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# Egyptian Teachers' Burnout: The Role of Work Environment Characteristics and Job Stress

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**Abstract** Recent research has pinpointed the serious effects of job burnout on both personal life and productivity in work. Yet, there is a gap in the research directed to service professions in developing countries. The aim of this study is to investigate the relationship between work environment, stress and burnout within the Egyptian context. The research proposes that stress mediates the relationship between work environment characteristics and burnout. An explanatory model was tested for the hypothesized relationships. The study was conducted on 325 Egyptian teachers with a response rate of 79.9% (250 teacher). The proposed model included 10 work environment components measured by the Work Environment Scale (WES) that affect work stress, which, in turn, may lead to burnout measured by the Maslach Burnout Inventory (MBI). Confirmatory factor analysis, hierarchical regression and path analysis were used to test the data fit for the hypothesized model. The results confirmed the proposed relationships between 7 components of work environment (involvement, work cohesion, supervisor's support, autonomy, work pressure, physical comfort, and innovation), stress, and burnout components. The mediation effect was confirmed. This results could help fill the gap in the study of burnout and burnout antecedents within the Egyptian context by highlighting the importance of specific work components that do not receive much attention in Egypt, especially innovation and autonomy. The study suggests that decision makers in schools should reconsider the work environment to give more space for autonomy and innovation, provide a comfortable physical environment and ensure supervisor support. The study propose several variables that should be investigated in future studies.

**Keywords:** *work environment, job stress, burnout, WES, MBI*

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## 1. Introduction

Burnout has captured the attention of researchers since the 1970s due to its noticeable effects on both organizational and personal life [3,45]. On the organizational level, burnout influences productivity [36], satisfaction, commitment, turnover [25], absenteeism [20, 54] and job performance [14, 56]. On the personal level, there is a relationship between burnout and peoples' mental and physical health. Although there is still a debate on whether burnout affects physical health or poor physical health can lead to burnout, the relationship itself is still valid [38]. These effects justify the increasing number of research studies that try to understand, predict and decrease the negative effects of this phenomenon. In their efforts to do so, researchers have found that situational and organizational factors play a more major role in burnout than individual factors [30]. Recent research has pinpointed the effects of work environment characteristics as a source for stress that can lead to job burnout. Evidence was given for the relationship between work environment as a source of stressors and burnout [16]. These studies have covered a wide range of human

service occupations including; teachers, nurses, physical therapists and doctors [30].

Teaching is considered to be one of the professions that experience high rates of burnout symptoms, not only due to the daily extensive contact with students [5] but also due to the work environment and bad conditions of teachers, especially in the developing countries. Egyptian schools suffer from a shortage of resources and have difficulty providing an appropriate organizational climate for teachers, so it becomes a necessity to care about the psychological welfare of those who work in such an inappropriate environment. Through the last 5 years, teachers have expressed their dissatisfaction about their work conditions through protests and strikes. Their complains have extended to include: salaries, physical environment, work pressure and lack of involvement and supervisor's support. These work environment characteristics could be a source of stress that may evolve to burnout syndrome.

## 2. Research Aims

This research aims at: (1) Investigating the relationship between work environment, stress and burnout in the

Egyptian teaching context and (2) Build an explanatory model for the hypothesized relationships between the three variables.

### 3. Literature Review

#### 3.1. Work Environment

A vast number of academic studies has been directed to the impact of the work environment on the psychological and physical well-being of employees. Yet, there is no agreed upon definition for work environment. It refers to a set of properties of the work climate perceived directly or indirectly by the employees that influence their behaviour in the organisation [9,13]. It also refers to the organizational and occupational context in which employees perform [16].

Researchers who have investigated the characteristics of work environment have presented a wide range of characteristics depending on; research scope, the industry or service they investigate and the instruments they used to assess the work environment. Yet, the majority of researchers are agreed (explicitly or implicitly) upon three dimensions of the work environment: organizational system, interpersonal relationships, and personal growth [33]. These dimensions represent the main areas of personal interaction with the work environment. The work environment factors ranged from 5 factors in the Dutch nursing environment [21] to 27 factors in the Psychosocial Work Environment Scale [29].

Many researchers have used the Work Environment Scale (WES) in assessing the work environment in several occupations, including nursing, teaching, and medical professions [33]. The WES includes 10 factors measuring employee perception of the work environment relating to the three dimensions. These factors are: Involvement, Work Cohesion, Supervisors Support, Autonomy, Task Orientation, Work Pressure, Clarity of roles, Managerial Control, Innovation and Physical Comfort [33]. These factors were used to assess teachers' work environments where the main stressors identified were autonomy, Workers Cohesions, Supervisors Support and Innovation [16,57]. This research will identify the main work environment stressors in the Egyptian teachers' environment.

#### 3.2. Job Stress

Job stress has been a field of study for long time as it is attached to human beings. Stress is considered by [35] as "the product of the dynamic interaction between the person and the social and organizational context in which he or she works". Stress was seen as negative psychological effects that result from aspects of the job [35].

Six major sources of job stress have been identified: stress on the job itself; role-based stress; relationships with subordinate, colleagues, and superiors; career development factors; organizational structure and climate; and the work-family interface [18]. Accordingly, stress is mainly a personal reaction toward environmental stressors.

