Student Engagement, Burnout, and Self-Efficacy Among High School Students in Saudi Arabia

A Dissertation Submitted to the Faculty of the Graduate School of HOWARD UNIVERSITY in partial fulfillment ofthe requirements for the degree ofDoctor of PhilosophyDepartment of Human Development and Psychoeducational Studies

Fatimah Fuad Tunsi
Washington, DC HOWARD UNIVERSITY
SCHOOL OF EDUCATION DEPARTMENT OF HUMAN DEVELOPMENT AND PSYCHOEDUCATIONAL STUDIES
Salman Elbedour, Ph.D.
Dissertation Advisor

Abstract:

Academic engagement and burnout have only recently been recognized as critical factors affecting schools and students (Li, WII: Wen, & Wang. 2014). Limited studies exist on academic engagement burnout among elementary and high school students in Middle Eastern societies. Using descriptive and inferential statistical analysis of data collected from 400 Saudi Arabian high school students in grades 9 through 12, this study examines the following research questions: Research Question 1: What is the relationship between burnout, academic self-efficacy, and engagement?.Research Question 2: What are the differences in engagement, burnout, and self-efficacy based on grade level?.Research Question 3: Are academic engagement and self-efficacy significant predictors of burnout?.Research Question 4: Does self-efficacy mediate the relationship between engagement and burnout. Correlations were conducted across key study variables to examine any significant covariance among the predictor variables (engagement, burnout, and self-efficacy). Findings showed that engagement and burnout were negatively correlated at r(401) = -.26, p=.000. Engagement and self-

efficacy were positively correlated at r(400)= .35, p=.000. Self-efficacy and burnout were negatively correlated at r(401) = -.33, p=.000. Furthermore, One-way ANOVA was conducted to compare differences between 9th, 10th, 11th, and 12th graders on academic engagement. There was a significant difference between grade level and levels of academic engagement F (3, 399)=, p=.000. Post hoc comparison using the Tukey HSD test indicated that 12th graders (M=5.15, SD=1.17) had significantly higher academic engagement than other graders.There was a significant difference between grade level and levels of self-efficacy F(3, 400)=4.138, p=.007. Post hoc comparison using Tukey HSD indicated that 9th graders (M=3.19, SD=4.2) had the highest self-efficacy scores. Further analysis showed that there was a significant difference between grade level and levels of burnout F(3,400)=2.640, p=.04 indicating that 9th graders (M=2.46, SD=.55) had significantly the highest burnout scores.Multiple regression analysis revealed that academic engagement (β= -.17, p<.01) and self-efficacy (β= -.27, p<.001) significantly predicted the outcome variable burnout. Table 4 shows the regression coefficients. Finally, partial mediation was found between engagement and burnout through self-efficacy. Sobel test results revealed that self-efficacy partially mediates (Z=-4.415, p<.001) the relationship between engagement and burnout. Investigating the relationship among stress, burnout, and turnover in Saudi Arabia is critical to efforts to improve educational outcomes among Saudi Arabian students and preventing burnout in schools.

Keywords:Burnout, and Self-Efficacy Student Engagement, Burnout, and Self-Efficacy

Introduction

The relationship between student engagement and positive student outcomes quickly becomes clear to anyone who has spent any time in a classroom. Engaged students not only participate more readily in classroom activities and have better attendance rates, but they also earn higher GPAs and more credits (Appelton, Christenson, Kim, &

Reschly, 2006). Engaged students exhibit a "committed and study-related mindset" (Upadyaya & Salmela-Aro, 2013, p. 137). Even after controlling for psychosocial factors (PSF) among over 1,800 low-income minority students, these researchers found that engagement behaviors also predicted resilience. Of equal importance, Finn (1989) reported that engagement "has emerged as the primary theoretical model for understanding school dropout" (cited in Appelton et al., 2006, p. 427). Dropping out of school, among other bad outcomes, can increase "the odds of being arrested during a lifetime by over 350%" (Lucio, Hunt, & Bornovalova, 2012, p. 422). Dropouts are also more likely to be involved with drugs, perpetuate violence, and be victims of violence than students who remain in school, even those students with poor academic standing (Beauvais, Chavez, Oetting, Deffenbacher, & Cornell, 1996). Furthermore, gender and ethnicity do not impact those results "with rare exceptions" (Beauvais et al., 1996, p. 298).

Skinner, Wilborn, and Connell (1990) state that engagement refers to children's "initiation of action, effort, and persistence on schoolwork, as well as their ambient emotional states during learning activities" (p. 24). According to Upadyaya and Salmela-Aro (2013), academic engagement is a multidimensional construct with several different components: psychological (sense of belonging and relatedness), academic (time on task, homework completion), affective (enjoyment and interest, willingness to do homework, relations with teachers and peers), and cognitive (effort to do homework and study). Homework

completion is very important. While middle school and high school characteristics such as the number of free and reduced lunches, minority population, and average class size were generally unrelated to psychosocial factors (PSFs) such as self-efficacy, the most reliable predictors of academic success were "homework not done, academic discipline [completion of schoolwork], orderly conduct [obeying the rules], and family attitude toward education" (Casillas ,Robbins, Allen, Kuo, Hanson, & Schmeiser, 2012, p. 415).

Because of the importance of academic engagement, this study examines the relationship between academic engagement, burnout, and self-efficacy among Saudi Arabian high school students, thereby extending studies conducted in Western cultures to those in the Middle East. While most studies on these topics have addressed the phenomenon of burnout among professionals (e.g., medical doctors, nurses, engineers, college students), limited studies exist on burnout among elementary and high school students. The present study will shed light on and provide empirical evidence for the existence of a relationship between students' engagement, burnout, and self-efficacy in high school settings in Saudi Arabia.

Research Questions and Hypotheses

This study examined subjects' scores on academic engagement, student burnout, and academic self-efficacy. The study attempted to determine the relationship between these three variables among Saudi high school students in Saudi Arabia. Using descriptive and inferential statistical

analysis, data collected from 401 high school students from Saudi Arabia (9th grade (n=97), 10th grade (n=104), 11th grade (n=98), and 12th grade (n=102). 9th-, 10th-, 11th- and 12th-grade students) will provide answers to the following four research questions:

Research Question 1: What is the relationship between burnout, academic self-efficacy, and engagement?

Ho1: The study hypothesized the following: Engagement and burnout will be negatively correlated; engagement and self-efficacy will be positively correlated. Finally, students with higher self-efficacy were expected to score lower levels of burnout.

Research Question 2: What are the differences in engagement, burnout, and self-efficacy based on grade level.

Ho2: The study hypothesized the following: 1) a significant difference between grade level and levels of academic engagement; 2) a significant difference on levels of self-efficacy based on grade level (9^{th}, 10^{th} 11^{th}, and 12^{th} graders); and 3) a significant difference on levels of burnout as function of grade level (9^{th}, 10^{th} 11^{th}, and 12^{th} graders).

Research Question 3: Are academic engagement and self-efficacy significant predictors of burnout?

Ho3: The study expected that academic engagement and self-efficacy would significantly predict the outcome variable burnout.

