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The Overwhelm of Crowded Classroom: Exploring the Relationship between Classroom Size and Teacher Burnout

The Case Study of Middle School Teachers

A Dissertation Submitted in Partial Fulfillment for the Requirement of the Master Degree in
Didactics of Foreign Languages

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Dedication I

*This work is dedicated to my **mother**, whose profound love for learning and unwavering encouragement have been the bedrock of my academic pursuit, instilling in me the enduring value of perseverance. I also honor my **father**, whose steadfast support and quiet strength have served as a constant grounding force throughout my life. To my **daughters and son**, whose presence has imbue my efforts with purpose and fortified my resolve, I offer my deepest gratitude. My **siblings** have consistently stood by me with love and an unwavering belief in my ability to succeed, and for this, I am truly thankful. I further acknowledge my **dear friend**, whose steady presence and encouragement were instrumental in carrying this journey forward. Finally, to my **husband**, whose role in this journey, though different from others, reminded me that growth often comes in quiet, unspoken ways.*

H. Lamia

Dedication II

In the Name of Allah, the Most Merciful, the Most Compassionate

I dedicate this work:

To the loving memory of my beloved father, Boujamaa, whose unwavering love and guidance have been my strength and inspiration throughout this journey.

To my dearest mother, Sonia, the greatest source of love and motivation in my life.

To my precious brothers, Baha and Sief, for their endless support;

To all my wonderful family members, whose love and encouragement mean everything to me.

To my best friend, Lamia, my steadfast companion in this long journey of hard work.

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And to everyone who has prayed for my success and stood by me—this achievement is a reflection of your faith and support.

.

Zayneb

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Abstract

Teachers can face overwhelming claim demands on their time and energy, which can drive them to leave the profession due to burnout caused by behaviour issues, excessive workload, and class size problems. One of the key drivers of this burnout is class size, as larger classes exacerbate these pressures, reducing teachers' ability to manage effectively and maintain their well-being. The current study attempts to examine the relation between teacher burnout and class size, focusing on how overcrowded classrooms contribute to heightened burnout levels among teachers. In light of these considerations, this study addresses the following three research questions: (1) How are teachers classified according to burnout levels? (2) How are teachers categorized according to class size? (3) Is there a significant relationship between teacher burnout and class size? It is hypothesised that there is a significant association between the teacher burnout and class size, or there is no significant association between teacher burnout and class size. In an attempt to answer the research questions and test the study's hypotheses, a questionnaire was administered to 143 middle school teachers. The questionnaire combines The Maslach Burnout Inventory, in addition to other questions related to class size. The analysis was run using SPSS. Following the identification of the categories, a Chi-square test assessed the association between class size categories and burnout dimensions (emotional exhaustion, cynicism, and inefficacy). The major research findings reflect that the combination of the three burnout components into a total burnout score reveals highly significant association. Results found association among burnout categories (high, medium, and low) and class size categories (large, medium and small), whereby teachers with large class size experienced high burnout. Other results are further discussed. Eventually, the research work offers some limitations, implications, and recommendations for pedagogy and future research.

Keywords: teacher burnout, class size, Maslach Burnout Inventory, association, dimension.

List of Acronyms and Symbols

OECD: Organization for Economic Co-operation and Development**.**

IBM: International Business Machines Corporation**.**

NCTE: National Council of Teachers of English**.**

MBI: Maslach Burnout Inventory.

SPSS: Statistical Package for the Social Sciences.

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General Introduction

1. Statement of the Problem

Teaching is a profession that demands high levels of intellectual, physical, and emotional resources. However, this vital profession is accompanied by significant challenges, particularly in the classroom setting. Large classrooms, diverse students' needs, and limited resources might make it difficult for teachers to deliver good teaching while working on themselves. This refers to their ongoing efforts toward personal and professional growth, self-improvement, and self-care. In light of this complex workload, it is not surprising that teachers often burnout and leave the teaching profession.

Teacher burnout is a common and complex problem that can take an emotional, physical, and psychological toll on teachers with varying levels of experience (Maslach, 1976; Maslach & Jackson, 1981). Despite the pedagogical training offered to middle school teachers, they always feel burnout in dealing with full classrooms (Kyriacou, 2001). Most teachers can find it challenging to deal with large class sizes. Furthermore, the stress of dealing with dozens of students at a time with varied skill levels and needs is likely to lead to exhaustion, frustration, and lower instructional quality (García & Weiss, 2019)

2. Aim of the Study

The aim of the present research is to examine the relationship between class size and teacher burnout. The study aims to assess teachers' stress levels, job satisfaction, and perceived workload in relation to class size categories.

3. Significance of the Study

The significance of the current study stems from its focus on class size, which has emerged in contemporary education as a key aspect that is likely to affect teaching quality,

student learning, and institutional resource allocation. Furthermore, this study derives its importance from the fact that it offers understanding of teacher burnout. This phenomenon has an essential significance to the melding of the future of teaching in schools and universities (Maslach & Leiter, 2016). Class size is among the most significant variables in educational effectiveness, and thus warrants additional study to optimize teacher well-being and teaching quality.

4. Research Questions

In light of what precedes, this study sets out to answer the following questions:

1. How are teachers classified according to burnout levels?
2. How are teachers categorized according to class size?
3. Is there a significant relationship between teacher burnout and class size?

5. Research Hypotheses

For this study on the relationship between class size and teacher burnout, the following hypotheses are proposed:

H_a: There is a significant association between the teacher burnout and class size.

H_o: There is no significant association between teacher burnout and class size.

6. Research Methodology

In order to reach the desirable research aims, a quantitative method was employed to validate the aforementioned hypotheses. Therefore, a single questionnaire was administered to middle school teachers currently teaching in diverse class size settings (small, medium, and large). This questionnaire assesses teachers' stress levels, job satisfaction, and perceived workload in relation to class size categories. Statistical analysis of the teachers' responses was performed

using IBM SPSS Statistics version 26 (64-bit). After the identification of the categories, a Chi-square test was conducted to ascertain any statistically significant association between teacher burnout and class size.

7. Structure of the Study

The present dissertation is structured into two principal chapters: the first presents the theoretical framework of the research, while the second details the practical application of the study. The theoretical part examines the background of the two variables, namely, teacher burnout and class size, with a dedicated section for each. The first section begins by defining burnout as conceptualized by different scholars, followed by discussing its dimensions**.** After that, the study shifts to focus on to the causes and consequences of burnout. The last part of this section highlights the fundamental strategies to reduce burnout. Thus, the second section of this chapter starts with definitions of the term class size and its various types, and concludes by discussing the benefits and the challenges of both large and small class sizes. Therefore, the second chapter deals with a description and analysis of the teachers' questionnaires. It includes the interpretations and discussion of the main findings. This study, in its concluding sections, outlines its various limitations, implications for practice, and recommendations for future research.