In educational settings, a lack of support and autonomy, work demands, co-workers' relations, clarity of tasks, conflicts of educational processes and structures with

teachers' personal needs and aspirations could be sources of stress [16,18]. Furthermore, the educational setting could include parents- teachers' interactions, students misbehaving, and lack of technological support as sources for stress [16,23].

#### 3.3. Burnout

Job burnout is a psychological syndrome that develops and progresses due to long-term work related stress. As defined by [30] burnout is "a syndrome of Emotional Exhaustion, Depersonalization, and Reduced Accomplishment which is a special risk for individuals who work with other people in some capacity". Burnout was initially found in professions that involve intensive interacting with people. All human service workers can experience burnout [30]. However, job burnout even among those in less people-oriented professions can still be a significant problem [25,30].

Burnout is a multidimensional phenomenon that has three dimensions tackling three levels of manifestation: individual stress, interpersonal interaction and self-evaluation. The first dimension is Emotional Exhaustion which is defined as feelings of being overextended and depleted of one's emotional and physical resources [25,30]. It is the most reported and manifested syndrome of burnout. The second is cynicism (or depersonalization). It refers to a negative, callous, or excessively detached response to various aspects of the job [30]. It is mainly describing a coping technique to deal with emotional work stress that arises due to the intensive interaction with service recipients. This coping technique is based on creating emotional distance between the service provider and the recipient. The third dimension is inefficacy (feelings of reduced efficacy). It represents how a person suffering from burnout syndromes evaluates him/herself. It is defined as feelings of incompetence and a lack of achievement and productivity at work [25,30,47].

Burnout can be predicted by several organizational factors including; work environment [16], perceived organizational support, Organizational justice, and psychological contract [6,46]. On the other hand, occupational factors like job control, role stress, job demands, ambiguity, role conflict and work overload can be predictors for burnout [24,48]. Some personality traits also have significant effects on burnout including; Neuroticism, Conscientiousness, Emotional Intelligence, perfectionism and Locus of Control [34, 39, 55,58].

### 4. Conceptual Framework and Hypothesis

As previously illustrated, stress is mainly a personal reaction toward environmental stressors. This reaction can be explained using the Demands- Control -Supports-Model [28,53]. According to this model job stress is seen as a consequence of the combination of three dimensions: high psychological demands in work, low or lack of decision latitude and lack of social support at work [9]. High psychological demands are manifested work pressure, where employees experience high demands in a limited time that push their strain to rise [9]. Decision latitude is manifested in degree of autonomy, Managerial control and innovation [2]. Workers whose jobs rated high in job demands and high in employee control reported

significantly less stress and exhaustion [51]. As expressed by [22] managerial control and autonomy are two extremes. Jobs with high autonomy experience low managerial control and vice versa. Accordingly, it is expected that work environment that has tight managerial control will impose stress on workers. Yet, researchers investigating the effects of work environment characteristics focused on autonomy more than managerial control [9,55]. Some researchers argue that innovation is related to decision latitude where an innovative work environment implies a degree of autonomy and freedom [9].

Finally, social support at work is manifested in perceived Work Cohesion, Supervisor' Support and Involvement [2]. Work cohesion works in leading as a mechanism to cope and deal with workload and stressors related to the contact with students and parents, where co-workers stand and support each other in their daily work [10]. Employees who feel the support of their supervisors are more likely to be satisfied and they feel as if their supervisors are helping in carrying the burden of their job, accordingly they became less stressed [10]. This may be connected to task-orientation vs. relationship –orientation as supervisors' behaviours. Task orientation a leadership style in which the leader focuses on tasks that need to be performed in order to meet certain goals, or to achieve a certain performance standard [43]. On the other hand, Relationship - oriented leadership is a behavioural approach in which the leader focuses on the satisfaction, motivation and general well-being of the team members [43]. Task-oriented leaders tend to give limited autonomy to employees and do not think much about their team's well-being, causing a decrease in employee motivation and increased stress. Yet, researchers tend to study task orientation from both a leadership perspective and cultural perspective and not from an environmental perspective. This may justify the scarcity of studies that investigate the effects of task orientation -as an environment characteristic- on stress. This study attempts to investigate this effect.

Researchers also propose that positive evaluations of the physical work environment are associated with job satisfaction, reduced stress and higher levels of perceived organizational support, where comfortable physical environment can be perceived by employees as a sign that the organization values them and cares about their well-being [44]. In a school setting, deficient equipment, unequipped class rooms, shortage of technological tools could be a source of stress [16]. As for Clarity of tasks or role ambiguity it is one of the role-based stressors [48]. So it is expected that lack of clarity can be a source of stress for Egyptian teachers.

Although researchers support the effects of these work environment characteristics on employees' psychological status, few studies have tried to investigate the relationship between these characteristics (as an integrated variable) and stress in the school settings [16]. In this research it is expected that Egyptian teachers experience job stress related to work environment characteristics. Hence,

*H1:* Work environment characteristics significantly affect Stress.