Research Question4: What is the mediating effect of perceived academic self-efficacy on the relationship between students' academic engagement and burnout?

Ho4: The degree of students' academic self-efficacy will mediate the relationship between academic engagement

and burnout among Saudi high school students in Saudi Arabia.

Significance of the Study

Academic engagement and burnout have only recently been recognized as critical factors affecting schools and students (Li, Wu, Wen, & Wang, 2014). Improving a person's engagement and preventing his or her burnout in school is important for several reasons. First, high levels of engagement promote resilience (Upadyaya & Salmela-Aro, 2013), lessen the desire to drop out, and improve school success (Appelton et al., 2006). In addition, engagement and school success "may predict long-term positive outcomes" (Bresó, Schaufeli, & Salanova, 2011)

Lowering rates of burnout has similar outcomes. To begin with, burnout can negatively impact academic achievement and increase the chances of a student dropping out of school (Walburg, 2014), just as it increases the likelihood that an employee will leave his or her position (Rupert, Miller, & Dorociak, 2015).

Definition of Terms

Engagement: Shernoff et al. (2003) state that engagement involves attention, interest, and enjoyment, three attributes of flow. Salmela-Aro (2015) divides flow into three similar components: energy, dedication, and absorption. .

Burnout: Shih (2012) describes the opposite of engagement and flow as burnout. Other scholars argue that burnout and engagement are not opposites but are "negatively related" to one another (Maslach, 2017, p.

145). Fruedenberger first applied the term "burnout" to the helping professions in 1974 (Kahill, 1988), but the term has broadened to encompass many settings. Rubino, Luksyte, Perry, and Volpone (2009), for example, describe burnout as "a prolonged response to chronic emotional and interpersonal stressors on the job" (p. 289).

Self-efficacy: Bandura (1994) defines self-efficacy as individuals' "belief in their capability to produce designated levels of performance for events that affect their lives, which determines how people feel, think, motivate themselves, and behave" (p. 1). Self-efficacy is "the belief in one's capabilities to organize and execute courses of action required to produce given attainments" (Bandura, 1997, as cited in Chemers, Hu, & Garcia, 2001, p. 55). S.

Theoretical Framework

Any discussion of engagement, burnout/stress, and self-efficacy must recognize the existence of a relationship between context, the self, and an action. In other words, individuals do not perform in either a psychological or environmental vacuum. Psychologically, students have control beliefs (their expectations about their ability to control their success at school), strategy beliefs (their knowledge about the best ways to achieve academic success, e.g., how to study), and capacity beliefs (their expectations about their own abilities to execute effective strategies for success, also called self-efficacy) (Skinner, Wilborn, & Connell, 1990). In addition, the level of stress that leads to burnout is dependent on a primary appraisal of how students appraise their self-efficacy, which, in turn, determines the level of stressors experienced by the individual in terms of effects, such as strain, burnout, well-

being, motivation, and performance (Lazarus & Folkman, 1984; LePine et al., 2005). Therefore, self-efficacy has the potential to determine the well-being of students in schools. In fact, the JD-R model is an effective framework that can integrate self-efficacy and examine the dynamic relationship between academic engagement burnout and self-efficacy. The Bakker and Demerouti (2007) job demands-resources model (JD- R model) defines demands as "physical, psychological, social, or school aspects that require sustained physical and/or psychological (cognitive and emotional) effort or skills" (Bakker & Demerouti, 2007, p. 312). If job demands such as academic engagement challenge the multi internal and external resources (e.g., efforts, motivation, self-efficacy) that students possess strain, stress, and burnout are the outcomes. In fact, burnout is the result of an appraised mismatch between demands such as academic engagement and resources (Bakker & Demerouti, 2007; McCarthy et al., 2015), and may eventually lead to student burnout and dropout (Harmsen et al., 2018). The present study recognizes that self-efficacy is a psychological resource that, if weakened or depleted, can lead to burnout.

A conservation of resources model (COR) holds that individuals strive to obtain and maintain what they value. Stress occurs, according to Hobfall (1989) under three conditions: when resources are threatened, when they are reduced, or when they are not refilled after expenditure of resources, which can be "objects, personal characteristics, conditions, or energies" (Hobfall, 1989, p. 516). These objects, states, and conditions can be valued for

themselves, or can be valued as a means of gaining more of what is desired by the individual. Furthermore, the theory states that "loss is disproportionately weighted compared to gain" (Hobfoll & Lilly, 1993). In other words, a loss of a specific amount of resources hurts more than a similar gain of resources makes one feel good.

Literature Review

Furrer and Skinner (2003) call academic engagement a key predictor of academic motivation. Casillas et al. (2012) include study habits and homework compliance under motivation, rather than under engagement. The waters are further muddied by Appelton et al. (2006) and Pears, Kim, Fisher, and Yoerger (2013), who found in reviews of pertinent literature three subtypes of engagement: behavioral (such as positive conduct, attendance in class, completion of assignments, and involvement in extra-curricular assignments), cognitive (such as effort and self-regulation), and emotional or affective (such as interest and positive attitudes about learning, and feelings about parents, teachers and peers). The third dimension encroaches on previous definitions of motivation, once again blurring any clear distinctions.

Even more problematic for those interested in improving academic engagement in order to improve academic achievement is the fact that engagement has been found to develop very early and outside of school. DeBaryshe, Patterson, and Capaldi (1993) followed 206 boys from 4th to 8th grades. In addition to a survey of the boys, the

results were determined by questions directed to the boys' parents and teachers, who were asked about the boys' effort, follow-through, and how often the boys slept in class. The researchers discovered that low parental academic achievement was associated with ineffective discipline, which, in turn, was related to the boys' anti-social behavior in 6th grade. The anti-social behavior had a direct negative effect on the boys' 7th-grade academic engagement, which was measured by how many nights homework was undertaken, how often it was finished, and how seriously the boys took their homework. The amount of engagement had a direct, positive impact on 8th-grade academic achievement. In other words, parental attributes and parenting styles had a direct impact on academic achievement, as mediated by engagement.

In a later study with even younger subjects, Drake, Belsky, and Fearon (2014) looked at how secure attachment, which facilitates exploration of the environment, impacts engagement. They measured attachment at 15 and 36 months using the Strange Situation procedure. The subjects' self-regulation was rated by teachers between grades 1 and 5. The researchers found that attachment was related to self-regulation, but only for social self-control and attentional impulsivity, not for task persistence. They concluded that social self-control in grade 1 mediated the effect of attachment on school engagement at grade 5.

One of the first scholars to study motivation, David McClelland (1961), also found that child-rearing practices

were linked to the development of motivation in individuals. "[C]hild-rearing practices that emphasize independence training and mastery," he found, "produce people who are high in achievement motivation" (cited in Renchler, 1992, p. 13). Hermans, ter Laak, and Maes (1972) studied 20 boys and girls with extreme scores on achievement-motivation and debilitating-anxiety scales. The authors reported that mothers of children with a high fear of failure "did not provide rewards for successful actions by the child but gave negative rewards when the child failed" (p. 521). Parents with high achievement-motivation children used nonspecific help and "more positive task-oriented reinforcements" (p. 520); in other words, the parents did not do their children's work for them but helped them figure out how to do it. The authors concluded that interactions with parents determined the behavior of children in the classroom.

