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Assessment of Work-Related Feelings Among Teachers within The United States and Jordan

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ASSESSMENT OF WORK-RELATED FEELINGS AMONG TEACHERS WITHIN THE UNITED STATES AND JORDAN

by

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ABSTRACT

Human personalities combined with working conditions affect how employees react to different work situations. Personality and work environment have also been shown to affect workers' feelings. Employees' psychological health plays an essential role in their performance and productivity in the workplace, and organizational awareness of work-related feelings has sparked interest in investigating this field of study. Teaching is a stressful job; however, research evaluating discrete states of work-related emotions in teachers remains somewhat limited. This study investigated the effects of job demands on teachers' work-related feelings within middle and high schools in the United States and Jordan. The study results revealed several significant relationships between the categories of job demands, including time pressure, discipline problems, and students' motivation, and four work-related feelings expressed by teachers: anxiety, happiness, dejection, and anger. Such knowledge should help manage teachers' feelings and mitigate potentially stressful and adverse health conditions in middle and high school environments. The effect of cultural differences on these relationships has also been discussed.

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CHAPTER 1: INTRODUCTION

1.1 Background

Workers' personalities, combined with the work environment, have been proven to affect how workers react to different work situations. It also affects their feelings and modes (Gomes, Faria, & Gonçalves, 2013). Workers' psychological health plays a leading role in their performance and productivity within the workplace. Therefore, organizational awareness of work-related feelings increased researchers' interest in investigating this field.

1.2 Work-Related Stress

Work-related stress is one of the most experienced feelings in the workplace. During the last ten years, substantial technological revolution and economic development have been taking up the world. Coping with these changes increased organizational competition, which created more stressed and insecure workers (Keser, Li et al. 2019). Most people affected by these changes were the less-educated workers, who are more likely to feel overwhelmed by handling fast technological changes and remain qualified for their jobs (Keser, Li et al. 2019). However, highly educated and well-trained employees have shown a better ability to deal with work-related stress. They developed higher skills to avoid negative health conditions related to the tough work environment (Boily, Kingston et al. 2017). Recently, researchers found that continuously exposing employees to stressful work environments will result in frequent negative feelings such as stress, burnout, and depression (Gómez-Gascón, Martín-Fernández et al. 2013). More discrete feelings still need further investigation and studying discrete feelings (e.g. happiness, sadness, anxiety, and fear) will result in a comprehensive understanding of work-related feelings, hence, more effective solutions.

Occupational stress could result from both the work environment and personal factors (Gomes, Faria et al. 2013). Jobs with high demand, night shifts, overtime, and strict management have all been proven to increase workers' chance to feel stressed (Chayu and Kreitler 2011). However, workers' response to job stressors can be different by many factors, such as; gender, age, years of experience, level of education, and culture (Antoniou, Polychroni et al. 2006, Khamisa, Oldenburg et al. 2015). Continuous stress at work usually results in emotional exhaustion and loss of concentration, resulting in poor performance and low efficiency (Graham, Davies et al. 2011). Studies show that workers with higher job satisfaction commence better working performance and higher quality outcomes (Côté and Hideg 2011). Experiencing continuous stress at a workplace causes failure and imbalance in the biological system (Khamisa, Oldenburg et al. 2015). This failure produces a barrier against handling harsh work environments, thereby causing unhealthy conditions such as depression, insomnia, and social isolation (Côté and Hideg 2011).

As demonstrated in Figure 1, Michie 2002 introduced a model for sources of occupational stress in any organization, showing expected physical and mental outcomes (Michie, 2002). The leftmost column shows organizational factors that cause occupational stress. Work overload, time pressure, and poor work environment are the most common sources of work stress. Moreover, many factors contributing to imbalanced career development are considered to create insecure and stressed workers who do not get fair promotions. Unhealthy communication within the environment is another source of organizational stress. Unhealthy communication may arise from or interact with workplace bullying, face-offs, and dark leadership. On the managerial side, poor management, poor decision-making processes, and a lack of employee participation are considered to enforce occupational stress.

All of these factors induce two types of outcomes. The first outcome is generated by the organization's managerial roles and is presented in the figure as organizational outcomes; the second type of outcome depends on the organization's workers' roles and how they handle job stressors and demands (Michie, 2002). Both outcomes result in physical and mental issues that would force the organization to make rapid changes and implementations such as downsizing, rescheduling, merging, and subcontracting (Kossek, Ruderman, Braddy, & Hannum, 2012).

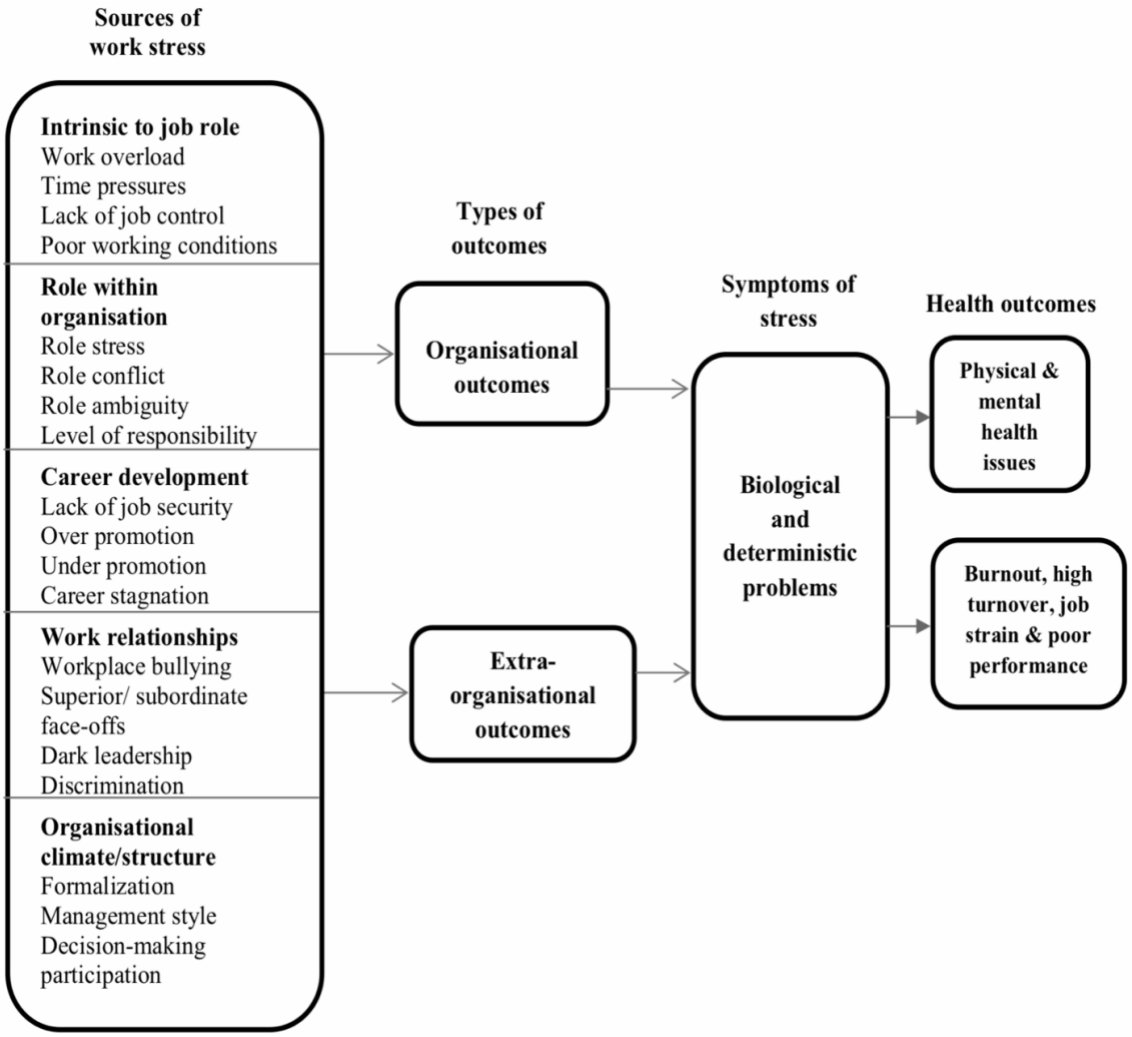

Figure 1: Factors Associated with Occupational Stress and their Outcomes (Michie 2002)

A study in nurses suggested some factors that affect the level of job satisfaction. These factors included various items such as promotions, management issues, staff issues, stress at work and the nature of the work. Stress at work had the highest effect on job satisfaction. In addition, communication, overtime pay, and long working hours play primary roles in worker satisfaction. Job satisfaction and the work environment significantly impact workers' emotions and performance, thereby affecting work quality and productivity. This has led to an increased interest

in organizational awareness and controlling the workplace environment to cater to workers' needs (Khamisa, Oldenburg, Peltzer, & Ilic, 2015).

The needs hierarchy described by Maslow states that lower-level needs must be satisfied before higher-level needs can be met (Huizinga, 1970). Meeting lower-level needs, such as safety, security, and emotions, would make workers in the healthcare industry, for example, less worried about patients' health (Hall & Nougaim, 1968); furthermore, they can avoid further loss of patient life (Van Bogaert, Clarke, Roelant, Meulemans, & Van de Heyning, 2010).

Two categories are used to classify organizational stress management: personal-level management and organizational-level management. To control stress on a personal level, organizations provide programs to teach workers how to handle stress in the workplace (Van Bogaert et al., 2010). However, providing the best resources and developing an understanding management system are needed to control work-related stress at the organizational level (Khamisa et al., 2015). Techniques used at both levels can prevent stress, burnout, insecurity, and negative physical or emotional issues (Chayu & Kreitler, 2011).

1.3 The Scale of Work-Related Affective Feelings (WORAF)

The scale of work-related affective feelings has first developed and validated by three researchers; Waldemar Karwowski, Magdalena Anna Jaworek, and Tadeusz Marek, to measure and evaluate workers' work-related affective feelings in Poland. The WORAF scale includes four discrete emotions that may experience in the workplace: happiness, anger, anxiety, and dejection. The Bioethics Committee accepted the scaling protocol of 28-items at the Jagiellonian University in Krakow, Poland, and three studies conducted by researchers to confirm the validity and

consistency of the WORAF scale. The first study included 297 Polish employees and designed to test the first version of the scale using a pilot study. The second study included 3019 Polish employees and proposed to confirm the results obtained from the first study. The third study with 284 participants used correlation analysis to verify the scale's validity (Jaworek, Marek et al. 2020). Table 1 summarizes the procedure of developing and validating the WORAF scale, including details on each study participants, procedure, and findings.

Table 1: Procedure of Developing and Validating WORAF Scale (Jaworek, Marek, & Karwowski, 2020)

Study	***Participants***	***Procedure***	***Findings***
Study #1	*297 employees of whom 59.6% were women and 36.7% were men (5.2% did not report their gender). Subjects were employed in different organizations and institutions. The major occupational groups included in the sample were managers (13.1%), sales representatives (11.4%), and office workers in the private sector (10.8%). At least 39% of the sample subjects were white- collar workers. Most participants of the Study 1 were employed in the current workplace between 3 and 5 years (26.6%), and of these, 27.9% in their current position from 3 to 5 years. The average work experience was 11.09 years (SD = 8.8). The participants worked on average 42.65 h per week (SD = 8.5).*	*Pilot study: Items on the scale were created by subject matter experts and have been widely used in other studies on the development of questionnaire measurement instruments (e.g., Hardesty and Bearden, 2004; Ross et al., 2006). The team of experts consisted of seven people. All evaluators were practitioners with extensive job experience in diverse organizational environments. The questionnaire statements were developed by the authors based on dictionary definitions, academic knowledge, and work experience of the expert's team.* *28 of 72 items were chosen for the first version of the measurement instrument. Answers to question: Taking into account the last month, how often do you feel at work in a way described below? were scored on a 4-point rating scale, ranging from 1 (almost never) to 4 (almost always).*	*The factorial structure of the WORAF was verified, and the internal consistencies of the subscales were calculated.* *The results of the EFA of the WORAF-28 version revealed a five-factor structure solution. Thus, we decided to exclude three items from the original version of the scale* *Details in table 1- Appendix C*
Study #2	*019 Polish employees, of whom 63.6% were women and 31.2% were men (5.2% did not identify their gender). The subjects were employed in a variety of organizations and institutions. The major occupational groups included in the sample were teachers (19.3%), nurses (11.6%), and managers (10.6%). At least 36% of the sample was white collar workers. Approximately 29% were aged under 30, almost 34% between 31 and 40, 22% between 41 and 50, approximately 12% between 51 and 60, and 2% over 60 years. Most participants of the study 2 were employed with the current place of work for between 3 and 5 years (20.4%), and of these, 23.9% in their current position from 3 to 5 years. The average amount of work experience was 14.8 years (SD=10.38). The participants worked on average 41.11 h per week (SD = 11.59).*	*Analyses were conducted with a revised version of the WORAF-24. In addition, an analysis of the one- factor model (24-items) was conducted.* *invariance test of the WORAF was examined using multigroup confirmatory factor analysis across two basic demographic factors: gender and age.* *the configural model in which all parameters were estimated without any equality constraints was run. Then, the metric invariance was tested by constraining the factor loadings between the observed items and the corresponding latent variable to be equal across the compared groups. In addition, the scalar invariance was tested by constraining the factor loadings, with the indicator intercepts required to be equal across the gender groups,*	*In the case of the four-factor model, the CFI, TLI, and IFI indices ranged between 0.93 and 0.94, and the RMSEA and SRMR were small (respectively, 0.05 and 0.04), which indicates a good fit of the model to the data (Details in table 3- Appendix C). Only one indicator (cmin/ df) was greater than the recommended value. All items were significantly loaded on latent variables, with coefficients ranging from 0.45 to 0.82. In the one-factor model, the fit indices were less than, or greater than the acceptable thresholds, depending on the indicator. (Details in table 1- Appendix C)* *In conclusion, these results confirmed both the same measurement pattern and psychological meanings for the latent constructs across gender and all age groups, excluding the youngest (Vandenberg and Lance, 2000). Scalar invariance analyses conducted in the gender groups showed that the three studied constructs (WR feelings of happiness, anger, and dejection) were measured in the same way in each group. In the case of WR feelings of the anxiety scale, only partial scalar invariance was*

Study	*Participants*	*Procedure*	*Findings*
			supported. Details are provided in Table 4 below.
Study #3	*284 respondents were recruited from external study programs (M.A. and B.A. programs) through the psychology and management departments from universities located in three different cities in Poland. The participants of the study were employed in different organizations and occupations, mostly as office workers in the private sector (20.8%), specialists (15.8%), and accountants/financial analysts (10.2%). At least 40% of the sample was white-collar workers, and all participants had completed at least secondary education. The sample consisted of 70.1% women and 25.4% men (4.6% did not identify their gender). Almost 80% were aged less than 30, approximately 15% between 31 and 40, 4.6% between 41 and 50, and only one person between 51 and 60. Most participants of the Study 3 were employed with their current work place between 3 and 5 years (25.4%), and of these, 28.2% in their current position from 0 to 6 months. The average work experience was 5.9 years (SD = 5.55). The participants worked on average 41.12 h per week (SD = 9.9).*	*For the purpose of convergent validity, partial correlation analyses with gender and age control variables were conducted between the WORAF scales, where the four groups of emotions are considered in the dimensional approach, as well as personality traits. In addition, the factorial structure with CFA and internal consistencies of the subscales were tested once more.*	*Confirmatory factor analysis revealed a satisfactory model fit to the data (cmin/df = 2.33; CLI and IFI = 0.90 (Details in table 3- Appendix C); RMSEA and SRMR = 0.07) (Details in table 2- Appendix C). Only one indicator (TLI) achieved a value that was slightly less than the acceptable threshold (0.89). All items were significantly loaded on latent variables, with coefficients ranging from 0.30 to 0.86 (Details in table 1- Appendix C). In general, these results were close to the outcomes from Study 2, which supports scale stability.* *sets of internal consistency using Cronbach's alpha for each of the factors (subscales) showed good reliability values ranging from 0.78 for WR feelings of dejection to 0.83 for WR feelings of anxiety. The WR feelings of happiness were negatively related to the rest of the subscales between (r = −0.54) and (r = −0.67), whereas correlations between WR feelings of anxiety, anger, and dejection ranged from (r = 0.52) to (r = 0.58) Details in table 2- Appendix C).* *work-related feelings of happiness were significantly positively correlated with HPLA and HPHA (respectively, r = 0.76 and r = 0.72) and negatively, with LPHA and LPLA (respectively, r = −0.55 and r = −0.65) (Details in table 4 - Appendix C).*

1.4 Job Demands-Resources Model (JD-R)

There are many models were created to describe employees'' well-being. The most common models in the field of occupational stress research are the demand-control-support model (Schonfeld & Chang, 2017) and the effort-reward imbalance model (Schonfeld, 2018). After that, an alternative model was derived to explain the relationship between two categories of

organizational characteristics; job demands and job resources (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Bakker and Demerouti created the Job Demands-Resources (JD-R) demand, which have been widely used to evaluate workers' work-related stress measured by job demands and evaluate workers' motivation and performance measured by job resources (Bakker & Demerouti, 2007).

The JD-R model were designed to include physical, cognitive, and emotional demands and numerous resources located at organizational, interpersonal, work, and task levels. The authors described job demand as a requirement of "sustained physical and/or psychological (cognitive or emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs", where they explained job resources as job requirement that helps in "functional in achieving work goals" and "reduce job demands and the associated physiological and psychological costs" (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).

To assure the proper application of the JD-R model, many documents created to organize the applicability of the model in various work fields (Demerouti et al., 2001) (Bakker, Demerouti, & Verbeke, 2004) (Bakker, Demerouti, & Dollard, 2008). Recently, researchers began to apply JD-R model in the educational field to study the effect of work environment on teachers' well-being (Simbula, 2010) (Hakanen, Bakker, & Schaufeli, 2006) (Bakker & Bal, 2010) (Skaalvik & Skaalvik, 2018). Simbula et al. 2010 found a positive links between collogues support with job satisfaction and mental health that eventually reflect on teachers' work engagement. However, she also job satisfaction and mental health to be affected by the work-family conflict, which would also affect teachers' emotional and physical exhaustion (Simbula, 2010). Another study found that teachers' health and organizational commitment are affected by their burnout level created by the

job demands and their work engagement level created by the job resources (Hakanen et al., 2006). Bakker et al. 2010 studied the weekly level of teachers' autonomy in relationship with the weekly level of engagement by evaluating the changes in supervisor support and development chances. He found these to be positively correlated and reflect on teachers' weekly level of performance (Bakker & Bal, 2010). Another study used JD-R model to investigate the effect of teachers' perception of job demands and resources on their well-being, job engagement, and intention to quit profession. The author found teachers' well-being to be highly related job demands and moderately related to job resources. Furthermore, teachers' well-being was a predictor for high job engagement and low intentions to quit profession (Skaalvik & Skaalvik, 2018).

Teaching as a job include several and diverse tasks. Teachers need to have maintained psychological health and sufficient resources to be able to professionally perform and fulfill their position. The psychological health and its effects on teachers' well-being and performance used to be under evaluated (Bellas, 1999). Workload is considered one of the main factor that blemish teachers' productivity and motivation. Teachers even reported that excessive workload affected their problem-solving skills and communication skills (Ilies, Huth, Ryan, & Dimotakis, 2015).

Bauer et al. 2007, studied the quality of 949 teachers' mental health related to work conditions including workload. Most of the respondents reported mental reactions such as stress, lack of sleep, lack of concentration, and poor decision-making skills. Also, respondents reported emotional reactions to work conditions where they experience feelings like sadness and depression (Bauer et al., 2007). Moreover, high workload environment seems to attract workaholic people where they can satisfy their extreme energy (DEFINE WORKHOLICS). Hogan et al. 2016 found that academic professions have the higher number of workaholism that aligns with poor psychological

health and work outcomes (Hogan, Hogan, & Hodgins, 2016). Workaholics found to have high levels of burnout than other employees working in the same environment (Schaufeli, Bakker, & Van Rhenen, 2009).

Researchers' efforts have been moved to encourage the study of the possible causes of work-related stress instead of focusing on the stress and negative mental health relationship. High workloads consider one of the main causes of work-related stress, where people are under the pressure of working for long hours, and working fast (Guglielmi & Tatrow, 1998). Researchers through the years tried to prove the dark side of high workload environments, where they found it reflect on people work-family conflicts, their attitudes, and their overall well-being. This usually happens as a result of imbalance between energy required to perform job and resources available to overcome physical fatigue, cognitive fatigue, and emotional fatigue (Ilies et al., 2015).

One study has developed a job demand-resources model and tested on 805 schools' teachers (Bakker et al., 2007). Negative links between teachers' work engagement and misbehaviors found to be able to be reduced by offering the adequate job resources. The researcher found 14 double-way interactions , where supervisor support, innovativeness, appreciation, and organizational climate found to be the most job resources that supported teachers working in high job demand environment (Bakker et al., 2007).

Job demand- resources model consider two organizational factors that would affect employees' well-being. First factor is the high workload characterized in high physical, social, emotional, or organizational job requirements. High work requirements produce negative outcomes when they exceeds the employees capability to recover (Meijman, Mulder, Drenth, & Thierry, 1998).

In teaching, mental and physical workload can results in long-lasting fatigue that usually affect teachers' performance and led to job burnout (Rudow, 1999). Bakker et al. (2000) showed that teacher-student relationship should be balanced, which means that teachers need to receive rewards for their physical and emotional investments. Investments returns are missed when students are careless, distracted, disrespectful, or even bored. This imbalance between what teachers give and what they receive in return will make them physically and emotionally exhausted that end with job burnout (Bakker & Schaufeli, 2000) (Schaufeli et al., 2009).

Second organizational factor discussed by the job demand-resources model is the resources offered to employees to help them recover the physiological and psychological energy they invest to perform the job tasks (Demerouti, Van den Heuvel, Xanthopoulou, Dubbelt, & Gordon, 2017). Bakker, Demerouti, Taris, et al., 2003 categorized job recourses into four types; organizational recourses such as salary and promotions, interpersonal and social resources such as administrator and colleague support, organization of work resources like sharing in decision making, and task related resources like performance feedback. In general, sufficient job resources can reduce the impact of high workload or intensive job demands (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003).

The demand-resources model suggests that working conditions can induce two psychological conditions. First condition starts with continuous overloading, which produce physical and emotional exhaustion with time. Employees' exhaustion reflects negatively on their performance and on the organizational outcomes (Bakker et al., 2003). Second condition include job engagement, extra role performance, and positive organizational outcomes as a result of sufficient job resources (Schaufeli & Bakker, 2004; Schaufeli et al., 2009). In teaching, job resources,

rewards, and promotions are important to encourage teachers' investments, motivation, and commitment which reflects on the success of the educational organizational (Bakker et al., 2003).

Yin et al. 2016 has used an altered version of job demand-resources (JD-R) model that discuss the effect of teachers' emotional job demands and trust in colleagues on their emotional exhaustion state and job satisfaction state. He found that high emotional workload can be damaging to the teachers mental and physical health. In addition, the author discussed two different emotions regulation strategies which he proved their positive affect on teachers' well-being (Yin, Huang, & Wang, 2016).

1.5 Objectives

The main objective of this research is to assess the effect of job demands on work-related feelings among middle and high schools' teachers within the United States and Jordan educational systems. Results within each country were analyzed with respect to age, gender, and level of experience. The data from the United States and Jordan was compared to understand how teachers' well-being is affected by work environments in two different societies. The Job Demands-Resources (JD-R) model is used to measure three types of job demands: discipline problems, time pressure, and students' motivation. The scale of Work-Related Affective Feelings (WORAF)" is used to measures four different work-related feelings that can be generated by the work conditions, including feelings of happiness, anxiety, anger, and dejection.

Studying the work conditions reflection on teachers' mental health helps us defining the problem in the first place. Once the problem is defined, we can develop and implement solutions and prevent negatives outcomes. In this research, the effect of job demands on teachers' feelings was

investigated. This research was applied in the United States and Jordan to compare the regional and cultural differences.

This study directs attention to the importance of creating a healthy working environment in schools and universities. Such studies would push the efforts to:

- Decrease workplace stressors to implement the process of delivering knowledge.
- Provide teachers with workshops to train them on how to control their emotions and lower emotional exhaustion at the workplace.
- Provide teachers and students with training on how to become emotionally intelligent, would post teachers' mental health and students' academic success.

CHAPTER 2: LITERATURE REVIEW

2.1 Emotions

Hargreaves defines emotions as “dynamic parts of ourselves, and whether they are positive or negative, all organizations, including schools, are full of them" (Shapiro, 2010). Emotions can be divided into positive emotions and negative emotions (An, Ji, Marks, & Zhang, 2017). One study discussed uncommon reactions to current emotions, where positive emotions can align with negative reactions and negative emotions can align with positive reactions in the long term (An et al., 2017). Happy people have been shown to be more selfish than those who are experiencing sadness. Gruber et al. (2011) mentioned an example of a very happy person having a greater chance of experiencing unhappiness and depression later in life (Gruber, 2011). Forcing happiness in oneself is a known phenomenon that usually leads to loneliness and depression (Tan & Forgas, 2010). Notably, negative feelings should not always count as a bad experience, as experiencing anger can lead to better performance and personal goals (Parrott, 2014).