As Work environment is a main factor that affects teachers' psychological status, the schools' working

environment can be a cause for both teachers' wellbeing through empowerment, engagement and positive work emotions and teachers burnout through daily personal interactions with students and parents that contribute to deepening the feelings of burnout dimensions [41]. Several research studies suggest that environmental factors, particularly characteristics of the work setting, are more strongly related to burnout than personal factors as demographic and personality variables. Research on teacher burnout has shown that the work environment characteristics contribute to burnout. Workload, a lack of social and administrative support, lack of autonomy, lack of work Cohesions and innovation were found to predict teachers burnout [16,45]. So it is expected that work environment characteristics in Egyptian schools affects teachers burnout. This implies that work environment will affect teachers' emotional exhaustion, cynicism and inefficacy. Hence,

*H2:* Work environment characteristics significantly affect Burnout.

*H 2.1:* Work environment characteristics significantly affect emotional exhaustion.

*H 2.2* Work environment characteristics significantly affect Cynicism.

*H 2.3* Work environment characteristics significantly affect Inefficacy.

As clear in burnout definitions, stress is considered as an antecedent for burnout [8, 14]. When the used coping techniques do not deal effectively with work stress, they can lead to burnout. Accordingly it is proposed that work environment characteristics also have indirect effects on burnout through stress.

*H 3:* Stress mediates the relationship between work environment characteristics and Burnout.

The third hypothesis can be illustrated in [Figure 1](#).

## 5. Methodology

### 5.1. Sample and Data Collection

This study was conducted on Egyptian teachers who work in 3 private schools in Cairo with different study systems (British, American, and Egyptian). All full time teachers in the three schools (325) were invited to participate in the study (British 76, American 83, and Egyptian 166). Data were collected through structured face-to-face interviews with the senior or by e-mail to the junior teachers. Only 250 questionnaires were completed representing a high response rate of 79.9%. The respondents were 57.6 % female and the majority of the respondents (81.2%) have more than 5 years of experience in the current schools. The respondents' age ranged from 22 to 55 with mean  $35.31 \pm 5.72$ .

Since this study uses the predictor and criterion variables from the same source in a single survey, several precautions were taken to minimize the impact of common method variance (CMV). Specifically, personal information were not collected from the participants to reduce socially desirable responding and evaluation apprehension by ensuring the anonymity of the responses. The survey items for both independent and dependent variables were shuffled. Using the above procedural remedies helped to minimize CMV in this study.

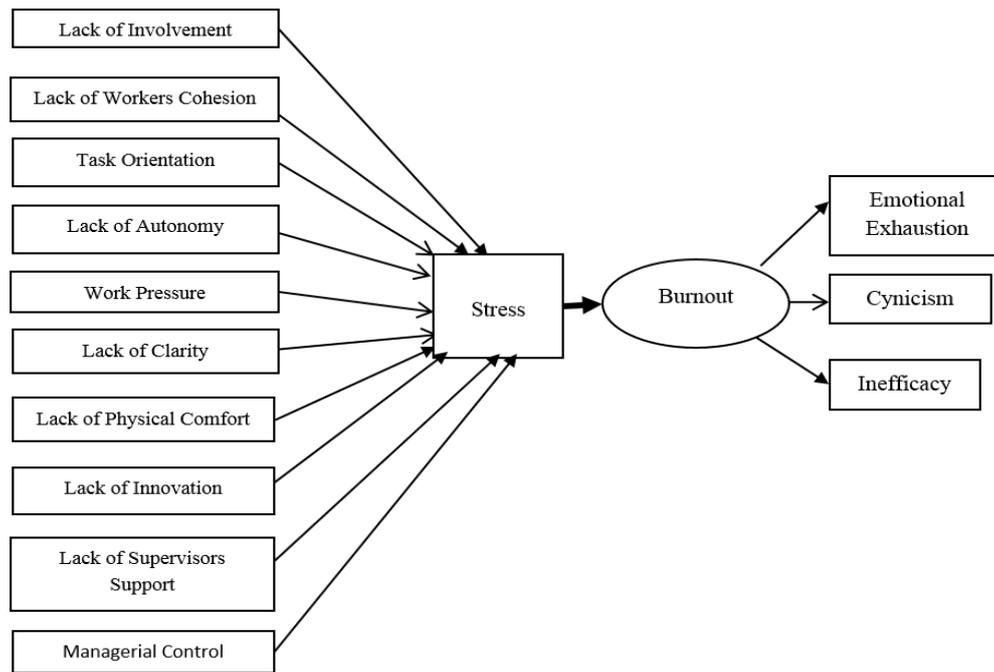


Figure 1. The Mediation relationship

5.2. Instrument

The work environment characteristics were measured using a modified version of the Work Environment Scale (WES) developed by [33]. The WES measures 10 characteristics of work environment: Involvement, work Cohesion, Supervisor Support, Autonomy, Task Orientation, Work Pressure, Clarity, Managerial Control, Innovation and Physical Comfort. The Original scale contains 90 statements where the respondents answer by choosing True or False. The adjusted scale contain 60 statements measured on a Likert scale (6 for each characteristic). Maslach Burnout Inventory (MBI) for Educators was used to measure the teachers' burnout. The scale has 3 subscales: emotional exhaustion, cynicism, and

inefficacy, measured by 22 items. Stress was measured by Parasuraman' 9 item scale [35].

