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The Impact of Organizational Justice on Teachers' Work Related Outcomes in Egypt with an Integer Programming Model

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Abstract: This study examines the impact of perceived organizational justice on Egyptian teachers' work related outcomes. It investigates the direct impact of organizational justice on teachers' job satisfaction and organizational commitment and its indirect impact on their turnover intention through these factors. It also examines the difference in teachers' perception of organizational justice and work related outcomes in public schools from that of private schools. Using a self-administrated questionnaire, 308 Egyptian teachers from 31 schools operating in the Tenth of Ramadan city were surveyed. Amos 18 and SPSS 20 were utilized to perform the statistical analyses. An integer programming model is presented to test the direct and indirect impacts of these variables on turnover intention. The study revealed that distributive justice is more related to teachers' job satisfaction than procedural justice, while interactional justice is more related to teachers' organizational commitment than procedural justice. Organizational justice was found to have an indirect impact on turnover intention through organizational commitment. The results show that there is a significant difference in teachers' perception of organizational justice and organizational commitment in public schools from that of private schools. On the other hand there is no significant difference between their perception of job satisfaction and turnover intention. This study demonstrates empirically the importance of organizational justice in developing positive work related outcomes in a developing country. It enables school managers to develop appropriate strategies and policies to achieve better outcomes especially in hard working conditions.

Keywords: Organizational Justice, Work Related Outcomes, Distributive Justice, Procedural Justice, Interactional Justice, Job Satisfaction, Organizational Commitment, Turnover Intention, Integer Programming

Introduction

Egypt is facing now a great challenge: Preparing its next generation to compete in the global economic community, to put the country on a path for the well-being of its citizens. Education plays an important role in promoting economic well-being and if education is not considered a binding constraint to development in a given country, robust growth will not be attained for those who fail to invest consistently in it over the long term (World Bank, 2007).

Despite the fact that the education system in Egypt is the largest in the Middle East and North Africa region, major structural changes are needed in school institutions to improve quality which is considered a central part of most development strategies (World Bank, 2007). Improving quality in schools depends mainly on teachers who are willing to contribute in successful changes and are ready to help students and colleagues voluntarily (Zeinabadi and Salehi, 2011).

Teachers in the Egyptian schools suffer from several problems. They face unfair practices such as low salaries, poor working conditions, obligatory assignments, bureaucratic rules and weak chances of promotion. The seconditions lead to low levels of job satisfaction and organizational commitment. So, experienced well qualified teachers exhibit high turnover rates, those who

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are more likely to perform beyond the call of duty and are highly motivated to do the best of their ability. Accordingly, Egyptian school managers face a major challenge, to achieve teachers' satisfaction and commitment under these severe conditions and keep it within their direct purview and control to reduce turnover; thus reducing the expenditure of training new teachers and reducing its negative effect on both school performance and development strategies. This cannot be achieved without deeply understanding the drivers of work related outcomes.

From managerial perspective, the retention of high quality employees has been increasing in importance. Recruiting, retaining and managing qualified personnel are crucial factors in the success of an organization. Increasing employees' job satisfaction, motivation and commitment to the organization will increase competitiveness and lead to better performance. On the contrary, dissatisfied employees do not function properly and are more willing to turnover. Turnover is alarming for managers who fear that the employees with better skills and abilities will be those who can leave, while those who remain will be those who cannot find other jobs (Nadiri and Tanova, 2010). The relevance of turnover can be viewed from the perspective of the high costs involved in the induction and training of new personnel.

Organizational justice is an important factor that has a strong impact on work related outcomes. If the perception of the employees to organizational consequences, procedures and interactions is fair they will feel more secure to develop confidence in their superior and organization and outcomes such as job satisfaction and organizational commitment will increase and professional function will appear as a result (Bidarian and Jafari, 2012). If employees show negative feelings towards justice, they are more apt to report lower performance, increased absenteeism, turnover, deviant behaviors and decreased commitment (Abu Elanain, 2010). While research in non-educational organizations is extensive, only few studies were conducted in educational organizations (Zeinabadi and Salehi, 2011).

Most previous studies on organizational justice and its influence on work-related outcomes have been conducted in western countries; only few studies were conducted in the Middle East countries (Elamin, 2012). This research has several objectives. First, examine the influence of organizational justice on teachers' job satisfaction and organizational commitment. Second, investigate the mediating role of job satisfaction in organizational justice-organizational commitment relationship and organizational justice-turnover intention relationship. Also, investigate the mediating role of organizational commitment in organizational justice-turnover intention relationship. Finally, to examine whether teachers' perception of organizational justice and work related outcomes in public schools differ from that of teachers in private schools which offer better salaries and better working conditions.