Chapter One: Conceptual Overview of Teacher Burnout and Class Size

Introduction

Teacher burnout and class size are two of the strongest variables in contemporary educational research. On the one side, class size is an exemplary determinant of instructional quality as well as teacher load. On the other side, an understanding of teacher burnout, a state of prolonged stress accompanied by emotional exhaustion, cynicism, and reduced professional competence, allows institutions to find strategies for teacher retention and the creation of secure learning environments. This chapter presents the theoretical framework of the current study. It is subdivided into two sections that examine teacher burnout and class size. The first section begins by defining burnout, then discusses its dimensions such as exhaustion, cynicism and efficacy, and further explores its causes, consequences, and solutions to minimize it. The second section commences by defining the term Class size and subsequently presents its types, challenges, and benefits of both large and small class sizes. The chapter ends up with a comprehensive conclusion.

Part One: Teacher Burnout

1.1.1. Burnout Definition

Burnout is literally defined as "a final flickering flame, of a charred and empty shell, of dying embers and cold, grey ashes" (Maslach, 2003, p. 2). In other words, burnout implies the process of depletion, where initial energy and enthusiasm fades to nothing, like a flame dying down to cold ashes. Earlier, during the sixties, the term *burnout* was popularly used in everyday language by people to describe their feelings before it was identified in psychology. In the 1970s, the psychologist Freudenberger extended its meaning to encompass the gradual emotional exhaustion, lack of motivation, and decreased dedication he saw in volunteers who offered services to homeless and drug addicts (Schaufeli et al., 2009). Since then, burnout has

been acknowledged by researchers and practitioners as a noteworthy social issue that deserves attention and improvement (Schaufeli et al., 2009). In essence, the recognition of burnout as a significant social issue by researchers led to more open discussions and efforts to understand and address it.

Burnout is described by Maslach and Leiter (2016, p. 103) as "a psychological syndrome emerging as a prolonged response to chronic interpersonal stressors on the job". It is a result of ongoing and unsolved stress in workplace relationships**.** It is marked by feelings of extreme depletion and complete worn out, which can result in the exhibition of negative and distant attitudes towards work, and a sense of not achieving anything worthwhile. Therefore, it is essential to define burnout as **"**the accumulation of responses to extended stressors caused by one's job" (Herman et al., 2018, p. 91). Furthermore, burnout is a build-up of reactions to ongoing work-related stressors such as, negative workplace, excessive workload, insufficient reward, and lack of support and trust (Maslach et al., 2001). Thus, burnout develops when there is a mismatch between the job demands and the individual's capacity to handle (Maslach et al., 2001). This mismatch means that there is a gap between job demands and individual's ability to cope, consequently, leading to difficulties and stress among teachers.

1.1.2. Burnout Dimensions

Burnout is a prolonged response to chronic emotional and interpersonal stressors. It is defined by the three dimensions of exhaustion, cynicism, and inefficacy.

1.1.2.1. Emotional Exhaustion. Emotional exhaustion is a core dimension and most noticeable sign of burnout. It is defined as a state of overwhelming depletion of emotional and cognitive resources (Maslach et al., 2001). This is very much keeping with Schaufeli et al. (2020) who elaborated that "exhaustion refers to a severe loss of energy that results in feelings

of both physical (tiredness, feeling weak) and mental (feeling drained and worn-out) exhaustion" (p. 27). This profound energy depletion can contribute to a range of stress related-illnesses.

Although exhaustion is a psychological symptom and reflects the stress dimension of burnout, it is correlated to physiological problems. Tunde and Oladipo (2013) noted that "workers having this problem reveal psychopathological, psychosomatic, somatic symptoms" (p.7). This psychological strain of exhaustion, as Maslach and Leiter (2016) reported, is often accompanied by physical stress symptoms like headaches, stomach problems, frequent flu and sleeping disturbance. That is to say, the chronic stress from emotional depletion triggers tension and headache. Furthermore, emotional exhaustion disrupts the digestive system which causes stomach problems and gastrointestinal distress. This interconnection reveals the profound impact of emotional exhaustion's psychological burden on overall health and well-being.

1.1.2.1. Cynicism. Cynicism or depersonalization is frequently developed as a consequence of exhaustion-(Maslach et al., 2009). This dimension was described by, Maslach (2017) as "having negative or inappropriate attitudes towards clients, having become irritable, lost idealism, and withdrawn (p.143). Then, cynicism is a shift toward critical or detached attitudes toward others, with tendency to emotional disengagement, often due to a prolonged stress.

Cynicism, in burnout, is a maladaptive coping mechanism, a way for individuals to create emotional distance as a rapid response to feeling drained, but negatively impacts the quality of their service and their own well-being (Maslach & Leiter, 2016; Maslach et al., 2001). The Adaptation of this psychological defense mechanism helps individuals protect themselves from emotional damages of constant interaction, especially in demanding or emotionally charged situations. Maslach et al., (2001) argued:

> It is an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people [……]. Outside of the human services, people use cognitive distancing by developing an indifference or cynical attitude when they are exhausted and discouraged. Distancing is such an immediate reaction to exhaustion. (p. 403)

In more precise terms, when individuals find it difficult to maintain empathy and compassion, they tend to distance themselves emotionally and mentally from their job. This distance is a temporary coping mechanism and self protection individuals use when they are drained and discouraged. Although it makes their job feel more manageable for them for short time, it ultimately has negative consequences for service quality and well being. Maslach et al (2001) argued that cynicism emerges from the presence of work overload and social conflict. As a result, sense of effectiveness tends to decline. In other words, individuals may feel stressed and emotionally drained when dealing with consistent work overload. Hence, they begin to view their work with negativity. Furthermore, social conflicts create a toxic environment in which workers lose trust in colleagues and organization, and become suspicious, and pessimistic about their relationships at work. Consequently, in working environments that can be toxic with the absence of emotional support in the workplace, individuals may feel isolate and overwhelmed, which foster cynicism. This cynicism diminished individual beliefs in their ability to be effective, and decreased their job effectiveness and performance.