The three scales were translated into Arabic and vice-versa (back translation). Responses for MBI ranged from 1 (Never) to 7 (Every day) on a 7 point Likert scale. WES and stress were measured on a 5 pint Likert scale ranging from 1 (totally disagree) to 5 (totally agree). Reversed items were indicated for the date entry. The resultant questionnaire was revised by panel of 5 experts and was modified to comply with the Egyptian culture and the teaching environment. Reliability assessment was conducted using Cronbach's alpha coefficient. The resulted alpha Cronbach appears to be reasonably high. Table 1 Shows descriptive and reliability results for study' variables.

Table 1. Descriptive and reliability statistics

|                               | Mean  | SD    | 1           | 2            | 3            | 4            | 5            | 6            | 7            | 8            | 9            | 10           | 11           | 12           | 13           | 14           | 15           |
|-------------------------------|-------|-------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1-Total Burnout               |       |       |             |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| 2-Exhaustion                  | 36.24 | 9.808 | <b>.847</b> |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| 3- Cynicism                   | 12.94 | 3.742 | .842**      | <b>0.703</b> |              |              |              |              |              |              |              |              |              |              |              |              |              |
| 4- Inefficacy                 | 11.48 | 3.688 | .805**      | .608**       | <b>0.700</b> |              |              |              |              |              |              |              |              |              |              |              |              |
| 5- Lack of Involvement        | 11.82 | 4.659 | .857**      | .534**       | .513**       | <b>0.741</b> |              |              |              |              |              |              |              |              |              |              |              |
| 6- Lack of Worker Cohesion    | 19.78 | 3.581 | .326**      | .249**       | .217**       | -.330**      | <b>0.715</b> |              |              |              |              |              |              |              |              |              |              |
| 7- Lack of Supervisor support | 18.89 | 4.046 | .434**      | .456**       | .258**       | .360**       | .381**       | <b>0.703</b> |              |              |              |              |              |              |              |              |              |
| 8- Lack of Autonomy           | 19.40 | 4.068 | .362**      | .329**       | .299**       | .286**       | .510**       | .365**       | <b>0.725</b> |              |              |              |              |              |              |              |              |
| 9- Work Pressure              | 18.64 | 4.536 | .278**      | .314**       | .201**       | .190**       | .592**       | .463**       | .597**       | <b>0.744</b> |              |              |              |              |              |              |              |
| 10- Lack of Innovation        | 18.64 | 3.979 | .274**      | .346**       | .289**       | .097         | -.163*       | -.197**      | -.034        | -.227**      | <b>0.701</b> |              |              |              |              |              |              |
| 11- Lack of Clarity           | 20.78 | 5.158 | .451**      | .421**       | .419**       | .316**       | .297**       | .446**       | .253**       | .388**       | .252**       | <b>0.708</b> |              |              |              |              |              |
| 12- Managerial Control        | 16.50 | 3.143 | .165*       | .190**       | .112         | .114         | .318**       | .131         | .192**       | .424**       | .283**       | .249**       | <b>0.722</b> |              |              |              |              |
| 13- Task orientation          | 20.60 | 3.156 | .129        | .130         | .145*        | .066         | .111         | .038         | .180**       | .066         | .221**       | .005         | .252**       | <b>0.748</b> |              |              |              |
| 14- Lack of Physical comfort  | 16.69 | 3.421 | .184**      | .166*        | .193**       | .119         | .109         | .118         | .081         | .147*        | .217**       | .526**       | .303**       | .181**       | <b>0.699</b> |              |              |
| 15 Stress                     | 17.82 | 4.448 | .268**      | .274**       | .283**       | .146*        | .274**       | .466**       | .349**       | .423**       | .274**       | .261**       | .105         | .124         | .107         | <b>0.715</b> |              |
|                               | 18.51 | 4.065 | .463**      | .428**       | .355**       | .378**       | .701**       | .690**       | .722**       | .793**       | .678**       | .628**       | .292**       | .076         | .244**       | .620**       | <b>0.782</b> |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Alpha Cronbach confections for scales are shown in bold.

## 6. Results

To test the first and second hypotheses, correlation and multiple regression analysis were conducted using SPSS version 21. As for the third hypotheses and the conceptual model, hierarchical regression (by SPSS) and path analysis (using Amos version 20) were conducted.

The results showed significant correlation between work environment characteristics and both stress and burnout except for managerial control where the correlation was not statistically significant. Stress was significantly correlated with burnout, and to its three dimensions. Work

environment characteristics were correlated to exhaustion except for managerial control. Significant correlation exists between Work environment characteristics and cynicism except for Lack of clarity. Inefficacy was significantly correlated to lack of involvement, lack of worker cohesion, lack of supervisor support, lack of autonomy, lack of innovation and lack of physical comfort. [Table 1](#) shows the resultant correlations between variables.

The relationship between the correlated variables was investigated using multiple regressions to determine the ability of work environment characteristics to predict stress, burnout and burnout dimensions.