Briner (1997) divided feelings into three different types depending on their affective phenomena: moods, meta-modes, and emotionally laden judgments. Moods are defined as intense emotions that humans can experience, which are created by prevailing circumstances, such as sadness, rather than specific incidents (Briner, 1999). Meta-moods are human thoughts used to understand, accept, and control moods and emotions. These thoughts can be expressed by asking questions such as “do I know how I feel?,” “is it ok to feel like this,” or “can I change this feeling” (Briner, 1999). Finally, emotionally laden judgements are most related to work emotions. Humans typically

express these judgements by describing an experience. Some examples of expressions are "exploited, disrespected, trusted, or appreciated" (Briner, 1999).

In general, emotions experienced in the workplace are usually explored from psychological or sociocultural perspectives (Hökkä, Vähäsantanen, & Paloniemi, 2019). The psychological perspective suggests that emotions are elevated by certain events and experiences, resulting in corresponding facial expressions and reactions, discounting the fact that peoples' reactions are different (Crivelli, Jarillo, Russell, & Fernández-Dols, 2016). However, the sociocultural perspective claims that a psychological evaluation of emotions ignores the fact that society and cultures set emotional rules that shape how people react to pleasant/unpleasant experiences (Hareli & Rafaeli, 2008).

Psychology research was previously limited to studies evaluating stress versus satisfaction at work. In recent decades, researchers have become more aware of the importance of evaluating different emotional states to implement workers' health and allow organizations to thrive (Briner, 1999). Giving workers' feelings general descriptions, such as stressed or satisfied, would make it hard to explain why they feel that way. Furthermore, without well-defined explanations, researchers will not develop implementations and solutions to avoid or treat negative emotions in the workplace (Briner, 1999).

2.2 Common Work-Related Feelings

2.2.1 Burnout

Burnout can be defined as psychological symptoms that people experience following exposure to a high workload environment paired with a lack of resources (Hakanen & Schaufeli, 2012).

Moreover, according to Herbert Freudenberg (1974), burnout is “a state of physical, emotional and psychological weariness or tiredness, with symptoms that include a decrease in the level of achievement, de-personalization and a decrease in the level of interest in work.”.

Freedenberg was among the first to study such concepts in the mid-1970s. His views about the burnout phenomenon were shaped by multiple qualitative studies involving interviews of personnel in different industries (Schaufeli, Maslach, & Marek, 2017). Another related issue is the relationship between job satisfaction and burnout, with recent studies finding a connection between these concepts (Al-Majid, Carlson, Kiyohara, Faith, & Rakovski, 2018). The theory of conservation of resources can show how burnout is affected by health outcomes via the depletion of resources needed for coping and job satisfaction. The results are a negative state of exhaustion, fatigue, somatizations, social withdrawal, and depression (Khamisa et al., 2015). Notably, depression has been a hard-to-control mental issue even when treated in the early stages (Bullock, Waddell, & Lavis, 2016). These facts highlight the importance of developing programs to prevent and control depressive illnesses.

Over 33% of teachers who participated in previous studies pertaining to teachers’ work-related emotions agreed that teaching is a stressful job that they would not choose if they had the opportunity to go back in time (Nagel & Brown, 2003). However, A variety of results were obtained. Some acknowledge the existence of negative emotions in special education and propose recommendations to educate and train teachers on emotional labor (Dababseh, 1993). Others describe working in special education as motivation to develop better communication skills with students (Al-Khateeb, Hadidi, & Elayyan, 1996). In any organization, worker burnout is an aggravated problem that affects workers' health, performance, and organizational goals (Majali,

Al Adwan, Rafi'Shaheen, & Al Momani, 2015). In teaching, job stressors can lead to worker burnout. Kim, Lee, & Kim (2009) listed teaching stressors as “inadequate resources, poor working conditions, working overload, role ambiguity and conflict, pressures of the teachers' role, lack of professional recognition, low remuneration, lack of involvement in decision-making, lack of effective communication, staff conflicts, and student misbehavior” (Kim, Lee, & Kim, 2009).

2.2.2 Depression

Maintaining a healthy body requires taking care of mental health. Due to poor awareness of the importance of mental health and the shortage of mental care resources, a high percentage of individuals with mental and emotional issues do not get the care they need (Dietrich, Deckert, Ceynowa, Hegerl, & Stengler, 2012). Related studies have shown that prevention techniques may significantly reduce emotional issues for workers in all organizational systems (Furlan et al., 2012). Depression is one of the most common emotional illnesses in society and is studied extensively in workplace settings (World Health Organization 2012).

Depression also has negative effects on the economy. Harsh work conditions, such as decreased sleep for night and early shift workers, are usually associated with major unhealthy physical and emotional conditions such as depression (Ramin et al., 2015). Individuals working night shifts suffer from an altered circadian rhythm, which leads to misalignment of social and biological schedules. Similar to the effects of traveling between different time zones, working shifts can cause a jetlag-like state (Drake & Wright, 2011). The internal biological system controls the need for sleep as well as temperature, heart rate, and hormone levels (Boivin & Boudreau, 2014). Night shift workers have low melatonin levels as a result of reduced light exposure. This sleep pattern

can also increase the risk of developing depression, breast cancer, and heart disease, in addition to causing cortisol dysregulation (Hill et al., 2015).

A cross-sectional study evaluating the effects of night and early shift work on mental health was performed by Germany's Federal Institute for Occupational Safety and Health (Vogel, Braungardt, Meyer, & Schneider, 2012), which demonstrated a relationship between working shifts and negative mental well-being described as severe and long-lasting. A correlation was found between irregular chronobiology and poor mental health; however, the effect of night shifts, in particular on mental conditions (specifically depression), remains unknown (McClung, 2013).

2.2.3 Happiness

Worldwide, workers spend an average of 8 hours per day performing their job tasks. Their physical and mental health will thus be highly affected by the work environment (Tasnim, 2016). Happiness in the workplace is usually combined with other positive emotions such as joy, excitement, and passion. In one study on work-related feelings, the authors defined happiness as "general contentment with one's job and having a positive attitude toward co-workers, supervisors, and professional tasks" (Jaworek et al., 2020). It was believed that successful individuals tend to be happy in their lives. However, recent studies showed that happiness is the main factor driving workers' success and accomplishments (Boehm & Lyubomirsky, 2008; Walsh, Boehm, & Lyubomirsky, 2018).

2.2.4 Anger

In previous studies, anger has been defined as how people react to social events that make them feel unappreciated or demeaned (Ross, 1941). Anger and anxiety have been shown to be connected in many studies, and attempts have been made to differentiate between their causes, meaning, and

effect on overall health. Feeling angry is accompanied by thoughts of strength and an ability to beat the situation, while feeling anxious occurs when a threatened person worries about their ability to handle a situation (Payne & Cooper, 2003). Other researchers have defined anger as a powerful emotion generated in workers as a result of organizational power, which makes motivated workers tend to use anger as a tool to prove their success (Jaworek et al., 2020).

2.2.5 Fear

Fear in humans can occur due to a specific threat or danger or can be learned as the result of others' past experiences (Olsson, Nearing, & Phelps, 2007). Fear in the workplace is usually caused by organizational changes that expose workers to potential job losses or being underappreciated (Jaworek et al., 2020). In this study, anxiety is studied as a general state of fear.

2.2.6 Sadness

Sadness is the least common emotion in the workplace; however, it is still a critical state of emotion and is considered related to depression in general. Sadness increases the annual number of depressed and disabled individuals worldwide, which emphasizes the need to create treatment programs (Jaworek et al., 2020).

2.3 Emotions and Age

One study evaluated and measured the effect of depression prevention programs on individuals with symptoms of depression. The effectiveness of such programs varies according to age and gender. Females under 40 years of age found the programs less useful than older males, despite the fact that symptoms of depression are more common in female populations (Pearce, 1978) (Organization, 2010). Although symptoms of depression are most likely to be found in 18–24 year-olds (students), this group was found to be the least affected by prevention programs. However,

teachers aged 35–44 years old were found to have a lower chance of developing depression (Walter & Scheibe, 2013). Another study suggested that each age group should receive different treatment procedures and prevention programs (Zacher, Rosing, & Frese, 2011). In conclusion, workshops and psychological training programs at schools and universities would effectively prevent mental health problems at a younger age.

2.4 Emotions and Gender

Fisher (2010) found that females respond to negative emotions more often than males; however, compared with males, females are more open to expressing their emotions and talking about their feelings when attempting to control and adjust negative feelings (Fisher et al., 2010). Males and females experience similar types of emotion but display many differences in expressing these emotions. Females tend to experience deeper and more frequent emotions, mostly related to feeling weak, such as sadness. In contrast, males experience emotions connected to power, such as anger. Females express their emotions more often than males when affected by community manners but are restricted according to when to express emotions and which emotions are acceptable to express (Walter & Scheibe, 2013).

Over the last ten years, the female workforce has increased worldwide; however, there remains a gender gap in the organizational workforce, and it is uncommon to see females in leadership positions. Emotional differences between males and females can affect their chances to be in leadership positions. Women's emotions (e.g., empathy, warm-heartedness, a nurturing nature) can make it harder to obtain powerful positions that require the handling of many challenging emotional situations (Overbeck, Neale, & Govan, 2010). Expression of emotions may differ between genders, which affects how men and women have been evaluated over the years in regard

to their skills and qualifications (Ragins & Winkel, 2011). The aspect of gendering emotions has a significant effect on society. A common belief states, “he has emotions, but she is emotional,” which reflects societies’ assumptions that men can always control their emotions, but women’s emotions control them. Controlling emotions indicates a person's level of power and influence (Brody & Hall, 2010). Figure 2 shows the relationship between the characteristics required in leadership positions and common male/female emotions. As shown in the figure, gendering emotions impacts the chance of women getting involved in leadership positions, reflecting the impression of poor skills and low qualifications (Brody & Hall, 2010; Lundqvist & Kenttä, 2010).

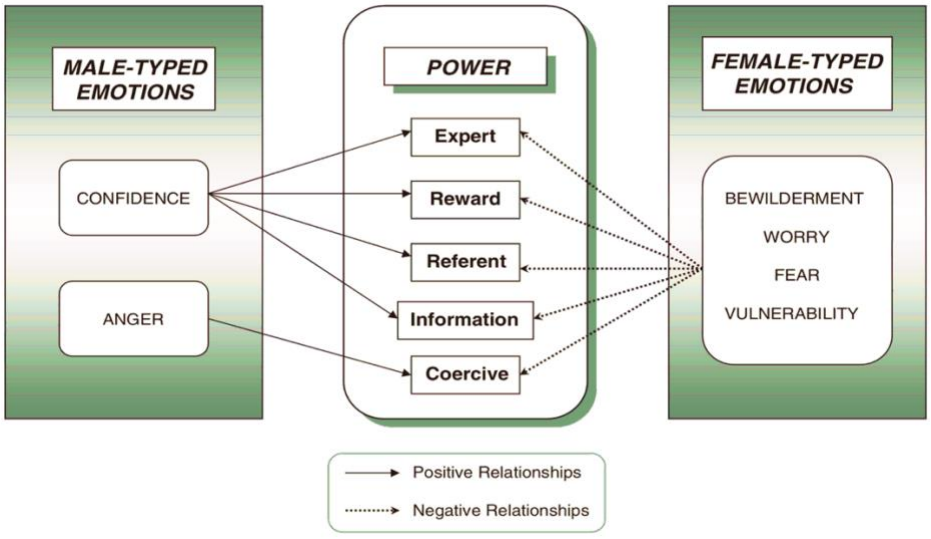

Figure 2: Relationship Between Power Requirement and Male/Female Emotions (Brody & Hall, 2010)

2.5 Emotional Labor (EL)

Emotional regulation in terms of organization and business employment is also called emotional labor. The concept was introduced in the 1980s, when Arlie Hochschild (1983) introduced it in her revolutionary volume. She defined it as “emotional regulation that functions to the norms of the

area of business/profession/vocation or of the organization" (Zaretsky & Katz, 2019). The volume investigated the consequences of emotional regulation in the workplace, focusing on the service industry. (A. A. Grandey & Gabriel, 2015).

The way people express their emotions varies between cultures; each culture has its own rules and manner by which to express emotions (Matsumoto & Hwang, 2013). These rules may change over time, and, in uncommon situations, even in different spheres of the same culture (Hochschild, 2012). Emotional labor is sometimes used to hide the gap between how a person feels and how they are supposed to feel so as not to hurt others with facial or spoken expressions (Hochschild, 2012). Research regarding teachers' well-being and negative educational environments remains limited. No studies were found that measured and evaluated discrete work-related feelings and their effect on teachers' physical and mental health.

Studies have proposed that emotional regulation is at the heart of emotional labor. Individuals can utilize multiple emotional labor settings (ELS) to express their emotions in the workplace (Humphrey, Ashforth, & Diefendorff, 2015). There exist three different ELSs:

- Surface acting (SA): one covers up or falsifies emotions, creating a dissonance between the stated and internal emotions.
- Deep acting (DA): one alters the outside display of their inner feelings, then usually states these feelings.
- The expression of naturally felt emotion (ENFE): one states their felt emotions with no effort made to alter or fake them.

Emotional labor is a critical requirement for jobs that challenge workers in the service industry, specifically education. Hochschild initially implemented this concept in “emotional labor” service industries and explained that workers make specific facial expressions and utilize their body or verbal language to interact with customers (Riley & Weiss, 2016). According to most research investigating the connection between emotional labor and burnout, the latter is hindered or even prevented by encouraging deep acting (Slatten, Carson, & Carson, 2011). In contrast, further research in mental health professionals revealed that promoting emotional labor via natural acting prevents burnout (A. Grandey, Foo, Groth, & Goodwin, 2012). However, a Chinese study in university instructors found that deep acting predicted burnout, while instructors who used surface acting showed less symptoms.

To display professionalism in education, instructors must show pleasant facial expressions and exhibit appropriate body and verbal language when interacting with customers. Customers in education are not only students, but also parents and colleagues (Yin, 2012), meaning that emotional labor must be undertaken by instructors in teaching.

2.6 Emotional Intelligence (EI)

Salovey and Mayer performed the earliest study of emotional intelligence (EI) (P. Salovey & Mayer, 1990), introducing the concept by explaining factors such as personalities, motivations, and other mental processes (Matthews, Zeidner, & Roberts, 2004). Subsequently, researchers began to introduce new models of EI, with recent studies dividing these models into three categories:

- Mixed models: EI is related mainly to personal skills and characteristics (Reuven Bar-On, 1997).
- Competence models: EI is related to social skills gained following different social experiences (Mayer, Salovey, Salovey, & Sluyter, 1997).
- Cognitive models: EI is related to mental skills and the personal ways of processing emotions (Mayer et al., 1997).

Later, Mayer and Salovey developed a test to evaluate a person's EI according to four different abilities (Mayer, Salovey, & Caruso, 2004):

- The ability to recognize various emotions in yourself and others.
- The ability to develop creative thoughts and use proper emotions in proper situations.
- The ability to understand and analyze emotions.
- The ability to adjust and control emotions in yourself and others.

Researchers have defined EI in many ways. The most common definition is that by Mayer and Salovey (1997): "the ability to perceive emotions, access and generate emotions to assist thought, understand emotion and emotional knowledge, and reflectively regulate emotions so as to promote emotional and intellectual growth." Three years later, Matthews and Zeidner proposed a new definition for EI: "a set of competencies or skills for handling effectively loaded encounters, which might predict future adaptive outcomes" (Matthews & Zeidner, 2000).

As in any organization, work conditions in schools and universities are not the best for employees' health. employees physical and mental health reflect on the quality of the teaching process. The

development of students' skills and personalities, and the relationship between teachers and students depends mainly on their behaviors within the classroom (P. E. Salovey & Sluyter, 1997). Caring teachers who are friendly and warm toward their students have greater success in delivering their message, which translates to higher academic achievement (Elias et al., 1997). Moreover, emotionally stable teachers can develop students' abilities to express, understand, and handle their emotions, especially within the classroom. Teaching students how to control their emotions also helps to develop their emotional intelligence (Hargreaves, 2000).

Teaching and teachers are affected by emotions, particularly negative emotions (Burns, Roberts, Posey, & Lowry, 2019). Teachers experience many stressors due to busy teaching schedules, uncontrollable students, integrated management systems, and lack of experience. Such a working environment requires special skills to overcome difficulties, solve classroom problems, deliver their academic message, and help students achieve the highest possible levels of understanding (Timoštšuk & Ugaste, 2012). Moreover, the ability to control negative feelings helps teachers develop better teaching techniques, improve their communication skills, and build problem-solving skills (Sutton & Wheatley, 2003).

Distance learning has spread worldwide (Perreault, 2004). Traditional classes depend mainly on instructors' techniques for delivering information; however, online classes require students to develop their skills related to relying only on written sources (e.g., Word documents) in combination with improving technological skills in order to succeed (Timmons, 2004). All academic success factors can be related to emotional intelligence, as emotionally intelligent teachers provide online students with a higher level of communication and problem-solving skills.

This will also impact students' interaction and achievement in online classes to make up for the absence of face-to-face interaction (Goleman, 2006).

Studies show that the ability to develop EI is higher in individuals over 40 years of age (Reuvan Bar-On, Handley, & Fund, 2006). Notably, younger individuals (students) who interact with emotionally intelligent teachers have a better chance than their peers of being emotionally intelligent at an early age. Thus, EI should be implemented for academic providers, especially those who utilize distance learning (Wang & Newlin, 2000).

2.7 Teaching in Jordan

The way people express their emotions varies between different cultures, in which each culture has its own rules and manners of expressing emotions (Matsumoto & Hwang, 2013). Still, these rules may change with time and uncommon situations even within the same culture (Hochschild, 2012). Emotional labor is sometimes used to hide the gap between how a person feels and how a person is supposed to feel, so he/she does not hurt others with facial or spoken expressions (Hochschild, 2012). Teaching environments in Jordan are not ideal for both teachers and students, with a classroom of 50 or more students and high job demand (Bataineh, 2009). However, Jordanian authorities have been investing in developing and reforming educational sectors over the last decades. Some web-based courses were adopted to decrease classroom loads on students and teachers (Hadidi & Sung, 1998). Researches on teachers' well-being and negative educational environments are still limited. No studies found that actually measure and evaluate discrete work-related feelings and their effect on teachers' physical and mental health.

A study was performed in Jordan to test whether effective social support can eliminate job stressors for special education teachers. Working in special education can be stressful and emotional, and social support by family and colleagues can help teachers overcome negative emotions within the workplace (Sari*, 2004). The results show little-to-no relationship between teacher burnout and factors such as age, experience, or marital status; however, a positive correlation was found between social support and overcoming a stressful work environment, reducing emotional exhaustion, and improving accomplishments (Bataineh, 2009).

Bataineh et al. (2009) investigated the possible effects of years of experience, age, gender, and marital status on teacher burnout. The results indicated no relationship between experience level and burnout in teachers, which is in contrast to related studies reporting an inverse relationship, in which experienced teachers seemed to have lower burnout levels than those less experienced in the field (Kruger, Botman, & Goodenow, 1991). With respect to age, Bataineh et al. (2009) found a link between teachers' age and burnout. This finding is in conflict with that of Keneer et al. (1987), who found no link between these two factors (Keener, 1987). Previous studies have shown no differences in gender with regard to the effect of burnout on school counselors (Haddad, 1998); however, Bataineh et al. (2009) found female teachers to be less affected by burnout than male teachers. Bataineh also revealed that married teachers usually experience greater emotional exhaustion related to work burnout than single teachers, which is in contrast to Haddad, who suggested that single workers in the same country usually experience greater burnout and emotional exhaustion (Haddad, 1998).

Another related research in Jordan was to measure burnout levels in 54 teachers who work in resource rooms in Northern Jordan. The results imply a significant burnout level in the collected

sample that appeared to fluctuate with personal factors such as gender and age (Batayinah, 2005). Most studies in the field were limited to special needs' education, where teachers face a daily stressful and emotional workload (Dababseh, 1993). Over 33% of teachers who participated in these studies have agreed to define teaching as a stressful job, which they would never practice if they had the opportunity to go back in time (Nagel & Brown, 2003). However, studies' results varied between those who approved the existence of negative emotions in special education and proposed recommendations to educate and train teachers on emotional labor (Dababseh, 1993). While the other described working in special education as a motivation to develop better communication skills with students in a particular and society in general (Al-Khateeb et al., 1996). As in any organization, workers' burnout becomes a spreading problem that seems to affect workers' health, performance, and organizational goals (Majali et al., 2015). In teaching, job stressors can lead to workers' burnout. Kim, Lee, et al. (2009) listed teaching stressors as: "inadequate resources, poor working conditions, working overload, role ambiguity and conflict, pressures of the teachers' role, ack of professional recognition, low remuneration, lack of involvement in decision-making, lack of effective communication, staff conflicts, and student misbehavior " (Kim et al., 2009).

Regarding how to evaluate teachers' burnout, researchers in Jordan have defined many physical and emotional symptoms. The most common physical symptoms were; change in food desire resulting in weight gain/loss, headaches or migraine, upset digestive (Alkhrisha, 2002). Most noticed emotional symptoms were; fatigue, depression, lack of academic confidence, thoughts of professional failure, guilt, negative attitudes, and blaming students for all of that (Friedman, 2000) (Talmor, Reiter*, & Feigin, 2005) (Schamer & Jackson, 1996).

Majali et al. (2015) published a study to test the relationship between emotional intelligence and burnout among 223 special education teachers in Jordan. The results revealed a negative correlation regarding the relationship between emotional intelligence and burnout. The author also tested the effect of gender and experience level on teachers' burnout level. She found female teachers to be emotionally exhausted than male teachers. Furthermore, she indicated teachers who had more than five years' experience to have low burnout levels than those who have less than five years' experience (Majali et al., 2015).

2.8 Data Analysis

2.8.1 Inferential Statistics

Researchers use inferential statistics to generate general conclusions and assumptions on a large population using a sample set of data. Inferential analysis has also been used to define the interaction between different variables and variances between various sample sets (Trochim & Donnelly, 2001). All the outcomes generated from inferential analysis vary with the method used to choose samples, which means rigor and validity also vary with different samples. Sampling methods can be a probability or nonprobability sampling (Elfil & Negida, 2017). When a researcher selects a sample where all items within the population have the same probability of getting selected, it is probability sampling. However, random selection and uneven chances are used for nonprobability sampling (Sekaran & Bougie, 2016). Next is different sampling methods that are related to population/non population sampling:

- Simple random sampling: all population has a significant chance to be in the sample, and all items have even chances. This method provides us with low bias and high

generalizability. However, in this method, it can be hard and expensive to collect and look up the whole population (Elfil & Negida, 2017)

- Stratified random sampling: the population is divided into groups depending on age, gender, and income. After that, the sample is selected from each group. The researcher has more information about the selected population in this method than in simple random sampling (Sekaran & Bougie, 2016).
- Systematic random sampling: items are selected from the population in equal intervals, creating some of the systematic bias (Sekaran & Bougie, 2016).
- Cluster sampling: the population is divided into clusters, then each cluster is used to choose a sample by a simple random sampling method, which is why it is called multi-stage sampling. This method is used when dealing with an indistinct population, where there is no enough information to use previous methods (Sekaran & Bougie, 2016).

2.8.2 Type 1 and Type 2 Errors

Type 1 error: "the probability of rejecting the null hypothesis when it is, in fact, correct" (Montgomery & Runger, 2010). Type 2 error: "the probability of the failure to reject the null hypothesis when, in fact the null hypothesis is false" (Montgomery & Runger, 2010). Type 1 and type 2 errors have many uses in the hypothesis testing practices. Type 1 can be named as Alph (α), and the probability of occurrence can't be higher than 5% to accept the null hypothesis. Type 2 error can also be named Beta (β), which results in rejecting the hypothesis(Hayter, 2012). However, some studies showed that using a larger sample size can lower the probability of occurrence of type 1 and type 2 error (Banerjee, Chitnis, Jadhav, Bhawalkar, & Chaudhury, 2009). Another study suggested four factors would affect the probability of making the right decision (Bureau 2012):

- Size of effect: determine the sample variation and compare variation between different samples.
- Sample size: using a large sample size lower the chance of getting type 1 or type 2 error, which also means a higher chance to make the right decision.
- Sample variance: the higher the sample variance, the lower the chance to reject the hypothesis, and the lower the chance to make the right decision.

On the other hand, the hypothesis test has two types:

- Directional (one-tail test): researcher uses when there are given information about the direction of the relationship between studied variables.
- Nondirectional (two-tail test): researcher uses when there is no given information about the direction of the relationship between studied variables.

2.8.3 Mixed Method

A mixed method is an approach where a researcher uses both qualitative and quantitative data in the same study to satisfy a specific goal (Johnson & Onwuegbuzie, 2004). Researchers believe in the importance of replace using qualitative (interviews, focus groups) or quantitative (surveys, experimentations) methods by merging both methods into a single study (Sale, Lohfeld, & Brazil, 2002). -method can be used for hypothesis testing. Data can be collected using a qualitative method (interviews), and then qualitative study applied and results analysis to answer study questions.

The mixed method has been widely used in the last decade due to the many advantages they found over other methods; such advantages are (Doyle, Brady, & Byrne, 2009):

- Increase the validity of the study by combining both qualitative and quantitative methods.

- More extensive study and more understanding of the studied problem.
- Overcome constraints and weak points of using only qualitative or quantitative methods.

More comprehensive analysis can be done on the collected data, which means more precise conclusions, solutions, and answers. However, adopting a mixed method is still connected to some disadvantages, and it can limit the use of this method. Some of the disadvantages are (Johnson & Onwuegbuzie, 2004):

- Difficulties to use both methods simultaneously, where it needs extra resources, effort, and time.
- Deep understanding of qualitative and quantitative methods in a way that makes researchers able to use both techniques at the same time.
- Complications in matching both methods, merge procedures, and integrate results.