1.1.2.1. Inefficacy. Inefficacy is the core component of burnout which describes the state of the reduction in one's capacity for work or achievement. "This dimension was originally called reduced personal accomplishment, and was also described as reduced productivity or capability, low morale, and an inability to cope**"** (Maslach & Leiter, 2016,

p.103)**.** Further, Maslach et al. (2001) mentioned that this dimension describes how individuals doubt their abilities, feel unproductive, and struggle with work related stressors. In light of the foregoing, and according to Maslach et al. (2001), inefficacy develops in parallel with exhaustion and cynicism, rather than as a consequence of them. That is to say, although exhaustion and cynicism contribute to feelings of inefficacy, other factors, such as lack of necessary resources can independently lead to inefficacy, even in the absence of exhaustion or cynicism. In point of fact, inefficacy is not necessarily due to lack of individuals' skills or efforts, but rather because they are operating in an environment where they miss essential resources. Maslach et al. (2001) also emphasized that in order to maintain motivation and sense of value in the work place, financial, social, or intrinsic rewards are essential. Furthermore, the lack of these rewards is linked to feelings of inefficacy, unappreciation, and demoralization, and can contribute to burnout in general.

1.1.3. Causes of Burnout

Teacher burnout, a common educational issue, results from a set of factors like work overload, lack of support, school climate, and excessively large class sizes

1.1.3.1. Excessive Workload. Teacher burnout, the essential concern in the teaching, most frequently is an outcome of overload. In broader term, workload refers to the perceived amount of work required to be completed within a specific timeframe that encompass both physical and psychological demands (Dicke et al., 2017). Thus, it involves both the quantity of work and the psychological burden it creates. As Kyriacou (2001) starkly stated, "When workload becomes excessive, it ceases to be a professional challenge and transforms into a threat to teachers' mental health" (p. 28). According to Denise et al (2017), teacher excessive workload extends far beyond classroom instruction. It includes lesson preparation, student assessment, meetings, paperwork, and parent communication. All of which contribute to

burnout when unsustainable. Critically, it is not just the number of tasks but the cognitive and emotional toll of managing them simultaneously.

Consequently, the constant pressure to manage diverse responsibilities can lead to fatigue, frustration, and even hopelessness, ultimately resulting in burnout (Malik, 2019). The consequences of excessive workload are indeed multifaceted. As Demirel and Cephei (2015) demonstrated, prolonged working hours combined with a negative work environment significantly exacerbate teacher burnout. Their findings highlight the critical importance of maintaining a healthy work environment in preventing burnout.

1.1.3.2. School Climate. Another critical factor contributing to teacher burnout is negative school climate. As defined by Mitchell et al. (2010), school climate represents the collective social, emotional, and organizational environment of an educational institution, directly affects teacher well-being. Specifically, Circe's (2018) research demonstrated that negative school climates characterized by inadequate administrative support, poor collegial relationships, and persistent student behavioural issues correlate strongly with increased teacher burnout. These conditions create chronic stressors that weaken teachers' professional self-efficacy and emotional resilience, ultimately contributing to the key dimensions of burnout: emotional exhaustion, cynicism, and reduced personal accomplishment (Maslach et al., 2001).

1.1.3.3. Lack of Support. Extensive research demonstrates that inadequate workplace support systematically contributes to teacher burnout. Perry's (2011) findings revealed that lack of administrative support is the major reason of teacher's attrition. In essence, if school leaders fail to provide guidance, resources, or recognition, teachers not only miss their targets, but also become frustrated and drained by the system. This aligns with Maslach and Leiter's (1997) seminal work on burnout that highlighted the fact that lack of support and not feeling

appreciated are important causes in teachers experiencing emotional exhaustion and losing their enthusiasm for teaching.

These results demonstrated the critical role of institutional support in mitigating teacher burnout. Moreover, they indicate that when educators perceive stronger institutional backing, their levels of emotional exhaustion and detachment from work decrease significantly.

1.1.3.4. Large Class Size. One of the significant factors contributing to burnout is large class size. When classrooms are overcrowded, educators are faced with an increased workload and a more challenging environment. Finn et al. (2003) claimed that teachers in large classes face substantially more grading, behavioural issues, and less time for individualized instruction, which directly elevate stress levels. Similarly, Jepsen and Rivkin (2009) demonstrated that teachers in overcrowded settings often perceive themselves as less effective in both instruction and classroom management. Teachers in overcrowded classrooms experience heightened burnout due to unmanageable grading loads, constant disciplinary issues, and an inability to provide individual attention, all of which gradually diminish their professional confidence and mental health. Skaalvik and Skaalvik (2017) demonstrated that excessive class sizes correlate with emotional exhaustion as teachers struggle with unsustainable workloads and diminished autonomy.

Together, these studies paint a clear picture that large classes are a systemic stressor that simultaneously increases workload, decreases perceived competence, and diminished opportunities for personalized pedagogical approaches thereby creating ideal conditions for burnout to develop.

1.1.4. Consequences of Burnout

Burnout clearly affects teachers' efficacy, students' engagement and outcome, and the educational system.

1.1.4.1. On Teachers. In fact, teachers are more susceptible to the feeling of burnout due to their interaction with colleagues, administration, students, and parents. Aloe et al. (2014) reported that teachers usually have higher levels of emotional exhaustion and depersonalization, and lower levels of personal accomplishment. Certainly, teaching is a demanding profession which requires long working hours, high expectations, and limited resources. These factors can lead to greater stress and burnout. They make teachers more sensitive to these challenges when compared with others in similar helping professions.

Undeniably, the human body cannot withstand the prolonged accumulation of stress that may contribute to a higher susceptibility to various diseases. Indeed, psychological complaints such as anxiety, depression, addictive behaviors, and sleep disturbances can be increased by burnout (Lheureux et al., 2011), in addition to the physiological complaints such as, peptic ulcers and heart attacks (Hamann & Gordon, 2000). Specifically, severe cardiovascular issues and digestive problems are frequently the results of the sustained strain on the body from prolonged stress.

Furthermore, burnout is linked to several physiological and cognitive changes that can significantly influence teacher's well-being. On a physiological level, burnout causes high blood pressure, irritability, sleeping disorder, and elevated cortisol level (Khammissa et al., 2022). Cognitively, burnout can lead to difficulties with memory, attention and concentration. In essence, the prolonged stress and exhaustion associated with burnout affect mental well-being and manifest in serious physiological health problems.

1.1.4.2. On Learners. Teaching is a profession that necessitates direct communication and interaction with learners. By virtue of their sustained daily interaction with their learners, teachers' emotions and feelings like frustration and tiredness are clearly visible in their actions and reactions with them. In this respect, Byrne (1994) confirmed that teachers who fall victims to burnout are likely to be less sympathetic towards learners and have less patience with class disruption. Naturally, when teachers are stressed out, they create an uncomfortable atmosphere and high-pressured environment for their learners. Unconsciously, the emotional state of the teacher makes learners feel anxious, distracted, or less engaged. Consequently, students would suffer emotionally and academically (Jacobson, 2016). Precisely, when teachers experience burnout they become less apt to prepare adequately for class and put less effort into planning lessons or preparing materials. This lack of preparation negatively affects the students' learning outcomes (Byrne, 1994). In a nutshell, there is a positive relationship between teacher's anxiety and student's anxiety and behavior.