**Table 2. Regression analysis for predicting stress , total burnout , and burnout dimensions**

| Dependent Variable | Independent variable       | Regression Coefficient | Standardized coefficient | t-value | F        | R. Sq |
|--------------------|----------------------------|------------------------|--------------------------|---------|----------|-------|
| Stress             | Lack of Involvement        | 1.31                   | .342                     | 4.19**  | 15.309** | .299  |
|                    | Lack of Work cohesion      | .505                   | .299                     | 2.18**  |          |       |
|                    | Lack of Supervisor support | 1.11                   | .316                     | 2.61**  |          |       |
|                    | Lack of Autonomy           | 1.23                   | .323                     | 3.28**  |          |       |
|                    | Work pressure              | 1.09                   | .308                     | 2.44**  |          |       |
|                    | Lack of Physical comfort   | 1.78                   | .355                     | 5.58**  |          |       |
|                    | Lack of Innovation         | 1.16                   | .318                     | 2.75**  |          |       |
| Total Burnout      | Lack of Work cohesion      | .563                   | .237                     | 3.570** | 22.573** | .343  |
|                    | Lack of Supervisor support | .837                   | .291                     | 4.158** |          |       |
|                    | Lack of Autonomy           | .417                   | .158                     | 2.094*  |          |       |
|                    | Work pressure              | .527                   | .181                     | 3.100*  |          |       |
|                    | Lack of Innovation         | .586                   | .287                     | 4.478** |          |       |
| Exhaustion         | Lack of Work cohesion      | .233                   | .254                     | 3.921** | 28.153** | .342  |
|                    | Lack Supervisor support    | .197                   | .177                     | 2.963** |          |       |
|                    | Work pressure              | .270                   | .239                     | 4.163** |          |       |
|                    | Lack of Innovation         | .161                   | .203                     | 3.216*  |          |       |
| Cynicism           | Lack of Innovation         | .228                   | .349                     | 5.448** | 20.142** | .270  |
|                    | Lack of Supervisor support | .279                   | .304                     | 4.158** |          |       |
|                    | Work pressure              | .214                   | .229                     | 3.743** |          |       |
|                    | Lack of Autonomy           | .142                   | .168                     | 2.173*  |          |       |
| Inefficacy         | Lack of Work cohesion      | .265                   | .230                     | 3.181*  | 12.609** | .226  |
|                    | Lack of involvement        | .321                   | .236                     | 3.054*  |          |       |
|                    | Lack of Innovation         | .189                   | .190                     | 2.765*  |          |       |
|                    | Lack of Autonomy           | .299                   | .233                     | 2.701*  |          |       |
|                    | Lack of Supervisor support | .241                   | .173                     | 2.234*  |          |       |

\*\* Significant at the 0.01 level.

According to the regression model, seven work environment characteristics (lack of involvement, lack of work cohesion, lack of supervisor support, lack of autonomy, work pressure, lack of physical comfort and lack of innovation) were able to predict stress. The developed regression model was significant ( $F = 15.309$ ,  $p < .000$ ). The independent variables explained 30% ( $R$ -square = .299) of the total variance of stress. Whereas only 5 Work environment characteristics (lack of work cohesion, lack of supervisor support, lack of autonomy, work pressure and lack of innovation) were able to predict total burnout. The regression model was significant ( $F = 22.573$ ,  $p < .000$ ). The independent variables explained

34% ( $R$ -square = .343) of the total variance of burnout. Regression analysis revealed the ability of two work environment characteristics (lack supervisor support and lack of innovation) to predict all three dimensions of burnout. Lack of work cohesion predicts both exhaustion and inefficacy, whereas lack of autonomy predicts both cynicism and inefficacy. Work pressure predicts both exhaustion and cynicism. Finally, lack of involvement predicts only inefficacy. The independent variables explained 34% of the total variance of exhaustion, 27% of the total variance of cynicism and 22% of the total variance of inefficacy. [Table 2](#) shows the developed regression models.

**Table 3. Hierarchical Regression for mediating effect**

| Independent variable       | Regression step one |         | Regression step Two |         |
|----------------------------|---------------------|---------|---------------------|---------|
|                            | B                   | t       | B                   | t       |
| Lack of Involvement        | 1.055               | 6.188** | .946                | 5.583** |
| Lack of Work cohesion      | .742                | 4.771** | .636                | 4.113** |
| Lack of Supervisor support | .852                | 5.603** | .758                | 5.037** |
| Lack of Autonomy           | .604                | 4.314** | .461                | 3.190** |
| Work pressure              | .616                | 3.826** | .012                | .034*   |
| Lack of Innovation         | .715                | 6.017** | .643                | 5.463** |
| Lack of Physical comfort   | .342                | 2.330** | .259                | 1.802*  |

\*\* Significant at the 0.01 level.

To test the mediating effect of stress on the relationship between work environment characteristics and burnout (H.3) Hierarchical Regression analysis was conducted.