Combining qualitative and quantitative methods can be done in many stages within the study (Powell, Mihalas, Onwuegbuzie, Suldo, & Daley, 2008). The first stage of any study is gathering data, which can be done by qualitative techniques such as interviews and open-ended questioners. However, gathering data can also be done by quantitative methods, where real experiments are applied to observe the data (Harrison & Reilly, 2011). The next stage is data analysis, and researchers usually use qualitative methods (e.g., narrative analysis) to give data qualitative description. Alternatively, they can use quantitative methods to analyze their data (e.g., correlation analysis and experiment (Yvonne Feilzer, 2010).

Regarding formal designs for mixed-method, there are five different designs summarized as follow (Terrell, 2012):

- Sequential transformative design: qualitative and quantitative methods can be used in any order. Also, easy to apply but requires more time and effort (Holmes, Brown, St Hilaire, & Wright, 2012).
- Sequential explanatory design: qualitative methods used first to collect data, then quantitative methods applied to analyze data (Buck, Cook, Quigley, Eastwood, & Lucas, 2009).
- Contemporary transformative design: both methods are used in collecting data. Some of the research types that support this kind of research design are critical theory and theoretical framework (Terrell, 2012).
- Concurrent Triangulation design: both methods are used in the data collection stage, where the data is integrated into the analysis stage (Terrell, 2012).
- Concurrent Nested design: design: qualitative and quantitative methods merge on the data analysis stage, where multiple groups from the same population are used. This design helps to develop broader findings and answers (Clegg, 2007).

Many statistical analysis techniques can be combined with qualitative methods to assist in more holistic research designs. Statistical techniques may be used to collect or analyze data, where regression analysis, correlation analysis, or cluster analysis are usually used in the data analysis stage. However, other statistical analysis techniques are used to evaluate and implement the experiment validity, such as randomized experimental designs (Terrell, 2012).

2.8.4 Regression modeling:

Regression modeling examines the connection between a response variable (y), or as known a dependent variable, and a regressor (x), or as known as an independent

variable or predictor (Hayter, 2012). In general, the main objective of the regression modeling is to anticipate the value of the dependent variable knowing the value of the independent variable (Montgomery & Runger, 2010). Researchers use regression modeling to detect if variations in the independent variable make the dependent variable vary (Mendenhall & Sincich, 2016). Simple regression is when in real-life cases, a single independent variable can, to some extent, affect the response variable (Hayter, 2012). In addition to simple regression, other types of regression are known: polynomial, logistic, and robust regression (Hayter, 2012). Other types of regression models include polynomial regression, logistic regression, and robust regression (Hayter, 2012).

2.8.5 Analysis of Variance/Design of Experiments

The term Analysis of Variance (ANOVA) describes a group of techniques that aims to find the variation among means for multiple treatments (Montgomery, 2017). For each group, a model utilizes the estimation process. Different types of ANOVA, starting with a basic type called "single-factor ANOVA", which examines one factor against multiple levels or treatment. The other types added more factors like two-way, three-way factors, factorial design, and others (Hayter, 2012). The ANOVA approach's main goal is to find if the factor levels have a significant effect on the response variable by examining the variances among levels and variances within Levels, also known as "error". To achieve this goal, it starts with a null hypothesis for the levels means to be equal. The alternative hypothesis would be that they are not equal. If the null hypothesis is rejected, the levels' means are different (Montgomery, 2017).

Multiple issues can be pointed out in the differences between regression modeling and analysis of variance. Starting with restrictions that ANOVA has, where it suffers when it comes to unbalanced design, continuous independent variables, and multiple covariates, also, it failed to provide a

strength of relationship index. On the other hand, regression modeling is a more comprehensive statistical analysis approach since it can handle more variate types of data types. ANOVA has been seen by many as a special case of the multiple regression analysis, so it means that Regression modeling should always be used, unless the special case requires ANOVA (Nelson & Zaichkowsky, 1979).

2.8.6 Correlation Analysis

The correlation analysis technique is used to assess the extent of the relationship among a couple of metric variables. It entitles either high or low correlation; the high correlation means the two variables have a very strong connection; on the other hand, the low or weak correlation entitles the variables being barely related (Ranganathan, Nakai, & Schonbach, 2018). Correlation analysis assumes that independent and dependent variables are random variables having a joint density function (Hayter, 2012). Correlation analysis aims to find if high values of independent value is connected with high values of the dependent variable and the if the opposite is true (Mendenhall & Sincich, 2016). The correlation analysis can provide values for connection strength, when its values start from -1 to +1. Smaller values near -1 are indicating for the strong negative relationship between the variables. On the other hand, a value near the +1 indicates a strong positive connection between the variables. Now when the correlation value is near 0, the indication is that there is a week to no relationship between the variables (Mendenhall & Sincich, 2016).

Similarities and differences between the two techniques come from the proper use and misuse (Bewick, Cheek, & Ball, 2003). Though both techniques are commonly used to find relationships between couple metric variables, the distinguish is that correlation analysis gives a quantifiable means for the strength of the relationship between variables. However, regression analysis

provides an equation showing the associations between variables (Bland & Altman, 1986). Although both techniques variables are assumed independent, in correlation analysis, both variables are random, and in the regression modeling, one variable has to be random, which the response (Bewick et al., 2003).

2.8.7 Cluster Analysis

This statistical technique is a way to form clusters out of similar observations (Romesburg, 2004). Cluster analysis entitles multiple strategies. A hierarchical cluster is considered one of the major strategies (Milligan & Cooper, 1986). The hierarchical cluster can be seen as a tree way that is appropriate for smaller data sets (Ranganathan et al., 2018). In this methodology, the differences among clusters are found by identifying distances (Roy, Kar, & Das, 2015). Each case is started as a separate cluster. These clusters are sequentially combined so that the number of clusters at each stage is reduced until eventually, only one cluster is left (Roy et al., 2015). In addition to the hierarchical cluster, techniques like portioning and analysis and overlapping clusters are used (Everitt, Landau, Leese, & Stahl, 2011).

Differences among the two statistical methods are that while the cluster analysis is mainly about finding how subjects may be similar through different variables, regression analysis enables predicting the response variable's behavior given different values of an independent variable. Another difference comes from cluster analysis's ability to handle the majority of data types, disregarding missing values with no need for the assumption of distribution error, the thing that regression analysis cannot do (Mallick, Chaudhari, Sheth, Palanikumar, & Joshi, 2019).

2.8.8 Longitudinal Analysis

Researchers use longitudinal analysis mainly in social studies, where participants respond more than once during the study (Fitzmaurice, Laird, & Ware, 2012). It's a way to track dynamic changes in participants' responses, but it is challenging to define and choose samples in a way that guarantees participants commitment all study long (Frees, 2004).

2.8.9 Time-Series Data Analysis

Forecasting, economics, and risk management are examples of studies use time-series-data, where analysis needs to be done as a function of time (De Gooijer & Hyndman, 2006). When putting time-series-data in a chart or plot, there will be no specific pattern to expect. Data can be shown as periods, random shifts, trends, or a mix of these patterns (Montgomery, Jennings, & Kulahci, 2015). Both Longitudinal Analysis and Time-Series Data Analysis are used to analyze data as a function of time. The only thing to take into account when trying to decide whether to use longitudinal analysis or time-series is that the first one can study and test more than one variable and compare differences between them. However, time-series can only be used to observe a single variable as a function of the study period (Frees, 2004). The longitudinal analysis and time-series validity depend mostly on the study period. Increasing the study period will raise the chance to get odd events that would affect researchers' conclusions on data behavior. Another factor that usually affects longitudinal analysis validity is time. Participants get older in long studies, and their behavior also changes, which means more deviation and noises in data behavior (Sekaran & Bougie, 2016). On the other hand, time-series analysis can also be affected by any modification to be done on the scale of time series within the study (Shadish, Cook, & Campbell, 2002). A controllable set of variables can relate to the study, where time constraints affect the validity for both analyses in the same amount resulting in less chance to get odd events (Linden, 2017).

In this research area, using Longitudinal Analysis and Time-Series Data Analysis would help detect students' responses as a function of time after communicating with teachers experiencing specific emotions to see if teachers can transfer their feelings to the students during a long period of time. This research also suggests offering academic providers professional training on how to control their emotions using emotional labor techniques. Longitudinal Analysis and Time-Series can be used to track changes in teachers' and students' behaviors when they are attending this training. Moreover, previous analysis results will be a good tool to evaluate professional training and make implementation as needed.

2.9 Partial Least Squares Structural Equation Modeling (PLS-SEM)

Structural equation modeling (SEM) became a widely used tool to analyze research models with latent variables without requiring distributional assumptions (Sarstedt & Cheah, 2019). The first version of SEM allows researchers to perform confirmatory factor analysis (CFA) to test standing theories or exploratory factor analysis (EFA) to create theories and concepts based on proposed data. The second version of SEM includes covariance-based structural equation modeling (CB_SEM) and partial least square structural equation modeling (PLS_SEM) (Garmon, 2019).

PLS_SEM has been spreading in many research disciplines during the last ten years, specially to analyze complex models with a small sample size. PLS_SEM is a tool to investigate data collected from nominal, ordinal, or interval scales creating abnormal distribution (Sarstedt, Ringle, & Hair, 2017).

The path model is a theoretical map that defines the hypothesis to be tested by showing all the relationships between model variables. Path model basic elements are latent variables (constructs), manifest variable (indicators), and the headed arrows. Conceptual variables or constructs in SEM

are represented by latent variables that show as circles in the path model and are connected to arrows, representing the direction of relationships between latent variables and indicators. Indicators can also call manifest variables and showed in the path map as rectangles to represent raw data (Bollen, 2002). PLS_SEM path model consists of structural theory and measurement theory connected to form the path model. The structural theory defines the relationship between latent variables from researchers' perspectives based on their knowledge of studied phenomena (Falk & Miller, 1992). Types of latent variables in PLS_SEM structural theory are dependent variables (endogenous latent variable) and independent variables (exogenous latent variable) (Garmon, 2019). Measurement theory defines the way that latent variables should be measured. Two types of measurement theory are used by researchers, reflective measurement and formative measurement. The reflective measurement model uses to assign direct relationships between latent variables and manifest variables. The equation $x = ly + e$ defines a relationship of strength l between the indicator x and latent variable y with a measurement error of e. A strong correlation will be found between indicators in the reflective measurement model, especially if they are all related to the same concept (Joe F Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). In the formative measurement model, latent variables are constructed by a linear grouping of multiple indicators, which means that any deviation and errors in the indicators will be transferred to the latent variable (Borsboom, Mellenbergh, & Van Heerden, 2003). Indicators with measurement errors are called casual indicators and can affect the accuracy of measuring their latent variables. If the researcher assumes that the indicators perfectly express a latent variable, then these indicators are called composite indicators, and associated errors equal to zero (Bollen & Bauldry, 2011). Indicators in the formative measurement model do not usually have a high correlation.

However, if they are highly correlated, it does not mean that the model has more reflective nature (Nitzl & Chin, 2017).

2.10 Review Summary

2.10.1 Search Strategy

Search terms were specified based on the research questions. Subsequently, search strings were developed using Boolean operators based on basic search terms and then modified gradually to narrow the collected results. Each search string was conducted individually using Google Scholar, ProQuest, and IEEE Xplore, limited to articles written in English and published after 2000. The first search string included the basic search terms and yielded 17,350 publications including duplicates. The same search string was applied with a restriction on the abstract matching terms, which resulted in 6,571 publications including duplicates. The next step was to exclude articles that focus on students' feelings in the educational environment by filtering studies with the term 'students' in the title, which yielded 5,658 publications including duplicates. The last search string was modified to exclude articles focusing on administrators' feelings within the educational facilities, which resulted in 1,647 publications including duplicates. The abstracts and introductions of these 1,647 articles were reviewed by two researchers (SO and WK), and duplicates and unrelated articles were removed. The full text of the remaining 67 articles was reviewed, and a total of 19 primary articles were chosen based on the inclusion and exclusion criteria. Figure 2 shows the PRISMA chart summarizing the literature selection process and findings.

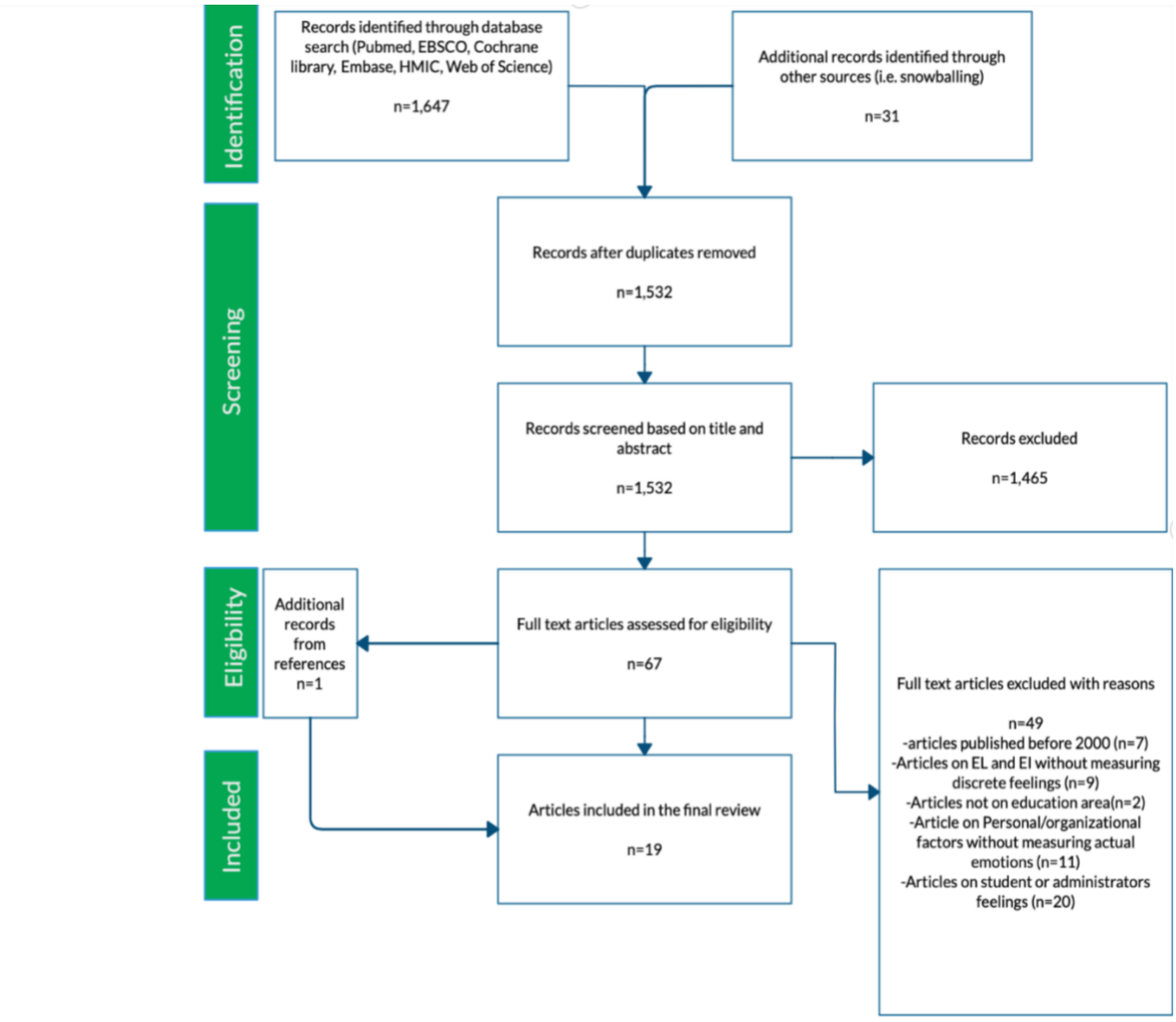

Figure 3: PRISMA Flow Diagram Summaries the Methodology and Selection Processes Used in this Literature

The aim of this review was to explore studies on teachers' work-related feelings. Many excluded articles (20) were related to students' or administrators' feelings at work. A total of 11 articles on organizational or demographic factors affecting teachers' feelings were excluded. Two further

articles were excluded because they assessed workers' feelings in areas other than education (e.g., hospitals).

While reviewing the articles, decisions to include an article were made based on the following requirements:

- Articles published in English.
- Articles published during the last 20 years.
- Studies conducted in educational facilities.
- Studies measuring and evaluating teachers' discrete feelings (e.g., burnout, happiness, sadness, anger).
- Studies using quantitative analysis and structural equation modeling.

Articles were excluded based on the following:

- Articles on work-related feelings in any field other than education.
- Articles on students' or administrators' feelings.
- Articles discussing only emotional labor or emotional intelligence.
- Articles discussing only job satisfaction or teachers' quality of life.

2.10.2 Study Characteristics

According to the selection criteria, all evaluated articles were published after the year 2000. The literature review was limited to articles published in the last 20 years because the education system is continuously being changed and enhanced (Al Jabery & Zumberg, 2008; Bataineh, 2009; Pinkerton, 2020). Major changes in the education system and work environment affect teachers'

mental and physical health in the long term. Figure 4 shows the reviewed articles distributed by publication year. The figure reveals a low number of publications in the last 20 years, with an average of one article per year. However, there was a significant increase in related publications in 2019, reflecting the growing interest in teachers' work-related feelings.

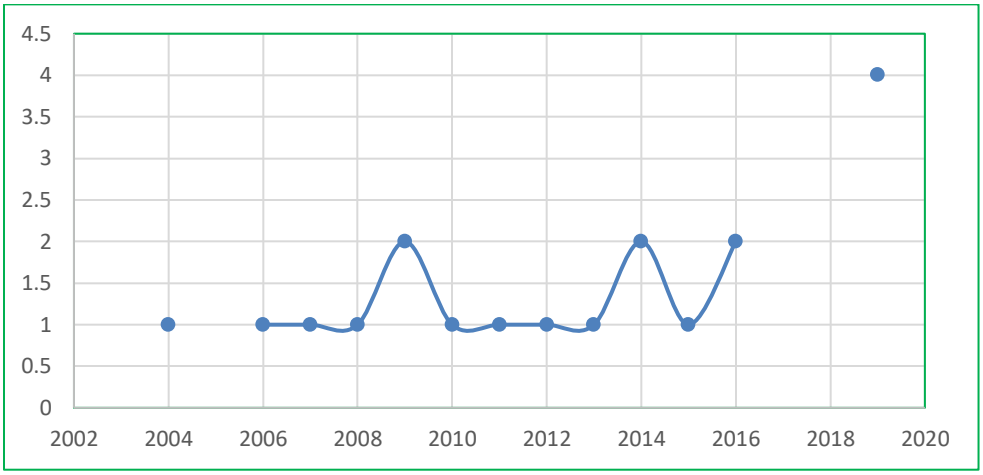

Figure 4: Scatter Plot of Selected Articles by Publication Year

The included articles were divided into three categories according to the type of study, as shown in Figure 5. The first group of articles (12) assessed the relationship between teachers' feelings and causal factors, such as night shifts, social support, age, gender, and job stressors. The second group included 3 articles related to the relationship between teachers' feelings and emotional labor or emotional intelligence. The third group of articles (4) investigated teachers' specific states of work-related feelings such as depression and burnout instead of teachers' general well-being.

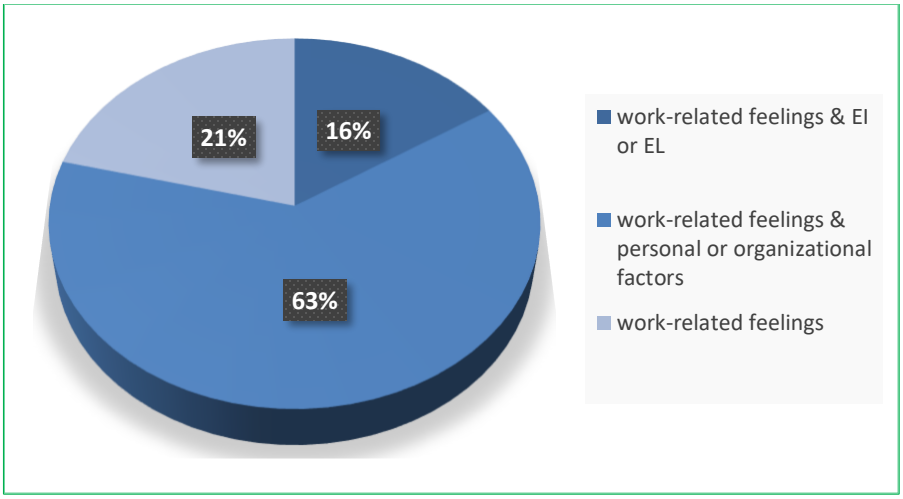

Figure 5: Distribution of Selected Articles Depending on the Type of the Study

2.10.3 Quality Assessment:

The quality of articles was evaluated using the Mixed Method Appraisal Tool (MMAT), which is employed in systematic reviews to evaluate qualitative, quantitative, and mixed methods (Hong, Fàbregues et al. 2018). Thus, the MMAT tool is applicable to the present review because all of the included studies are empirical with experimental, practical, and observed methodologies. Two researchers, SO and WK, used the 2018 version of the MMAT user guide (Hong, Fàbregues et al. 2018) to evaluate the quality of the studies. The included articles were divided into four categories based on the study design: quantitative non-randomized, quantitative descriptive, quantitative randomized controlled trials, and mixed method. Subsequently, five questions were answered for each study in order to rate the chosen category criteria (Details in Appendix D).

A summary of the MMAT quality assessment results is provided in Table 2. The quality evaluation of the included studies varied from moderate to high quality, where seven studies scored 3 points, eight studies scored 5 points, and four studies scored 4 points.

Table 2: MMAT Quality Assessment Results

Study #	***Title***	***Data analysis***	***Methodological Approach***	***MMAT Score***
1	*An analysis of burnout and job satisfaction among Turkish special school headteachers and teachers, and the factors affecting their burnout and job satisfaction*	*t-test and variance analysis*	*Quantitative descriptive*	*5 points*
2	*Sources of Social Support among Special Education Teachers in Jordan and Their Relationship to Burnout*	*Correlation analysis ANOVA*	*Mixed method*	*4 points*
3	*The Relationship between Teachers' Perceptions of Emotional Labor and Teacher Burnout and Teachers' Educational Level*	*Correlation analysis, ANOVA and MANOVA*	*Quantitative descriptive*	*3 points*
4	*Participation in nighttime activities in the genesis of depression in public school teachers from the State of Pernambuco, Brazil*	*Kruskal-Wallis test with Dunn's multiple comparison*	*Mixed method*	*3 points*
5	*Current situation of job burnout of junior high school teachers in Zhongqiu urban areas and its relationship with social support*	*Regression analysis*	*Mixed method*	*4 points*
6	*Teaching Styles and Occupational Stress among Chinese University Faculty Members*	*Satisfactory reliability (correlation analysis)*	*Mixed method*	*4 points*
7	*Teachers' burnout, depression, role ambiguity and conflict*	*Regression analysis*	*Quantitative descriptive*	*5 points*
8	*Life satisfaction of professional college teachers in relation to their stress level*	*Descriptive analyses & Correlation analysis*	*Quantitative descriptive*	*3 points*
9	*Does job burnout mediate negative effects of job demands on mental and physical health in a group of teachers? Testing the energetic process of Job Demands-Resources model*	*Regression analysis with bootstrapping*	*Quantitative descriptive*	*4 points*

Study #	*Title*	*Data analysis*	*Methodological Approach*	*MMAT Score*
10	*The association between occupational stress and depressive symptoms and the mediating role of psychological capital among Chinese university teachers: a cross-sectional study*	*Hierarchical linear Regression analysis*	*Mixed method*	*5 points*
11	*Examining Effort–Reward Imbalance and Depressive Symptoms Among Turkish University Workers*	*Descriptive analyses &Correlation analysis*	*Mixed method*	*3 points*
12	*The Mediating Role of Depression, Anxiety and Stress between Job Strain and Turnover Intentions among Male and Female Teachers*	*Correlation analysis & Logistic regression*	*Quantitative descriptive*	*3 points*
13	*Emotional Intelligence and Components of Burnout among Chinese Secondary School Teachers in Hong Kong*	*Structural equation modeling*	*Mixed method*	*5 points*
14	*A Brief Cognitive-behavioral Stress Management Program for Secondary School Teachers*	*Quasi-experimental design*	*Quantitative randomized controlled trials*	*5 points*
15	*The relations between Principal support and work engagement and burnout: Testing the role of teachers' emotions and educational level*	*Structural equation modeling*	*Quantitative descriptive*	*3 points*
16	*The impact of resilience on role stressors and burnout in elementary and secondary teachers*	*Structural equation modeling*	*Quantitative non-randomized*	*5 points*
17	*The Mediating Role of Teachers' Depression Levels on the Relationship between Emotional Labor and Burn-Out*	*Regression analysis-relational scanning model*	*Quantitative descriptive*	*3 points*
18	*Work Environment Stressors, Social Support, Anxiety, and Depression Among Secondary School Teachers*	*Correlation analysis*	*Quantitative non-randomized*	*5 points*
19	*Happy, Stressed, and Angry: A National Study of Teachers' Emotions and Their Management*	*Logistic regression*	*Quantitative descriptive*	*5 points*

2.10.4 Conclusion:

Articles in the first category, as shown in Figure 6, investigated the relationships among organizational factors, demographics factors, and teachers' work-related feelings. For demographic factors, gender, family support, and level of experience were the most commonly studied factors; work overload and job burnout were the most commonly studied organizational factors. The findings for this category suggest the following:

- Male teachers experience negative feelings at work less often than female teachers (Husain, Gulzar, Aqeel, & Rana, 2016; Sari*, 2004; Song, 2008); however, two studies found no effect of gender or experience on burnout level (Bataineh, 2009; Song, 2008).
- Teachers with higher levels of experience are more emotionally exhausted due to long-term exposure to stressful work environments (Sari*, 2004).
- Family and coworker support helps to eliminate stressful work environments and prevent depression and anxiety (Bataineh, 2009; Mahan et al., 2010).
- Principal support increases work engagement and decreases burnout (Slišković, Burić, & Sorić, 2019).
- Working three shifts or more increases depressive symptoms and burnout (Baka, 2015; Correia et al., 2012; Shen et al., 2014; Zhang, 2007).