Flow Theory

Salmela-Aro (2015) divides flow into three similar components: energy, dedication, and absorption. Energy expresses a willingness to invest effort in school work. Dedication implies pride and inspiration regarding school, which is seen as meaningful. Absorption means being happily engrossed in studying. Csikszentmihalyi (1990) defines happiness as "not being bored on the one hand but not feeling anxiety on the other when confronted with a task" (cited in Whitson & Consoli, 2009, p. 41). Csikszentmihalyi (1990) identified seven characteristics of flow:

- A challenging activity that requires skills
- Merging of action and awareness (not clearly defined)
- Concentration on the task at hand
- Clear goals and feedback
- Paradox of control
- The loss of self-consciousness
- The transformation of time (pp. 48-59).

Burnout

Shih (2012) describes the opposite of engagement and flow as burnout. Some others argue that burnout and engagement are not opposites but are "negatively related" to one another (Maslach, 2017, p. 145). Fruedenberger first applied the term burnout in 1974 to the helping professions (Kahill, 1988), but the term has been around longer than that. The British author Graham Green, for example, called his 1960 novel A Burnt-Out Case. As might be expected given its usage, it didn't take long for the term burnout to be associated with all careers, not just service careers. Rubino et al. (2009), for example, described burnout as "a prolonged response to chronic emotional and interpersonal stressors on the job" (p. 289).

For researchers in the area of industrial and organizational psychology, the study of burnout and other job-related stress is important. In Australia alone, stress costs businesses $10 billion a year in absenteeism, loss of production, health care costs, and social welfare costs. As might be expected based on these figures, the cost of stress in Europe is a staggering $655 billion a year, and costs are

probably similar in North America (Grant, 2017). Maslach agrees that psychological stress that leads to burnout impacts market economics when it creates "poor job performance and errors, absenteeism, [and] turnover," all of which come with real costs (p. 144).

Stress and burnout, according to Jackson, Schwab, and Schuler (1985), are similar, but not quite the same. Exhaustion resembles an orthodox stress variable (Salmela-Aro, Kiuru et al., 2009; Jackson, Schwab, & Schuler, 1985), depersonalization is a stress reaction, low personal accomplishment lies between (Jackson, Schwab, & Schuler, 1985), and cynicism resembles depression (Salmela-Aro, Kiuru et al., 2009). However, Jackson, Schwab, and Schuler (1985) conclude that burnout literature and stress literature cover the same subjects.

almela-Aro, Kiuru et al. (2009) and Salmelo-Aro, Savolainen, and Holopainen (2009) have also found similarities between burnout and depression. The former found that the more depressive symptoms exhibited by a subject, the more exhaustion, cynicism, and inadequacy a subject feels. Based on these findings, Salmelo-Aro, Savolainen, and Holopainen (2009) suggest that burnout and stress develop in tandem, and that severe burnout begins to resemble depression. Similarly, Walburg (2014) writes that burnout increases anxiety and depression.

For convenience, symptoms of burnout are often grouped into five major categories.

- Physical: gastro-intestinal problems, sleep disturbances, back pain, headaches, colds and flu, physical exhaustion

- Emotional: depression
- Behavioral: drinking, absenteeism, caffeine consumption, drug use
- Interpersonal: having fewer friends
- Attitudinal: cynicism (Kahill, 1988).

Using the Malasch Burnout Inventory of the three factors of burnout (emotional exhaustion, cynicism, and academic efficacy), Lee, Puig, Kim, Shin, Lee, & Lee (2010) divided students into four clusters: 25% distressed group (high emotional exhaustion and cynicism, and low academic efficacy), laissez-faire group (32.8% low scores on all), persevering group (13.8% high scores on all three), and well-functioning group (28.4% low emotional exhaustion and cynicism and high academic efficacy).

Burnout can have many negative effects, such as harming academic achievement and increasing the chances of a student dropping out of school (Walburg, 2014). Walburg, Moncla, and Mialhes (2015) discovered among French students that burnout, particularly the cynicism component, explained "cannabis consumption frequency and abuse, but not dependency" (p. 33). In turn, cannabis users had a higher burnout level.

In a study of 383 Turkish undergraduates. Duru, Duru, and Malkis (2014) found that academic achievement was negatively associated with Maslach's three dimensions of burnout. Self-regulation (what Bandura [1977] defined as "the exercise of influence over one's own motivation, thought processes, emotional states and patterns of behavior") was positively related to achievement in the study.

Almost 70 years ago, Kahn and Singer (1949) wrote, "Individual and group intellectual measures differentiate between the superior and inferior groups adequately" but not completely, and "only measures of personality adjustment…could account for the fact that students of high intelligence fail consistently and that students relatively low in intelligence achieve high academic success" (p. 116). One potential component of "personality adjustment" is self-efficacy. Butkowsky and Williams (1980) reported that students with low self-concepts of ability (low self-efficacy) had "significantly lower initial estimates of success, less persistence, attribution of failures to lack of ability and of successes to factors beyond personal control, and greater decrements in expectancy of success following failure" (p. 408). Zimmerman (2000) also reported that perceived control (the belief that outcomes are controlled by one's behavior) is related to self-efficacy.

Bandura (1977) noted that even if subjects completed therapy to overcome a fear, they "still differed in the perceived capabilities to use the techniques outside the therapeutic setting" (cited in Zimmerman, 2000, p. 82). Bandura called those differences self-efficacy, a "personal judgment of one's capabilities to organize and execute courses of action to attain designated goas" (cited in Zimmerman, 2000, p. 82). Unlike self-concept, which is described by some as a general self-efficacy, self-efficacy is domain specific.

Methodolgy

This study examines student scores on academic engagement, student burnout, and academic self-efficacy to determine the relationship between these three variables among Saudi high school students in Saudi Arabia.

Participants

Participants for this study were drawn from 9th-, 10th-, 11th- and 12th-grade students enrolled in three randomly selected high schools in Riyadh, Saudi Arabia. From a list of high schools in the Riyadh, the investigator randomly selected three high schools. If one of the selected schools did not agree to participate, another school was selected until three schools had agreed. Participants in the study included 401 high school students from Saudi Arabia, of whom 28 were female. The high school grade group of the participants consisted of the following: 9th grade (n=97), 10th grade (n=104), 11th grade (n=98), and 12th grade (n=102).

The sociodemographic characteristics of study participants are shown in Table 1.

Table 1. *Grade Levels of Participants*

Characteristic	*n*	%
Grade Level		
9th	97	24.2
10th	104	25.9
11th	98	24.4
12th	102	25.5

Note. N=401. Participants were on average 15.59 years old.

Research Questions and Hypotheses

Research Question 1: What is the relationship between burnout, academic self-efficacy, and engagement?

Ho1: The study hypothesized the following: Engagement and burnout will be negatively correlated; engagement and self-efficacy will be positively correlated. Finally, students with higher self-efficacy are expected to score lower levels of burnout.

Research Question 2: What are the differences in engagement, burnout, and self-efficacy based on grade level?