From the above, the study seeks to answer the following research questions:

- Does the perception of organizational justice affect Egyptian teachers' job satisfaction and organizational commitment?
- Does Egyptian teachers' job satisfaction affect their organizational commitment and turnover intention?
- Does Egyptian teachers' organizational commitment affect their turnover intention?
- Does Egyptian teachers' perception of organizational justice and work related outcomes in public schools differ from that of teachers in private schools?

Theoretical Background

Organizational Justice (OJ) Organizational justice describes the employees' perception of whether they are being treated fairly by the organization (Greenberg, 1987). Organizational Justice has been conceptualized in the extant literature based on three dimensions: distributive justice, procedural justice and interactional justice (Nadiri and Tanova, 2010).

Distributive Justice (DJ) refers to the perceived fairness of the allocation of resources by the organization (Folger and Konovsky, 1989). This definition stems from the equity theory in which employees judges the fairness of work outputs (e.g., pay, promotion, rewards and benefits) offered by the organization with respect to their work inputs (hard work, enthusiasm, skills level, commitment and dedication) (Bibby, 2008). Employees assess the fairness of their input/output ratio by comparing their ratio to the ratios of referents such as colleagues (Elamin, 2012). If an employee feels inequitable, he/she is motivated to change his ratio by reducing inputs or increasing outputs. For example, when an employee perceives that the output of a decision is unfair he may be engaged in a counterproductive work behavior. On the contrary, when he/she perceives that the distribution of the organization is fair higher levels of satisfaction and commitment are ensued (Cohen-Charash and Spector, 2001; Colquitt *et al*., 2001).

Procedural Justice (PJ) refers to the perceived fairness of the procedures used to make allocation decisions and distribute the outputs (Alexander and Ruderman, 1987). Employees judge the fairness of procedures by the amount of bias, the breadth and accuracy of information gathered, number of relevant parties shared in taking decisions, ethical standards applied and the consistency and universality of decision implementation (Stecher and Rosse, 2005). Employees always have certain beliefs and attitudes about the way managers make and implement

decisions. When the beliefs of how decisions should be made and how they are actually made are different, the employees may suffer from cognitive dissonance and they will feel uncomfortable, consequently dissatisfied (Nadiri and Tanova, 2010).

Interactional Justice (IJ) refers to perceived fairness of interpersonal treatment (Nadiri and Tanova, 2010). It is formed of two constituents: interpersonal and informational justice. Interpersonal justice is concerned with the way managers treat their subordinates and the response of these subordinates (Cohen-Charash and Spector, 2001). Informational justice is concerned with the communication of information and the sufficiency of explanations given in terms of their specificity, timeliness and truthfulness (Bies and Moag, 1986). In this study interactional justice will be treated as one construct encompassing both concepts. Perceptions of interactional justice result from the behavior of managers in building trust such as availability, competence, consistency, discreetness, fairness, integrity, loyalty, openness, promise fulfillment, receptivity and overall trust (Deluga, 1994).

Work-Related Outcomes

Job Satisfaction (JS) job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience" (Locke, 1976). Job Satisfaction has been conceptualized by some researchers as a multifaceted construct including five facets: work itself, quality of supervision, relationship with colleagues, promotion opportunities and pay (e.g., Goris *et al.*, 2000). Other researchers dealt with satisfaction as a global construct, conceptualizing job satisfaction as the degree of positive emotions an employee has toward a job (Locke, 1976). Satisfied employees are expected to be creative, innovative and come up with breakthroughs that allow an organization to grow and change positively with time and changing market conditions (Sharma and Jyoti, 2009). Job satisfaction has an indirect influence on turnover through its direct influence on forming turnover intention (Price and Mueller, 1981). This study uses the global approach, as the overall attitude is the one of interest.