The second category included articles that evaluated the relationships among teachers' work-related feelings, emotional labor, and emotional intelligence to control their feelings. The findings imply that the use of specific emotional labor techniques depends on teachers' burnout level and that teachers' educational level can prevent emotional exhaustion (Zaretsky & Katz, 2019); however, burnout level is not related to teachers' emotional intelligence (Chan, 2006).

The third category, with 21% of articles assessing teachers' work-related feelings, suggests that the level of depression and the role of conflict increase the chance of emotional exhaustion in teachers, but training programs can help reduce negative emotions and enhance stress management skills (Leung, Chiang, & Wong, 2010; Papastylianou, Kaila, & Polychronopoulos, 2009). Moreover, one study developed a conceptual framework to test the effect of teachers' resilience on reducing stress and burnout levels (Richards, Levesque-Bristol, Templin, & Graber, 2016).

This study uses a scale to measure and evaluate teachers' feelings and emotions in the workplace. Studying how the work environment affects teachers' mental health helps define the importance of the problem. Once the problem is defined, we can develop and implement solutions to prevent negative outcomes.

CHAPTER 3: METHODOLOGY

3.1 Research Design

A systematic literature review was performed to utilize previous studies in the field of teachers' feelings, and the results were reported using PRISMA. A recently developed scale (WORAF) was used as a quantitative method to collect data (Jaworek et al., 2020). The scale collected teachers' answers to 24 different questions. Three job demands from the JD-R model were used in combination with the WORAF scale. The data analysis methodology used partial least square structural equation modeling (PLS_SEM) to investigate the relationship between assumed causes (independents) and their effect (dependent). In this study, Partial Least Square Structural Equation Model (PLS-SEM) using Smart-PLS software was used to propose and test two separate research models in the United States and Jordan. The software was then used to identify major differences between both models.

Figure 6 shows the sequence of the proposed research model. This study suggests that job demands have a significant relationship with generating work-related affective feelings in teachers. Three job demands were chosen from the JD-R model based on the previous studies. Studies done in the field found time pressure, discipline problems, and students' motivation to be the major factors affect workers' feelings (more details in chapter one).

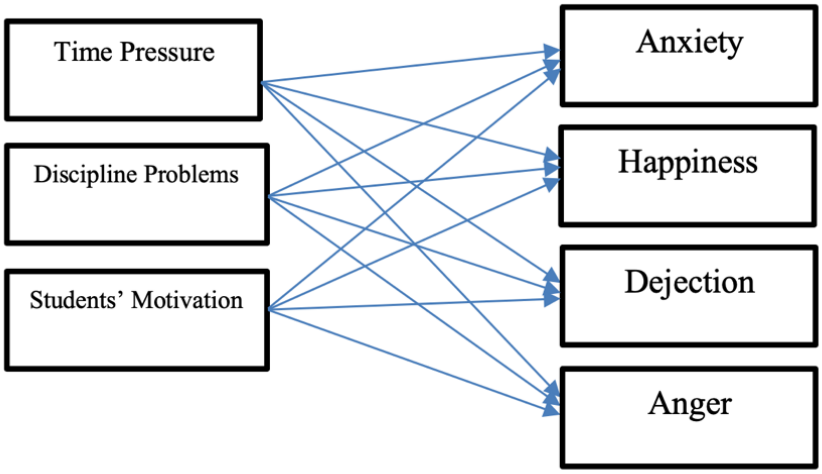

Figure 6: Proposed Research Model

In general, the goal is to examine the effect of job demands (independent variable) on teachers' work-related affective feelings (dependent variables) in the United States and Jordan. Table 3 defines the proposed dependent and independent variables in the current study.

Table 3: Research Proposed Dependent and Independent Variables

Independent Variables	**The Job Demands-Resources Model (JD-R)**			
	Time Pressure	Discipline Problems	Students' Motivation	
Dependent Variables	**The Scale of Work-Related Feelings (WORAF)**			
	Anxiety	Happiness	Dejection	Anger

3.2 Proposed Research Model and Hypotheses

This research studies the relationship between job demands and work-related feelings for teachers. The complete data sample was divided into two samples depending on the country of the

respondent. Two models were generated and tested using PLS-SEM. The following are the proposed hypotheses for both models:

- H1: there is a significant relationship between discipline problems and anger.
- H2: there is a significant relationship between discipline problems and anxiety.
- H3: there is a significant relationship between discipline problems and dejection.
- H4: there is a significant relationship between discipline problems and happiness.
- H5: there is a significant relationship between students' motivation and anger.
- H6: there is a significant relationship between students' motivation and anxiety.
- H7: there is a significant relationship between students' motivation and dejection.
- H8: there is a significant relationship between students' motivation and happiness.
- H9: there is a significant relationship between time pressure and anger.
- H10: there is a significant relationship between time pressure and anxiety.
- H11: there is a significant relationship between time pressure and dejection.
- H12: there is a significant relationship between time pressure and happiness.

Figure 7 shows the proposed model that used to test the current research hypotheses.

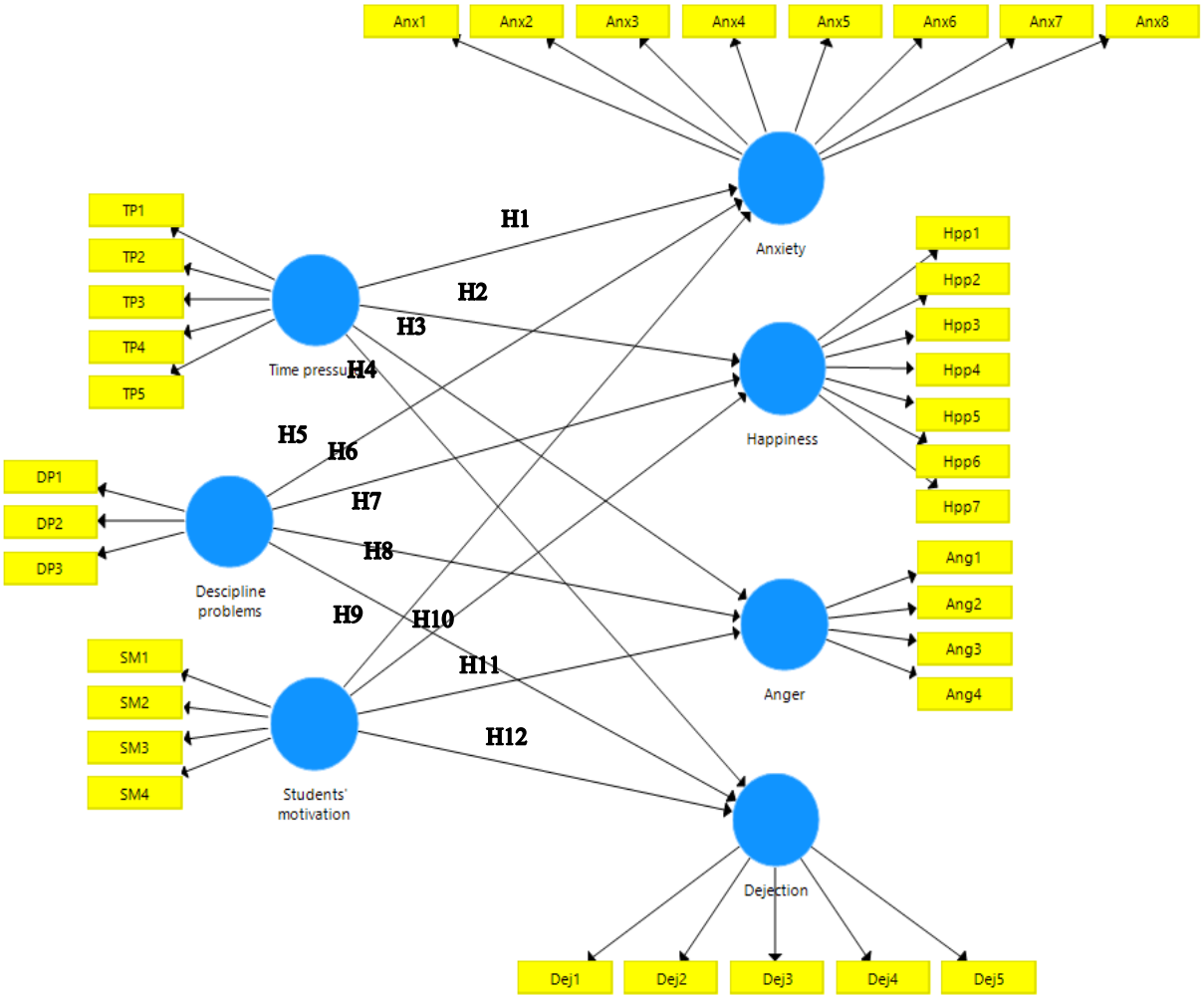

Figure 5:Proposed Casual PLS Model

These hypotheses were chosen based on previous studies that tested the relationship between the same factors used in the current study. The current study focuses on testing these relationships in middle and high schools within two countries: The United States and Jordan. Table 4 provides a list of studies that this study used to define research hypotheses:

Table 4:Research Hypotheses Reference Studies

Proposed Hypotheses	**Reference Study Results**
H1: There is a significant relationship between discipline problems and anger.	Lack of students' discipline was found to be a strong predictor for teachers' anger (Hagenauer, Hascher, & Volet, 2015)
H2: There is a significant relationship between discipline problems and anxiety.	Significant positive relationship was found between lack of students' discipline and teachers' anxiety (Hagenauer et al., 2015)
H3: There is a significant relationship between discipline problems and dejection.	Discipline problems found to be one of the significant factors that raise teachers' burnout resulting in multiple negative emotional states including dejection (Yong & Yue, 2007)
H4: There is a significant relationship between discipline problems and happiness.	Significant negative relationship was found between lack of students' discipline and teachers' happiness (Hagenauer et al., 2015)
H5: There is a significant relationship between students' motivation and anger.	Association was found between motivation and feeling angry (Harmon-Jones, 2003)
H6: There is a significant relationship between students' motivation and anxiety.	A strong negative relationship was found t between students' anxiety and Students' low motivation (Zakaria & Nordin, 2008)
H7: There is a significant relationship between students' motivation and dejection.	Correlation was found between lack of motivation and dejection (Roney, Higgins, & Shah, 1995)
H8: There is a significant relationship between students' motivation and happiness.	Students with higher levels of motivation were found to have higher chances to experience happiness at that time (Omar, Jain, & Noordin, 2013)
H9: There is a significant relationship between time pressure and anger.	Time pressure was found to positively correlates with anger (Thies & Kordts-Freudinger, 2019)
H10: There is a significant relationship between time pressure and anxiety.	Time pressure was found to positively correlates with anxiety (Thies & Kordts-Freudinger, 2019)
H11: There is a significant relationship between time pressure and dejection.	It was found that one of the main significant connections in the study was between time pressure as a sleep deprivation and dejection as a result of lack of sleep (Minkel et al., 2012)
H12: There is a significant relationship between time pressure and happiness.	Negative and significant relationship was found between time pressure and happiness (Thies & Kordts-Freudinger, 2019)

In this study, seven latent variables were used, where each latent variable was measured by multiple survey items shown in Figure 7 as the indicators. Table 5 summaries used latent variables and indicators.

Table 5: Summarized Survey Statements

Endogenous Variable	Exogenous variable	Survey item
Time pressure	TP1	Preparation for teaching must often be done after working hour
	TP2	Life at school is hectic and there is no time for rest and recovery
	TP3	Meetings, administrative work, and documentation take much of the time that should be used for preparing teaching
	TP4	Teachers are loaded with work
	TP5	To provide a good education teacher would need more time with the students and for preparing their teaching
Discipline problems	DP1	My teaching is often disrupted by students who lack discipline
	DP2	Some students with behavioral problems make it difficult to carry out lessons as planned
	DP3	Controlling students' behavior takes a lot of time and effort
Students' motivation	SM1	Many of my students show little interest in school- work
	SM2	Many of my students give up once they meet a challenge
	SM3	I find it difficult to make all students work seriously with schoolwork
	SM4	Many of my students show little effort at schoolwork
Anxiety	Anx1	I feel fear at work
	Anx2	I feel that matters related to work are getting out of control, which makes me panic.
	Anx3	What is happening at work, fills me with anxiety and makes me feel threatened.
	Anx4	I'm thinking that on Monday I need to go to work I feel anxious.
	Anx5	I have symptoms of anxiety and nervousness at work, and I'm not able to calm down.
	Anx6	Actions taken by my co-workers and/or supervisors make me feel uncertain.
	Anx7	I am concern that I won't be able to meet the work requirements.
	Anx8	I feel uncertain at work.
Happiness	Hpp1	I find my work enjoyable.
	Hpp2	My job brings me satisfaction.
	Hpp3	My job gives me a sense of fulfillment.
	Hpp4	I find contentment in my work.
	Hpp5	Overall I feel relaxed and free.
	Hpp6	I am happy with my relations with my supervisors.
	Hpp7	I have a position attitude toward the tasks and problems which I am facing at work.
Dejection	Dej1	At work I feel like I reached the bottom.
	Dej2	When it goes to my job, it cannot be worse.
	Dej3	Most work-related activities make me feel sad and useless.
	Dej4	I don't see any career path in front of me.
	Dej5	I have a sense of being suspended from what is happening at work.
Anger	Ang1	Recently everything related to my work makes me angry.
	Ang2	I find everything at work annoying.
	Ang3	The tasks I am getting from my supervisor make me furious.
	Ang4	There are moments when I feel very irritated.

3.3 Population and Data Collection

Participants in this study are middle and high school teachers who directly and continuously interact with the students. A survey of 41 items was sent to the participant by e-mail and social media posts to answer anonymously and return for analysis. Participants were selected randomly from different middle and high schools in the United States and Jordan.

3.4 Research Instruments

A survey of 41 questions was used to collect data from the United States and Jordan's schools. The first five questions are intended to collect demographic characteristics, including age, gender, county, level of school currently teaching at, and years of experience. The rest of the questions were a combination of the JD-R model and WORAF scale. This study survey was translated into the Arabic language. The participants have the option to choose survey language (English or Arabic) before starting, English version survey is provided in Appendix F.1 and Arabic version survey id provided in Appendix F.2. The combined experimental procedure for JD-R model and WORAF scale was approved by the Institutional Review Board (IRB) at the University of Central Florida (UCF). IRB approval letter is provided in Appendix E.

3.4.1 Job Demand-Resource (JD-R) Model

This study focuses on testing three job demands as a potential driver of emotional exhaustion and their relationship with four of teachers' effective states of emotions: happiness, anger, dejection, and anxiety. Job demands included in this study are time pressure, discipline problems, and low student motivation. Previous studies that chose these three job demands found that time pressure and discipline problems have a significant role in increasing teachers' stress and decrease their motivation and performance (Collie, Shapka, & Perry, 2012; Doménech Betoret & Gómez Artiga,

2010; Fernet, Guay, Senécal, & Austin, 2012; Klassen & Chiu, 2010; Skaalvik & Skaalvik, 2011). Regarding low student motivation, Skaalvik and Skaalvik (2015) found it to be the most mentioned stressor in open-ended interviews with teachers (Skaalvik & Skaalvik, 2015).

Discipline problems

Discipline problems were measured using a three-item scale, which was tested before elementary and middle school (Skaalvik & Skaalvik, 2011). The three items were: "My teaching is often disrupted by students who lack discipline," "Some students with behavioral problems make it difficult to carry out lessons as planned," and "Controlling students' behavior takes a lot of time and effort." Respondents were given a 6-point scale to answer from "Completely disagree" (1) to "Completely agree" (6).

Time pressure

To measure time pressure, five items were used. Three items were tested before in elementary and middle school with a Cronbach's alpha of 0.81 (Skaalvik & Skaalvik, 2011). These items were "Preparation for teaching must often be done after working hours," "Life at school is hectic, and there is no time for rest and recovery," and "Meetings, administrative work, and documentation take much of the time that should be used for teaching preparation." The two additional items were tested before by Skaalvik and Skaalvik (2017). These items were "Teachers are loaded with work," and "To provide a good education, teachers would need more time with the students and for preparing their teaching." Respondents were given a 6-point scale to answer from "Completely disagree" (1) to "Completely agree" (6).

Low student motivation

Four items were developed by Skaalvik, and Skaalvik (2017) measured the teachers' perceptions of low student motivation. The items were: "Many of my students show little interest in schoolwork," "Many of my students give up once they meet a challenge," "I find it difficult to make all students work seriously with schoolwork," and "Many of my students show little effort at schoolwork." (Skaalvik & Skaalvik, 2017). Respondents were given a 6-point scale from "Completely disagree" (1) to "Completely agree" (6).

3.4.2 The Scale of Work-Related Affective Feelings (WORAF)

The scale of work-related affective feelings was first developed and validated in Poland by three researchers (Jaworek et al., 2020). The WORAF scale includes four discrete emotions that may be experienced in the workplace: happiness, anger, anxiety, and dejection. This research applied the WORAF scale on teachers in the United States and Jordan to evaluate the four affective feelings and compare results between the two different countries and investigate how teachers react to different cultures' work environments.

3.5 PLS-SEM Analysis

Collected data were analyzed first using different SPSS to report demographic characteristics. Smart-PLS was used to explore skewness, kurtosis, and reliability measures. The research model and research hypothesis for each country sample were developed and validated using PLS_SEM. The basic PLS algorithm was used to estimate the inner and outer loadings. After that, bootstrapping and blindfolding procedures were used to test proposed hypotheses. PLS Multigroup

analysis was then used to explore differences between the Jordan sample and the United States sample.

CHAPTER 4: RESEARCH FINDINGS

4.1 Introduction

The research findings chapter discusses the process of analyzing collected data for the Jordan sample and the United States sample separately, including demographics and the descriptive statistical results. Partial least square path modeling was used as a variance-based structural equation modeling technique by Smart-PLS software. Multi group analysis was used to define significant differences between United States sample and Jordan sample. This chapter reports result in four sections: Complete sample demographics, Basic PLS algorithm-Jordan Sample, Basic PLS algorithm-United States sample, and PLS Multi-Group Analysis (PLS-MGA).

4.2 Study Survey

The survey used in this study includes four parts. The first part consists of demographic questions (age, gender, years of experience, middle/high school, country). The second part includes five items to measure time pressure at school on a 6-points Likert scale. The third and fourth parts include three and four items to measure discipline problems and student's motivation, respectively, and respondents answered on a 6-points Likert scale. The last part includes 24 items to measure four different work-related feelings (happiness, anger, dejection, anxiety) on a 4-points Likert scale. The study survey is provided in Appendix F, and more details are available in chapter three. Table 6 provides a summary of the variables used in the current study.

Table 6: Research Survey Variables

Construct	Number of items	Source
Time pressure	5	Job Demands-Resources Model (Demerouti et al., 2001)
Discipline problems	3	Job Demands-Resources Model (Demerouti et al., 2001)
Student's motivation	4	Job Demands-Resources Model (Demerouti et al., 2001)
Anxiety	8	The Scale of Work-Related Affective Feelings (Jaworek et al., 2020)
Happiness	7	The Scale of Work-Related Affective Feelings (Jaworek et al., 2020)
Dejection	5	The Scale of Work-Related Affective Feelings (Jaworek et al., 2020)
Anger	4	The Scale of Work-Related Affective Feelings (Jaworek et al., 2020)

A total of 965 survey invitations were sent, and a total of 631 responses were received. Two hundred thirty responses from the United States were collected, and 11 incomplete responses were excluded. Three hundred eighty-three total responses from Jordan were collected, and 28 incomplete responses were excluded. A summary table of sample group and response counts is shown in Table 7.

Table 7: Research Survey Responses

Surveys sent by email	207
Surveys sent by social media (Facebook & LinkedIn)	424
Total surveys received from Jordan	383
Total surveys analyzed from Jordan	356
Total surveys received from the United States	230
Total surveys analyzed from the United States	219
Surveys opened in Arabic	383
Surveys opened in English	230

Incomplete responses may be a result of long surveys that consumes more than expected time to complete. It also can result from finding difficulties in understanding specific questions or thinking that they do not apply to the respondents. The most common rule states that five to ten percent of the data is considered as an acceptable amount of missing data without having a significant effect on the statistical results (Joseph F Hair Jr, Sarstedt, Ringle, & Gudergan, 2017). To avoid inaccurate statistical analysis results and parameter estimates, all incomplete responses have been deleted from the data set (a total of 39 responses). Table 8 shows the frequency analysis done in SPSS and no missing values were found.

Table 8: Frequency Analysis Results

Variable	No.	Missing
Gender	1.000	0.000
Age	2.000	0.000
I am a teacher at	3.000	0.000
Teaching experience	4.000	0.000
Country	5.000	0.000
TP1	6.000	0.000
TP2	7.000	0.000
TP3	8.000	0.000
TP4	9.000	0.000
TP5	10.000	0.000
DP1	11.000	0.000
DP2	12.000	0.000
DP3	13.000	0.000
SM1	14.000	0.000
SM2	15.000	0.000
SM3	16.000	0.000
SM4	17.000	0.000
Anx1	18.000	0.000
Anx2	19.000	0.000
Anx3	20.000	0.000
Anx4	21.000	0.000
Anx5	22.000	0.000
Anx6	23.000	0.000
Anx7	24.000	0.000
Anx8	25.000	0.000
Hpp1	26.000	0.000
Hpp2	27.000	0.000
Hpp3	28.000	0.000
Hpp4	29.000	0.000
Hpp5	30.000	0.000

Variable	No.	Missing
Hpp6	31.000	0.000
Hpp7	32.000	0.000
Dej1	33.000	0.000
Dej2	34.000	0.000
Dej3	35.000	0.000
Dej4	36.000	0.000
Dej5	37.000	0.000
Ang1	38.000	0.000
Ang2	39.000	0.000
Ang3	40.000	0.000
Ang4	41.000	0.000

4.3 Demographic Characteristics-Complete Sample

Frequency analysis by SPSS software was used to report the demographic characteristics of the whole sample. As shown in Table 9, 64.35 percent of the respondents were female, and 35.65 of the total respondents were male. However, this was expected since the number of female teachers in most of the educational facilities is higher compared to male teachers (Cushman, 2005). Regarding age, the majority of the respondents were above the age of 31 (35.30% age 31-40 years old and 45.04% age more than 40). Most of the respondents are teachers in high schools (58.26%) and have teaching experience of more than 11 years. According to the literature review, this age group have lower chance to experience negative feelings, but they need more effort to treat if it happened. Regarding the country, 61.85% of the respondents are teachers from Jordan, and 38.15% of the respondents are from the United States.

Table 9: Demographic Characteristics-Complete Sample

Characteristics	Categories	Count	Percentage
Gender	Male	205	35.65%
	Female	370	64.35%
Age	Less than 25	38	6.61%

Characteristics	Categories	Count	Percentage
	25-30	75	13.04%
	31-40	203	35.30%
	More than 40	259	45.04%
School level	Middle school	240	41.74%
	High school	335	58.26%
Teaching experience	Less than 5 years	125	21.74%
	5-10 years	114	19.83%
	11-20 years	205	35.65%
	More than 20 years	131	22.78%
Country	Jordan	355	61.85%
	United States	219	38.15%

4.4 Basic PLS Algorithm-Jordan Sample:

4.4.1 Demographic Characteristics

SPSS software was used to perform frequency analysis and report demographic results of the Jordan sample. As shown in Table 10, 62.1 percent of the respondents were female, and 37.9 percent of the total respondents were male, which matches the fact that female working power is higher in schools (Cushman, 2005). Regarding age, 53.9 percent of the respondents were above the age of 40. Most of the respondents are teachers in high schools (57.0 %) and have been teaching for 11-20 years.

Table 10: Demographic Characteristics-Complete Sample

Characteristics	Categories	Count	Percentage
Gender	Male	135	37.9%
	Female	221	62.1%
Age	Less than 25	3	0.8%
	25-30	25	7.0%
	31-40	136	38.2%
	More than 40	192	53.9%
School level	Middle school	153	43.0%
	High school	203	57.0%
Teaching experience	Less than 5 years	57	16.0%
	5-10 years	66	18.5%
	11-20 years	152	42.7%
	More than 20 years	81	22.8%

4.4.2 Descriptive Statistics

Normality was measured using skewness and kurtosis. Skewness indicates the level of the symmetrical distribution of a construct (skewed to the left or skewed to the right). However, kurtosis indicates whether the construct's distribution is flat or narrow (Hair, Hult, Ringle, Sarstedt, & Thiele, 2017). The skewness values range between -1 and +1, while the kurtosis values range between -3.0 and +3.0 (Gamst, Meyers, & Guarino, 2008; Hair et al., 2017).