Ho2: The study hypothesized the following: 1) a significant difference between grade level and levels of academic engagement; 2) a significant difference on levels of self-efficacy based on grade level (9^{th}, 10^{th} 11^{th}, and 12^{th} graders); and 3) a significant difference on levels of burnout as a function of grade level (9^{th}, 10^{th} 11^{th}, and 12^{th} graders).

Research Question 3: Are academic engagement and self-efficacy significant predictors of burnout?

Ho3: The study expected that academic engagement and self-efficacy would significantly predict the outcome variable burnout.

Research Question 4: What is the mediating effect of perceived academic self-efficacy on the relationship between students' academic engagement and burnout?

Ho4: The degree of students' academic self-efficacy will mediate the relationship between academic

engagement and burnout among high school students in Saudi Arabia.

Measurements

Demographics. A demographics questionnaire was used to collect sociodemographic data concerning the participant's age, gender, city, and country of origin. This questionnaire took approximately 4 minutes to complete.

Schoolwork engagement. Schoolwork engagement was measured by the Schoolwork Engagement Inventory (EDA; Salmela-Aro & Upadyaya, 2013). The measure assesses three school engagement dimensions: energy (three items, e.g., "When I study, I feel that I am bursting with energy"), dedication (three items, e.g., "I am enthusiastic about my studies"), and absorption (three items, e.g., "Time flies when I'm studying") in relation to schoolwork in general. The instrument uses a 7-point Likert-type scale, where the subject's score on engagement varies from 0 (*Never*) to 6 (*Every day*). In this study, the composite score was computed from all nine items to determine students' schoolwork engagement. The Cronbach alpha reliability for this study was .87 for this measure. It took participants approximately 7 minutes to complete this inventory.

School burnout. School burnout was measured by an inventory developed by Salmela-Aro & Näätänen (2005); for validity and reliability, see Salmela-Aro et al., 2009. The inventory measures a student's level of burnout across three dimensions: exhaustion at school (three items, e.g., "I feel overwhelmed by my schoolwork"), cynicism toward the meaning of school (three items, e.g., "I feel that I am losing interest in my schoolwork"), and sense of inadequacy as a student (two items, e.g., "I often have

feelings of inadequacy in my schoolwork"). Subjects read the question and were instructed to indicate their response on a 6-point Likert-type scale ranging from 1 (*Completely disagree*) to 6 (*Completely agree*). The total score for the three dimensions was computed to represent students' degree of school burnout. The Cronbach alpha reliability was .89. Participants needed approximately 7 minutes to complete this inventory.

Academic self-efficacy. The Arabic version of the Academic Self-efficacy Scale (Almohazie, 2018) originally developed by Chemers, Hu, and Garcia (2001) was used in this study. This tool measures respondents' self-efficacy across different domains. Each of the thirty items was scored using a 4-point Likert scale, where 1= Completely describes me and 4 = Does not describe me at all. The Cronbach alpha reliability for the Arabic version of the Academic Self-efficacy Scale was .82.

Survey Translations

The surveys used in this study were originally designed in English and translated into Arabic by a Howard University faculty member who holds a doctoral degree in Arabic language and literature and is currently teaching Arabic at the Saudi Academy in Washington, D.C. The final Arabic versions of surveys were retranslated back into English by an expert in Arabic with a master's degree in Arabic literature from the Hebrew University and many years of experience in teaching Arabic language. Discrepancies in translation from the original English versions were examined by Dr. Salman Elbedour of Howard University, who has a trilingual background (Arabic, English, and Hebrew) and is very familiar with the

psychological field and has demonstrated strong competencies in cross-cultural guidelines for translating psychological surveys.

Procedure

To recruit student participants, the following steps were be followed:

Step 1: As indicated earlier, each of these three school principals received a letter and a flyer by email outlining the purpose of the study, the location of the study, names of the questionnaires, the number of surveys and the amount of time required to complete each questionnaire. The principals of these three schools were asked in the email letter to allow their schools to participate in this study. The letter to the principals also detailed the confidential measures the researcher implemented to protect the privacy and confidentiality of students. The letter emphasized that student participants would not be asked to provide any personal information about themselves or their families, including personal or family names or backgrounds. The only information that requested of participants was the age, gender, grade level, and name of school and city.

Step 2: The student investigator visited each of the three school principals to collect their signed letters saying their schools are allowed to participate in the study. If a chosen school principal declined to allow the school to participate, another school was chosen from the list of twelve schools.

Step 3: The principal introduced the student investigator to students from grades 9, 10, 11, and 12 to elicit their

participation in this study. The student researcher (Tunsi) described the purpose of the study and the number of surveys the students were asked to complete, the days the study was implemented, and the location (the school library) where the administration of the surveys took place. The student researcher also describe to the students the measures used to ensure their confidentiality. Each student in the class received a cover letter, a student assent form, and a parental consent form to take home. These forms described the nature and importance of this study and the steps taken to protect participant's confidentiality and privacy, and also that student participants were to be pulled from their classrooms for the administration of the survey, which took place in the school library. The parental consent form also highlighted that if the parents did not agree to the student's participation, the student remained in regularly scheduled classes without interruption. Students were not able to participate in the study without parental consent.

Step 4: Student participants were asked to review this request with their parents and ask their parents to sign a parental consent form allowing their participation in the study. The letters and flyer to the students' parents described the measures followed in case students experienced distress or discomfort during the study.

Step 5: Students were informed that the student researcher would return the following day to collect signed parental consent forms and student assent forms. The students were also informed that their parental consent form must be signed before they could participate in the

study. Students whose parents did not give consent were not allowed to participate in the study; they remained in their regularly scheduled classes.

Step 6: The student investigator selected study participants from those students who have returned both parental consent forms and student assent forms.

With the help of school principals, the student investigator scheduled the day of administration of the study at each of the three schools, with the agreement that the administration of the study took place in the school library. Other students who were not participating in the study did not have their class time interrupted but continued classwork as usual.

On the day of the administration of the study, a social worker/school psychologist (Dr. Manal Sawan) who holds a Ph.D. in school psychology accompanied the student investigator to the schools to oversee and help students in case of distress or discomfort. As expected, minimal to no distress occurred among student participants, because the surveys were geared towards measuring attitudes/opinions of students regarding burnout, school engagement, and self-efficacy.

Participants were administered measures including the Schoolwork Engagement Inventory (EDA; Salmela-Aro & Upadyaya, 2012), which took approximately 7 minutes to complete; (2), the school burnout questionnaire (Salmela-Aro et al., 2009), which took approximately 8 minutes to complete; and (3) an academic efficacy questionnaire, which took approximately 9 minutes to complete. Finally, a

demographic questionnaire was distributed to collect sociodemographic data, which took 4 minutes to complete.

Because of the covid-19 pandemic in 2020, data collection for this study was somewhat disrupted due to school closure. The school principals assisted the student researcher by calling students at home and arranging for them to participate in the study in the school library in groups of five, with groups sitting at recommended social distancing and all participants wearing masks. Because there was only one participating school for girls, and many of their parents were reluctant to send their daughters into the school building during the pandemic, there were only 28 female student participants.