According to the results, stress mediates the relationship between seven work environment characteristics (lack of

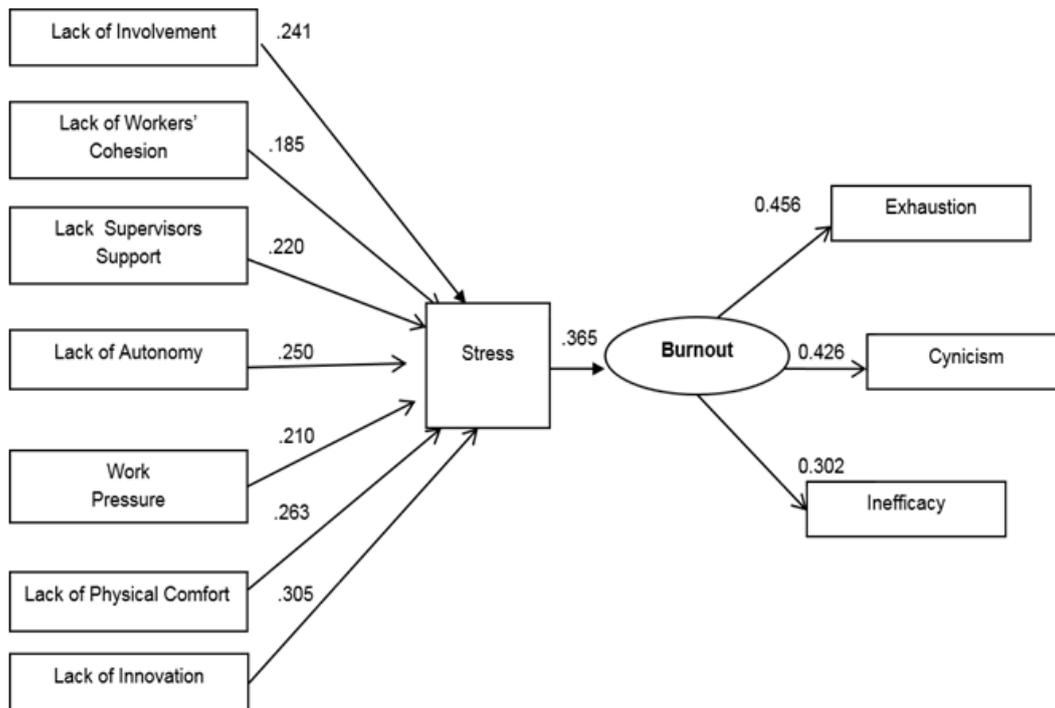
involvement, lack of work cohesion, Lack of Supervisor support, Lack of Autonomy, Work pressure, Lack of Physical comfort and Lack of Innovation) and burnout. Table 3 shows the results for the hierarchical regression analysis.

**Table 4. Model Fit Analysis**

|                              | Estimate | Standardized | C.R.   | P      |
|------------------------------|----------|--------------|--------|--------|
| Stress ← Involvement         | 1.61     | .241         | 32.038 | 0.0001 |
| Stress ← Workers Cohesion    | .687     | .185         | 24.994 | 0.0001 |
| Stress ← Supervisors Support | .993     | .220         | 28.975 | 0.0001 |
| Stress ← Autonomy            | 1.037    | .250         | 28.795 | 0.0001 |
| Stress ← Work Pressure       | .966     | .210         | 3.698  | 0.0001 |
| Stress ← Physical comfort    | 1.001    | .263         | 37.452 | 0.0001 |
| Stress ← Innovation          | .978     | .305         | 45.669 | 0.0001 |
| Burnout ← Stress             | .665     | .365         | 22.614 | 0.0001 |
| E. Exhaustion ← Burnout      | .122     | .456         | -7.346 | 0.0001 |
| Cynicism ← Burnout           | .085     | .426         | -6.629 | 0.0001 |
| Inefficacy ← Burnout         | .095     | .302         | -4.715 | 0.0001 |

These results suggest changing the conceptual model to include only the 7 work environment characteristics that affect stress and burnout. CFA was conducted for the concept of Burnout which hypothesized to be factorized into three components, namely: Emotional Exhaustion, Cynicism, and Inefficacy. To test the fit of the model, a path analysis model was designed to represent the possible paths from work environment to stress, and to burnout. The hypotheses model was explored and the overall model

fit was validated. The analytical results are shown in Table 4. With regard to the indices of overall model fit, the model showed good fit indices, as it scored 2.032 for CMIN/Df. For GFI, AGFI, NFI, and CFI the model scored 0.976, 0.968, 0.984 and 0.991 respectively. When using RMSEA the model score was 0.048. Model fit analysis is illustrated in Table 4. The results support the structural model presented in Figure 2.



**Figure 2. Testing the Mediation Relationship**

### 7. Discussion

According to the results, Egyptian teachers under investigation experience medium to high levels of stress and medium levels of burnout. Compared to research

conducted on teachers using the WES in Australia and England [16,57] the research findings suggest that Egyptian teachers report less involvement and supervisors' support, less autonomy, less Co-worker Cohesion, less innovation and less Physical Comfort. Egyptian teachers reported high work pressure similar to these researches [16,57]. The lower degree of autonomy

and involvement can be explained by the high power distance culture in Egypt [15], whereas, lack of physical comfort and innovation could be attributed to the limited resources and shortage of technological advances in schools. It can also be attributed to the un-innovative work where curricula and teaching methods are rigid and inflexible. During the *interview* process with senior teachers they expressed their proudness that every element of the educational process is very well planned and controlled that junior teachers cannot change them. It was said that teachers should not have the right to change the curricula or teaching methods in order to maintain consistency. This could be indication for the

High Work pressure could be attributed to the nature of the occupation itself [4,31] and to the fact that private schools in Egypt tend to minimize full time staff members for cost reduction. The surprising result was the lack of co-worker cohesion. Egypt scored low on the Individualism culture dimension, so it is expected to demonstrate higher co-worker cohesion than Australia and England (both scoring high on Individualism). The result may be explained by the growing competitive work environment in Egypt as it scored relatively high on Masculinity, yet, lower than Australia and England [15], and by the high rate of unemployment that force teachers to compete for their jobs.