For this study data set, normality was met since Skewness and Kurtosis values for all indicators are within the acceptable range, as shown in Table 11.

Table 11: Demographic Characteristics-Complete Sample

	Standard Deviation	**Excess Kurtosis**	**Skewness**
Gender	0.485	-1.760	-0.500
Age	0.662	0.566	-0.989
I am a teacher at	0.495	-1.930	-0.285
Teaching experience	0.988	-0.824	-0.420
TP1	1.707	-0.980	-0.606
TP2	1.553	-0.722	-0.618
TP3	1.588	-0.409	-0.870
TP4	1.486	0.613	-1.309
TP5	1.443	0.661	-1.226
DP1	1.593	-1.182	-0.093
DP2	1.516	-0.785	-0.467
DP3	1.575	-0.880	-0.490
SM1	1.450	-0.576	-0.575
SM2	1.405	-0.793	-0.383
SM3	1.454	-0.899	-0.235
SM4	1.454	-0.760	-0.455
Anx1	0.941	-0.864	0.362
Anx2	0.871	-0.454	0.527
Anx3	0.918	-0.728	0.356
Anx4	0.921	-0.769	0.375
Anx5	0.870	-0.240	0.677
Anx6	0.931	-0.880	0.011
Anx7	0.910	-0.568	0.534
Anx8	0.924	-0.675	0.427
Hpp1	0.944	-0.678	-0.514
Hpp2	0.908	-0.437	-0.563

	Standard Deviation	Excess Kurtosis	Skewness
Hpp3	0.932	-0.530	-0.560
Hpp4	0.927	-0.676	-0.438
Hpp5	0.921	-0.640	-0.389
Hpp6	0.847	0.232	-0.862
Hpp7	0.782	0.732	-0.890
Dej1	0.944	-0.033	0.995
Dej2	0.922	-0.398	0.730
Dej3	0.957	-0.787	0.461
Dej4	1.014	-0.977	0.376
Dej5	0.986	-0.961	0.328
Ang1	1.008	-1.059	0.147
Ang2	0.956	-0.652	0.496
Ang3	0.979	-0.991	0.113
Ang4	1.006	-1.016	-0.235

To test consistency within respondents' groups, Cronbach's alpha was used, as shown in Table 10. Cronbach's alpha value should range between 0 and 1. A negative Cronbach's alpha suggests an issue in the data set. Cronbach's alpha value of 0.7 or higher is considered as good consistency, while Cronbach's alpha of 0.8 or higher indicates a better consistency. Cronbach's alpha value of 0.9 or higher indicates the best consistency. Cronbach's alpha values for each group of indicators are higher than 0.8, which indicates excellent consistency. All values are shown in Table 12.

Table 12: Reliability Measures-Jordan Sample

	Cronbach's Alpha	rho_A	Composite Reliability
Time pressure	0.820	0.853	0.874
Discipline problems	0.827	0.836	0.896
Students' motivation	0.852	0.867	0.900
Anxiety	0.873	0.873	0.900
Happiness	0.915	1.051	0.917
Dejection	0.864	0.897	0.898
Anger	0.832	0.842	0.888

Hypothesized Model

The hypothesized structural causal path model shown in Figure 8 was analyzed using Partial Least Squares Structural Equation Modelling on Smart-PLS 3 software. The measurement model was

analyzed first to define linear relationships between the measured indicators and corresponded latent variables, including assessments of reliability and validity. After that, the structural model was analyzed to define the linear relationship between endogenous and exogenous latent variables (Wong, 2013). Using Smart-PLS, you can combine the measurement model and structural model in one model, which is considered as an advantage of using Smart-PLS over any other software.

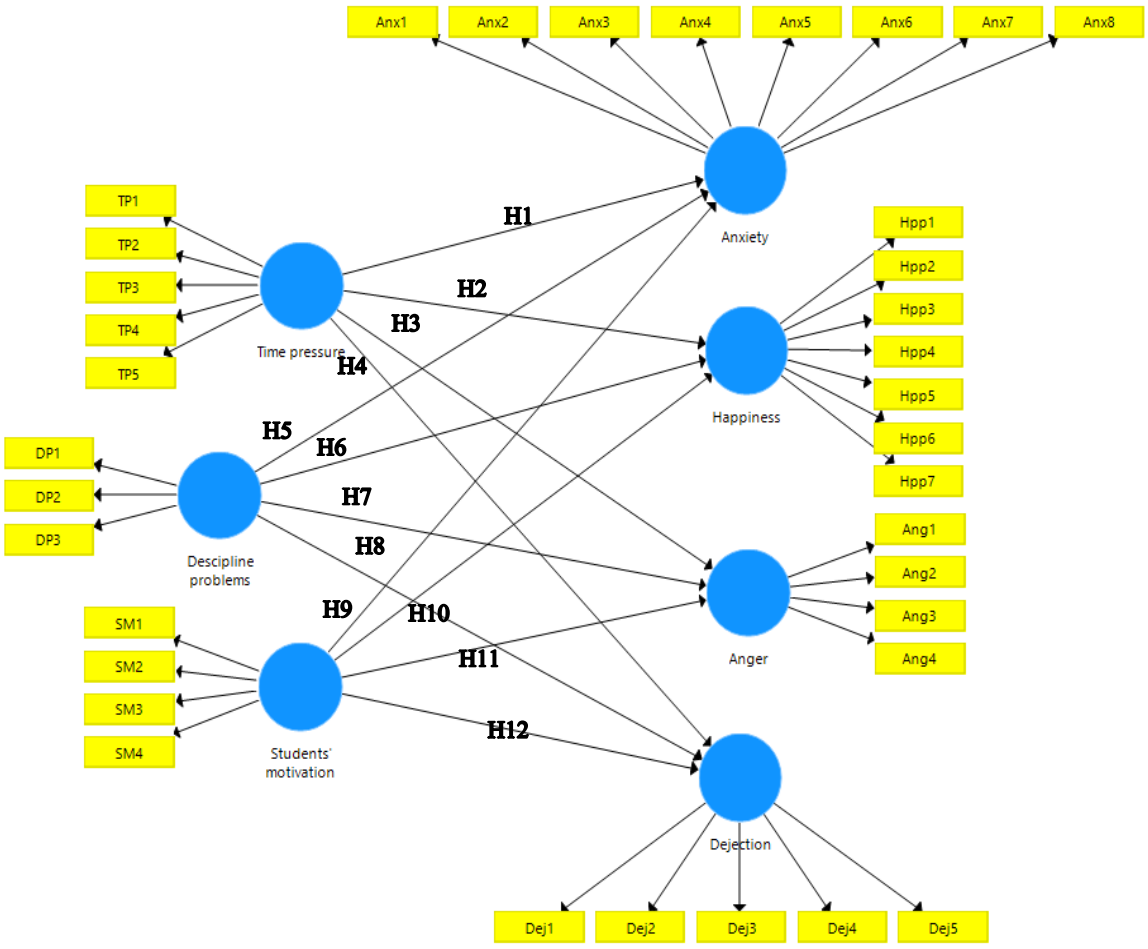

Figure 6: Hypothesized PLS-SEM Casual Model

The associated hypotheses for the model include:

- H1: there is a significant relationship between discipline problems and anger.
- H2: there is a significant relationship between discipline problems and anxiety.
- H3: there is a significant relationship between discipline problems and dejection.
- H4: there is a significant relationship between discipline problems and happiness.
- H5: there is a significant relationship between students' motivation and anger.
- H6: there is a significant relationship between students' motivation and anxiety.
- H7: there is a significant relationship between students' motivation and dejection.
- H8: there is a significant relationship between students' motivation and happiness.
- H9: there is a significant relationship between time pressure and anger.
- H10: there is a significant relationship between time pressure and anxiety.
- H11: there is a significant relationship between time pressure and dejection.
- H12: there is a significant relationship between time pressure and happiness.

Basic PLS algorithm using Smart-PLS was used first to define:

- Outer approximation of the latent variable scores
- Estimation of the inner weights
- Inner approximation of the latent variable scores
- Estimation of the outer weights

4.4.3 Measurement Model

Measurement models can be either reflective or formative models. In reflective models, indicators are driven and caused by the construct and highly correlated to each other. For formative models,

indicators are not related to each other and considered as the cause of the latent variable (Coltman, Devinney, Midgley, & Venaik, 2008).

Cronbach's alpha in Table 13 supports that the measured indicators used in this study are reflective variables. The reflective measurement model is analyzed first to assess the validity and variability of the constructs. Independent variables including; Time pressure (TP1-TP5), Discipline problems (DP1-DP3), and Students' motivation (SM1-SM4) are connected together with the dependent variables; Anxiety (Anx1-Anx8), Happiness (HPP1-HPP7), Dejection (Dej1-Dej5), and Anger (Ang1-Ang4). All variables are connected by a specific factor loading, as shown in Figure 9.

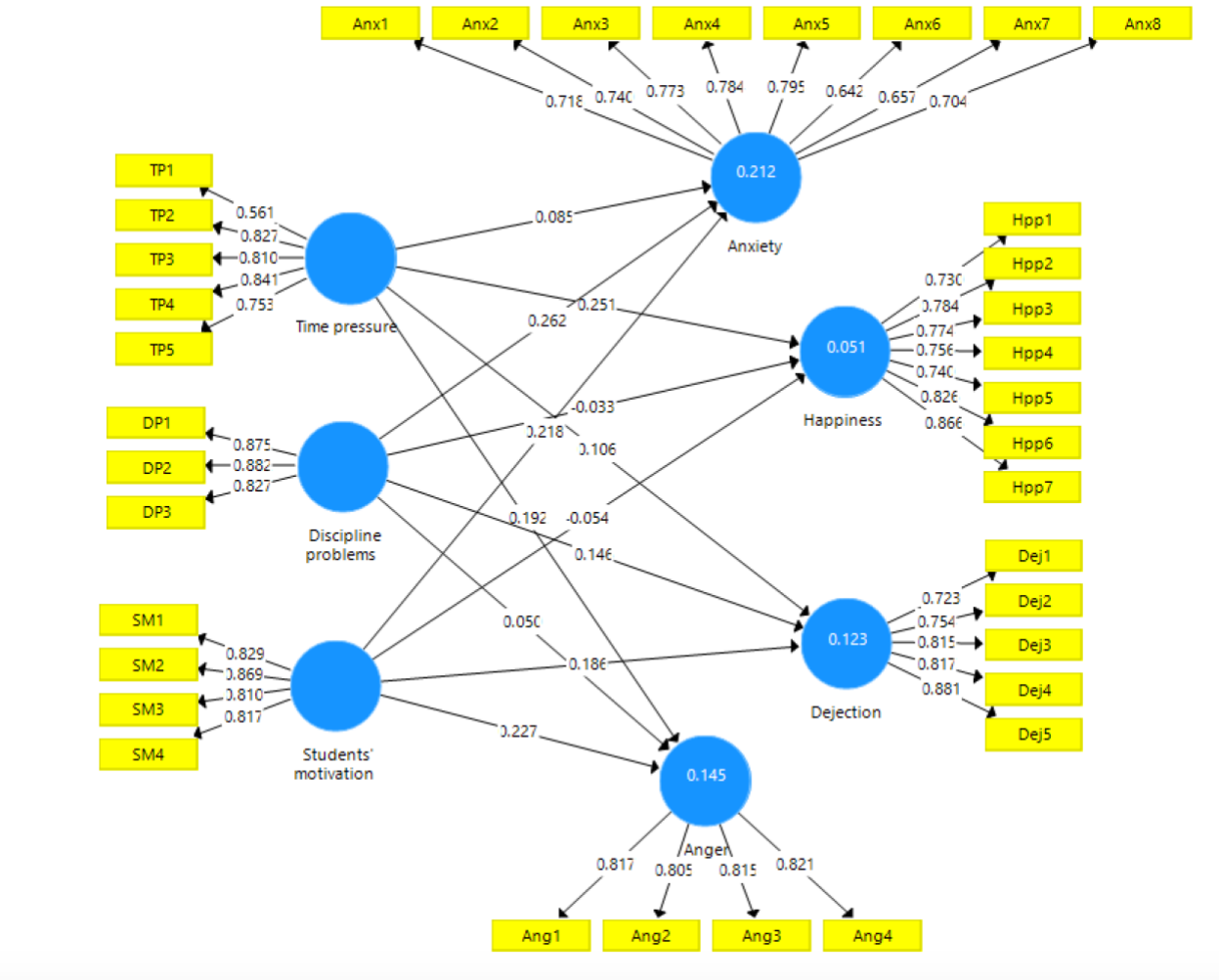

Figure 7: PLS-SEM Casual Model with Loading Factors

Table 13 summaries the outer loading for all indicators representing how much they correlate with the latent variable they are supposed to measure (Urbach & Ahlemann, 2010). Outer loading for each indicator should be at least 0.7 as an acceptable ratio to explain 50 percent or more of the indicator variance (Hair et al., 2017). Indicators with loading lower than 0.4 should be excluded from the model (Hulland, 1999). However, it is common to find some outer loadings in the measurement model to be less than 0.7 (Hulland, 1999). All Exogenous variables in the current

model have outer loading higher than 0.7, except for TP1 which has an outer loading of 0.561. TP1 loading is still considered acceptable, and no variables will be removed from the model.

Table 13: Indicators' Outer Loadings

Endogenous Variable	Exogenous Variable	Outer Loading
Time Pressure	TP1	0.561
	TP2	0.827
	TP3	0.810
	TP4	0.841
	TP5	0.753
Discipline problems	DP1	0.875
	DP2	0.882
	DP3	0.827
Student's motivation	SM1	.829
	SM2	0.869
	SM3	0.810
	SM4	0.817
Anxiety	Anx1	0.718
	Anx2	0.740
	Anx3	0.773
	Anx4	0.784
	Anx5	0.795
	Anx6	0.642
	Anx7	0.657
	Anx8	0.704
Happiness	Hpp1	.730
	Hpp2	.784
	Hpp3	0.774
	Hpp4	0.756
	Hpp5	0.740
	Hpp6	0.826
	Hpp7	0.866
Dejection	Dej1	0.723
	Dej2	0.754
	Dej3	0.815
	Dej4	0.817
	Dej5	0.881
Anger	Ang1	0.817
	Ang2	0.805
	Ang3	0.815
	Ang4	0.821

Convergent Validity

Model validity was evaluated to test whether the indicators are actually measuring the construct they meant to measure. Average variance extracted (AVE) value reveals how much variance can be extracted on average from all indicators to represent the related construct. AVE value should be at least 50 percent of the total variance (Joseph F Hair Jr et al., 2017). To calculate AVE value, each factor loading was squared, and the summation of squared loading was divided by the number of the factors. Any factor with loading less than 0.5 should be extracted from the model. In our model, all factors have good factor loading, and no factors were excluded. Furthermore, AVE values for all constructs are above 0.5, as shown in Table 14, which means the constructs are absolutely explained by their indicators.

Table 14: Convergent Validity Results

Endogenous Variable	Average Variance Extracted (AVE)
Time pressure	0.586
Discipline problems	0.742
Students' motivation	0.691
Anxiety	0.531
Happiness	0.614
Dejection	0.640
Anger	0.664

Discriminant Validity

Discriminant Validity is used in the analysis to define relationships between all latent variables in the model. Table 16 and 17 show the tests that PLS algorithm used to evaluate Discriminant Validity across the model, including Fornell and Larcker and the Heterotrait-Monotrait ratio of correlations (HTMT), respectively.

In Fornell and Larcker table, the values in red AVE values are squared. For each construct, the AVE value squared should be higher than that construct correlation with all other constructs (Latif, Pérez, & Sahibzada, 2020). All constructs in Table 15 pass the Fornell and Larcker test.

Table 15:Fornell and Larcker Test Results

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Student's motivation	Time pressure
Anger	0.815						
Anxiety	0.525	0.729					
Dejection	0.696	0.621	0.800				
Discipline problems	0.234	0.401	0.278	0.861			
Happiness	-0.070	-0.198	-0.169	0.036	0.784		
Students' motivation	0.331	0.383	0.303	0.491	0.035	0.831	
Time pressure	0.305	0.275	0.239	0.379	0.216	0.417	0.765

Another way to test discriminant validity is HTMT value. HTMT value of a construct measures the ratio of correlation within itself to correlation with other constructs (Henseler, Ringle, & Sarstedt, 2015). Table 16 provides HTMT value for our model noting that HTMT value should be less than 0.9 (Latif et al., 2020). All constructs in this model pass the HTMT test.

Table 16: HTMT Ratio

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Student's motivation	Time pressure
Anger							
Anxiety	0.613						
Dejection	0.805	0.714					
Discipline problems	0.274	0.469	0.316				
Happiness	0.176	0.273	0.255	0.110			
Students' motivation	0.382	0.436	0.316	0.583	0.099		
Time pressure	0.348	0.305	0.247	0.459	0.213	0.492	

To investigate issues in discriminant validity, standardized loadings are shown in Table 17. It provides each indicator loadings with all constructs in the model. Each indicator should load higher with its own construct than other constructs in the model. Otherwise, the indicator should be moved to the construct with higher loading, keeping in mind that an indicator difference in cross loading among other constructs should be at least 0.1 (Chin, 1998). The results show that all indicators have higher loadings with their construct (highlighted in yellow) than their loadings with other constructs in the model.

Table 17: Indicators' standardized Loadings

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Students' motivation	Time pressure
Ang1	0.817	0.398	0.616	0.217	-0.014	0.264	0.252
Ang2	0.805	0.488	0.686	0.181	-0.175	0.253	0.199
Ang3	0.815	0.391	0.522	0.122	-0.048	0.266	0.212
Ang4	0.821	0.437	0.467	0.226	-0.012	0.292	0.312
Anx1	0.325	0.718	0.358	0.281	-0.070	0.230	0.232
Anx2	0.383	0.740	0.462	0.328	-0.155	0.250	0.167
Anx3	0.410	0.773	0.491	0.301	-0.142	0.218	0.218
Anx4	0.343	0.784	0.460	0.350	-0.126	0.253	0.197
Anx5	0.363	0.795	0.501	0.272	-0.185	0.281	0.154
Anx6	0.360	0.642	0.355	0.257	-0.067	0.363	0.272
Anx7	0.357	0.657	0.494	0.259	-0.163	0.279	0.103
Anx8	0.497	0.704	0.500	0.280	-0.251	0.326	0.228
DP1	0.196	0.381	0.284	0.875	-0.081	0.445	0.284
DP2	0.232	0.342	0.240	0.882	0.096	0.405	0.360
DP3	0.174	0.310	0.186	0.827	0.093	0.421	0.340
Dej1	0.394	0.502	0.723	0.193	-0.186	0.113	0.078
Dej2	0.519	0.438	0.754	0.172	-0.176	0.137	0.094
Dej3	0.580	0.527	0.815	0.206	-0.127	0.327	0.247
Dej4	0.581	0.471	0.817	0.242	-0.114	0.259	0.239
Dej5	0.645	0.551	0.881	0.278	-0.126	0.276	0.210
Hpp1	-0.092	-0.179	-0.130	0.028	0.730	-0.060	0.120
Hpp2	-0.175	-0.247	-0.240	-0.047	0.784	-0.079	0.080
Hpp3	-0.170	-0.263	-0.244	-0.072	0.774	-0.087	0.123
Hpp4	-0.144	-0.236	-0.231	-0.043	0.756	-0.059	0.062
Hpp5	-0.143	-0.233	-0.218	0.023	0.740	0.022	0.068
Hpp6	-0.033	-0.128	-0.090	0.079	0.826	0.115	0.193
Hpp7	0.039	-0.094	-0.082	0.053	0.866	0.072	0.265
SM1	0.296	0.270	0.232	0.389	0.043	0.829	0.390
SM2	0.347	0.356	0.314	0.446	0.042	0.869	0.395
SM3	0.237	0.340	0.224	0.408	-0.007	0.810	0.270
SM4	0.198	0.297	0.219	0.384	0.037	0.817	0.323

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Students' motivation	Time pressure
TP1	0.122	0.114	0.073	0.198	0.156	0.235	0.561
TP2	0.312	0.309	0.282	0.306	0.070	0.355	0.827
TP3	0.195	0.271	0.200	0.298	0.163	0.323	0.810
TP4	0.275	0.158	0.173	0.313	0.206	0.352	0.841
TP5	0.219	0.151	0.131	0.319	0.274	0.315	0.753

4.4.4 Structural Model Analysis

Smart-PLS was used to evaluate the structural model. Bootstrapping with the complete bootstrapping option with 5000 iterations was used to define p-values where needed. And blindfolding was used to get predictive relevance values.

The tools used to complete this investigation are:

- lateral collinearity
- Size and significance of the path coefficients
- Coefficient of determination (R^2)
- Effect sizes of R^2 (f^2)
- Predictive relevance (Q^2)
- Hypotheses testing.

Lateral Collinearity

Variance inflation factor (VIF) was used to evaluate lateral collinearity. To avoid collinearity issues, Risher et al. (2019) recommend VIF value to be less than 5.0 (Hair, Risher, Sarstedt, & Ringle, 2019). In the Jordan model, VIF values for both the measurement model in Table 18 and the structural model in Table 19 are below 5.0.

Table 18: Measurement Model Collinearity Test Using VIF

	VIF
Ang1	1.849
Ang2	1.927
Ang3	1.937
Ang4	1.735
Anx1	1.831
Anx2	2.345
Anx3	2.201
Anx4	2.236
Anx5	2.353
Anx6	1.457
Anx7	1.550
Anx8	1.774
DP1	1.887
DP2	2.041
DP3	1.767
Dej1	1.959
Dej2	2.129
Dej3	1.850
Dej4	2.114
Dej5	2.652
Hpp1	3.062
Hpp2	4.837
Hpp3	4.353
Hpp4	3.459
Hpp5	2.365
Hpp6	2.099
Hpp7	2.067
SM1	2.017
SM2	2.140
SM3	1.911
SM4	2.022
TP1	1.263
TP2	1.804
TP3	1.892
TP4	2.174
TP5	1.659

Table 19: Structural Model Collinearity Test Using VIF

	Anger	Anxiety	Dejection	Happiness
Discipline problems	1.385	1.385	1.385	1.385
Student's motivation	1.437	1.437	1.437	1.437
Time pressure	1.272	1.272	1.272	1.272

Coefficient of Determination (R^2)

Coefficient of Determination (R^2) was used to assess the model predictive accuracy by defining the combined effect of indicators and constructs together. Cohen (1988) states that R^2 value for a construct is considered weak for values of 0.25, moderate for values of 0.5, and substantial for values of 0.7 (Hair et al., 2019). Flak and Miller (1992) propose an acceptable R2 value to be no less than 0.10. As shown in Table 20, angry, anxiety, and dejection constructs have acceptable R2 level except for happiness. This indicate that Hpp1-Hpp7 have poor ability to predict happiness in the model.

Table 20: Coefficient of Determination for Endogenous Variables

	R Square	P-value
Anger	0.145	0.000
Anxiety	0.212	0.000
Dejection	0.123	0.000
Happiness	0.051	0.050

f^2 Effect Sizes

The effect size is expressed by f^2, and it evaluates the effect of an exogenous latent variable on an endogenous latent variable when compared with different R^2 values (Chin, 2010). f^2 value of 0.02 or higher suggests small effect, f^2 value of 0.15 suggests medium effect, and 0.35 for a large effect (cohen 1988). Table 21 shows that seven paths are significant with f^2 values greater than 0.02. One path was found to have an effect size lower than 0.02, which suggests that the relationship is not significant. In other words, hypothesis H3 should be rejected and excluded from the model.

Table 21: Model Paths Effect Sizes

	f^2
Discipline problems -> Anger	**0.002**
Discipline problems -> Anxiety	**0.063**
Discipline problems -> Dejection	**0.020**
Discipline problems-> Happiness	**0.001**
Student motivation -> Anger	**0.042**
Student motivation -> Anxiety	**0.043**
Student motivation -> Dejection	**0.027**
Student motivation -> Happiness	**0.005**
Time pressure -> Anger	**0.034**
Time pressure -> Anxiety	**0.007**
Time pressure -> Dejection	**0.010**
Time pressure -> Happiness	**0.047**

Predictive Relevance (Q^2)

The blindfolding procedure was used to evaluate the model prediction using Predictive Relevance (Q^2). Q^2 values that are greater than zero support the model's ability to predict endogenous latent variables. While Q^2 values less than zero suggest that the model path has no predictive value (Hair et al., 2019). In our model, anger has Q^2 value of 0.087, anxiety has Q^2 value of 0.101, dejection has Q^2 value of 0.066, and happiness has Q^2 value of 0.021. All predictive relevance values indicate that exogenous latent variables can predict their related endogenous latent variables.

Hypothesis Testing-Path Coefficients and Significance

Path coefficient is used to define the connection between different latent variables in the model with value rang between +1 and -1 (Hair et al., 2017). A path coefficient that is close to +1 suggests a strong and positive relationship between the variables. Where a path coefficient that is close to -1 indicates a strong and negative relationship between the variables. Bootstrapping in Smart-PLS was used to find the significant standard error. Regarding the significance level, Hair et al. (2017)

recommend significant level for $p < 0.01$ at t-values > 2.58 (two-tailed) at t-values > 2.33(one-tailed), and for $p < 0.05$ at t-values > 1.96 (two-tailed) at t-values > 1.65 (one-tailed) (Joseph F Hair Jr et al., 2017). In this study, path coefficients define significant relationships in the model at $p < 0.05$ two-tailed test. The results indicate significant relationships for seven of the paths in the model with t-values greater than 1.96 and p-values less than 0.05. However, five relationships were nonsignificant: Discipline problems and Anger, Discipline problems and Happiness, Students' motivation and Happiness, Time pressure and Dejection, Time pressure and Anxiety. Supporting effect sizes results, five hypotheses found to be nonsignificant in the Jordan sample and should be removed from the model. Excluded hypotheses are H1, H4, H8, H10, and H11. More details are shown in Table 22.