Results

Data collected from participants was analyzed for each of the three research questions, showing the following results.

Research Question 1: What is the relationship between burnout, academic self-efficacy, and engagement?

Correlations were conducted across key study variables to examine any significant covariance among the predictor variables (engagement, burnout, and self-efficacy). Engagement and burnout were negatively correlated at $r(401) = -.26$, $p=.000$. Students who demonstrated higher academic engagement showed lower burnout level. Engagement and self-efficacy were positively correlated at $r(401)= .35$, $p=.000$. Students with higher engagement scored higher self-efficacy. Self-efficacy and burnout were negatively correlated at $r(401) = -.33$, $p=.000$. Students

with higher self-efficacy had lower levels of burnout. Table 2 shows the means, standard deviations, and bivariate correlations for the variables under study.

Table 2. *Descriptive Statistics and Correlations for Study Variables*

Variable	*n*	*M*	*SD*	1	2	3
• Engagement	401	4.38	1.60	-		
• Burnout	401	2.37	.53	-.26***	-	
• Self-Efficacy	401	3.09	.48	.35***	-.33***	-

***p<.001

Research Question 2: What are the differences in engagement, burnout, and self-efficacy based on grade level?

Levene's test showed that the variances for engagement across grade levels were not equal: F(3,396) = 9.412, p = 0.003. Although the assumption of homogeneity of variance has been violated, the sample sizes are roughly equal across groups. One-way between subjects ANOVA was conducted to compare differences between 9th, 10th, 11th, and 12th graders on academic engagement. There was a significant difference between grade level and levels of academic engagement F(3, 399)=, p=.000. Post hoc comparison using the Tukey HSD test indicated that 12th graders (M=5.15, SD=1.17) had significantly higher academic engagement than 9th graders (M=4.53, SD, 1.71), 10th graders (M=3.77, SD=1.5) and 11th graders (M=4.08, SD=1.66). Further, 9th graders (M=4.53, SD=1.71) had significantly higher academic engagement compared with 10th graders (M=3.77, SD=1.52). Table 3 shows the analysis of variance and post hoc comparisons.

Table 3. *Means, Standard Deviations, and One-Way Analyses of Variance in Engagement, Burnout, and Self-Efficacy*

Measure	Ninth		Tenth		Eleventh		Twelfth		F(3,399)	
	M	SD	M	SD	M	SD	M	SD		
Engagement	4.53_a	1.71	3.77_b	1.52	4.077	1.64	5.15_b	1.17	15.79***	
Burnout	2.46_a	.55	2.39	.55	2.25_b	.55	2.37	.47	2.640*	
Self-Efficacy	3.19_a	.41	3.11	.51	3.12	.45	2.96_b	.52	4.13**	

***p<.05, **p<.01, ***p<.001**

Note: Means with different subscripts are statistically significant

Levene's test showed that the variances for self-efficacy across grade levels were equal, F(3,396) = 1.781, p = 0.150 . A one-way between subjects ANOVA was conducted to compare differences in 9th, 10th, 11th, and 12th graders in self-efficacy. There was a significant difference between grade level and levels of self-efficacy F(3, 401)=4.138, p=.007. Post hoc comparison using Tukey HSD indicated that 9th graders (M=3.19, SD=4.2) had significantly higher self-efficacy than 12th graders (M=2.96, SD=.52). Table 3 charts the analysis of variance and post hoc comparison.

Figure 1 shows a graph of mean differences in self-efficacy by grade level.

Figure 1. *Self-Efficacy Scored by Grade Level*

Levene's test showed that the variances for burnout across grade levels were equal, F(3,397) = -1.854, p =

0.137. A one-way between subjects ANOVA was conducted to compare differences in 9th, 10th 11th, and 12th graders in burnout. There was a significant difference between grade level and levels of burnout F(3,401)=2.640, p=.04. Post hoc comparison using Tukey's test indicated that 9th graders (M=2.46, SD=.55) had significantly higher burnout, compared with 11th graders (M=2.25, SD=.58).

Figure 2 shows a graph of the mean differences in burnout across grade level.

Figure 2. *Burnout Scores by Grade Level*

Research Question 3: Are academic engagement and self-efficacy significant predictors of burnout?

Table 4. ***Multiple Regression Analysis of Engagement and Self-Efficacy on Burnout***

Variable	**Unstandardized coefficients**		**Standardized coefficients**	
	B	**SE**	**β**	**t**
Engagement	**-.056**	**.017**	**-.168**	**-3.373****
Self-Efficacy	**-.302**	**.055**	**-.272**	**-5.474*****
R^2 =.13, adj R^2 =.13, F=30.723* **				

**p<.01

Research Question 4: Does self-efficacy mediate the relationship between engagement and burnout.

.

Figure 3. *Path Analysis Model of Association between Engagement and Burnout*

**p<.01. ***p<.001

Table 5. ***Multiple Regression Analysis of the Mediating Effect of Academic Self-Efficacy***

Outcome	Predictor	Unstandardized coefficients		Standardized coefficients		R^2	ΔR^2	F
		B	SE	β	t			
Self-Efficacy	Engagement	.104	.014	.35	7.348***			
Academic Burnout	Engagement	-.087	.016	-.26	-5.417***	.07		29.340***
	Engagement	-.056	.017	-.17	-3.373**	.134	.065	30.723***
	Self-Efficacy	-.302	.055	-.272	-5.474***			

**p<.01, ***p<.001

DISCUSSION

This study examined the relationships in a Saudi Arabian setting. Although Salmela-Aro and Upadyaya reported in 2013 that "the relations between school-related burnout and engagement have seldom been analysed [sic]" (p. 139), in the past seven years several studies of the relationship between academic engagement and burnout have been published. For the most part, these studies are split between defining engagement in two ways. One describes three components: affective, cognitive, and behavioral. The affective refers to students' enjoyment of school-related challenges and their interpersonal relationships. The cognitive refers to students' willingness

to engage in schoolwork. The behavioral component revolves around attendance and a willingness to follow rules (Tuominen & Salmela-Aro, 2014). According to Salmela-Aro's model (2013), engagement consists of three components (Salmela-Aro and Upadyaya (2013)): energy (a positive approach to study similar to cognitive component), dedication (a positive attitude toward school similar to the behavioral component), and absorption (a feeling of competence similar to the affective component). These interconnected three dimensions of the burnout have been related with higher risk status for students in terms dropout, absenteeism, turn-over, and decline in school-related outcomes such as pursuit of achievement goals, academic motivation, and commitment (Tuominen-Soini & Salmela-Aro, 2013; Vasalampi et al., 2009).