Organizational Commitment (OC) organizational commitment is defined as the degree to which an employee feels loyal to his organization (Price, 1997). It is recognized as the bond or the linkage between the employee and the organization (Abu Elanain, 2010). It is a strong belief in the organization's goals and values, a willingness to work on behalf of the organization and a desire to maintain membership in the organization (Carmon *et al.*, 2010). Organizational commitment has attracted researchers' attention due to its significant impact on work attitudes such as performance, absenteeism and turnover intention (Abu Elanain, 2010). Organizational commitment can be viewed as a multi-dimension construct. Some researchers identified three dimensions of organizational commitment: Affective, continuance and normative commitment (Meyer and Allen, 1991). Affective commitment is the emotional attachment of an employee to his organization. Continuance commitment is the attachment based on valued benefits such as pension, skills, transferability, relocation and self-investment that co-vary with organizational membership. Normative commitment is the attachment based on motivation to stratify with social norms regarding attachment (Elamin, 2012). These dimensions were found to be distinct but correlated. This research will adopt organizational commitment as a global construct.

Turnover Intention (TI) turnover is the actual movement of an employee across the membership boundary of an organization (Price, 1997). Since collecting data from employees who quit voluntarily is difficult, researchers usually focus on the most direct determinant of turnover which is turnover intention (Price, 1997). Turnover intention of employees is a process which encompasses constructs of turnover intentions namely: Thinking of quitting, intention to search and intention to quit (Mobley, 1982). Many studies related the perception of distributive and procedural justice to job satisfaction and organizational commitment, yet only few studies have examined their effect on turnover intention. The role of some variables as mediators in influencing the relationship between justice and workout-comes has not been adequately addressed (Abu Elanain, 2010).

Mobley (1977) formulated a model which explains how people decide to leave their organizations. First, individuals evaluate their existing jobs and decide whether they are satisfied or dissatisfied, if dissatisfaction is felt they start to think of quitting. Second, they evaluate the cost of incurred from quitting the existing job and the utility expected to be received from the search, if the expected utilities are considered worthy, a search for the alternatives begin. Then, they start to evaluate and compare the alternatives with the present situation. Finally, if the alternatives are more desired, turnover intention is formed followed by actual turnover.

Hypotheses

Previous studies reported that the three components of organizational justice (distributive, procedural and interactional) have a significant positive relationship with job satisfaction and organizational commitment. For example, Folger and Konovsky (1989) found that distributive justice is more related to pay satisfaction than procedural justice, while procedural justice was more related to organizational commitment than distributive justice. Sweeney and McFarlin (1993) suggested that procedural justice is a better predictor of organizational commitment compared with distributive justice. Fair procedures allow employees to have faith in

the organization and therefore increase their commitment (Hendrix *et al.*, 1998). The studies conducted by Cohen-Charash and Spector (2001) and Colquitt *et al.* (2001) revealed that increasing the perception of organizational justice leads to higher satisfaction and greater commitment. In his study Elamin (2012) found positive and significant correlations between employees' organizational justice perception and both job satisfaction and organizational commitment. Yet, his study opposed the mainstream research findings, since the results indicated that procedural justice did not tend to predict organizational commitment. He explained that this finding is due to the socio-cultural differences between the western and non-western context. Accordingly, in view of the above it is hypothesized that:

H_{1a}: Perception of distributive justice positively affects teachers' job satisfaction.
H_{1b}: Perception of procedural Justice positively affects teachers' job satisfaction.
H_{1c}: Perception of interactional justice positively affects teachers' job satisfaction.
H_{2a}: Perception of distributive justice positively affects teachers' organizational commitment.
H_{2b}: Perception of procedural justice positively affects teachers' organizational commitment.
H_{2c}: Perception of interactional justice positively affects teachers' organizational commitment.

Few researchers have studied the indirect effects of justice on work-related outcomes using some variables (Abu Elanain, 2010). Job satisfaction was found to have a positive relationship with organizational commitment and job performance, while it was found to have negative relationship with absenteeism and turnover (Abu Elanain, 2010). Greenberg (1987) has proposed that employees' perceptions of unfairness will lead them to sense injustice therefore be less productive, less satisfied and consequently more willing to quit their jobs. Accordingly, job satisfaction seems to play a mediating role between organizational justice and both organizational commitment and turnover intention. So, it can be hypothesized that:

H_{3a}: Teachers' job satisfaction positively affects their organizational commitment.
H_{3b}: Teachers' Job satisfaction negatively affects their turnover intention.

Similar to job satisfaction, it was found that organizational commitment is a major antecedent of turnover intention and many studies have reported a significant relationship between them (Mowday *et al.*, 1982). Some studies reported that commitment has a stronger relationship with turnover intention than satisfaction (Shore and Martin, 1989). Employees who are committed to their organizations tend to identify with its objectives and goals and wish to remain with their organization (Hunt *et al.*, 1989). So, it can be hypothesized that:

H_4: Teachers' organizational commitment negatively affects their turnover intention.