1.1.4.3. On Education. In fact, high workload leads to the feeling of being overwhelmed and unable to manage teaching responsibilities. Teachers are no longer able to cope and handle the teaching demands such as classroom management, colleague's collaboration, or parents' communication. Maslach et al. (2001) reported that burnout is clearly related to job withdrawal behavior such as absenteeism, turnover, and intention to quit. Consequently, these actions are employees' coping mechanisms, which are directly related to the exhaustion and dissatisfaction. Moreover, the high levels of teachers' absenteeism negatively impacts teaching quality, which becomes a major concern for school districts (Foldesy & Foster, 1989). As a matter of fact, absenteeism lowers the teaching quality, posing a major challenge for schools districts to provide effective education and ultimately influences student outcomes.

Furthermore, the globally recognized concern in USA was that 25% of new teachers leave the profession within three years and 40% leave within five years, highlighting the severe consequences of unmanageable workload and burnout (Kerry & Henkel, 2017). In point of fact, this significant number, of new teachers leave and quit the profession within few years, highlights the serious impact of overwhelming workloads and burnout on teachers' retention. This, in turn, has become a globally recognized concern.

1.1.4. Solutions to Minimize Burnout

Burnout has negative effects on both individuals and organization. To face the costly effects of burnout, many different intervention strategies have been proposed. Some are preventive while others try to treat burnout after it occurs.

On the one hand, to mitigate burnout before it occurs, the focus should be on adjusting work habits, building coping skills, and improving work-life balance (Maslach & Leiter, 2016). These directly counteract the burnout's three primary dimensions (exhaustion, cynicism, and inefficacy) by creating sustainable work routines and constructive boundaries. Specifically, Shanafelt and Noseworthy (2017) found that reducing working hours and acquiring productive stress-regulation strategies, including cognitive restructuring and time management, are significant in preventing burnout.

Developing strong social support structures both within and outside the workplace is also frequently recommended as a preventive measure (Bakker & Demerouti, 2017).For instance, Colleagues, supervisors, friends, and family members can provide emotional support, practical assistance, and advice in times of stress, which can help to buffer job demands. Additionally, according to Gerber et al. (2020), promoting relaxation skills such as mindfulness, relaxation breathing, or progressive muscle relaxation and developing physical health and fitness can help individuals build resilience for burnout. Notably, stress-reduction

and exercise interventions improve physiological and psychological coping capacity, making the individual less vulnerable to the effects of chronic stress. Together, these strategies create a protective shield against burnout by reducing its causative factors before their effects in emotional, mental, and physical depletion.

Among the most effective preventive measures is cultivating positive school climates which characterized by collaboration, mutual respect, and effective leadership (Collie et al., 2012). Therefore, to create such protective environments, transformative interventions are required. These include having stable administrative support systems, professional learning communities, and restorative behaviour management systems, which enhance teachers' sense of autonomy, connectedness, and professional satisfaction (Herman et al., 2018). Consequently, the risk of burnout is reduced.

Furthermore, Michaelson and Joyner's (1982) study indicated that cultivating positive workplace relationships increases teachers' motivation to succeed. On this basis, positive relations are among the most significant factors that dictate teachers' motivation as they have the potential to make teachers feel comfort and satisfaction. Therefore, if teachers are respected and supported by administrators and colleagues, anxiety and dissatisfaction decline.

On the other hand, when burnout has already occurred, fostering deeper self-understanding through methods like counselling or therapy becomes an essential component of individual burnout intervention (Ahola et al., 2017). The previously mentioned preventive strategies seeking social support, practicing relaxation techniques, and improving health remain important, but require greater emphasis on therapeutic approaches to address existing burnout symptoms (Leiter & Maslach, 2005). For instance, cognitive-behavioural therapy (CBT) has demonstrated particular efficacy in helping individuals reframe maladaptive thought patterns associated with burnout (van Dam et al., 2021).

Besides, recovering from burnout requires both changing work habits and rebuilding emotional control. This typically requires workplace adjustments and a phased return (Aronsson et al., 2017). Without adequate support, complete recovery from burnout is improbable, potentially leading to long-term exhaustion and reduced work performance.

1.2. Part Two: Class Size

1.2.1. Class Size Definition

A classroom is an organized environment where learning and teaching processes take place. Researchers identified classrooms as dynamic spaces where teachers and students interact with each other and the surrounding environment, forming a complex ecological space (Creemers & Tillema, 1987-1988). The main characteristic of this learning environment is its class size.

Class size is the total number of learners allocated for a teacher throughout the teaching timetable (Wilson, 2006). That is to say, class size refers to the number of students present in a learning environment -a classroom- to acquire knowledge and skills for a specific period of teacher's schedule. Nelson (2008) found in his studies that "increased class size increases teacher's workload and decreases opportunities for differentiation" (p.16). In other words, class size greatly affects how a classroom works, influencing how much work teachers have, how they teach, and how much individual help students get.

1.2.2. Large Class VS. Small Class

In point of fact, one of the vital concerns that are deeply rooted in the practical realities of the daily work of teachers is the size of the class. Based on educational data and the number of classes in a school, the average class size is the total number of students divided by the number of classes (OECD, 2014).

Much ink has been spilled by researchers on the issue of class size. Thus, according to Blatchford and Mortimore (1994), there is no precise definition for *large* and *small* class; that is to say, what is considered a *large* class in one school might be *small* class in the other. It depends on the environment of the school, the grade level, the subject matter and personal opinion (Minnesota Principals Academy, 2019). In light of their research, however, Blatchford and Mortimore (1994) defined classes of more than 30 students as *large* and classes of 20 and fewer as *small*.

Table 1: OECD average class size data (2017) (Blatchford & Russel, 2020)

Country	**Primary**	**Lower secondary**
Australia	23.6	22.2
Denmark	21	21.2
Finland	19.6	19.1
France	23.7	25.2
Germany	20.9	23.9
Japan	27.2	32.2
Luxembourg	15.9	19.1
Slovenia	18.4	19.9
Spain	21.9	25.4
Sweden	19.5	21.2
UK	26.7	23.1
USA	20.8	25.7

Class sizes vary among countries of the world. Data from the Algerian Ministry of National Education (2025) reveals that Algerian middle and high schools maintain an average class size exceeding 32 students. Therefore, the data from table 1 show that Finland, Luxembourg, and Slovenia have an average class size of 20 and bellow, while Sweden, Australia, Denmark, France, Germany, Japan, Spain, the UK, and the USA have more than 20 students in the class.