Table 22: Casual Model Path Coefficients and Hypotheses Testing Results

Hypothesis		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
H1	Discipline problems -> Anger	0.048	0.051	0.059	0.816	0.415	Rejected
H2	Discipline problems -> Anxiety	0.263	0.267	0.056	4.706	0.000	Accepted
H3	Discipline problems -> Dejection	0.147	0.150	0.061	2.409	0.016	Accepted
H4	Discipline problems -> Happiness	-0.040	-0.043	0.064	0.631	0.528	Rejected
H5	Students' motivation -> Anger	0.227	0.229	0.063	3.583	0.000	Accepted
H6	Students' motivation -> Anxiety	0.218	0.219	0.057	3.816	0.000	Accepted
H7	Students' motivation -> Dejection	0.186	0.190	0.058	3.228	0.001	Accepted
H8	Students' motivation -> Happiness	-0.084	-0.089	0.087	0.964	0.335	Rejected
H9	Time pressure -> Anger	0.192	0.196	0.055	3.477	0.001	Accepted
H10	Time pressure -> Anxiety	0.084	0.088	0.058	1.440	0.150	Rejected
H11	Time pressure -> Dejection	0.107	0.111	0.060	1.782	0.075	Rejected

Hypothesis		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
H12	**Time pressure -> Happiness**	**0.239**	**0.239**	**0.073**	**3.284**	**0.001**	Accepted

Figure 8 provides the final casual model with significant paths highlighted based on their T-value. The wider the arrow, the stronger the relationship, which means that Jordanian teachers mainly indicated that discipline problems and low students' motivation make them feel anxious.

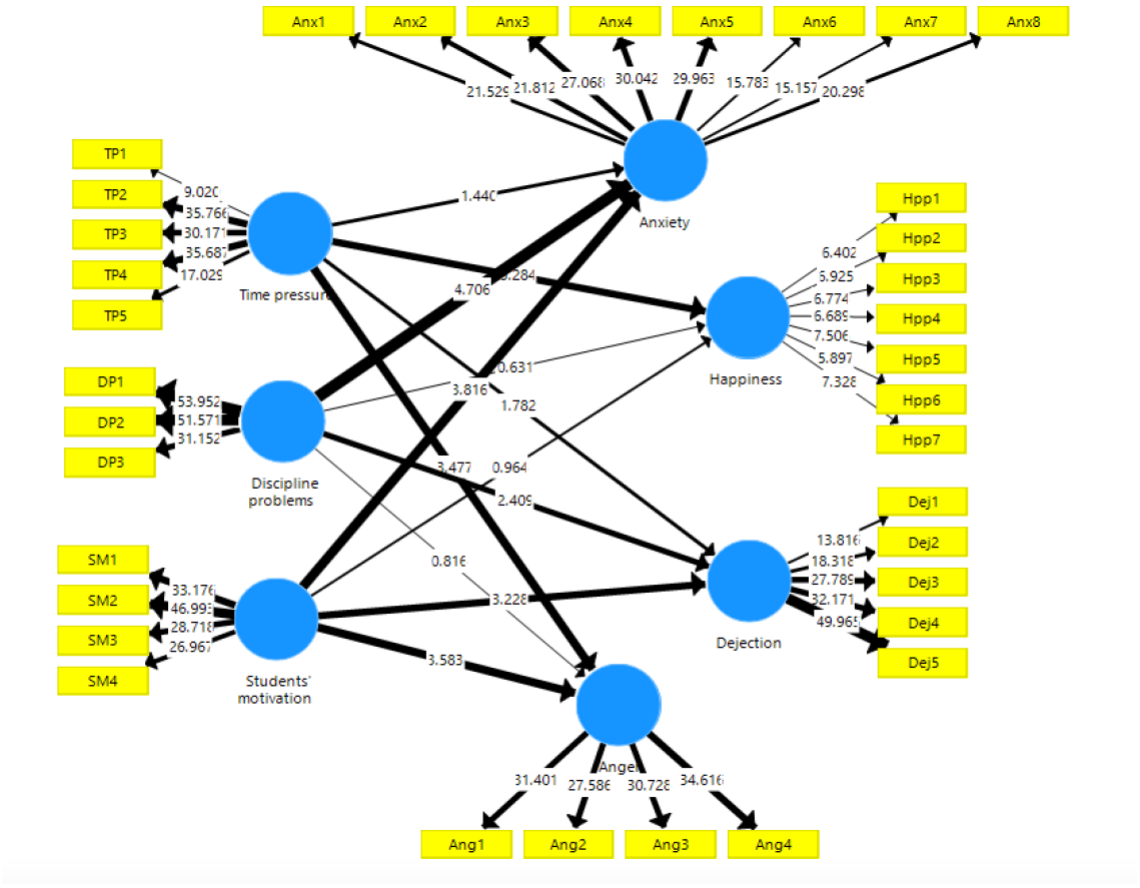

Figure 8: Final Casual Model with Significant Paths Highlighted-Jordan Sample

4.5 Basic PLS Algorithm-United States Sample:

4.5.1 Demographic characteristics

Frequency analysis by SPSS software was used again to report the demographic characteristics of Unites States sample. As shown in Table 23, the majority of the United States respondents were also female, with 68.0 percentage, and 32.0 percent of the respondents were male. Regarding age, majority of the respondents were above the age of 31(30.6 % age 31-40 years old and 30.6 % age more than 40). Most of the respondents found to be teachers in high schools (60.3 %) and have teaching experience between 11-20 years, which matches the results from Jordan sample.

Table 23: Demographic Characteristics-United Sates Sample

Characteristics	Categories	Count	Percentage
Gender	Male	70	32.0%
	Female	149	68.0%
Age	Less than 25	35	16.0%
	25-30	50	22.8%
	31-40	67	30.6%
	More than 40	67	30.6%
School level	Middle school	87	39.7%
	High school	132	60.3%
Teaching experience	Less than 5 years	68	31.3%
	5-10 years	48	21.9%
	11-20 years	53	24.2%
	More than 20 years	50	22.8%

4.5.2 Descriptive Statistics

A normality test was performed using Smart-PLS to measure skewness and kurtosis. For the United States sample, Skewness and Kurtosis values for all indicators were found to have acceptable values, as shown in Table 24.

Table 24: Descriptive Statistics-United States Sample

	Standard Deviation	Excess Kurtosis	Skewness
Gender	0.466	-1.406	-0.779
Age	1.056	-1.123	-0.323
I am a teacher at	0.489	-1.838	-0.423
Teaching experience	1.147	-1.425	0.112
TP1	1.729	-0.185	-1.110
TP2	1.556	-0.810	-0.677
TP3	1.230	0.828	-1.153
TP4	1.314	0.581	-1.175
TP5	1.127	3.763	-1.850
DP1	1.217	0.764	-1.126
DP2	1.176	1.585	-1.331
DP3	1.195	0.710	-1.118
SM1	1.328	-0.252	-0.832
SM2	1.305	0.097	-0.949
SM3	1.255	0.293	-1.002
SM4	1.262	0.266	-1.037
Anx1	1.152	-1.474	0.013
Anx2	1.112	-1.392	-0.031
Anx3	1.108	-1.408	0.022
Anx4	1.061	-1.237	-0.309
Anx5	1.096	-1.372	-0.111
Anx6	1.016	-0.964	-0.534
Anx7	1.105	-1.372	-0.137
Anx8	1.067	-1.265	-0.099
Hpp1	1.195	-1.543	-0.137
Hpp2	1.190	-1.544	-0.060
Hpp3	1.157	-1.477	-0.007
Hpp4	1.137	-1.436	0.051
Hpp5	1.059	-1.108	0.397
Hpp6	1.025	-1.088	0.404
Hpp7	0.977	-1.203	0.050
Dej1	1.127	-1.408	0.092
Dej2	1.162	-1.486	0.029
Dej3	1.168	-1.470	0.149
Dej4	1.134	-1.438	-0.134
Dej5	1.103	-1.361	-0.101
Ang1	1.143	-1.442	-0.047
Ang2	1.125	-1.415	0.040
Ang3	1.092	-1.174	-0.433
Ang4	1.033	-1.066	-0.444

Table 25 provides a list of the reliability measures, where Cronbach's alpha value and Composite reliability value for all latent variables included in United States sample is around 0.9. Regarding

rho-A value, all scores were between Cronbach's alpha value and Composite reliability value. The results indicate high consistency of the United States model.

Table 25: Reliability Measures-United States Sample

	Cronbach's Alpha	rho_A	Composite Reliability
Time pressure	0.875	0.890	0.910
Discipline problems	0.923	0.923	0.951
Students' motivation	0.945	0.946	0.960
Anxiety	0.953	0.961	0.961
Happiness	0.947	0.958	0.958
Dejection	0.952	0.958	0.964
Anger	0.939	0.948	0.956

Smart-PLS software was used to analyze the proposed model for this data sample. The measurement model was analyzed first by running basic PLS algorithm to test the outer model. The structural model was then analyzed using bootstrapping and blindfolding to test the inner model. Figure 9 shows the proposed hypothesis model for the United States sample.

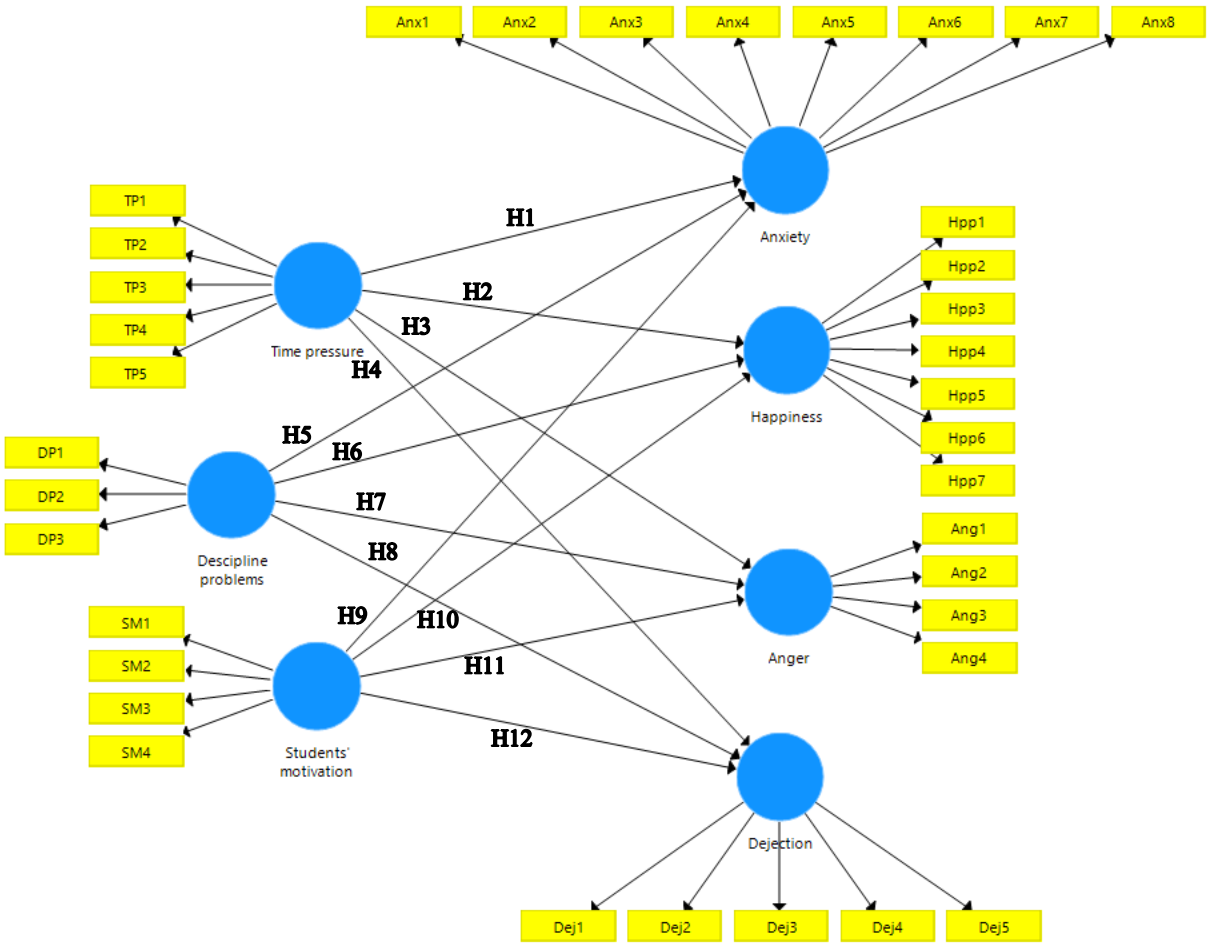

Figure 9: Hypothesized PLS-SEM Casual Model

The associated hypotheses for the United States model are:

- H1: there is a significant relationship between discipline problems and anger.
- H2: there is a significant relationship between discipline problems and anxiety.
- H3: there is a significant relationship between discipline problems and dejection.
- H4: there is a significant relationship between discipline problems and happiness.

- H5: there is a significant relationship between students' motivation and anger.
- H6: there is a significant relationship between students' motivation and anxiety.
- H7: there is a significant relationship between students' motivation and dejection.
- H8: there is a significant relationship between students' motivation and happiness.
- H9: there is a significant relationship between time pressure and anger.
- H10: there is a significant relationship between time pressure and anxiety.
- H11: there is a significant relationship between time pressure and dejection.
- H12: there is a significant relationship between time pressure and happiness.

4.5.3 Measurement Model

Cronbach's alpha for United States sample support that the indicators are reflective. The reflective measurement model is analyzed first to assess validity and variability of the constructs. Three independent variables used in the model including of Time pressure (TP1-TP5), Discipline problems (DP1-DP3), and Students' motivation (SM1-SM4). Four dependent variables included in the model: Anxiety (Anx1-Anx8), Happiness (HPP1-HPP7), Dejection (Dej1-Dej5), and Anger (Ang1-Ang4). All independent and dependent variables are connected by a factor loading as shown in Figure 10.

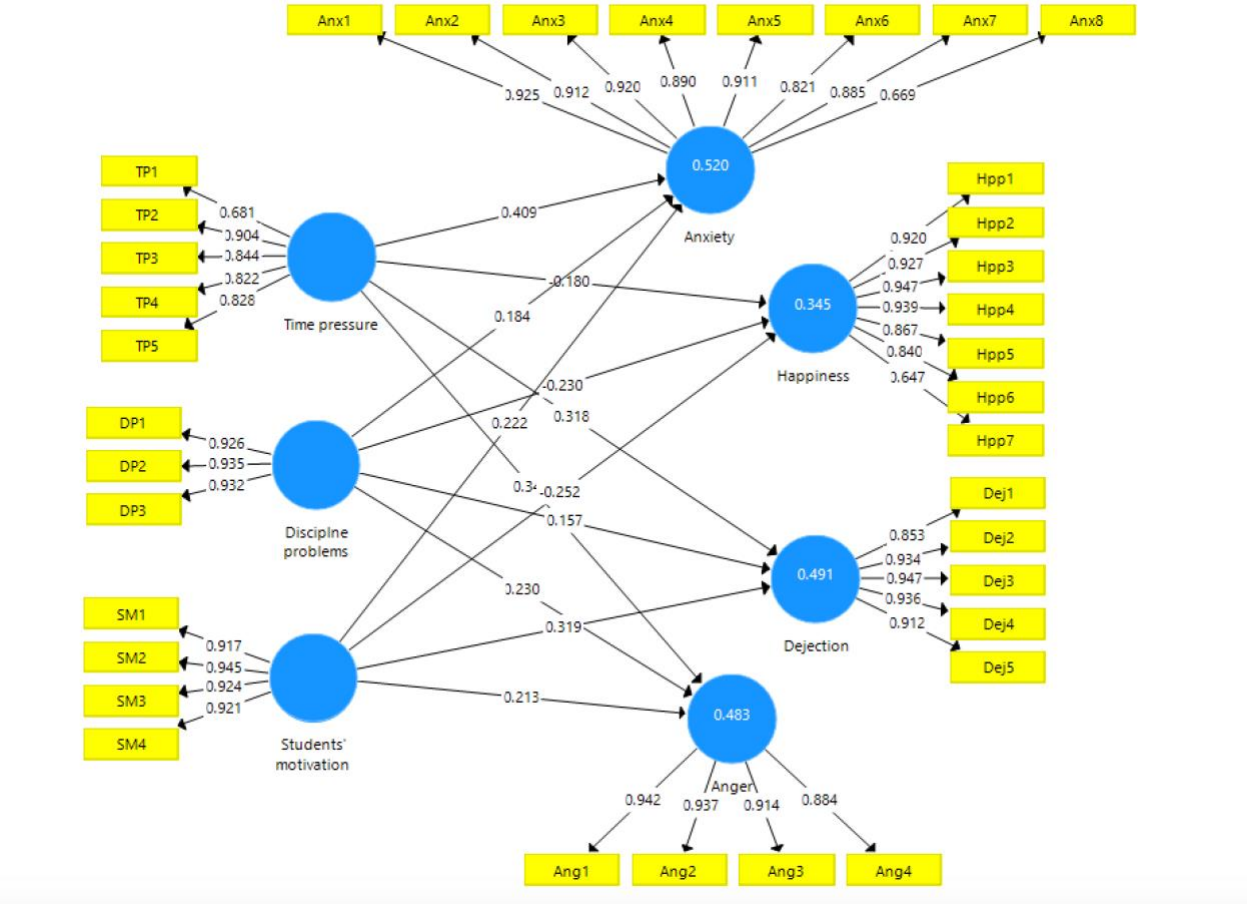

Figure 10: PLS-SEM Casual Model with Loading Factors

The outer loadings for all indicators are shown in Table 26. All indicators for this model have outer loading higher than 0.7, except for TP1, Anx8, Hpp7 which have an outer loading lower than 0.7 but higher than 0.5. These loading are still considered acceptable, and no variables will be removed from the model.

Table 26: Indicators' Outer Loadings

Endogenous Variable	**Exogenous Variable**	**Outer Loading**

Time Pressure	TP1	0.681
	TP2	0.904
	TP3	0.844
	TP4	0.822
	TP5	0.828
Discipline problems	DP1	0.926
	DP2	0.935
	DP3	0.932
Student's motivation	SM1	0.917
	SM2	0.945
	SM3	0.924
	SM4	0.921
Anxiety	Anx1	0.925
	Anx2	0.912
	Anx3	0.920
	Anx4	0.890
	Anx5	0.911
	Anx6	0.821
	Anx7	0.885
	Anx8	0.669
Happiness	Hpp1	0.920
	Hpp2	0.927
	Hpp3	0.947
	Hpp4	0.939
	Hpp5	0.867
	Hpp6	0.840
	Hpp7	0.647
Dejection	Dej1	0.853
	Dej2	0.934
	Dej3	0.947
	Dej4	0.936
	Dej5	0.912
Anger	Ang1	0.942
	Ang2	0.937
	Ang3	0.914
	Ang4	0.884

Convergent Validity

AVE values are summarized in Table 27 to indicate how much variance can be obtained by the indicators. In the current model, all AVE values are above 0.5, which confirms that the model construct are well explained by their indicators. In other words, indicators have the ability to explain more than 50% of the construct's variance.

Table 27: Convergent Validity Results

Endogenous Variable	Average Variance Extracted (AVE)
Time pressure	0.671
Discipline problems	0.867
Students' motivation	0.859
Anxiety	0.758
Happiness	0.765
Dejection	0.841
Anger	0.846

Discriminant Validity

Table 28 and 29 show the discriminant validity tests for the United States model. All constructs pass the Fornell and Larcker test in, which means that each construct in the model correlate with itself more than it correlates with other constructs. All values are shown in Table 27 and Table 28.

Table 28: Fornell and Larcker Test Results

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Student's motivation	Time pressure
Anger	0.920						
Anxiety	0.906	0.870					
Dejection	0.914	0.906	0.917				
Discipline problems	0.616	0.619	0.605	0.931			
Happiness	-0.774	-0.771	-0.782	-0.537	0.875		
Students' motivation	0.593	0.607	0.629	0.746	-0.533	0.927	
Time pressure	0.624	0.664	0.615	0.660	-0.484	0.606	0.819

Table 29: HTMT Ratio

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Student's motivation	Time pressure
Anger							
Anxiety	0.956						
Dejection	0.960	0.950					
Discipline problems	0.658	0.657	0.641				
Happiness	0.812	0.805	0.817	0.572			
Students' motivation	0.620	0.633	0.660	0.799	0.559		
Time pressure	0.681	0.718	0.667	0.738	0.527	0.674	

Next step was to evaluate cross loadings. As mentioned before, each indicator has higher loading with its own construct than other constructs in the model or the indicator should be moved to the other construct. Cross loadings are shown in Table 30.

Table 30: Indicators' Cross Loadings

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Students' motivation	Time pressure
Ang1	0.942	0.863	0.903	0.586	-0.756	0.611	0.574
Ang2	0.937	0.864	0.900	0.615	-0.760	0.652	0.614
Ang3	0.914	0.799	0.802	0.541	-0.685	0.461	0.544
Ang4	0.884	0.802	0.741	0.513	-0.632	0.426	0.560
Anx1	0.811	0.925	0.815	0.563	-0.721	0.593	0.612
Anx2	0.796	0.912	0.832	0.569	-0.751	0.637	0.621
Anx3	0.818	0.920	0.828	0.552	-0.733	0.567	0.587
Anx4	0.784	0.890	0.759	0.550	-0.648	0.482	0.602
Anx5	0.835	0.911	0.825	0.580	-0.675	0.535	0.595
Anx6	0.809	0.821	0.758	0.561	-0.629	0.482	0.530
Anx7	0.840	0.885	0.854	0.552	-0.686	0.538	0.630
Anx8	0.594	0.669	0.615	0.347	-0.484	0.341	0.419
DP1	0.572	0.588	0.573	0.926	-0.504	0.696	0.637
DP2	0.568	0.578	0.547	0.935	-0.493	0.675	0.603
DP3	0.580	0.564	0.570	0.932	-0.503	0.714	0.602
Dej1	0.718	0.741	0.853	0.449	-0.584	0.525	0.506
Dej2	0.812	0.833	0.934	0.529	-0.706	0.600	0.594
Dej3	0.858	0.862	0.947	0.634	-0.744	0.644	0.636
Dej4	0.896	0.864	0.936	0.573	-0.758	0.574	0.535
Dej5	0.902	0.849	0.912	0.572	-0.783	0.530	0.536
Hpp1	-0.701	-0.718	-0.723	-0.517	0.920	-0.537	-0.448
Hpp2	-0.706	-0.706	-0.728	-0.484	0.927	-0.518	-0.417
Hpp3	-0.755	-0.734	-0.771	-0.506	0.947	-0.534	-0.474
Hpp4	-0.747	-0.732	-0.761	-0.494	0.939	-0.531	-0.447
Hpp5	-0.693	-0.695	-0.654	-0.449	0.867	-0.351	-0.467

	Anger	Anxiety	Dejection	Discipline problems	Happiness	Students' motivation	Time pressure
Hpp6	-0.669	-0.654	-0.643	-0.496	0.840	-0.378	-0.400
Hpp7	-0.418	-0.434	-0.457	-0.311	0.647	-0.374	-0.292
SM1	0.568	0.583	0.591	0.694	-0.543	0.917	0.619
SM2	0.538	0.553	0.578	0.700	-0.499	0.945	0.595
SM3	0.539	0.560	0.574	0.686	-0.448	0.924	0.527
SM4	0.551	0.551	0.586	0.686	-0.480	0.921	0.499
TP1	0.386	0.425	0.456	0.521	-0.385	0.644	0.681
TP2	0.579	0.637	0.598	0.557	-0.506	0.556	0.904
TP3	0.542	0.583	0.517	0.534	-0.384	0.470	0.844
TP4	0.563	0.577	0.487	0.544	-0.362	0.356	0.822
TP5	0.458	0.466	0.439	0.556	-0.327	0.482	0.828

4.5.4 Structural Model Analysis

Structural model (inner model) was analyzed to investigate the relationships between latent variables (Sarstedt et al., 2017). Smart-PLS version 3 was used to perform the PLS analysis. Bootstrapping with the complete bootstrapping option with 5000 iterations was used to define p-values where needed.

Lateral Collinearity

Lateral collinearity was tested for the United States sample using VIF value. Table 31 and 32 view VIF values for measurement and structural model respectively, which found to pass the lateral collinearity. Some values in the measurement model exceed 5, which is as indicated by Hair (1995) still acceptable as long as it does not exceed 10 (Hair, 2009).