The proposed model is as shown in Fig. 1.

Previous research pointed out the difference in employees' perception of justice and work-related outcomes according to working conditions (Abu Elanain, 2010). Nojani *et al.* (2012) mentioned that teachers working with intelligent and smart students are more satisfied than teachers working with students having learning difficulties. Similarly, teachers working in some schools that give desirable social prestige are more satisfied than teachers working in public schools.

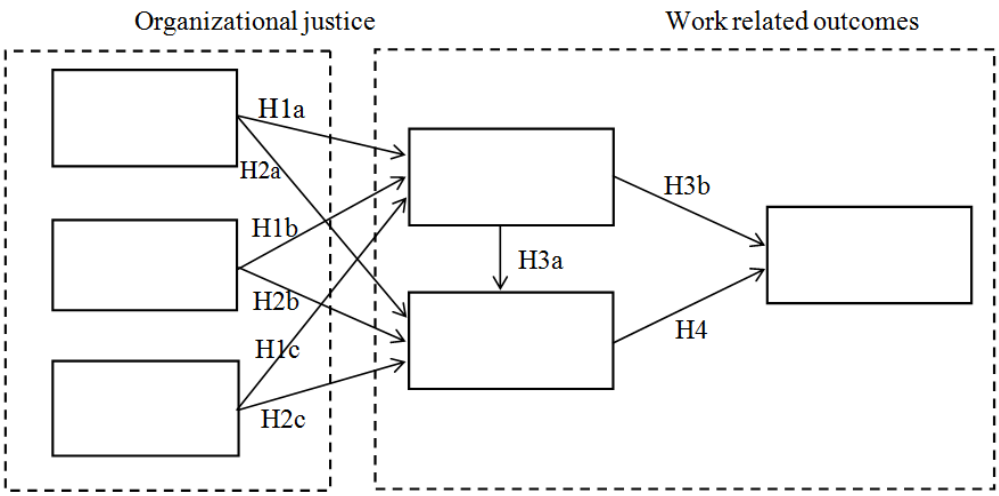

Fig. 1. The proposed model

In Egypt salaries and working conditions in private school are better than that of public schools, accordingly it can be hypothesized that:

H_{5a}: There is no difference in distributive justice perception among teachers of public and private schools.
H_{5b}: There is no difference in procedural justice perception among teachers of public and private schools.
H_{5c}: There is no difference in interactional justice perception among teachers of public and private schools.
H_{6a}: There is no difference in job satisfaction perception among teachers of public and private schools.
H_{6b}: There is no difference in organizational commitment perception among teachers of public and private schools.
H_{6c}: There is no difference in turnover intention perception among teachers of public and private schools.

Method

Sampling and Data Collection

Due to time and cost constraints, a multi-staged stratified random sample was used since we have two different types of schools (public-private) and three education levels (primary-preparatory-secondary). The teachers' sample was drawn from 31 schools (25 public and 6 private) which are the total schools operating in the Tenth of Ramadan, one of the biggest industrial cities in Egypt. Being a new urban city, its inhabitants come from various Egyptian governorates, thus it is a perfect representation of the Egyptian teachers. Using a self-administrated questionnaire containing measures of distributive justice, procedural justice, interactional justice, job satisfaction, organizational commitment and turnover intention, a total of 308 teachers (173 from public schools and 135 from private schools) from a total of 1562 (880 in public schools and 682 in private schools) were randomly selected and surveyed from teachers who have been working for three years or more in the current school to be sure that they have clear perceptions about organizational justice. All teachers have a graduate degree. The School managers didn't agree to give the permission to collect data until they read the questionnaire and were reassured that it does not contain the name of the school. All of the questionnaires were completed by teachers during a separate school meetings. Teachers of public schools were cooperative and willing to help in contrast to teachers in private schools who were less helpful.