These work environment characteristics have significant effects on Egyptian teachers' perceived stress and burnout, and lend support to previous work where these characteristics were seen as work stressors and related to burnout [9,16,51,57]. The exclusion of managerial control, lack of clarity (or role ambiguity) and task orientation as sources of stress and burnout matches the results found in previous research [40]. Yet, it contradicts with other results that support the effect of managerial control, lack of clarity and task orientation in stress and burnout development [24,48].

The exclusion of managerial control could be attributed to two reasons; the attributes of the knowledge involved and the culture. It was found that the use of managerial control can have differing effects on motivation and employee' psychological status depending on the attributes of the knowledge involved. When the knowledge being used is complete and in a state of stability- like in teaching- the negative effects of managerial control are minimized [11]. Within the Egyptian culture context high managerial control is relatively accepted as a manifestation of high power distance [15], taking into consideration that 81% of the respondents have more than 5 years' experience in their current school, it is expected that they have already adapted to the systems [16].

Understanding Employees' reactions to task clarity is essential in explaining the research result. If a task is clear, performance levels can easily and fairly be assessed, accordingly, stress is reduced [32]. On the other hand, if tasks are vague or ambiguous, consequently performance assessment is less straightforward, and employees fear injustice, which in turn can increase stress [32]. In the teaching context, tasks are well identified and performance indicators are relatively standardized [16]. This matches with teachers' comments in the interviews. This may justify the exclusion of lack of clarity as a source of stress in this research.

Task orientation was found to increase stress, yet, the relationship was not significant [27]. Task orientation has a beneficial side which is the emphasis on clear objectives, good planning for activities, clear steps and instructions. This helps in decreasing the anxiety and stress associated with unclear objectives and activities. On the other hand, task orientation emphasises getting the job done with no regard for personal relations which may be associated with higher workloads and accordingly higher stress [27]. In this research it seems that the beneficial side had the greater effect on teachers' perceived stress as task orientation was not reported as a source of stress.

The results revealed that burnout components are affected by different work environment characteristics. Emotional exhaustion was predicted by: lack of workers cohesion, lack of supervisors support, work pressure and lack of innovation (these characteristics predicts 34% of the total variance in EE). According to Droogenbroeck and his colleagues (2014), teachers are exposed to what he called intensification and de-professionalization, according to this thesis, teachers are "increasingly subjected to external pressures from policy-makers, supervisors, parents, and experts. This intensification results in a never-expanding teaching role, a significant increase in nonteaching-related (largely administrative) workload, and less time for social contact with colleagues and in private life" [11]. So, teachers are subject to ongoing work pressure and decline in interpersonal relations with supervisors and colleagues. Workloads and time pressure are dominant features of teachers' work environment that relate directly to Emotional exhaustion [11,50]. The results of a structural equation analysis conducted by Li and his colleagues (2013) matches the results of the current study where job demands (psychological and physical demands) and job resources (decision latitude, supervisor support and co-worker support) affect emotional exhaustion [26]. The effect of autonomy (decision latitude) on emotional exhaustion is not clear in previous studies. The effect was supported by some studies [26] where decision latitude and control of resources significantly affect emotional exhaustion levels. On the other hand, autonomy was found to have insignificant effects on emotional exhaustion [50]. This difference could be attributed to the context of these studies. The relation between autonomy and emotional exhaustion was not supported in the teaching context. Lack of innovation manifested in rigid curricula and level of technology applied affect teachers' emotional exhaustion, where they could not satisfy their motivational needs [16,57].

The results show that lack of innovation, lack of supervisor support, work pressure and lack of autonomy explain 27% of the total variance in Cynicism. Autonomy was found to affect Cynicism directly [57] as lack of autonomy drives teachers to set spaces between them and other parties (especially students and parents) due to their inability to respond to their demands in an autonomous way [11]. Like emotional exhaustion, cynicism is also affected by work pressure, innovation and interpersonal relationships. Individuals high in cynicism are likely to have negative perception of co-worker support and supervisor support [11,50,52]. Cynicism is seen in the literature as a personality trait [52], an organizational attitude and burnout dimension. As a personality trait, it