Table 31: Measurement Model Collinearity Tests using VIF

	VIF
Ang1	5.641
Ang2	5.383
Ang3	3.824
Ang4	3.114
Anx1	6.577
Anx2	6.701
Anx3	6.904
Anx4	4.698
Anx5	5.324

	VIF
Anx6	2.944
Anx7	4.095
Anx8	1.808
DP1	3.246
DP2	3.690
DP3	3.522
Dej1	2.906
Dej2	5.594
Dej3	6.304
Dej4	6.544
Dej5	4.882
Hpp1	7.845
Hpp2	9.200
Hpp3	8.419
Hpp4	6.599
Hpp5	3.691
Hpp6	3.107
Hpp7	1.485
SM1	4.293
SM2	5.756
SM3	4.491
SM4	4.259
TP1	2.360
TP2	3.907
TP3	2.384
TP4	3.242
TP5	2.518

Table 32: Structural Model Collinearity Tests using VIF

	Anger	Anxiety	Dejection	Happiness
Discipline problems	2.668	2.668	2.668	2.668
Student's motivation	2.380	2.380	2.380	2.380
Time pressure	1.866	1.866	1.866	

Coefficient of Determination (R^2)

United States model have high predictive accuracy, which was measured using coefficient of determination. R2 value should be higher than 0.10 to be acceptable, and all constructs have high R2 level as shown in Table 33. This means that the model has good predictive accuracy.

Table 33: Coefficient of Determination for Endogenous Variables

	R Square	P-value
Anger	0.483	0.000
Anxiety	0.520	0.000
Dejection	0.491	0.000
Happiness	0.345	0.000

f^2 Effect Sizes

To evaluate the effect of an independent variables on the dependent variable, effect sizes were used. f^2 value of 0.02 or higher suggests small effect, f^2 value of 0.15 suggests medium effect, and 0.35 for a large effect (cohen 1988). Table 34 shows *p* values for all paths are significant with f^2 values greater than 0.02, except for discipline problems and dejection suggesting that exogenous latent variable does not have enough effect to measure the related endogenous latent variables. The results suggest that this relationship is not significant. In other words, hypothesis H3 should be rejected and excluded from the model.

Table 34: Model Paths Effect Sizes

	f^2
Discipline problems -> Anger	0.038
Discipline problems -> Anxiety	0.027
Discipline problems -> Dejection	0.018
Discipline problems -> Happiness	0.030
Student's motivation -> Anger	0.037
Student's motivation -> Anxiety	0.043
Student's motivation -> Dejection	0.084
Student's motivation -> Happiness	0.041
Time pressure -> Anger	0.122
Time pressure -> Anxiety	0.187
Time pressure -> Dejection	0.106
Time pressure -> Happiness	0.027

Predictive Relevance (Q^2)

Blindfolding procedure was used to calculate Predictive Relevance (Q^2). Q^2 values should be greater than zero. While Q^2 values less than zero suggests that the model path have no predictive value (Hair et al., 2019). In United States model, anger has Q^2 value of 0.380, anxiety has Q^2 value of 0.366, dejection has Q^2 value of 0.382, and happiness have Q^2 value of 0.244. All predictive relevance values indicate a good predictive model.

Hypothesis Testing-Path Coefficients and Significance

Bootstrapping in Smart-PLS was used to find the significant paths. The results are shown in Table 35 indicate significant relationships for all of the paths in the model with t-values greater than 1.96 and p-values less than 0.05, except for one path (Discipline problems and Dejection) found to be nonsignificant. Hypothesis testing findings matches the effect sizes results to exclude H3 from the United States model.

Table 35: Casual Model Path Coefficients and Hypotheses Testing Results

Hypothesis		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
H1	**Discipline problems -> Anger**	0.231	0.232	0.093	2.472	0.013	Accepted
H2	**Discipline problems -> Anxiety**	0.184	0.185	0.088	2.099	0.036	Accepted
H3	**Discipline problems -> Dejection**	0.156	0.156	0.093	1.684	0.092	Rejected
H4	**Discipline problems -> Happiness**	-0.230	-0.231	0.085	2.699	0.007	Accepted
H5	**Students' motivation -> Anger**	0.212	0.210	0.087	2.448	0.01	Accepted

Hypothesis		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
H6	**Students' motivation -> Anxiety**	0.222	0.222	0.073	3.043	0.002	Accepted
H7	**Students' motivation -> Dejection**	0.320	0.320	0.074	4.337	0.000	Accepted
H8	**Students' motivation -> Happiness**	-0.253	-0.253	0.078	3.226	0.001	Accepted
H9	**Time pressure -> Anger**	0.344	0.347	0.068	5.058	0.000	Accepted
H10	**Time pressure -> Anxiety**	0.409	0.412	0.061	6.655	0.000	Accepted
H11	**Time pressure -> Dejection**	0.318	0.323	0.065	4.899	0.000	Accepted
H12	**Time pressure -> Happiness**	-0.180	-0.186	0.077	2.339	0.019	Accepted

Figure 11 shows the final PLS-SEM model with significant paths highlighted based on T-value. Time pressure seems to be the most type of job demands that United States teachers are experiencing. Time pressure relationship with feeling anxious, angry, and dejected are the most significant relationships found on United States sample.

In United States sample, both students' motivation and time pressure found to have a relationship with anger, anxiety, dejection, and happiness. However, discipline problems found to be related to anger, anxiety, and happiness.

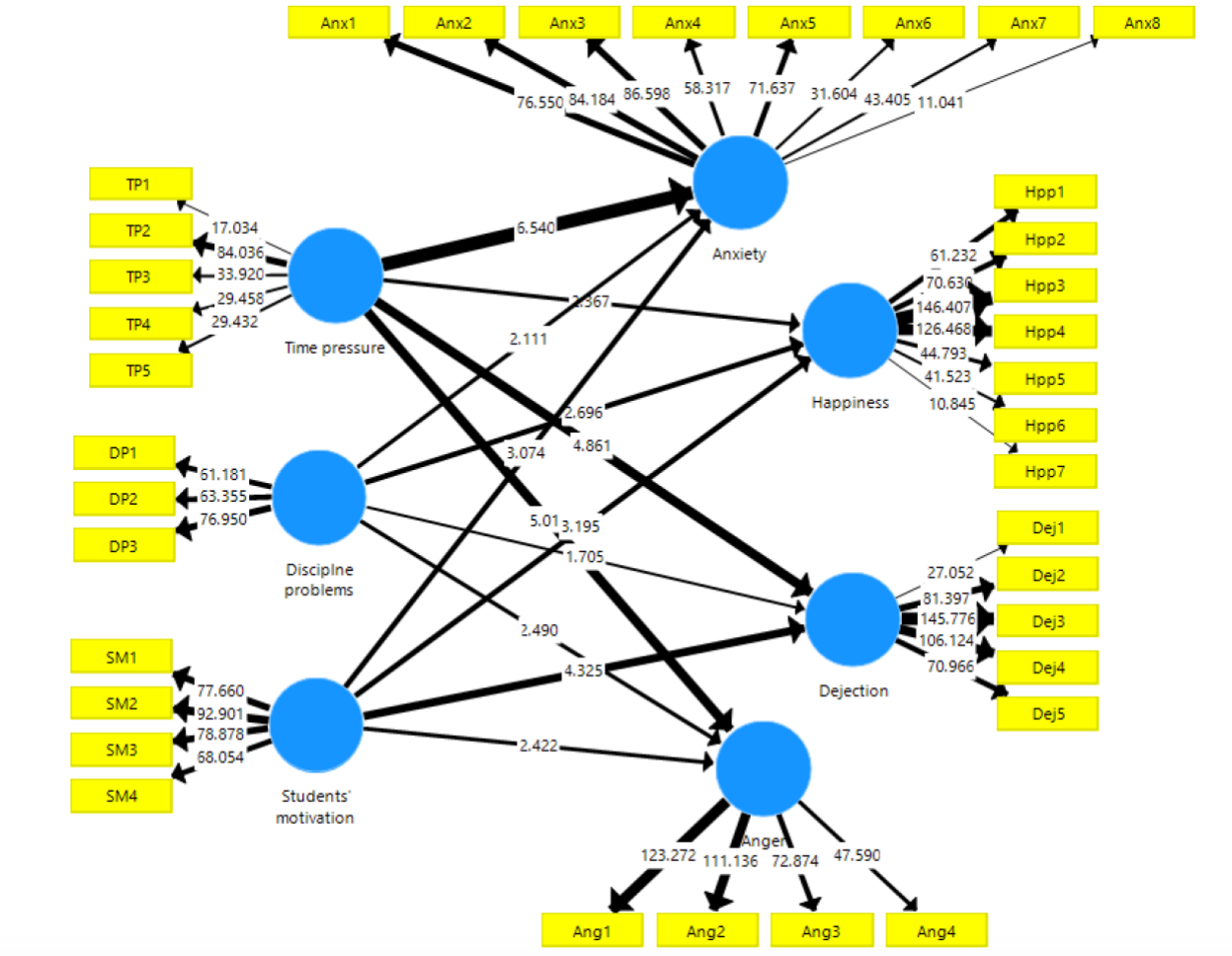

Figure 11: Final Casual Model with Significant Paths Highlighted-United States Sample

4.6 PLS Multigroup Analysis

The partial least squares structural equation modelling was performed to test the proposed research model. Initially, this model was divided by country into two samples. Both samples were validated separately. Multi-group partial least squares analysis was then run to compare differences between the samples. Smart-PLS software was used for this analysis.

Table 36 evaluates reliability and validity of the measurement model for each sample using Cronbach's Alpha, Composite Reliability, and AVE value. The results show that both samples in the United States and Jordan have acceptable values for Cronbach's Alpha (above 0.7), Composite Reliability (above 0.7), and AVE (above 0.5). Next step was to ensure that all indicators have factors loadings that are high enough to explain their latent variable. Jordan model and United States model found to have all 36 indicators with high factor loadings.

Table 36: Comparison Summery for Models Validity and Factor Loadings

Endogenous Variable	Exogenous variable	Convergent validity	All	United States	Jordan
Time pressure		Cronbach's Alpha Composite Reliability AVE	0.842 0.888 0.616	0.875 0.910 0.671	0.820 0.874 0.586
	TP1 TP2 TP3 TP4 TP5		0.647 0.863 0.817 0.815 0.764	0.681 0.904 0.844 0.822 0.828	0.561 0.827 0.810 0.841 0.753
Discipline problems		Cronbach's Alpha Composite Reliability AVE	0.878 0.925 0.803	0.923 0.951 0.867	0.827 0.896 0.742
	DP1 DP2 DP3		0.906 0.904 0.879	0.926 0.935 0.932	0.875 0.882 0.827
Student's motivation		Cronbach's Alpha Composite Reliability AVE	0.901 0.931 0.771	0.945 0.960 0.859	0.852 0.900 0.691
	SM1 SM2 SM3 SM4		0.867 0.899 0.873 0.873	0.917 0.945 0.924 0.921	0.829 0.869 0.810 0.817
Anxiety		Cronbach's Alpha Composite Reliability AVE	0.927 0.940 0.664	0.953 0.961 0.758	0.873 0.900 0.531
	Anx1 Anx2 Anx3 Anx4 Anx5 Anx6 Anx7 Anx8		0.831 0.851 0.852 0.851 0.875 0.741 0.801 0.703	0.925 0.912 0.920 0.890 0.911 0.821 0.885 0.669	0.718 0.740 0.773 0.784 0.795 0.642 0.657 0.704

Endogenous Variable	Exogenous variable	Convergent validity	All	United States	Jordan
Happiness		Cronbach's Alpha Composite Reliability AVE	0.938 0.950 0.733	0.947 0.958 0.765	0.915 0.917 0.614
	Hpp1 Hpp2 Hpp3 Hpp4 Hpp5 Hpp6 Hpp7		0.878 0.912 0.918 0.909 0.842 0.793 0.725	0.920 0.927 0.947 0.939 0.867 0.840 0.647	0.730 0.784 0.774 0.756 0.740 0.826 0.866
Dejection		Cronbach's Alpha Composite Reliability AVE	0.917 0.938 0.751	0.952 0.964 0.841	0.864 0.898 0.640
	Dej1 Dej2 Dej3 Dej4 Dej5		0.825 0.877 0.876 0.867 0.887	0.853 0.934 0.947 0.936 0.912	0.723 0.754 0.815 0.817 0.881
Anger		Cronbach's Alpha Composite Reliability AVE	0.888 0.922 0.748	0.939 0.956 0.846	0.832 0.888 0.664
	Ang1 Ang2 Ang3 Ang4		0.871 0.882 0.869 0.837	0.942 0.937 0.914 0.884	0.817 0.805 0.815 0.821

After the validity and reliability of both models were met, a multigroup analysis was run to see if there are actually differences between samples. Final casual models resulted from basic PLS algorithm runs, some differences in the significant paths were seen.

Multi-group analysis was run to further investigate these differences. PLS-SEM, Parametric test assuming equal variances, and Welch test assuming non equal variances were performed to evaluate the structural models and define significant differences between United Sates sample and Jordan sample. Results are shown in Table 37.

As shown in Table 38, significant differences between United States and Jordan they were found in the effect of time pressure on anxiety, dejection, and happiness. These three relationships found to have different behaviors between Untied States sample and Jordan sample.

Table 37: PLS-MGA Path Differences and Path Significance

	Path difference (|United States-Jordan|)	P-value (Jordan)	P-value (United States)
Discipline problems -> Anger	0.182	0.413	0.020
Discipline problems -> Anxiety	0.079	0.000	0.039
Discipline problems -> Dejection	0.010	0.014	0.112
Discipline problems -> Happiness	0.189	0.516	0.008
Student's motivation -> Anger	0.015	0.000	0.015
Student's motivation -> Anxiety	0.004	0.000	0.002
Student's motivation -> Dejection	0.134	0.001	0.000
Student's motivation -> Happiness	0.168	0.329	0.001
Time pressure -> Anger	0.151	0.000	0.000
Time pressure -> Anxiety	0.325	0.132	0.000
Time pressure -> Dejection	0.211	0.069	0.000
Time pressure -> Happiness	0.419	0.002	0.017

Table 38: PLS-MGA Results

	PLS_SEM p-Value(United States vs Jordan)	PARAMETRIC TEST p-Value(United States vs Jordan)	WELCH TEST p-Value (United States vs Jordan)
Discipline problems -> Anger	0.061	0.091	0.113
Discipline problems -> Anxiety	0.777	0.417	0.446
Discipline problems -> Dejection	0.453	0.929	0.933
Discipline problems -> Happiness	0.958	0.069	0.075
Student's motivation -> Anger	0.549	0.884	0.886
Student's motivation -> Anxiety	0.485	0.965	0.965
Student's motivation -> Dejection	0.074	0.153	0.157
Student's motivation -> Happiness	0.928	0.181	0.149
Time pressure -> Anger	0.039	0.082	0.081
Time pressure -> Anxiety	0.000	0.000	0.000
Time pressure -> Dejection	0.008	0.020	0.016
Time pressure -> Happiness	0.999	0.000	0.000

CHAPTER 5: CONCLUSION

This research focused on testing the effect of job demands (time pressure, discipline problems, and students' motivation) on teachers' work-related feelings (anxiety, happiness, dejection, and anger). A causal path model was developed using Smart-PLS to understand the relationships between job demands and work-related feelings in the United States and Jordan. Multigroup analysis using Smart-PLS was performed to define the significant differences between the United States and Jordan samples. This section discusses the analysis results, study implications and limitations, and future research recommendations.

5.1 Discussion

Research interest in teachers' mental health is growing. Investigating the causes behind teachers' negative feelings is critical in implementing better a working environment and efficient teaching process. High job demands usually result in emotional exhaustion and poor performance. Teachers' negative feelings can reflect on students' mental health and academic achievements in the long term.

To define the proposed relationships in two countries, an individual model was created for each country sample. The data was collected from middle and high school teachers in and the United States Jordan. Each data sample was analyzed separately to test the proposed model validity and reliability, and then the results were compared to define significant differences.

As shown in chapter 4, twelve hypotheses were proposed for each model. The findings suggest accepting seven of the proposed hypotheses in the Jordan sample and eleven hypotheses in the United States sample (details in Table 40). The stronger hypotheses found in Jordan sample were the effect of discipline problems on anxiety and the effect of low students' motivation on anxiety. This could be related to switching all classes to be virtual due to Covid-19 pandemic. Online classes in Jordan challenged both teachers and students and it was hard for teachers to control students' behaviors and class rules. A study done on Jordanian universities to test the impact of covid-19 lockdown found the most common feeling in students at that time was anxiety, which support this study results (Alsoud & Harasis, 2021).

Hypotheses testing results showed an unexpected positive significant relationship between time pressure and happiness in the Jordan sample. This could be related to the fact that happiness as a construct has a low coefficient of determination ($R^2 = 0.051$) indicating poor prediction ability. Indicators used in this study were found to have the ability to explain only 5% of happiness variance. Another explanation could be that teachers in Jordan do not experience high levels of time pressure at the time to make them feel unhappy. This made them indicate being under time pressure and still feeling happy about their jobs. They could also be mixing between levels of time pressure they used to experience during normal service years and time pressure during the pandemic. Online classes saved teachers' time of daily traveling to work and back home, which should lower the work-related time pressure (Anderson, 2004).

In contrast, time pressure was the most type of job demand experienced by United States teachers, as shown in Figure 13. The stronger relationships indicated by the United States sample were time

pressure with anxiety, anger, and dejection. This means that time pressure is the cause behind the majority of negative feelings experienced by United States teachers.

Classes at the time of the study were a mix of online and in-person classes, which increased the pressure on teachers to do what they usually do and adapt the new virtual teaching techniques.

The effect of low students' motivation on the four WORAF was significant ind. At the same time, discipline problems have the smallest effect sizes with all WORAF, and it has a nonsignificant relationship with dejection. This could be explained by the fact of growing attention of controlling discipline systems and students' behaviours in United States schools. It was mentioned by prior studies that significant changes were made in disciplines' policies and safety guides to avoid physical and emotional damages on teachers and students (Morrison, Redding, Fisher, & Peterson, 2006). However, the current study supports that these changes were able to decrease the effect of discipline problems on teachers feeling angry and anxious, increase their feeling of happiness, and no connection found between discipline problems and their feeling of dejection.

Multigroup analysis revealed differences in all proposed relationships between United States sample and Jordan sample. However, only three relationships were found to have significant differences between both samples: time pressure and anxiety, time pressure and dejection, time pressure and happiness. This supports earlier results, where time pressure was the most critical type of job demands to teachers in the United States but not in Jordan.

The relationship between time pressure and anxiety was found to be significant in the United States sample and nonsignificant in the Jordan sample. The relationship between time pressure and

dejection was found to be significant to the United States respondents, while it was found to be nonsignificant to Jordan respondents. Also, the results show that time pressure affects teachers feeling of happiness in the United States and in Jordan. Where a significant positive relationship found in Jordan sample and Negative significant relationship found in the United States. Happiness as a latent variable in the Jordan model has a very low coefficient of determination, which suggests poor ability to present the hypothesized relationships. Table 39 provide a comparison between results established from hypotheses reference studies and results of the current study hypotheses. The table indicates a high level of matching results in United States sample and moderate level of matching results in Jordan sample.

Table 39: Hypotheses Testing Results Summery

Proposed Hypotheses	**Reference Study Results**	**Current Study Results-Jordan Sample**	**Current Study Results-United States Sample**
H1: there is a significant relationship between discipline problems and anger.	lack of students' discipline is a strong predictor for teachers' anger (Hagenauer et al., 2015)	Rejected	Accepted
H2: there is a significant relationship between discipline problems and anxiety.	significant positive relationship found between lack of students' discipline and anxiety (Hagenauer et al., 2015)	Accepted	Accepted
H3: there is a significant relationship between discipline problems and dejection.	discipline problems are one of the significant factors that raise teachers' burnout resulting in multiple emotional states including dejection (Yong & Yue, 2007)	Accepted	Rejected
H4: there is a significant relationship between discipline problems and happiness.	significant negative relationship found between lack of students' discipline and happiness (Hagenauer et al., 2015)	Rejected	Accepted
H5: there is a significant relationship between students' motivation and anger.	association between motivation and feeling angry (Harmon-Jones, 2003)	Accepted	Accepted
H6: there is a significant relationship between students' motivation and anxiety.	strong negative relationship between students' anxiety and low motivation (Zakaria & Nordin, 2008)	Accepted	Accepted
H7: there is a significant relationship between students' motivation and dejection.	correlation between lack of motivation and dejection (Roney et al., 1995)	Accepted	Accepted
H8: there is a significant relationship between students' motivation and happiness.	students with higher levels of motivation are more likely to experience happiness at that time (Omar et al., 2013)	Rejected	Accepted
H9: there is a significant relationship between time pressure and anger.	time pressure positively correlates with anger (Thies & Kordts-Freudinger, 2019)	Accepted	Accepted
H10: there is a significant relationship between time pressure and anxiety.	time pressure positively correlates with anxiety (Thies & Kordts-Freudinger, 2019)	Rejected	Accepted

Proposed Hypotheses	Reference Study Results	Current Study Results-Jordan Sample	Current Study Results-United States Sample
H11: there is a significant relationship between time pressure and dejection.	main significant connection between time pressure as a sleep deprivation and dejection as a result of lack of sleep (Minkel et al., 2012)	Rejected	Accepted
H12: there is a significant relationship between time pressure and happiness.	negative and significant relationship between time pressure and happiness (Thies & Kordts-Freudinger, 2019)	Accepted	Accepted

5.2 Study Limitations

A total of 575 survey responses were collected in this study. The total sample was divided into two samples depending on the respondent's country, where 356 surveys were from Jordan, and 219 surveys came from the United States.

The data collection process started in April 2021. All schools in Jordan were taking online classes, and no in-person meetings were allowed. Contacting teachers and inviting them to participate in this study remotely was harder than expected. In the United States, middle and high schools were giving both online and in-person classes, and they were preparing for final exams at the time of introducing this survey. These conditions combined made it difficult to obtain a high response rate.

Most of the participants in Jordan were contacted by social media posts (Facebook and LinkedIn) due to the lockdown the country was imposing at that time. Most of the scheduled personal interviews with teachers in the United States were canceled due to the fact that they are busy organizing final reviews and exams. However, some of the received invitations may have been ignored because of the length of the survey.

A total of 39 incomplete response were excluded from the analysis. Incomplete response can be related to teachers' inability to understand certain terminologies.

The effect of the low response rate can be seen in the low standard deviation of the data, which could also be related to many respondents choosing the same answers. A low response rate can be reflected in the high reliability of the constructs as well. However, another reason for repeated answers could be due to the respondents trying to respond in a certain pattern to reflect certain viewpoints. Repeated answers to the survey questions can be an indication of sample bias. This can result in inaccurate estimation of the model indicators, where only unsatisfied teachers tend to participate in the survey or they try to over evaluate the job demands (Crump, Hotz, Imbens, & Mitnik, 2009).

Research findings and final casual models are only applicable to the related country sample in the United States and Jordan. They are considering that the study model uses only three job demands from the JD-R model, which were chosen based on the literature review results.

This study was conducted during covid-19 pandemic, where many changes in the teaching system all over the world were made to adapt to ongoing social and health situations. These changes had greatly affected teachers' emotions and mental health.

5.3 Future Research

The current study focuses on specific types of job demands and four discrete work-related feelings. Future research recommendations can be to extend this study to investigate different types of work stressors and their effect on other work-related feelings and mental health conditions. The more

causes of negative feelings are defined, the easier it would be to develop solutions and implement prevention techniques. Future work may be applied to educational systems or any other organizations.

Another focus area could be to test differences in the proposed relationships within other countries to further understand regional and cultural differences. Also, the investigation of religious and gender differences can reveal interesting results.

This study directs attention to the importance of creating a healthy working environment in schools. Such studies would push the efforts to:

- Decrease workplace stressors to implement the process of delivering knowledge.
- Provide teachers with workshops to train them on how to control their emotions and lower emotional exhaustion at the workplace.
- Providing teachers and students with training on becoming emotionally intelligent would post teachers' mental health and students' academic success.

5.4 Conclusion

The current study results indicated a significant difference in the relationships between job demands and work-related feelings within the United States and Jordan educational systems. These differences could result from cultural characteristics and working conditions that may reflect how teachers react to stressful working conditions. This study combined the Job Demands-Resources model (JD-R) and The Scale of Work-Related Affective Feelings (WORAF) in one model to investigate the hypothesized relationships. The focus has been limited to test the connections

between three job demands included in the JD-R model and the WORAF in two countries. The final models in this study are only applicable to the investigated countries.