Burnout is another crucial school-related factor that impacts students' motivations for learning and plays an essential role in academic performance (William, 2006). Most researchers measure academic burnout with Maslach's Burnout Inventory—Student Form. The inventory lists three components for burnout: exhaustion due to school demands, cynicism shown by indifference toward schoolwork, and inadequacy because of low competence (Tuominen-Soini & Salmela-Aro, 2014). In addition to these three components, Walburg (2014) adds that burned-out students exhibit chronic stress due to high self-expectations or high expectations from parents or teachers. Regarding burnout, in a literature review of 16

international studies of student burnout, Walburg (2014) reported that emotional exhaustion has both direct and indirect effects on feelings of inadequacy via cynicism. In addition, the author concluded that "school-related burnout is rather consistent over time as is cynicism which in turn predicts feelings of inadequacy" (p. 30). Various research findings have established the link between burnout and reduced quality of school life, educational expectations, risk of school dropout, and poor educational engagement as result of decreased motivation, chronic stress, and a psychological state of helplessness associated with depression (Mutkins, Brown, & Thosteinsson, 2011), low self-esteem (Eriksson, Engström, Starring, & Janson, 2011), and a higher suicide risk (Ang & Huan, 2006; Pompili et al., 2010). Until recently, studies of burnout have mostly focused on university students (Schaufeli et al., 2002); despite their vulnerability, elementary and secondary school students facing burnout have received less attention (Salmela-Aro, Kiuru, & Nurmi, 2008). Broad research attention has been given to burnout among professionals in the human-services sector (Bakker, Demerouti, & Sanz-Vergel, 2014), including teachers, nurses, school psychologists counselors, police officers, and social workers, but limited empirical studies exist addressing the scope of this problem among school children, despite its adverse significant consequences in schools and organizations at large. (Walbur, 2014). The lack of research on the topic merits further study and

highlights the need to extend the investigation to cross-cultural contexts such as school settings in Saudi Arabia.

Hypothesis 1: There is a statistically significant negative relationship between academic engagement and burnout.

Like Tuominen-Soini and Salmela-Aro's (2014) research, the findings of this study affirm the link between students' academic engagement and burnout were negatively correlated r(401) = -.26, p=.000. Students who demonstrated higher academic engagement revealed lower burnout levels. This finding is also similar but adds to the findings of Suominen-Soini and Salmela-Aro (2014), who found "the lower level of engagement, the higher the school burnout" (p. 659). AkbaŞli, Gün, Gökhan, and Turabik (2019) found in another study of 472 Turkish students that students' school engagement was "found to be a significant predictor of all subscales [of] burnout" (p. 293). A study carried out by Schaufeli, Martínez, Pinto, Salanova & Bakker (2002) also detected the negative affect of burnout on decreased level of academic outcomes such as academic engagement among university students (Schaufeli, Martínez, Pinto, Salanova & Bakker, 2002), in terms of negative attitudes about the school environment (Salmela-Aro, Kiuru, Pietikäinen, & Jokela 2008)Taken together, the results of this research confirmed the link between school engagement and burnout. In other words, they are particularly close and interrelated (Salmela-Aro, Kiuru, & Nurmi, 2008), suggesting the importance of academic engagement in combating and protecting against school burnout and it related adversities

Although the current study indicates the link between academic engagement and burnout syndrome, quite a few studies have indicated the possibility of the opposite direction. Lee, Lee, Lee, and Lee (2020), for example, measured the opposite correlation that burnout out may have been responsible for the relationship effect, breaking down Korean high school students into various groups based on the strength of their burnout components: exhaustion, cynicism, and academic inefficacy. "Distressed" students (entirely burned out) have no motivation or low internal motivation. and "well-functioning" students were distinguished by internal motivation and identified regulation. "Struggling" students (those who were trying but not succeeding) had favorable attitudes despite high exhaustion, inefficacy, and anxiety. "Laissez-faire" (non-participating) students had high levels of cynicism and antipathy and low levels of exhaustion, inefficacy, and anxiety.

Other researchers argued that since the inadequacy component of burnout and the absorption component of engagement are very similar, it should not be surprising that, while most studies find a correlation between academic engagement and burnout, the direction of the correlation is sometimes different. Although Salmela-Aro and Upadyaya (2013) insisted in a study of over 1700 Finnish students that student burnout negatively predicted engagement rather than vice-versa, the following year, by contrast, Tuominen-Soini and Salmela-Aro (2014) found "the lower level of engagement, the higher the school burnout" (p. 659).

No matter the direction of the correlation, the reasons for studying burnout and engagement are clear in investigating the mechanisms explaining the relationship between the two constructs. Research has shown that students who are burned out report more psychological problems (Schaufeli &), increased levels of anxiety and depression, and suicidal ideation, which in turn leads to poor academic achievement and higher risk for school dropout (Walburg, 2014). In a similar vein, Salmela-Aro and Upadyaya (2013) found substantial evidence that "students who are burned out by school are more likely to experience academic failure, school dropout, and a host of other negative psychosocial outcomes" (p. 137). Previous research by Fimian and Cross (1986) and Salmela-Aro, Kiuru et al. (2009) determined that school burnout is positively linked to depression and negatively linked to engagement and self-esteem. According to Schaufeli et al. (2002), burnout can result in reduction of academic engagement and devaluation in self-efficacy (Yang & Farn, 2005), as well as poor perceptions about the school environment (Salmela-Aro, Kiuru, Pietikäinen, & Jokela 2008). On the other hand, school engagement is a significant factor that can mitigate burnout; academically engaged students showed the "lowest levels of academic withdrawal" (Tuominen-Soini & Salmela-Aro, 2014, p. 659).

Findings in this study demonstrate that although burnout and academic engagement are interrelated, they are multifaceted, complex constructs/processes. More complex analysis such structural equation modeling analyses are needed to detect the dual pathways and determine the

casual relationships between academic engagement and burnout.

Hypothesis 2: There is a statistically significant negative relationship between self-efficacy and burnout.

Self-efficacy is "one's belief in one's ability to succeed in specific situations or accomplish a task" (Beri & Stanikzai, 2018, p. 213). Self-efficacy is influenced by accomplishments, comparison to peers, verbal persuasion, and somatic feelings (such as a stomachache). This personality resource plays an instrumental role in promoting cognitive engagement (Pintrich & Groot, 1990) and complements the protective role of other personality variables such as hardiness, locus of control, resiliency and self-esteem, and achievement motivation in buffering individual in times of stress and challenging demands. Variation in self-efficacy resources may predispose students to perceive their school demands differently, with individuals with higher self-efficacy perceiving the demands more favorably, regardless of the actual stressors of their schooling. It is therefore not surprising that inefficacy results from a self-efficacy crisis (Breso, Schaufeli & Salanova, 2011) and indeed is reliably linked to burnout as established by our work and others (Salmela-Aro et al, (2009).

Specifically, our research also supported this hypothesis. The results indicated that academic self-efficacy is negatively related to burnout. In other words, the higher students' self-efficacy, the less likely they are to suffer

from burnout. The relationship between academic self-engagement and burnout was also found in Evers et al. (2002), who found that those students with higher levels of self-efficacy beliefs are less likely to report depersonalization and emotional exhaustion and other burnout symptoms.