represents the belief that people and social entities cannot be trusted because they pursue only their own self-interest and can deceive in order to achieve them [52]. As an organizational attitude, it represents a negative attitude toward organization' members due to mistrust and suspicion, negativism and being doubtful about facts. Accordingly the employee creates a distance between him/her and his/her colleagues and supervisors. Some researchers prefer to deal with this as Organizational cynicism [40]. As burnout dimension, it is a coping technique based on creating emotional distance between the service provider and the recipient to avoid emotional stress. The common area is tendency to create distance and the difference is the targeted people for this distance. As a personality trait the distance targeted to any one the person deals with (e.g. friends, family...) whereas organizational cynicism is targeted toward organizational parties (colleagues, supervisors, subordinates). Cynicism as a burnout dimension is targeted toward service recipients. Taking this holistic view of cynicism, it could be seen as an outcome and a reason for lack of supervisor support and co-worker cohesion. When teachers perceive that their supervisors and colleagues are not supporting them and seek only their own interest, they tend to avoid taking decisions or actions, they prefer to keep distance to avoid stressful situations. On the other hand, when supervisors and colleagues perceive teachers' actions as a kind of cynicism, they consider this behaviour as a sign for negative response to their actions and as a sign of rejection. So they do not give any further support. Social support (manifested in supervisor and colleague support) can help in reducing cynicism. Yet, a question needs to be asked about whether all people may suffer from cynicism, or only those who have this personality trait. In other words is there a real distinction between them?

As for Inefficacy, lack of work cohesion, lack of involvement, lack of innovation, lack of autonomy and lack of supervisor support explain 22% of its total variance. As in the other two dimensions, Ineff1cacy is affected by lack of supervisor support and co-worker cohesion, as employees perceive that their supervisors and colleagues are not supporting them, they perceive it as a reflection of being unworthy and unqualified [5]. Lack of autonomy can also be interpreted as a sign of not being trusted and not capable of taking decisions. Job involvement was found to predict burnout and its three dimensions [7]. Yet in this study, Job involvement predicts burnout and only one dimension (inefficacy). In Chauhan' study job involvement has a positive correlation with personal accomplishment (a positive construct), while in this study lack of job involvement has positive correlation with inefficacy (negative construct). This points out the debate about the third dimension of burnout. Originally, it relates to the belief that one is no longer effective in performing one's work. Although the concept itself is a negative one, yet the MBI scale used positive wording to measure it. The research that used this scale reported contradicting results that led to the question should this dimension be excluded from the burnout concept or the scale be redefined [47,49]. This debatable point needs more investigation from researchers. The results also show that lack of innovation predicts ineff1cacy, yet, as with other dimensions, there is a

shortage of studies on the effect of innovation on inefficacy.

Finally, the mediational analysis revealed that the relationship between Work environment characteristics and burnout can be largely accounted for by the job stress caused by the different stressful Work environment characteristics. This matches the fact that burnout is a result of pro-longed and high levels of stress at work [30]. This result is supported by the works of [8,23]. Yet, scholars tend to ignore this mediation role of stress in burnout studies, where models are introduced without this mediation role [19,37]. This could be justified by the need for simplicity, yet the mediating role of stress should not be ignored.

## 8. Conclusion

This study aimed at investigating the work environment characteristics that are perceived as work stressors by Egyptian teachers and that may lead to teachers' burnout. The mediating role of stress was also investigated by proposing an explanatory model for the hypothesized relationships between the three variables. The results revealed that Egyptian teacher in private schools report low levels of involvement, autonomy, co-worker cohesions and supervisor support. They also work in un-innovative work environment with low levels of physical comfort along with high work pressure. These work environment characteristics led to high level of stress and medium level of burnout among teachers.

These results indicate several *practical implications*: first, the need to revise and restructure the work environment in private schools in Egypt, in order to promote a supportive work environment. Second, the fact that each dimension of the burnout construct is predicted by different work environment characteristics is eye-catching and should be the subject of further investigation by academics and practitioners especially when designing intervention programmes to reduce burnout. This fact was clearly stated by [23].

The results also have *theoretical implications*. First, it is important to consider the mediating effect of stress in the relationship between burnout antecedents and burnout. The reality that burnout is always associated with stress as an outcome of ineffective coping strategies should not be neglected in models that try to explain the interactions with burnout. However, excluding stress from these models should be out of the need for simplicity. Second, there is a gap in research that needs to be fulfilled considering the effects of innovation – as a work environment characteristic- and burnout. Only few researches have tackled this relation [16, 57]. Accordingly studies that investigate how innovative environments can affect burnout and burnout dimensions is needed. Third, the relationship and the distinction between cynicisms as a personality trait, organizational attitude and burnout dimensions needs to be investigated.

These results are subject to the following *limitations*. (1) The timing of the research in a transition period between political systems may limit the generalizability of the results. Yet, it could be helpful for decision makers as a pilot study before any intervention is introduced. (2) The research sample (250 respondents) and the nature of the

schools (privately owned schools) may also limit the generalizability of the results. During the timing of the research (academic year 2013-2014) public schools were not accessible. Yet, knowing that the number of private schools in Egypt in the academic year 2013-2014 were 6604 schools, which constitute approximately 16% of the total number of schools working in Egypt, it can be concluded that the results can be used in confidence for the private schools, which indicate the importance of the research results.

**Future research** should address the effects of work environment on teacher burnout in public sector in Egypt. The role of innovation and task orientation on burnout in eastern cultures needs to be investigated. Finally, the interaction between cynicism as a personality trait, organizational cynicism as an organizational attitude and as burnout dimension needs to be investigated.

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