APPENDIX A: SUMMARY OF ARTICLES CHOSEN IN THE LITERATUR

Study	*Title*	*Year*	*Country*	*Number of Participants*	*Data analysis*	*Findings*
1	*An analysis of burnout and job satisfaction among Turkish special school headteachers and teachers, and the factors affecting their burnout and job satisfaction*	*2004*	*Turkey*	*295 teachers*	*t-test and variance analysis*	*male teachers have less emotional exhaustion and personal accomplishment but higher depersonalization. Female teachers have higher job satisfaction. More experienced teachers have higher emotional exhaustion.*
2	*Sources of Social Support among Special Education Teachers in Jordan and Their Relationship to Burnout*	*2009*	*Jordan*	*83 special education teachers*	*Correlation analysis*	*There are significant positive correlations between family support and personal accomplishments; marital status, age, and teaching experience were not significantly related to any three burnout dimensions.*
3	*The Relationship between Teachers' Perceptions of Emotional Labor and Teacher Burnout and Teachers' Educational Level*	*2019*	*Israel*	*170 teachers*	*Correlation analysis*	*Both teachers' burnout levels and teachers' levels of education differentially affected the use of specific emotional labor techniques (surface, deep, or natural acting).*
4	*Participation in nighttime activities in the genesis of depression in public school teachers from the State of Pernambuco, Brazil*	*2012*	*Brazil*	*201 teachers*	*Kruskal-Wallis test with Dunn's multiple comparisons*	*teachers working three shifts showed excessive daytime sleepiness and a higher percentage of mild and moderate depression compared to teachers working only one or two shifts.*
5	*Current situation of job burnout of junior high school teachers in Zhongqiu urban areas and its relationship with social support*	*2008*	*China*	*400 teachers*	*Regression analysis*	*Emotional exhaustion in teachers is serious; gender does not affect the score of burnouts significantly; teachers with 1-year job experience recorded significantly lower scores of burnouts than others, and teachers who have worked for 6-10 years is second.*
6	*Teaching Styles and Occupational Stress among Chinese University Faculty Members*	*2007*	*China*	*144 faculty members*	*Satisfactory reliability (correlation analysis)*	*A stronger feeling of role overload and more frequent use of a rational/cognitive coping strategy were conducive to employing both creativity-generating and conservative teaching styles; a stronger feeling of role insufficiency and psychological strain had a negative impact on the use of creative-generating teaching styles.*
7	*Teachers' burnout, depression, role ambiguity and conflict*	*2009*	*Greece*	*562 teachers*	*Regression analysis*	*Emotional exhaustion showed a statistically significant (positive) correlation with the factors that comprise: (a) the Scale of Depression (b) Degree of Role Conflict. Positive affect and Degree of Role Clarity showed a statistically significant (negative) correlation with Emotional exhaustion.*

8	*Life satisfaction of professional college teachers in relation to their stress level*	*2013*	*Punjab*	*50 teachers*	*Descriptive analyses*	
9	*Does job burnout mediate negative effects of job demand on mental and physical health in a group of teachers? Testing the energetic process of Job Demands-Resources model*	*2015*	*Poland*	*316 teachers*	*Regression analysis with bootstrapping*	*The indirect effect and the direct effect of job demands turned out to be statistically important. The negative impact of 3 job demands on mental (hypothesis 1 – H1) and physical (hypothesis 2 – H2) health were mediated by the increasing job burnout. Only organizational constraints were directly associated with mental (and not physical) health*
10	*The association between occupational stress and depressive symptoms and the mediating role of psychological capital among Chinese university teachers: a cross-sectional study*	*2014*	*China*	*1,210 teachers*	*Hierarchical linear Regression analysis*	*58.9% (95% CI (Confidence Intervals): 56.1% to 61.7%) of university teachers had a CES-D score equal to or above the cut-off of 16. Both effort-reward ratio (ERR) and scores of over-commitments were positively associated with depressive symptoms, whereas psychological capital was negatively associated with depressive symptoms among university teachers. Psychological capital partially mediated the relationship between occupational stress and depressive symptoms.*
11	*Examining Effort–Reward Imbalance and Depressive Symptoms Among Turkish University Workers*	*2019*	*Turkey*	*114 faculty and staff*	*Descriptive analyses*	*The mean stress level in the sample was high. More than half of the participants reported having depressive symptoms.*
12	*The Mediating Role of Depression, Anxiety and Stress between Job Strain and Turnover Intentions among Male and Female Teachers*	*2016*	*Pakistan*	*131 teachers*	*Correlation analysis*	*The results revealed the mediating effects of depression, anxiety, and stress between job strain and turnover intentions. Additionally, male teachers were found to be more inclined towards turnover due to job strain as compared with female teachers. Moreover, job stress had a more moderating effect on the levels of stress in female teachers and on the levels of depression and anxiety in male teachers.*
13	*Emotional Intelligence and Components of Burnout among Chinese Secondary School Teachers in Hong Kong*	*2006*	*Hong Kong*	*167 teachers*	*Structural equation modeling*	*Emotional exhaustion, influenced by emotional appraisal and positive regulation, was causally prior to depersonalization and personal accomplishment, but personal accomplishment could develop relatively independently from the burnout components through the influence of positive utilization of emotions*

14	*A Brief Cognitive-behavioral Stress Management Program for Secondary School Teachers*	*2011*	*Tokyo*	*124 teachers*	*Quasi-experimental design*	*Teachers experienced less work-related stress after the program, and they reported reduced dysfunctional thoughts and enhanced stress management behaviors*
15	*The relations between Principal support and work engagement and burnout: Testing the role of teachers' emotions and educational level*	*2019*	*Croatia*	*868 class teachers (lower grades) and 1057 subject teachers (upper grades)*	*Structural equation modeling*	*Emotions partially mediate the relationship between perceived Principal support and work engagement and burnout among teachers. Although class teachers experience higher levels of positive emotions and work engagement compared to subject teachers*
16	*The impact of resilience on role stressors and burnout in elementary and secondary teachers*	*2016*	*United States*	*415 teachers (174 elementary, 241 secondary*	*Structural equation modeling*	*The results show that teachers develop resilience to overcome stress and burnout. A conceptual framework to explain the ability of resilience to decrease role stress and burnout was developed and tested.*
17	*The Mediating Role of Teachers' Depression Levels on the Relationship between Emotional Labor and Burn-Out*	*2014*	*Turkey*	*163 teachers*	*Regression analysis-relational scanning model*	*Results of analysis regarding the mediation effect of depression levels on the relationship between teachers' emotional labor and burnout also illustrate that depression levels are a partial mediator in this relationship. Within that context, it is recommended that activities that could decrease teachers' depression levels at schools should be organized by school administrators*
18	*Work Environment Stressors, Social Support, Anxiety, and Depression Among Secondary School Teachers*	*2010*	*United States*	*168 teachers*	*Correlation analysis*	*Secondary school teachers were experiencing stress in the work environment. Only ongoing work environment stressors and coworker support made significant independent contributions to anxiety and depression. Higher levels of ongoing stressors were associated with higher levels of anxiety and depression, whereas higher levels of coworker support were related to lower levels of anxiety and depression. In sum, ongoing work environment stressors and coworker support had a main effect on anxiety and depression, respectively, after other study variables were controlled, whereas episodic stressors and supervisor support had no independent effect on anxiety or depression.*
19	*Happy, Stressed, and Angry: A National Study of Teachers' Emotions and Their Management*	*2019*	*Australia*	*Logistic regression*		

APPENDIX B: THE SCALE OF WORK-RELATED AFFECTIVE FEELINGS (WORAF)

ITEM WORDING

	1	2	3	4
WR FEELINGS OF ANXIETY				
I FEEL FEAR AT WORK				
I FEEL THAT MATTERS RELATED TO WORK ARE GETTING OUT OF CONTROL, WHICH MAKES ME PANIC.				
WHAT IS HAPPENING AT WORK, FILLS ME WITH ANXIETY AND MAKES ME FEEL THREATENED.				
I'M THINKING THAT ON MONDAY I NEED TO GO TO WORK I FEEL ANXIOUS.				
I HAVE SYMPTOMS OF ANXIETY AND NERVOUSNESS AT WORK, AND I'M NOT ABLE TO CALM DOWN.				
ACTIONS TAKEN BY MY CO-WORKERS AND/OR SUPERVISORS MAKE ME FEEL UNCERTAIN.				
I AM CONCERN THAT I WON'T BE ABLE TO MEET THE WORK REQUIREMENTS.				
I FEEL UNCERTAIN AT WORK.				
WR FEELINGS OF HAPPINESS				
I FIND MY WORK ENJOYABLE.				
MY JOB BRINGS ME SATISFACTION.				
MY JOB GIVES ME A SENSE OF FULFILMENT.				
I FIND CONTENTMENT IN MY WORK.				
OVERALL, I FEEL RELAXED AND FREE.				
I AM HAPPY WITH MY RELATIONS WITH MY SUPERIORS.				
I HAVE A POSITIVE ATTITUDE TOWARD THE TASK AND PROBLEMS WHICH I AM FACING AT WORK.				
WR FEELINGS OF DEJECTION				
AT WORK I FEEL LIKE I REACHED THE BOTTOM.				
WHEN IT GOES TO MY JOB, IT CANNOT BE WORSE.				
MOST WORK RELATED ACTIVITIES MAKE ME FEEL SAD AND USELESS.				

ITEM WORDING	
I DON'T SEE ANY CAREER PATH IN FRONT OF ME	
I HAVE A SENSE OF BEING SUSPENDED FROM WHAT IS HAPPENING AT WORK.	
WR FEELINGS OF ANGER	
RECENTLY EVERYTHING RELATED TO MY WORK MAKES ME ANGRY.	
I FIND EVERYTHING AT WORK ANNOYING.	
THE TASKS I AM GETTING FROM MY SUPERVISOR MAKE ME FURIOUS.	
THERE ARE MOMENTS WHEN I FEEL VERY IRRITATED.	

APPENDIX C: WORAF SCALE VALIDATION RESULTS

Items, factor loading of the WORAF scale in study 1 (with EFA), and in study 2 and 3 (with CFA).

Item wording	Study 1				Study 2	Study 3
	EFA				CFA	CFA
	1	2	3	4		
WR FEELINGS OF ANXIETY						
I feel fear at work	0.71				0.72	0.67
I feel that matters related to work are getting out of control, which makes me panic.	0.64				0.72	0.58
What is happening at work, fills me with anxiety and makes me feel threatened.	0.60				0.77	0.76
I'm thinking that on Monday I need to go to work I feel anxious.	0.59				0.71	0.53
I have symptoms of anxiety and nervousness at work, and I'm not able to calm down.	0.52				0.66	0.61
Actions taken by my co-workers and/or supervisors make me feel uncertain.	0.48				0.73	0.65
I am concern that I won't be able to meet the work requirements.	0.47				0.59	0.54
I feel uncertain at work.	0.43				0.67	0.65
WR FEELINGS OF HAPPINESS						
I find my work enjoyable.		0.89			0.81	0.80
My job brings me satisfaction.		0.82			0.80	0.86
My job gives me a sense of fulfilment.		0.70			0.77	0.83
I find contentment in my work.		0.69			0.72	0.79
Overall I feel relaxed and free.		0.63			0.67	0.69
I am happy with my relations with my superiors.		0.54			0.59	0.53
I have a positive attitude toward the task and problems which I am facing at work.		0.44			0.63	0.72
WR FEELINGS OF DEJECTION						
At work I feel like I reached the bottom.			−0.92		0.78	0.73
When it goes to my job, it cannot be worse.			−0.81		0.78	0.83
Most work related activities make me feel sad and useless.			−0.60		0.82	0.82
I don't see any career path in front of me			−0.34		0.53	0.74
I have a sense of being suspended from what is happening at work.			−0.32		0.45	0.30
WR FEELINGS OF ANGER						
Recently everything related to my work makes me angry.				0.87	0.77	0.75
I find everything at work annoying.				0.61	0.74	0.74
The tasks I am getting from my supervisor make me furious.				0.54	0.68	0.74
There are moments when I feel very irritated.				0.36	0.64	0.60

In Study 1, only factor loadings > 0.30 are shown.

Means, standard deviations, Cronbach's alphas, and intercorrelations among subscales in Studies 1, 2, and 3.

	M (SD)	Cronbach's alpha	1	2	3
1. WR feelings of happiness	2.59 (0.68)/2.67 (0.66)/2.77 (0.70)	0.88/0.88/0.90	–		
2. WR feelings of anxiety	1.88 (0.70)/1.75 (0.59)/1.60 (0.48)	0.90/0.88/0.83	−0.51**/-0.44**/-0.54**	–	
3. WR feelings of dejection	1.72 (0.69)/1.60(0.58)/1.42 (0.51)	0.83/0.80/0.78	−0.43**/-0.49**/-0.60**	0.72**/0.68**/0.52**	–
4. WR feelings of anger	2.01 (0.71)/1.87 (0.60)/1.80 (0.58)	0.82/0.80/0.80	−0.53**/-0.48**/-0.67**	0.72**/0.69**/0.56**	0.62**/0.62**/0.58**

**$p < 0.01$.

Goodness-of-fit indexes for the WORAF scale in Studies 2 and 3.

Study	Model	χ^2	*Df*	χ^2/df	CFI	TLI	IFI	RMSEA	SRMR
2	1-factor	11740.78	434	27.05	0.75	0.75	0.75	0.09	0.08
	24-items	2226.28	246	9.05	0.94	0.93	0.94	0.05	0.04
3	24-items	573.39	246	2.33	0.90	0.89	0.90	0.07	0.07

	WR feelings of happiness	WR feelings of anxiety	WR feelings of dejection	WR feelings of anger
JAWS				
1. HPHA	0.72***	−0.41***	−0.46***	−0.57***
2. HPLA	0.76***	−0.56***	−0.52***	−0.66***
3. LPHA	−0.55***	0.65***	0.47***	0.72***
4. LPLA	−0.65***	0.55***	0.59***	0.69***
JAWS (modified version)				
5. Anxiety_LPHA	−0.44***	0.71***	0.33**	0.48***
6. Dejection_LPLA	−0.58***	0.55***	0.50**	0.65***
7. Anger_LPHA	−0.54***	0.51***	0.42**	0.75***
TIPI				
8. Extraversion	0.23***	−0.21***	ns	ns
9. Agreeableness	ns	−0.14*	ns	−0.18**
10. Conscientiousness	ns	ns	−0.13*	ns
11. Emotional stability	0.34***	−0.45***	−0.23***	−0.33***
12. Openness to experience	0.19**	−0.24***	−0.14*	−0.13*

*$p < 0.05$; **$p < 0.01$; ***p < 0.001.

APPENDIX D: MMAT TOOL, VERSION 2018

Category of study designs	Methodological quality criteria	Responses			
		Yes	No	Can't tell	Comments
Screening questions (for all types)	S1. Are there clear research questions?				
	S2. Do the collected data allow to address the research questions?				
	Further appraisal may not be feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.				
1. Qualitative	1.1. Is the qualitative approach appropriate to answer the research question?				
	1.2. Are the qualitative data collection methods adequate to address the research question?				
	1.3. Are the findings adequately derived from the data?				
	1.4. Is the interpretation of results sufficiently substantiated by data?				
	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?				
2. Quantitative randomized controlled trials	2.1. Is randomization appropriately performed?				
	2.2. Are the groups comparable at baseline?				
	2.3. Are there complete outcome data?				
	2.4. Are outcome assessors blinded to the intervention provided?				
	2.5 Did the participants adhere to the assigned intervention?				
3. Quantitative non-randomized	3.1. Are the participants representative of the target population?				
	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?				
	3.3. Are there complete outcome data?				
	3.4. Are the confounders accounted for in the design and analysis?				
	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?				
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the research question?				
	4.2. Is the sample representative of the target population?				
	4.3. Are the measurements appropriate?				
	4.4. Is the risk of nonresponse bias low?				
	4.5. Is the statistical analysis appropriate to answer the research question?				
5. Mixed methods	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?				
	5.2. Are the different components of the study effectively integrated to answer the research question?				
	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?				
	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?				
	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?				

APPENDIX E: IRB APPROVAL LETTER

UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board
FWA00000351
IRB00001138, IRB00012110
Office of Research
12201 Research Parkway
Orlando, FL 32826-3246

EXEMPTION DETERMINATION

April 22, 2021

Dear Shahed Obeidat:

On 4/22/2021, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Category 2(ii)
Title:	Assessment of work-related feelings among teachers in the United States and Jordan
Investigator:	Shahed Obeidat
IRB ID:	STUDY00002877
Funding:	None
Grant ID:	None
Documents Reviewed:	• HRP-251 - FORM - Faculty Advisor -Obeidat wk.pdf, Category: Faculty Research Approval; • Assessment_of_work-related_feelings_among_teachers_in_the_United_States_and_Jordan.docx, Category: Survey / Questionnaire; • -Assessment_of_work-related_feelings_among_teachers_in_the_United_States_and_Jordan-Translated.doc, Category: Survey / Questionnaire; • HRP254-FORM-Explanation_of_Research_Obeidat-3.pdf, Category: Consent Form; • HRP-254-translated.pdf, Category: Consent Form; • HRP-255-FORM - Request for Exemption.docx, Category: IRB Protocol; • HRP-256 - FORM - Translation Verification-3.docx, Category: Translation Verification; • Invitation Email translated.docx, Category: Recruitment Materials; • Survey_Invitation Emails-Obeidat.docx, Category: Recruitment Materials

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please submit a modification request to the IRB. Guidance on submitting Modifications and Administrative Check-in are detailed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Katie Kilgore
Designated Reviewer

APPENDIX F.1: RESEARCH SURVEY-ENGLISH VERSION

UNIVERSITY OF CENTRAL FLORIDA

English

Default Question Block

Q1.
You are invited to participate in a survey study focused on identifying factors that a ffect teachers' mental well-being in Jordan and the United States as part of a doctoral study being conducted at the University of Central Florida. We are currently seeking school teachers who are current full-time employees and have daily interaction with classr oom and students. participants have to be 18 years or older to take this survey . The survey should take approximately 20-30 minutes to complete and the r esults will be used to support the development of constructs for futur e research. This survey responses are confidential and anonymous. No personally identifiable information is captur ed.

Thank you for your time and consideration!
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Q2. Gender

Male
Female

Q3. Age

Less than 25
25-30
31-40
More than 40

Q4. I am a teacher at

Middle school
High school

Q5. Teaching experience

Less than 5 years
5-10 years
11-20 years
More than 20 years

Q6. Country

lack discipline.						
Some students with behavioral problems make it difficult to carry out lessons as planned.	○	○	○	○	○	○
Controlling students' behavior takes a lot of time and effort.	○	○	○	○	○	○

Q9. Evaluate student motivation in terms of the following statements:

	Please select one of the following					
	Completely Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Completely Agree
Many of my students show little interest in school-work.	○	○	○	○	○	○
Many of my students give up once they meet a challenge.	○	○	○	○	○	○
I find it difficult to make all students work seriously with schoolwork.	○	○	○	○	○	○
Many of my students show little effort at schoolwork.	○	○	○	○	○	○

Q10. Please answer the following questions:

	Please select one of the following			
	Completely Disagree	Disagree	Agree	Completely Agree
I feel fear at work	○	○	○	○

I feel that matters related to work are getting out of control, which makes me panic.	○	○	○	○
What is happening at work, fills me with anxiety and makes me feel threatened.	○	○	○	○
I'm thinking that on Monday I need to go to work I feel anxious.	○	○	○	○
I have symptoms of anxiety and nervousness at work, and I'm not able to calm down.	○	○	○	○
Actions taken by my co-workers and/or supervisors make me feel uncertain.	○	○	○	○
I am concern that I won't be able to meet the work requirements.	○	○	○	○
I feel uncertain at work.	○	○	○	○
I find my work enjoyable.	○	○	○	○
My job brings me satisfaction.	○	○	○	○
My job gives me a sense of fulfillment. .	○	○	○	○
I find contentment in my work.	○	○	○	○
Overall I feel relaxed and free.	○	○	○	○
I am happy with my relations with my supervisors.	○	○	○	○
I have a position attitude toward the tasks and problems which I am facing at work.	○	○	○	○
At work I feel like I reached the bottom.	○	○	○	○
When it goes to my job, it cannot be worse.	○	○	○	○
Most work-related activities make me feel sad and useless.	○	○	○	○
I don't see any career path in front of me.	○	○	○	○
I have a sense of being suspended from what is happening at work.	○	○	○	○

Recently everything related to my work makes me angry.	○	○	○	○
I find everything at work annoying.	○	○	○	○
The tasks I am getting from my supervisor make me furious.	○	○	○	○
There are moments when I feel very irritated.	○	○	○	○

APPENDIX F.2: RESEARCH SURVEY-ARABIC VERSION

UNIVERSITY OF CENTRAL FLORIDA

العربية

Q1.

أنت مدعو للمشاركة في استبيان يركز على تحديد العوامل التي تؤثر على مشاعر المعلمين في الأردن والولايات المتحدة كجز من دراسة الدكتوراه التي
أجريت في جامعة وسط فلوريدا. نحن نبحث عن معلمين يعملون حاليا بدوام كامل في المدارس ولديهم تفاعل يومي مع الفصل والطلاب. يجب أن يكون المشاركون 18 عاما أو أكثر للمشاركة في هذا الاستبيان. سوف تأخذ الدراسة ما يقرب من 30-20 دقيقة .لإكمالها وسيتم استخدام النتائج لدعم تطوير بنيات الأبحاث المستقبلية.
ردود هذا الاستطلاع سرية ومجهولة المصدر. لم يتم تخزين أي معلومات شخصية.

شكرا لك على وقتك.
لمزيد من المعلومات:

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Q2. الجنس

ذكر

أنثى

Q3. العمر

أقل من 25

30 - 25

40 - 31

أكبر من 40

Q4. انا مدرس/ مدرسة في

المدرسة المتوسطة

المدرسة الثانوية

Q5. خبرة التدريس

أقل من 5 سنوات

5 - 10 سنوات

11 - 20 سنة

أكثر من 20 سنة

Q6. البلد

الولايات المتحدة

الأردن

Q7. قيم ضغوط أوقات العمل بالإجابة على العبارات التالية:

	الرجاء تحديد واحد مما يلي					
	لا أوافق تمامًا	غير موافق	أرفض قليلاً	موافق قليلاً	موافق	موا تم
تحضير الدروس يكون في كثير من الأحيان بعد ساعات العمل.	○	○	○	○	○	○
الحياة في المدرسة محمومةً ولا يوجد وقت للراحة والتقاط الأنفاس.	○	○	○	○	○	○
تستهلك الاجتماعات والعمل الإداري والتوثيق الكثير من الوقت الذي ينبغي استغلاله في تحضير الدروس.	○	○	○	○	○	○
المعلمون مثقلون بالكثير من مهام العمل.	○	○	○	○	○	○

إعداد معلمون أكفاء يتطلب مزيدًا من الاحتكاك مع الطلاب ومزيدًا من الوقت لتحضير دروسهم.	○	○	○	○	○	○

Q8. قيم مشكلات الانضباط بالإجابة على العبارات التالية:

	الرجاء تحديد واحد مما يلي					
	لا أوافق تمامًا	غير موافق	أرفض قليلاً	موافق قليلاً	موافق	موا تم
تتأثر قدرتي على الشرح بسبب افتقار الطلاب غالبًا إلى الانضباط.	○	○	○	○	○	○
بعض الطلاب الذين يعانون من مشكلات سلوكية يحولون دون شرح الدروس كما هو مخطط له.	○	○	○	○	○	○
يتطلب التحكم في سلوك الطلاب الكثير من الوقت والجهد.	○	○	○	○	○	○

Q9. قيم دوافع الطلاب بالإجابة على العبارات التالية:

	الرجاء تحديد واحد مما يلي					
	لا أوافق تمامًا	غير موافق	أرفض قليلاً	موافق قليلاً	موافق	موافـ تمامـ
يبدي العديد من طلابي القليل من الاهتمام بالعمل المدرسي.	○	○	○	○	○	○
يستسلم العديد من طلابي إذا ما أعترضهم أي تحدي.	○	○	○	○	○	○
أجد صعوبة في جعل جميع الطلاب يعملون بجدية في إنجاز العمل المدرسي.	○	○	○	○	○	○
يبذل العديد من طلابي القليل من الجهد في العمل المدرسي.	○	○	○	○	○	○

Q10. الرجاء الإجابة على الأسئلة التالية:

	الرجاء تحديد واحد مما يلي			
	لا أوافق تمامًا	غير موافق	موافق	موافـ تمامً

يساورني بعض المخاوف من العمل.	○	○	○	○
شعر أن الأمور المتعلقة بالعمل تخرج عن نطاق السيطرة مما يجعلني أشعر بالذعر.	○	○	○	○
ما يحدث في بيئة العمل يزيد من قلقي ويعرضني للخطر.	○	○	○	○
يساورني القلق في كل يوم احد أذهب فيه إلى العمل.	○	○	○	○
أعاني من أعراض القلق والتوتر في العمل ولا أستطيع الحفاظ على هدوئي.	○	○	○	○
الإجراءات التي اتخذها زملائي في العمل و / أو المشرفون لا تروقني.	○	○	○	○
أشعر بالقلق لأنني لن أكون قادرًا على تلبية متطلبات العمل.	○	○	○	○
لا أشعر بالراحة في بيئة العمل.	○	○	○	○
أجد عملي ممتعًا.	○	○	○	○
عملي يجلب لي الرضا.	○	○	○	○
عملي يمنحني الشعور بالبهجة وبالإنجاز.	○	○	○	○
راضي تمامًا عن طبيعة عملي.	○	○	○	○
أشعر بالراحة والحرية بشكل عام.	○	○	○	○
سعيد بعلاقاتي مع زملائي.	○	○	○	○
دوري إيجابي في الاضطلاع بأي مهمات والتعامل الرشيد مع المشكلات التي أواجهها في بيئة العمل.	○	○	○	○
عملي ينحدر بي إلى الحضيض.	○	○	○	○
لا يوجد أسوأ من العمل في هذه الوظيفة.	○	○	○	○
معظم الأنشطة المتعلقة بالعمل تجعلني أشعر بالحزن وعدم الجدوى.	○	○	○	○
مساري الوظيفي مبهم وغير واضح الملامح.	○	○	○	○
أشعر بأني مسلوب القوة حيال يجري في بيئة العمل.	○	○	○	○
كل ما يتعلق بعملي مؤخرًا لا يسرني.	○	○	○	○
أجد كل شئ في بيئة العمل مزعجًا.	○	○	○	○
المهام التي يكلفني المشرفون بها لا تسرني.	○	○	○	○
تأتيني لحظات أشعر فيها بالغضب الشديد.	○	○	○	○

ext

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