Measures

The questionnaire used the five-Point Likert scales with anchors of 1=strongly agree and 5=strongly disagree to measure the items of the following constructs:

- Job satisfaction was measured by 4 items developed by Lucas *et al*. (1990)
- Distributive, procedural and interactional justice was measured by 20 items developed by Niehoff and Moorman (1993)
- Organizational commitment was measured by 10 items developed by Mowday *et al.* (1979)
- Turnover intention was measured by 3 items developed by Cammann *et al.* (1979)

Data Analysis

Amos 18 and SPSS20 were utilized to perform the statistical analyses. Cronbach's alpha, a coefficient of internal consistency was calculated to confirm the reliability of each survey instrument. The mean and the standard deviation for each variable were calculated. Correlation analysis was used to identify the nature of the relationship between variables. Amos 18 Structural Equation Modeling was used to test the proposed model. The analysis of the Total Effect (TE) is done to compare among organizational justice dimensions in the magnitude of the effect on work related outcomes. Several fit criteria were used to evaluate the overall model fit. Comparative Fit Index (CFI), Normed Fit Index (NFI), Tucker-Lewis Index (TLI) and Incremental Fit Index (IFI) were used with values greater than 0.95 indicating a good fit, Root Mean Square Error of Approximation (RMSEA) with values in the range of 0.05 to 1.0 indicating fair fit, while Chi-square on degree of freedom ratio (χ^2/df) with acceptable values in the range as high as 5 to as low as 2 (Hooper *et al.*, 2008).

Results

Measurement Model

Table1 represents means, Standard Deviations (SD), Cronbach's alpha (α) and correlations between variables. The alphas ranged from 0.923 to 0.931, which mean that all the scales are reliable. Regarding correlations, the highest correlation was found between job satisfaction and distributive justice ($r = 0.78$; $p<0.01$), whereas the lowest correlation was found between job satisfaction and turnover intentions ($r = -0.17$; $p<0.01$). Results of the correlation analysis provide support for the discriminant validity of the study. When correlation coefficient matrix between constructs is examined, no correlation coefficient is above 0.9.Consequently, all the constructs are different. Previous research has shown that these scales predict different dependent measures and proposed that they are distinct variables representing different constructs (McFarlin and Sweeny, 1992; Colquitt *et al*., 2001).

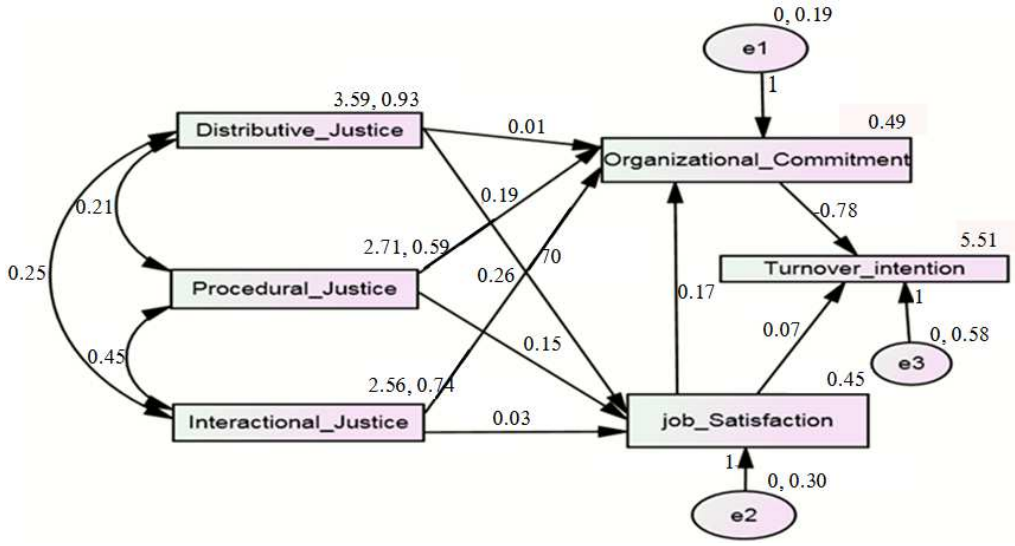

Fig. 2. Results of the structural model

Table1. Means, standard deviations, Cronbach's alpha and correlations

Variables	Mean	SD	α	DJ	PJ	IJ	JS	OC	TI
DJ	3.59	0.96	0.924	1.000					
PJ	2.71	0.77	0.924	0.298	1.000				
IJ	2.55	0.86	0.923	0.283	0.671	1.000			
JS	3.45	0.91	0.924	0.786*	0.332*	0.356	1.000		
OC	2.26	0.60	0.924	0.383	0.615*	0.577*	0.464*	1.000	
TI	3.99	0.88	0.931	-0.050*	-0.278*	-0.221*	-0.176*	-0.503*	1.000

