0.93 which was above the cut-off point of 0.80 as recommended by Chau and Hu (2001). Based on the CFI, TLI and IFI indices with values more than the recommended cut-off value of 0.90 (Baggozzi and Yi, 1988; Byrne, 1998; Hair et al., 2006; Ho, 2006) it can be concluded that the model had good fit of data. Further, the Root-Mean-Square Error of Approximation (RMSEA) was 0.04 which was below the threshold 0.08 as recommended by Hair et al. (2010). Additionally, the Relative CMIN/df (1.820) was <5 demonstrating good fit of the model (Baggozzi and Yi, 1988). Given that the modified model for work alienation fits the data adequately, no adjustments are required.

The CFA model for job satisfaction was made up of 26 items to measure two first-order constructs: Intrinsic Job Satisfaction (IJS) and Extrinsic Job Satisfaction (EJS). The results of assessing the standardized loadings of the model’s items indicated that the calculated factor loadings for 11 items in the model (i.e., IJS1, IJS4, IJS6, IJS8, IJS10, IJS13, EJS2, EJS5, EJS7, EJS8 and EJS10) were lower than the cut-off value of 0.50. Thus, these items had to be discarded from their relative constructs. The second

standardised factor loadings for all the items and constructs in the measurement model were $>0.50$ with values ranging between 0.73 and 0.82. The revised measurement model for job satisfaction is suitable for the data sufficiently by utilizing 15 remaining items as it has been pointed out in the complete findings of the GOF. The p = 0.000, $\chi^2 = 154.95$ and df = 89 but the absolute fit index of lowest discrepancy chi-square can be disregarded if the sample size that is acquired for the study exceeds 200 as stated by Hair et al. (1995) and Joreskog and Sorbom (1984). As Hoyle (1995) had suggested, the GFI was 0.95 that had exceeded the cut-off value of 0.90 and the AGFI was 0.94 that also exceeded the cut-off point of 0.80 as Chau and Hu (2001) had suggested. According to Baggozzi and Yi (1988), Byrne (1998), Hair et al. (2006) and Ho (2006), the value of IFI, TLI and CFI were all 0.98 and they had exceeded the cut-off value of 0.90. Moreover, as Hair et al. (2010) had stated, the Root-Mean-Square Error of Approximation (RMSEA) was 0.04 that lies below the threshold value of 0.08. In addition, the Relative CMIN/df (1.741) was <5 and therefore, indicated that there was good fit of the model (Baggozzi and Yi, 1988). In order to calculate the overall measurement model for leader-member exchange, job satisfaction and work alienation, the Confirmatory factor analysis was used.

Figure 2 showed that the result of factor loadings of all first-order constructs were above the cut-off value of 0.50 as recommended by Hair et al. (2006) and ranged from 0.75-0.84. Therefore, no construct was removed from the model since there was no insufficient factor loading. Table 1 shows the results of factor loadings in overall CFA Model. The overall results of the CFA of overall measurement model provided adequate fit of the data.
Table 1: List of Cronbach’s alpha and convergent validity values for the constructs in the overall CFA model

<table>
<thead>
<tr>
<th>Second-order construct</th>
<th>First-order construct</th>
<th>Cronbach alpha</th>
<th>Factor loading</th>
<th>(AVE)</th>
<th>(CR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader-Member Exchange (LMX)</td>
<td>Affect (AFF)</td>
<td>0.91</td>
<td>0.81</td>
<td>0.59</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>Loyalty (LOY)</td>
<td></td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contribution (CON)</td>
<td></td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional Respect (PRR)</td>
<td></td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Alienation(WA)</td>
<td>Powerlessness (POW)</td>
<td>0.86</td>
<td>0.82</td>
<td>0.64</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>Meaninglessness (MEA)</td>
<td></td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-estrangement (SST)</td>
<td></td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Satisfaction(JS)</td>
<td>Intrinsic Job Satisfaction (IJS)</td>
<td>0.92</td>
<td>0.84</td>
<td>0.65</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>Extrinsic Job Satisfaction (EJS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The χ² value was insignificant, χ² = 1090.677, df = 848, p = 0.000. The GFI was 0.90 as recommended by Hoyle (1995). As Chau and Hu (2001) had recommended, the AGFI was 0.88 that exceeded the cut-off point of 0.80. The value of IFI was 0.98 while the values of TLI and CFI were 0.98 and 0.98.

According to Bagozzi and Yi (1988), Byrne (1998), Hair et al. (2006) and Ho (2006), these values exceeded the cut-off value of 0.90. Further, the RMSEA was 0.03 which was lower than the threshold value of 0.08 as recommended by Hair et al. (2010). Also, the Relative CMIN/df of 1.29 was <5 and indicated good fit between the observations and the model (Bagozzi and Yi, 1988).