1.2.3 Large Class

1.2.3.1. Challenges of Teaching a Large Class. Teaching large classes presents big hurdles. Specifically, classroom management complexities, increased workload, limited individual attention, potentially influence the quality of teaching.

1.2.3.1.1 Classroom Management. Effective Classroom management aims to establish a good environment for learning; nevertheless, in overcrowded classrooms, it becomes a challenge for teachers (Harmer, 2001), particularly, if they choose to organize students into small learning groups. This strategy of small groups is difficult to be implemented effectively in such conditions (Hallinan & Sørensen, 1985). Therefore, Wilson (2006) confirmed that the demands of large classes with numerous subgroups make the devoted time for individual support nearly impossible. In other words, with more students, a simultaneous management of multiple small groups becomes more complex for one single teacher, who needs to circulate effectively and provide support and feedback to each small group.

1.2.3.1.2 Disciplinary Problems. Research has consistently shown the significant impact of class size on students' behavior within the classroom. Wilson (2006) explained that large groups exhibit greater aggression with more pushing incidents, crowding, and striking, resulting in noisier, more chaotic, and challenging environment for teaching. Carbone (1999) added that students are inspired by the anonymity and the impersonal nature of large class to

behave in a way they have never dreamt exhibiting in other environment. In other words, in such crowded environment, students feel covered and supported, which encourages them to exhibit aggressive behaviors they would not show individually. As a result, students' misbehavior lower the educational performance, disrupt the learning environment and interrupt teachers' concentration (Joshi, Gokhale & Acharya, 2012). That is to say, students' obstructive behavior damages the necessary environment for learning, and significantly impacts the teacher's effectiveness in the classroom.

Ideally, classroom time should be focused on teacher-learner interaction, and teaching. In large class sizes, teachers often perceive that their primary concern and attention is directed towards managing students' behavior. Blatchford and Russell (2020) reported that some teachers find themselves resorting to 'crowd control' mode, including excessive shouting, which ultimately undermines their teaching goals. That is to say, the higher the number of students in class, the more time is spent controlling them. Affectively, as the class size rose, teachers' job satisfaction fell (Nelson, 2008).

1.2.3.1.3. Work Overload. Class size is a key factor in teachers' working conditions; but a large class adds a significant strain to their workload. According to NCTE Committee (1977), "The daily preparation for teaching demands significant intellectual energy, imagination, thoroughness, and flexibility" (p.833). Therefore, teaching a large class means teachers spend more time on preparing lessons, grading and monitoring students, and providing feedback. In order to illustrate the impact of large classes, consider the following hypothetical example: If a teacher has 5 classes with 50 students in each class, the teacher is responsible for 250 students. If a teacher spends five minutes reading and analyzing writing assignments or scoring student tasks, the teacher would have to devote 21 hours of workweek (Great Schools Partnership, 2015).

Ostensibly, teachers work is delivering lessons inside classrooms. In fact, it extends to more administrative tasks such as documenting daily lesson plans, recording students' attendance and grades, collaborating with colleagues, and contacting parents. Hallinan and Sørensen (1985) pointed out that large classes require teachers to dedicate significantly more time to administrative and organizational tasks. Consequently, the time spent on administrative duties directly minimizes the time available for actual teaching within a limited school day.

Undoubtedly, effective teaching requires not only planning instructions, but also addressing students' emotional and cognitive needs. However, in large classes, these demands become harder to meet. Blatchford and Russel (2020) found a direct link between class size and high stress levels among teachers, due to the increase in workload. Actually, teachers have limited stamina, and when they are burdened with administrative and management tasks, they will experience a diminish in physical and mental reserve needed for teaching (Hallinan & Sørensen, 1985). As a result, the burden with excessive administrative and management tasks reduces the teachers' ability to teach effectively.

1.2.3.1.4. Feedback and Assessment. Feedback and assessment are essential components for successful learning. They are often described as being vital aspects to guide and direct students to improve their learning experience and raise their achievement; however, they become harder when dealing with large numbers of students. This is very much in keeping with Hussain et al. (2019) who hold that effective student learning and an enriching educational process strongly rely on well executed assessment and feedback. Nevertheless, providing these fundamental elements becomes significantly challenging when dealing with large classes, and often fails to meet students' needs.

Large classes are difficult settings for both teaching and learning. They are problematic sets for developing learning as they may limit the amount of feedback provided to students (Devlin, 2002). In other words, large numbers of students reduce the quantity of feedback that teachers can provide, consequently, negatively affecting students' learning. To elaborate further, constructive and personalized feedback becomes challenging in large classes, forcing teachers to limit themselves to general feedback on written assignments and exams (Chan, 2010). Put otherwise, large classes stretch teachers' time thin, obliging them to prioritize general over individual and personalized feedback.

Generally, large classes have diverse and complex student cohorts, and finding an effective way of assessment poses a challenge for teachers. Chan (2010) indicated that the heterogeneity of students in large classes complicates the process of marking and grading. Therefore, the establishment of clear and fair grading criteria is paramount when it comes to large groups of different cultural and educational experience, subject interest, and prior knowledge.

In the same vein, driven by the pressure to grade a large number of assignments efficiently, teachers tend to adopt assessment methods that are shallow and less focused on promoting deep learning (Devlin, 2002). That is to say, to manage the heavy workload of grading a substantial amount of work efficiently, educators adopt less effective assessment methods, such as short answers and multiple choices. These methods limit the depth of the assessment and may not provide the learners with the necessary detailed feedback, and consequently hindering the learning outcomes.

1.2.3.1.5. Participation of Students. Students' participation, in general, is the active engagement in the learning process inside the classroom caused by motivation. Nonetheless, in large classes, students lack motivation and engagement; they are less likely to interact with

teachers and prefer to stay unknown (Chan, 2010). When Students, in large classes, lack individual attention, they feel unmotivated to participate and tend to hide in the crowd. Furthermore, students' lack of motivation and engagement is due to anonymity, fear of judgment, and limited interaction opportunities (Chan, 2010). In essence, all these factors tend to reduce the participation level and the effectiveness of learning.