Notes:*Correlation is significant at the 0.01 level (2-tail)

Table 2. Hypothesis test results

	S.E.	C.R.	P	Total effect	Direct effect	Indirect effect	Hyp	Decision
DJ→JS	0.035	20.327	***	0.742	0.742	0.000	H_{1a}	Supported
PJ→JS	0.055	2.760	0.006	0.130	0.130	0.000	H_{1b}	Supported
IJ→JS	0.050	0.506	0.613	0.024	0.024	0.000	H_{1c}	Not supported
DJ→OC	0.042	0.142	0.887	0.195	0.010	0.185	H_{2a}	Not supported
PJ→OC	0.045	4.182	***	0.270	0.238	0.032	H_{2b}	Supported
IJ→OC	0.040	6.565	***	0.376	0.370	0.006	H_{2c}	Supported
JS→OC	0.046	3.634	***	0.250	0.250	0.000	H_{3a}	Supported
JS→TI	0.054	1.317	0.188	-0.060	0.074	-0.134	H_{3b}	Not supported
OC→TI	0.081	-9.603	***	-0.538	-0.538	0.000	H_4	Supported

Notes: t- value is significant at the 0.05 level

Table 3. H_5 and H_6 test summary

	DJ	PJ	IJ	JS	OC	TI
Hypotheses	H_{Sa}	H_{Sb}	H_{Sc}	H_{6a}	H_{6b}	H_{6c}
Significant	0.019	0.000	0.000	0.070	0.000	0.301
Decision	Reject	Reject	Reject	Retain	Reject	Retain

The significance level is 0.05

Test of Hypotheses

The Fit indices of model are found to be:

$$\chi^2 = 13, df = 3, \chi^2 / df = 4.399, p = 0.004, NFI = 0.984,$$
$$IFI = 0.988, TLI = 0.937, CFI = 0.987, RMSEA = 0.1$$

Which indicate that the model fits the data well. Results of the structural model are presented in Fig. 2.

H_{1a} and H_{1b} are accepted, while H_{1c} is not accepted. Both distributive justice and procedural justice positively affect job satisfaction and the impact of distributive justice (TE=0.742) is more than the impact of procedural justice

(TE=0.130). Meanwhile the effect of interactional justice on job satisfaction is not significant.

H_{2a} is rejected; meanwhile both H_{2b} and H_{2c} are accepted. Both procedural justice and interactional justice positively influence organizational commitment. Interactional justice is the most influential (TE=0.376) followed by procedural justice (TE=0.270), while distributive justice has no significant effect.

H_{3a} is accepted, while H_{3b} is rejected. Job satisfaction positively affects organizational commitment, but it has no significant negative effect on turnover intention. Thus organizational justice affects organizational commitment directly and indirectly via job satisfaction. Then job satisfaction has a mediating role in justice-commitment relationship. On the contrary, the mediating role of job satisfaction in justice-turnover intention relationship was not significant.

H_4 is accepted, assuring that organizational commitment has the major effect on turnover intention. It can be also concluded that procedural and interactional justice affects turnover intention indirectly via organizational commitment, emphasizing the mediating role of organizational commitment in justice-turnover intention relationship.

The results of the fifth and sixth hypotheses are shown in Table 3.

Organizational justice perceptions differ between teachers in public schools and private schools. Teachers in private schools perceive organizational justice better than teachers in public schools. Managers and headmasters of private schools are more strict and keen on applying the reward and punishment policy. Salaries in these schools are based on performance. These schools aim at maximizing their profits through attracting more students by giving better services. Meanwhile managers and headmasters of public schools do not stick to these rules; since these schools are owned by the government with no tuition fees and the schools make no profits.

There is also a difference in organizational commitment. Teachers working in private schools are more committed and willing to exert more effort to achieve better school performance.

There is no difference in teachers' perception of job satisfaction and turnover intention. Teachers in private schools are paid according to their qualifications and effort exerted. Teachers in public schools exert less effort and are less dedicated than those in private schools, so they make up for the low salaries by private tutoring.