In general, our findings are consistent with and expand findings from several other studies. Charkhabi, Abarghuei, and Havati (2013) reported that academic burnout and all its components had a significant correlation with the self-efficacy and the learning experience among 233 Iranian undergraduates. Among 120 Turkish university students, Rahmati (2015) found a negative relationship among self-efficacy, academic burnout, and burnout variables (exhaustion, academic uninterest, and academic inefficacy). In another study of Turkish subjects, Savaş, Bozgeyik, and Eser (2014) reported that among 163 elementary and secondary school teachers, self-efficacy had a negative relationship with burnout once gender, seniority, and age were controlled for. In a similar study on Korean medical school students, Yu, Chae, and Chang (2016) reported a negative correlation between academic burnout and academic self-efficacy that was stronger than the correlation with socially prescribed perfectionism, defined as a student's understanding that he or she is expected to be perfect by parents, teachers, and the community.

Hypothesis 3: There is a significant positive relationship between academic engagement and self-efficacy.

Our research indicates a positive relationship between academic engagement and self-efficacy. This finding is in line with several other studies on the relationship between self-efficacy and engagement. Beri and Sainkzai (2018) reported that "both self-efficacy beliefs and student engagement are crucial factors for successful academic learning" (p. 213). In their summary of papers on self-efficacy, engagement and learning, the authors reported that students with high self-efficacy were "highly engaged with constructive and cooperative methods along with doing homework" (p. 218). In another study of community college students that was summarized by Beri and Stanikzai, the study also found a link between self-efficacy and engagement. Ventura, Slanova, and Llorens (2015) found from their research the following: "Empirical evidence of the positive relationship between self-efficacy and engagement across time supports Bandura's notion that core self-evaluations or self-efficacy beliefs are crucial determinants of engagement" (p. 279). Building on Bandura's notion of self-efficacy, we propose that students' differences in appraisals of their self-efficacy are likely to affect their degree of burnout and their commitment to remain academically engaged. We assume that self- efficacy will serve as psychological resource that challenges stressors associated with burnout. Zimmerman (2000) reported that self-efficacy mediates students'

academic achievement by influencing motivation through "choice of activities, level of effort, persistence, and emotional reactions" (p. 86).

Linnenbrink and Pintrich (2003) also reported a link between self-efficacy and

To investigate whether academic self-efficacy mediates the relationship between students' academic engagement and burnout, the mediation analysis confirmed the partial role of self-efficacy in mediating the relationship engagement through self-efficacy.

Put another way, our research findings indicate that as academic self-efficacy increases among students, their academic engagement increases. Furthermore, as academic engagement increases among students, their reported academic burnout decreases. Therefore, self-efficacy serves as a psychological resource that determines the degree of academic burnout. Consistent with this are the findings by Gil-Monte (2005) who proposes that negative impact of perceived student self-efficacy on academic engagement may be attributed to personal sense of efficacy.

Schwarzer and Hallum (2008) found "hardly any formal tests of mediation in the literature" when it comes to self-efficacy, stress and burnout (p. 155). However, there are a few. Our findings support the results of a study by Saricam (2015) of Turkish adolescents that found self-efficacy partially mediated the relationship between subjective

vitality and school burnout" (p. 1). Although engagement and subjective vitality are not exactly the same thing, they are close. According to Saricam (2015), subjective vitality is "an indicator of mental positive energy, and a vital and cheerful person is an alert and fresh person and also is full of life and energy" (p. 2). The use of the world positive in the definition of engagement already included earlier in the discussion and here shows the close connection.

More recently, Jurado, Pérez-Fuentes, Atria, Ruiz, and Linares (2019) report in a study of Sicilian high school teachers a "mediating effect of perceived personal efficacy on the relationship between burnout and job satisfaction" (p. 1). Thus, further studies should be conducted to determine if the impact of student self-engagement on burnout

is function of mediating variables.

What are the differences in engagement, burnout, and self-efficacy based on grade level?

Academic engagement: The results of this study indicate that 12th graders (M=5.15, SD=1.17) had significantly higher academic engagement than 9th graders (M=4.53, SD, 1.71), 10th graders (M=3.77, SD=1.5) and 11th graders (M=4.08, SD=1.66). However, 9th graders (M=4.53, SD=1.71) had significantly higher academic engagement when compared with 10th graders (M=3.77, SD=1.52).

Self-efficacy: Our results indicate that 9th graders (M=3.19, SD=4.2) had

significantly higher self-efficacy than 12th graders (M=2.96, SD=.52). (See table 4 for analysis of variance and post hoc comparison table.)

Burnout: Our results indicate that 9th graders (M=2.46, SD=.55) had significantly higher burnout compared with 11th graders (M=2.25, SD=.58).

Regarding engagement, our findings mostly are inconsistent with previous studies on age in other research on academic engagement, efficacy, and burnout. For example, Bílge, Tuzgöl Dost, and Çetín (2014) report that, in general, school engagement declines as class and age levels rise. Walburg (2014), however, reported on a study of Finnish students that included 979 students in year 1 and 663 of those same students six years later, finding that their profiles (engaged, engaged-exhausted, cynical, and burned out) remained relatively stable over time. Bugler, McGeown, and St. Clair-Thompson (n.d.) found in a study of United Kingdom students using the Student Motivation and engagement Scale-High School (SMES) drops in motivation between early and mid-adolescence and early and late adolescence but not between mid and late adolescence. Both a drop in school engagement or stable school engagement refute our findings that 12th graders were more engaged than 9th graders. One plausible explanation is that parental and societal expectations play a key role in exerting pressure and demand on students to

persist in engagement. In addition, a high GPA in high school is emerging as a central criteria for admission to any university, and students must achieve and obtain high grades to ensure admission to universities in order to secure a stable job after graduating from the university.

When it comes to burnout, Palabivik (2014) also used one-way ANOVA results to report "no significant grade level differences in overall burnout, emotional exhaustion, [and] depersonalization" (p. 171). However, the author noted that "the students' burnout level increases as time passes" (p. 174) and that 12th grade male students had the highest levels of burnout and depersonalization, facts which the author claimed supported other studies on burnout levels from grade to grade. The author speculates that the increase in 12th grade may be related in part to university entrance exams. These findings are not as concerning as they sound since Fredricks, Blumenfeld, and Paris (2004) report that behavioral engagement in the early years of school is the critical mediator in the dropout process, suggesting that an increase in burnout in the later school years may not be as crucial as burnout at earlier ages. Walburg (2014) reported on several studies of age and burnout. In one study of the transition period from secondary to upper-secondary school in Finland, the author found that boys increased in all three burnout components, and girls also increased, particularly in feelings of inadequacy. In another study of Finnish students by Parker and Salmnela-Aro (2011), burnout stayed relatively stable

over time. Both these findings contradict our findings on burnout, in which the younger students had higher burnout. Although findings showed that 9th graders (M=3.19, SD=4.2) had significantly higher self-efficacy than 12th grader, the higher school demands, stressor associated with transition from elementary to high school and less developed problem solving and personal resources may have not helped younger students effectively cope with stressors and has translated into higher burnout load. Specifically, regarding efficacy, Palabiyik (2014) reported that for girls' self-efficacy decreased in 10th grade, partially supporting our finding of an overall drop in self-efficacy from 9th through 12th grade. On the other hand, Palabiyik (2014) noted in his study of 10th through 12th grade Turkish students "no significant grade level differences in overall…professional efficacy levels" (p. 171).