Therefore, the results of the different statistical analyses indicated that the overall measurement model fit the data very well thereby obviating the need for further adjustments. The uni-dimensionality of the constructs that were utilized in the measurement model was evaluated for consistency and validity after they were checked and acquired. The Construct Reliability (CR), Average Variance Extracted (AVE) and Cronbach’s alpha were utilized in the calculation of reliability. On the other hand, validity of the constructs was determined using convergent and discriminant validity tests. The outcomes of Cronbach’s alpha and convergent validity for the overall measurement model are illustrated in the Table 1.

\[
AVE = \frac{\lambda^2}{n}
\]

Where:

\[
\lambda = \text{Standardized factor loading}
\]
\[
n = \text{No. of item in a model}
\]

\[
CR = \frac{\sum k^2}{[\sum k^2 + (\sum I - k^2)]}
\]

where, \(k^2\) is factor loading of every item. Table 1 demonstrates that the AVE higher than the cut-off value of 0.50 for all second-order constructs as recommended by Nunally and Bernstein (1994) and ranged from 0.59-0.65. As recommended by Bagozzi and Yi (1988), the composite reliability values lied between the range of 0.65 and 0.70 and they exceeded the suggested value of 0.60 for every construct. Nunnally and Bernstein (1994) suggested the threshold value of 0.70 but the Cronbach’s alpha values lied between the range of 0.82 and 0.91 and exceeded the value that was presented. Hence, the Cronbach’s alpha for all constructs were regarded as suitably flawless.

According to the advice of Kline (2005), the correlations between the elements within the measurement model do not cross 0.85 in the case of discriminant validity. According to Fomell and Larcker (1981), on the basis of the comparisons of the correlations between square root of the mean variance that was obtained for a construct and constructs, the validity was verified. The discriminant validity of the general measurement model is illustrated in Table 2.

Residing within the overall absolute measurement model, the absolute inter-correlations that exist between the three first-orders constructs that vary from -0.60 and 0.68 had the threshold value of 0.85, as it has been depicted in Table 2. This value was declared as acceptable. Moreover, as stated by Kline (2005), the square root of the mean variance that was obtained by the indicators was more than the correlations and this reveals sound discriminant validity between these elements. It can be deduced that the general measurement scale that was utilized to calculate the constructs and the items related to it was reliable and valid. This was deduced after the assessment of the goodness to fit of data, discriminant validity of the measurement model and the convergent validity.

**Structural model:** The creation of an illustration of the structural model was the work that was supposed to be done after verifying the measurement model. The identification of the connections of the current constructs would help in the establishment of this illustration. The structural model through Maximum Likelihood Estimate (MLE) and regression method was calculated in this latest
study. These measures and assessments helped to critically analyse the research hypotheses. The connection between the variables of leader-member exchange, job performance and job satisfaction and were observed in the structural model. Further, the mediating effect of job satisfaction on the relationship between leader-member exchange and job performance were evaluated. Figure 3 describes the structural model for latest investigative research and also depicts the standardized regression weights.

The goodness-of-fit indices demonstrated that the structural model developed in this research adequately fitted the data $\chi^2 = 1090.677$, df = 848, p = 0.000, GFI = 0.90, AGFI = 0.88, CFI = 0.98, TLI = 0.98, IFI = 0.98, RMSEA = 0.03 and $\chi^2$/df = 1.29. For the Work Alienation (WA), the value of $R^2$ was 36 and it was 52 for the Job Satisfaction (JS). These were therefore above the cut-off value of 0.30 as suggested by Quadrus and Hofmeyer (2007). To investigate the hypothesized direct impacts that variables have, the estimations of coefficient parameters were checked afterwards. In Table 3, the outcomes that were obtained from inspecting the hypothesized direct effects and the standardized regression weight are described.

Table 3 showed that all the 3 direct paths existent in the structural model were statistically significant. Thus, all three hypothesized direct effects were supported (i.e., $H_4$, $H_5$, $H_6$) with Beta = 0.49, -0.60 and -0.31, respectively. Furthermore, The significance of the regression mediation effect and its mediating degree. The results of examining hypothesis $H_4$ are displayed in Table 4. The result in Table 4 showed that leader-member exchange had a significant indirect positive effect on job satisfaction through work alienation with the standardized indirect effect of 0.19 and the p-value of 0.000.

**CONCLUSION**

This study aimed to examine the relationship between leader-member exchange and job satisfaction and the mediating role of job satisfaction among 419 of academic staff in 18 Iraqi technical colleges and institutes. This study contributed to the current body of knowledge by developing the theoretical model in order to examining the relationship between the variables of this study. Structural Equation Modelling (SEM) was utilized to
examine the relationships between the variables and to
test the hypotheses of this study. The results confirmed
that all four hypotheses are supported. Moreover, the
results showed that the LMX has significant relationship
with job satisfaction through the mediating variable of
work alienation. The findings suggest the importance of
how leader-member exchange decrease work alienation
in order to enhance job satisfaction of the academic staff in
the Iraqi technical colleges and institute.

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