Mathematical Model

From the results of the regression analysis (neglecting errors), work related outcomes (dependent variables) can be written as functions of organizational justice dimensions (independent variables) as follows:

$$JS = 0.45 + 0.701(DJ) + 0.153(PJ) + 0.025(IJ),$$
$$OC = 0.46 + 0.006(DJ) + 0.188(PJ) + 0.261(IJ)$$

Also, from the regression analysis, organizational commitment can be written as a function of job satisfaction, while turnover intention can be written as a function of organizational commitment and job satisfaction as follows:

$$TI = 5051 + 0.072(JS) - 0.781(OC),$$
$$OC = 0.49 + 0.167(JS)$$

These equations can be utilized to formulate an integer programming problem to determine which variables have direct impacts on turnover intention. It is assumed that the variables will have an integer value, the greater the integer value, the greater its influence on turnover intention. It is required to minimize turnover intention and this will be the objective of the model. The above equations will be relaxed to inequalities; we want both job satisfaction and organizational commitment to be greater than the given values, while we want turn over intention to be less than the given value. The problem is given by:

$$\begin{aligned}
&Minimize(TI)\\
&Subject\ to\\
&\mathrm{JS} \geq 0.45 + 0.701(\mathrm{DJ}) + 0.153(\mathrm{PJ}) + 0.025(\mathrm{IJ}),\\
&\mathrm{OC} \geq 0.49 + 0.006(\mathrm{DJ}) + 0.188(\mathrm{PJ}) + 0.261(\mathrm{IJ}),\\
&\mathrm{OC} \geq 0.49 + 0.167(\mathrm{JS}),\\
&\mathrm{TI} \leq 5.51 + 0.072(\mathrm{JS}) - 0.781(\mathrm{OC})
\end{aligned}$$

All variables are non-negative integers.

Solving this integer programming problem reveals that organizational commitment and job satisfaction are the only variables that affects turnover intention directly. Job satisfaction and organizational commitment have positive integer values while organizational justice dimensions were found to be zeroes. In addition, the impact of commitment is double that of job satisfaction (the integer value of commitment was double that of job satisfaction), emphasizing on its role in minimizing turnover.

Discussion

Organizational justice is one of the factors that affect teachers' work related outcomes and contribute to effective management of work force Managers need to thoroughly understand the role played by organizational justice on teachers' work related outcomes to increase both job satisfaction and organizational commitment and reduce turnover.

The study revealed that distributive justice is more influential than procedural justice in predicting job

satisfaction, while interactional justice has no significant effect. Fairness of personal outcomes that teachers receive explains more of the variance on teachers' job satisfaction even after the role played by fairness of procedures. Teachers who have positive perceptions of equity and fairness regarding the allocation of assignments, workload, punishments and rewards are likely to report higher level of job satisfaction.

On the other hand, it was found that interactional justice is a better predictor of organizational commitment compared to procedural justice, while distributive justice has no significant effect. The fairness of interpersonal relationships is more important in predicting organizational commitment compared to the fairness of procedures. It can be said that the quality of the interpersonal treatment between teachers and managers in the Egyptian schools is more important than procedures, rewards or punishment in predicting commitment. Teachers treated in courteous, civil manner, dignity and respect are more committed to school and subsequently they tend to identify with the school objectives and goals. These results are consistent with many previous studies (Folger and Konovsky, 1989; Hendrix *et al.*, 1998).

To sum up, the above findings answer the research first question "Does the perception of organizational justice affect teachers' job satisfaction and organizational commitment?"Perception of organizational justice was found to be related to job satisfaction and organizational commitment. These findings are important since feeling of injustice results in dissatisfied and uncommitted teachers who exhibit negative outcomes such as poor work incentives, poor performance and absenteeism. So, organizational justice is a fundamental element affecting both satisfaction and commitment. Thus, managers have to create and foster high justice perceptions in the school environment.

The results revealed that teachers' job satisfaction is positively related to their organizational commitment. This goes in line with the previous studies which emphasized on the positive correlation and direct link between job satisfaction and organizational commitment, where job satisfaction is an antecedent of organizational commitment (Abu Elanain, 2010). Thus job satisfaction mediates the relationship between organizational justice and organizational commitment.

As opposed to the mainstream search findings, the direct effect of job satisfaction on turnover intention was not significant. Some researches pointed out the possibility of exhibiting high levels of job satisfaction without having a sense of attachment or obligation to stay in the organization (Suma and Lesha, 2013). The converse is true for Egyptian teachers; teachers might be attached to the school despite being dissatisfied. The fact that some teachers are not willing to turn over despite being dissatisfied is salient in the Egyptian schools. For some teachers the school is only a mean of private tutoring, thus quitting the school means also losing the private tutoring income.