In addition to the impact on students, large classes present significant challenges on teachers. Chan (2010) noted that the lack of interaction deprived teachers from receiving an immediate feedback on their teaching effectiveness. During most of the teaching time, teachers rely on learners' interaction to receive instant feedback to improve their teaching quality. The major problem that faces teachers in large classes is how to make students more involved and active. Furthermore, teachers in large classes face the challenge of students' disengagement and silence, which requires them to be well prepared and use diverse teaching methods and strategies to ensure active engagement from all learners (Pedder, 2006). Consequently, encouraging students' participation, which is a heavy task in the hands of teachers, requires effective strategies.

1.2.3.2. Benefits of Large Class Size. Despite the fact that large class sizes are often associated with challenges and increased classroom management complexity**,** they present significant benefits that affect both teaching effectiveness and student learning development.

1.2.3.2.1. Classroom Management. Teaching large classes offers teachers a special chance to improve their classroom management expertise. According to Jones and Jones (2016), teaching large classes provides educators with significant professional benefits by forcing them to refine their management systems. Additionally, research confirms that the experience of managing many students leads to three main advantages: "more efficient classroom routines that save instructional time, clearer behavioural expectations that reduce

disruptions and more scalable teaching strategies that adapt to any class size" (Jones & Jones, 2016, p134). In fact, these benefits extend beyond the large-class context, as Marzano (2003) found that teachers who master large-group management develop stronger organizational skill. Ultimately, the challenges inherent in large classes serve as valuable professional development, which provide teachers with more robust skills that make them more effective in all classroom environments.

1.2.3.2.2. Teacher Adaptability and Innovation. The experience of teaching large classes often drives significant professional growth, particularly in terms of pedagogical innovation and adaptability. Smith and Jones (2020) observed that "large classes push educators to experiment with technology and active learning strategies, fostering professional adaptability" (p. 157). In essence, teachers who have the issue of handling a large number of students tend to find that conventional teaching strategies like long lectures are unable to sustain the engagement and interest of the students. This realization motivates them to adopt and adapt more innovative, student-centred teaching strategies supported by technology (Prince, 2004; Freeman et al., 2014; Bates, 2019).

Furthermore, this inclination towards innovation is further substantiated by Carbone's (2011) findings, who demonstrated that instructors managing classes exceeding 100 students adopted new teaching methods at a rate 23% higher than their colleagues did. Therefore, the necessity of innovation in large classes cultivates pedagogical expertise that enhances both educators' professional practice and students' learning outcomes across diverse academic settings.

1.2.3.2.3. Classroom Interaction and Peer Learning. One of the most notable benefits of large class sizes is the increased interaction and engagement among students. Hess (2001) reported that the potential number of participants in large classes creates numerous

opportunities for discussions, debates, and collaborative learning activities. Besides, with many students, teachers can hold various forms of group work like think-pair-share activities, small group discussions, and peer review sessions that might be less effective in smaller classes. This is particularly beneficial for fostering cooperative learning and collaboration.

Above all else, more students provide an abundance of various perceptions to make problem solving in teams richer. Thus, this engaged interaction, where students exchange concepts to one another and work together on tasks, not only strengthens their own understanding of the topic but also encourages essential teamwork skills, effective communication and provides support. Indeed, research has shown that when peers teach one another, they are more likely to achieve a deeper level of cognitive processing (Chi et al., 1994).

1.2.3.2.4. Diverse Human Resources and Perspectives. Large class sizes present a distinct pedagogical advantage by offering a diverse range of human resources and perspectives. Hess (2001) pointed out that each student brings unique backgrounds, life experience, cultural understandings, and prior knowledge to the classroom environment. This diversity serves as a valuable pedagogical resource that instructors can utilize to enhance discussions and deepen conceptual learning (Johnson & Johnson, 2009). In the same line of thought, Barkley et al. (2014) demonstrated that this multiplicity fosters richer peer learning and more nuanced exploration of subject matter than typically occurs in smaller groups. Moreover, research indicated that exposure to a multitude of perspectives in large lecture classes contributes significantly to students improved critical thinking abilities, as they learn to synthesize and critically evaluate diverse points of views (Loes et al., 2017). This active engagement helps them think deeper and solve problems better.

1.2.3.2.5 Development of Self-Help Strategies. Although instructors in large classes may struggle to provide attention to every student, this limitation can also encourage students to become more independent. According to Hess (2001), when teachers are unable to assist everyone consistently, students must take greater responsibility for their own learning. As a result, they master such essential academic skills as self-assessment, goal-setting, and resourcefulness (Zimmerman, 2002). Additionally, Pint rich and Zusho (2007) researches also supported the idea by claiming that students in large classes improve their understanding by identifying gaps and proactively seeking out information-skills that contribute to higher academic achievement. Thus, while large classes create some challenges, they also can promote self-reliance and enhance students' ability for independent learning.

1.2.4 Small Class

1.2.4.1 Challenges of Small Class. Despite their potential benefits, small classes are not without inherent difficulties, such as attendance issues and class dynamics, lack of diversity and limited exposure, and teaching methodology constraints.

1.2.4.1.1. Attendance Issues and Class Dynamics. One of the biggest issues with small classes is the considerable compounded impact of student absences. Schreiner (2016) noted that in a small class, the absence of one or two students sets back the learning progress; it presents a high percentage of the class population, so that it upsets the class dynamic. This aligns with Pedder (2006), who found that in small-group learning environments, absenteeism disproportionately affects lesson continuity and peer-dependent activities, which often forces instructors to alter pedagogical plans. Therefore, these studies highlight the manner in which small-class settings enhance the effects of student absence, where each absent student not only disrupts cooperative learning arrangements, but also pushes teachers toward reactive

teaching methods. Consequently, it diminishes the quality of education and reaching the goals of the course.

1.2.4.1.2. Lack of Diversity and Limited Exposure. Small class sizes may unintentionally narrow students' perspectives, which may disrupt the improvement of critical thinking skills. As Schreiner (2016) claimed, "A small class does not provide students with sufficient opportunities to engage in a truly diverse learning environment" (p. 52). In other words, with fewer classmates, students are exposed to fewer cultural backgrounds, opinions, and distinct problem-solving methods in classroom discussions. Consequently, learners in small classes may encounter a narrower range of ideas, reducing their ability to analyse, compare, and evaluate contrasting points of view that are key components of critical thinking (Paul & Elder, 2020).

1.2.4.1.3. Teaching Methodology Constraints. While smaller classes are assumed to facilitate better teaching, they pose specific methodological challenges that can hinder effective teaching. Schreiner (2016) indicated that teachers in small classes frequently rely on a limited repertoire of teaching approaches rather than diversifying them (p. 89). This tendency may stem from a false perception that fewer students require less varied instruction or from comfort with familiar routines (Schreiner, 2016, p. 90). In essence, reduced class sizes only equate to better teaching if teachers work towards diversifying their teaching methods.