Implications for School Psychologists

Many scholars have written about specific methods to improve student engagement. These methods are applicable to Saudi high school students as well. Specifically, these methods should target 10th graders, who scored the lowest on engagement, followed by 11th graders and then 9th graders in our study. Given the cultural diversity in Saudi schools, school psychologists should consult teachers on how to use culturally relevant pedagogy, defined as pedagogy that "empowers students intellectually, socially, emotionally, and politically using

cultural referents to impart knowledge, skills, and attitudes" (Ladson-Billings 1994, pp. 16–17). In order to become culturally relevant educators, Saudi teachers should be trained to utilize constructivist strategies to improve student motivation (Bui & Fagan, 2013; Dimick, 2012) which can have a direct impact on student engagement and thereby increase student interest and engagement in content (Choi, 2013; Dimick, 2012). Culturally relevant pedagogy improves students' perception of their self-efficacy (Souryasack & Lee, 2007) by empowering them through teachers' setting high expectations. Further, culturally responsive teachers demonstrate an attitude of caring for all ethnically diverse students in the classroom (Gay, 2000). Caring is one essential pillar for preventing student burnout.

In addition, Saudi school psychologists as well as high-school educators should adapt the following list compiled by Zepke and Leach (2010) summarizing 93 studies over 30 years of research to improve student engagement:

- Enhance students' self-belief.
- Enable students to work autonomously, enjoy learning relationships with others and feel they are competent to achieve their own objectives.
- Recognize that teacher and teachers are central to engagement.
- Create learning that is active, collaborative and fosters learning relationships.

- Create educational experiences for students that are challenging and enriching while extending their academic abilities
- Ensure institutional cultures are welcoming to students from diverse background
- Invest in a variety of support service
- Adapt to changing student expectations
- Enable students to become active citizens
- Enable students to develop their social and cultural capital (p. 169)

Darling-Hammond, Flook, Cook-Harvey, Barron, and Osher (2019) recommend looping, the practice of assigning students to the same teacher for more than a year, as a way to create "a heightened sense of efficacy." The authors also acknowledge that "culturally responsive pedagogy" requires teachers to consciously transmit to students a sense of efficacy through the promotion of equity.

Looking at both numbers 4 and 5, Goldberg and Ingram (2011) found that assignments in which students could demonstrate creativity and resourcefulness were the most successful.

One way to achieve number 8 is to make sure students feel their feedback is important and acted upon (Nair, Adams, & Mertova, 2008). Another way is to be creative in the means in which technology is adapted. Kirsch, Marlow, Pingley, Leonhirth, and Lownes (2016) have written about the best pedagogical applications of technology to improve student engagement, explain the pitfalls and how to overcome them of a variety of technology tools.

Finally, cognitive-behavioral therapy is essential method to consider to help students better cope and heal from school stress and burnout. Support for this comes from the work of Bresó, Schaufeli, and Salanova (2010) used two control groups ("healthy" and "stressed") to determine if a 4-month cognitive-behavioral intervention program could decrease burnout by improving self-efficacy, engagement, and performance. Self-efficacy, engagement and performance increased in the intervened group more than both the control groups. Quite unexpectedly, both the intervened group and "stressed" groups had decreased levels of burnout. The "healthy" group, however, performed best at T2

Limitations

The psychological stress of following rules regarding the limitation of group gatherings, self-quarantining and social distancing, and the fear of contracting COVID-19 can be very debilitating (Salari et al., 2020). A range of psychosocial effects of COVID-19 on children and youth have been identified, with children experiencing stressors such as frustration/boredom, fear, and anxiety, all of which increase the likelihood of student burnout (Brooks, Webster, Smith, Woodland, Wessely, Greenberg, Rubin, 2020; Horesh & Brown, 2020). Because of their limited abilities and resources for coping (internal and external resources), our findings show that younger students (9th grade) are most severely impacted by burnout, and it is still unclear how COVID-19 has undermined the academic

engagement of Saudi students. Thus, it is important to continue studying student engagement and burnout during and post-pandemic.

In the current study, data collection was disrupted by the pandemic and relied heavily on personal assistance from school principals in securing student participants. The recruitment of subjects was not based on random sampling as originally proposed, but rather on convenience sampling procedure. Our participants who volunteered to participate in this study might be different from the participants who did not volunteer because of the pandemic in terms of motivation, intelligence, and burnout. Therefore, future studies need to rule out the impact of the covid-19 pandemic on the results.

This disruption may have also impacted the validity of the findings in this study in another way, specifically regarding female students, in that only 28 female students were able to participate. Originally this study sought to compare mean differences in academic engagement, self-efficacy, and burnout between female and male students by grade level. Future studies are needed to explore gender differences in these areas; the findings of this study may generalize only to male high school students. If female subjects' findings on engagement, self-efficacy, and burnout are consistent with the findings for Saudi male students and these findings are inconsistent with findings in Western societies, then cultural factors are postulated to play a central role in moderating or mediating the

relationship between academic engagement, self-efficacy, and student burnout. A cross-cultural study of two distinct cultural groups will provide a better prognosis for identifying both the universal/non-cultural and the native/specific cultural mechanisms that promote or hinder academic engagement, self-efficacy, and burnout. As culture is closely tied to familial socialization (Scarr, 1993), the role of Saudi familial socialization and its relationship to student engagement, self- efficacy, and burnout should also be tested in future studies.

Finally, future studies are needed to clarify the role of individual, familial (e.g., family support), and school resources in protecting against school stress and burnout and enhancing student self-efficacy and academic engagement.

References

- AkbaŞli, S., Gün, F, Gökhan, A., & Turabik, T. (2019). School engagement as a predictor of burnout in university students. *PAU Journal of Education, 45,* 293-309. doi: 10.9779/PUJE.2018.234
- Akin, A. (2012). Self-handicapping and burnout. *Psychological Reports, 110*(1): 187-196.
- Almohazie, Mohammed Fahad, Reliability and validity of an Arabic translation of the Academic Self-Efficacy Scale (ASE) on students at King Faisal University (2018).Wayne State University Dissertations. 1910. https://digitalcommons.wayne.edu/oa_dissertations/1910
- Alrashidi, O., Phan, H.P., & Ngu, B.H. (2016). Academic engagement: An overview of its definitions, dimensions, and major conceptualisations. *International Education Studies, 9*(12), 41-52. doi:10.5539/ies.v9n12p41
- Ang, R.P. & Huan, V.S. (2006). Relationship between academic stress and suicidal ideation: Testing for depression as a mediator

using multiple regression. *Child Psychiatry & Human Development, 37*: 133-143.

- Appelton, J.J., Christenson, S.L., Kim, D., & Reschly, A.L. (2006). Measuring cognitive and psychological engagement: Validation of the student engagement instrument. *Journal of School Psychology, 44*(5): 427-445.
- Aypay, A. (2011). Elementary school student burnout scale from grades 6 to 8: A study of from http://www.ascd.org/publications/books/107034/chapters/Student-Motivation,-Engagement,-and-Achievement.aspx.
- Jackson, S.E., Schwab, R.L., & Schuler, R.S. (1986). Toward an understanding of the burnout phenomenon. *Journal of Applied Psychology, 71*(4): 630-640.

***