Accordingly, findings about the second research question "Does teachers' job satisfaction affect their organizational commitment and turnover intention?" showed that improving the level of job satisfaction enhances the level of commitment, yet it does not affect turn over intention directly. Job satisfaction mediates the relationship between organizational justice and organizational commitment, but it does not play the same role regarding turnover.

The results of the third research question "Does teachers' organizational commitment affect their turnover intention?" revealed that organizational commitment affects turn over intention, thus it has a mediating role in the organizational justice-turnover intention relationship. Organizational commitment as a construct is more complex and enduring than job satisfaction due to its consistent development over time. It focuses on the attachment to the organization as a whole including organization's goals and values (Suma and Lesha, 2013). This result is consistent with previous studies in which organizational commitment has been treated as a major antecedent of turnover intention and various researches have reported a significant negative relationship between them (Shore and Martin, 1989; Mowday *et al*., 1982).

The final research question" Does teachers' perception of organizational justice and work related outcomes in public schools differ from that of teachers in private schools?" The research revealed that teachers' perception of organizational justice in private schools differs from the perception of teachers in public schools. The rigid pay and grading system which links performance and pay is strictly applied in private schools, meanwhile this practice has become obsolete in public schools nearly all teachers receives excellent in their annual reports. This negatively affects teachers' perception of justice in public schools.

Regarding work related outcomes, there is a difference in the perception of organizational commitment. Public schools are not well equipped and furnished and the classes are of high capacity, increasing the stress on the teachers working in such harsh conditions which leads to poor work incentives and poor accountability. On the contrary, private schools offer better working conditions. The classes are well equipped and furnished and the capacities are low.

There were no difference in the perceptions of job satisfaction and turnover intention. Although private school teachers' salaries are better than that of public schools, yet public teachers feel more secure. Teachers in private schools work with annual contracts, so they may be fired easily at any time. Meanwhile public school teacher are tenured and firing any teacher is quite impossible according to the laws governing public schools which haven't changed much since the socialist

regime in Egypt. Being secured in a job is highly evaluated in the Egyptian culture. Teachers in both public and private schools who have turnover intentions are waiting for the proper chance when finding a job in Gulf countries with salaries that can reach ten times their salaries in Egypt.

Limitations and Future Research

This study has several limitations which should be addressed. The results are specific to education systems in developing countries which are not performing well with monotone management system. Cross-cultural differences must be taken into consideration. The sample size is small due to time and cost constraint. Since the data on both the independent and the dependent variables were collected in one wave, this might have resulted in potential bias. In this research only the general schools were subject to study. The religious schools (AlAzhar education system) and the Technical and Vocational schools weren't taken into consideration. Accordingly, future research can be extended to such types of schools.

Conclusion

This study helps school managers and headmasters to understand the influence of organizational justice on work related outcomes, thus enabling them to develop appropriate strategies and policies to enhance this influence to achieve better outcomes especially in hard working conditions.

Managers should apply rules fairly to all teachers. They should pay great attention to the distribution process regarding workloads, responsibilities avoiding any personal bias. The rewards must be based on performance and merit. More attention must be paid to appreciation awards. Literary and moral appreciation cannot be neglected in such working conditions. In fact they make a perfect psychological compensation when the pay fails to express the feeling of gratitude towards the efforts exerted by active teachers. This creates a positive perception of distributive justice, thus enhancing job satisfaction levels which in turn raise the level of commitment.

Managers are responsible for creating and maintaining a procedurally fair environment. They need to pay attention to the procedures by which decision making for the distribution is done. In addition, they need to allow teachers to participate and voice their preferences and opinions when taking decisions. Informing the teachers about any possible changes and seeking their opinions of these changes. Accordingly teachers feel psychologically satiated, they are no more marginalized. This fair climate enhances both job satisfaction and organizational commitment which affects turnover negatively.

Managers must treat teachers with dignity, respect and communicate effectively with them, conveying clear messages that the school is responsible for them and values them. Why not? Under severe working conditions interpersonal relations, lucidity, care and other human aspects are critically important and are greatly appreciated by teachers. Interactional justice plays a crucial role in improving organizational commitment which in turn is a key factor in reducing turnover intention.

Finally, becoming more aware with organizational justice prepares a suitable climate in schools in which managers and teachers are ready to share and cooperate with each other to create better learning and teaching processes. Teachers are more responsible and effective and are ready to create conditions of learning.

Author's Contributions

All authors equally contributed in this work.

Ethics

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

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