1.2.4.2. Benefits of Small Class. Small class sizes provide substantial benefits for both educators and learners.

1.2.4.2.1. Better Feedback. Small class sizes empower teachers to use formative assessment more effectively, which leads to higher student achievement. Black and Wiliam (1998) stated that "in small classes, teachers can provide more frequent and detailed feedback, which is the single most powerful modifier of student achievement" (p.143). Consequently,

this highlights that with fewer numbers of students to focus on; teachers can offer more individualized and tailored feedback that is more relevant and actionable. That is to say, the direct attention and guidance leads to better understanding of the materials, improved skills, and ultimately, better educational outcomes.

1.2.4.2.2. Morale and Professional Satisfaction. Small class sizes significantly improve teacher morale and job satisfaction, which lead to more fulfilling professional experience. According to Cooper (1989), educators in small classrooms report substantially higher morale and greater satisfaction with their teaching performance. Moreover, this positive effect stems largely from teachers' ability to foster more supportive attitudes toward students, thus creating less stressful and more fulfilling teacher-student relationships. Furthermore, Finn et al (2003) demonstrated that reduced class sizes directly enhance teachers' morale and enjoyment of teaching. His research confirmed that these positive attitudes foster a more relaxed and effective classroom environment, ultimately benefiting both educators and students.

1.2.4.2.3. Reducing Behavioural Disruptions. The academic benefits of small classes are further promoted through improved classroom organizational dynamics. Arias and Walker's (2004) comprehensive analysis demonstrated that classes with fewer than 20 students experience far fewer behavioural disruptions, enabling teachers to devote more class time to teaching activities rather than classroom management. Furthermore, this organizational efficiency creates a virtuous cycle with fewer disciplinary interruptions, students demonstrate deeper cognitive engagement, as evidenced by increased on-task behaviour and sophisticated questioning patterns (Finn et al., 2003). The resulting learning environment to conceptual mastery becomes particularly conducive with the possibility for teachers to employ differentiated instruction strategies tailored to diverse learning needs (Tomlinson, 2014). Consequently, reducing behavioural disruptions in small classes allows

teachers to shift their focus from managing misbehaviour to delivering quality instruction, creating meaningful learning time for every student.

Conclusion

This chapter has presented the theoretical foundations and core concepts of both variables: class size and teacher burnout. It has examined the practical implications of class size in educational settings, particularly its impact on teachers' well-being and teaching quality. The main finding of the overview reveals that a greater knowledge of how class size influences teachers' stress and job satisfaction can allow institutions to implement particular interventions to avoid burnout and promote sustainable teaching.

In light of these findings, it is recommended that educational administrators should stem teacher workload and stress by prioritizing optimal class sizes. In the same line of thinking, teachers can also develop coping skills such as time management ability, peer support networks, and personal self-care practices to create resilience to burnout. Consequently, schools and universities can create healthier working environments that promote teacher retention as well as students' learning achievements.

Chapter Two: Testing the relationship between Teacher Burnout and Class Size

Introduction

Unlike the first chapter which dealt with what researchers and scholars have noted about both teacher burnout and class size, this chapter is devoted to the practical part of this research work**.** It is designed to highlight the fieldwork that is done to describe, interpret and discuss the gathered data necessary to reach the aims of the study, answer the research question, and test its hypotheses. Therefore, to carry out the present research, a questionnaire was administered to 143 middle school teachers. The aim of the present research is to examine the relationship between class size and teacher burnout. The present chapter is one section that focuses on the teachers' questionnaire. It includes the sample selected for this study, the description of the questionnaire, the analysis, the interpretation, and the discussion of the results.

2.1 Research Design and Methodology

2.1.1 Aim of the Study

The aim of the present research is to examine the relationship between class size and teacher burnout. The study aims to assess teachers' stress levels, job satisfaction, and perceived workload in relation to class size categories. Additionally, it seeks to categorize teachers according to their burnout levels (high, medium, low) and aims to classify teachers based on their class sizes (large, medium, small).

2.1.2 Research Questions

The main questions of the present study are:

1. How are teachers classified according to burnout level?

2. How are teachers categorized according to class size?

3. Is there a significant relationship between teacher burnout and class size?

2.1.3 Research Hypotheses

In the light of the aforementioned questions, we hypothesise that:

H_a: There is a significant association between the teacher burnout and class size.

H_o: There is no significant association between teacher burnout and class size.

2.1.4 Participants

Participants in this study, undertaken during the 2024/2025 academic year within the Algerian educational system, comprised a sample of educators from different middle schools. The middle school educational stage presents a unique set of pedagogical complexities. Therefore, teachers at this stage of education frequently contend with large class sizes, the intricate demands of adolescent student management, and the requirement of a complex curriculum. These combined factors create a high-pressure environment, which contributes significantly to teacher stress and burnout. A total of 143 teachers contributed to this study. This selection aimed to capture a broad range of teaching experiences across different classroom contexts within the national curriculum. In addition to that, it tends to achieve and increase reliability of the study's findings.

2.1.5 Data Collection Tool and Statistical Tests

In order to achieve the aim of the study, data was collected through a well structured teacher's questionnaire. It was administered to middle school teachers to gather the necessary data about class size and dimensions of teacher burnout. After data collection, the responses were coded and entered into IBM SPSS (Statistical Package for the Social Sciences) Version 26 (64-bit) for analysis.

Specifically, using SPSS 26, a hierarchical cluster analysis was conducted. The analysis obtained from on the responses from both Part Two and Part Three. According to the threshold used by Blatchford and Russel (2020), classes, in Part Two, were classified into small (fewer than 20), medium, and large classes (more than 30). Part Three assessed teachers' burnout and subsequently grouped them into clusters according to responses similarities. After the clustering process, a Chi-square test was performed to analyse the statistical significant association between class size and teacher burnout.

2.1.6 Description of the Teachers' Questionnaire

The questionnaire was designed to examine the relationship between class size and teacher burnout in its three dimensions: emotional exhaustion, cynicism, and inefficacy. It includes scale based questions, multiple choice questions as well as one open ended question. This questionnaire is divided into three parts: Part one and two, which gather general information about the teachers' experience and the size of their classes. Part three is Maslach Burnout Inventory (MBI). This inventory breaks burnout down into three components. First, emotional exhaustion consists of seven questions that assess the extent to which teachers feel depleted of their emotional and physical energy, and often overwhelmed by the demands of their profession. Second, depersonalization, or cynicism, which involves seven questions that measure the development of a detached, impersonal, or even callous attitude towards students and the job; it reflects a psychological distance. Last, the lack of personal accomplishment or inefficacy is assessed through eight questions that measure a feeling of reduced competence and efficacy. This dimension indicates a perception that individuals' efforts are no longer meaningful or impactful in their teaching role. The MBI measures how often individuals experience these feelings. These MBI items are scored using a seven level frequency rating from never to daily scoring from 0 to 6. It allows for a detailed, multifaceted understanding of their burnout levels.

2.1.7 Administration of the Teachers' Questionnaire

This questionnaire was administered in both ways via Google form and directly in person. The process of collecting data took place during February and March of the academic year 2024/2025. About 250 copies of the questionnaire were distributed in four middle schools in Mila and one other in Constantine. A total of 143 teachers contributed to this study, among them 16 teachers engaged through online platforms to ensure geographical diversity and flexible participation.

2.2 Data Analysis and Interpretation

2.2.1 Part One: Background Information

Q1. Teaching Experience

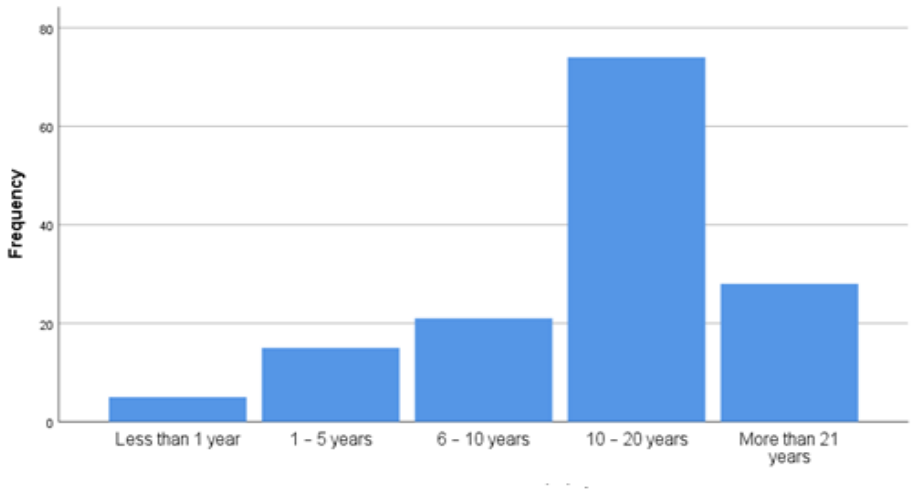

Figure 2.1 Teacher's Experience

This question aims to find out the teaching experience of the participants. Less than 1 year category represents the smallest segment of the sample. Only 3.5% of the participants are new to teaching. Hence, the presence of novice teachers in this group is limited. Similarly, teachers of 5 years or less of experience represent only 10.5%. This result reinforces the

observation of a minimal representation of early career teachers. Mid-career teachers, of 6 to 10 years of experience, represent 28.7% of the participants. On the contrary, a clear majority of participants 51.7% have between 10 to 20 years of teaching experience. It represents the largest single group within the distribution, which highlights that the core of the sample comprises highly experienced teachers. However, a substantial proportion of participants are over 20 years of experience. This group contributes significantly to the overall high experience level of the participants.

As a conclusion, this analysis reveals that the majority of the participants are highly experienced educators. Thus, the majority (71.3%) of them possess over 10 years of teaching experience, which indicate that the teachers' responses are less likely to be influenced by factors such as professional inexperience or initial apprehension towards this study. Consequently, the results enhance the validity and reliability of the conclusions.

2.2.2 Part Two: Class Size

Q2. How many students do you have in your class?

In this research, class sizes are categorized according to Blatchford and Russell (2020) who gave approximate threshold for class size. Hence, according to them, small classes are generally those with less than 20 students, while classes with more than 30 students are categorized large. Folmer-Annevelink et al. (2010) mentioned that there is no universal agreement about what makes a class small or large, but generally they stated in their research that those with less than 20 students are small (e.g., Blatchford, 2003b; Blatchford et al., 2001; Finn et al., 2003; Glass & Smith, 1979; Milesi & Gamoran, 2006), while classes with more than 30 students are categorized large (Blatchford, 2003b; Blatchford et al., 2001).

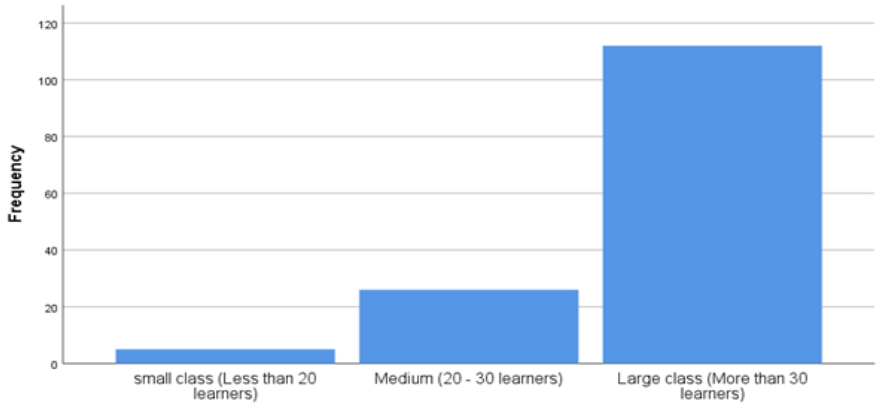

Figure 2.2 Class Size

The question of this section "How many students do you have in your class?" aims to confirm the current class size of the participants of this study. It is crucial to understand the distribution of class size and its significant influence on teachers' well-being. As figure 2.2 shows, over 78% of the respondents teach in large classes with more than 30 students, while only 3.5% have small classes, and 18.2% have medium-sized classes. Obviously, these statistics show that the prevalence of classes with over 30 learners (78.3%) is a dominant feature. Consequently, most respondents currently manage large classes.

2.2.3 Part Three: Teacher Burnout: Maslach Burnout Inventory

2.2.3.1 Section A: Emotional Exhaustion.

Table 2.1 Statistical Analysis of Section A: Emotional Exhaustion

	Valid	missed	mean	Std. Deviation
Section A	143	0	3.29	1.918
I feel emotionally drained by my work.	143	0	3.57	2.345

Working with learners all day long requires a great deal of effort.	143	0	5.50	1.261
I feel like teaching is breaking me down	143	0	4.76	1.855
I feel frustrated by my work	143	0	3.22	2.412
I feel I work too hard.	143	0	4.83	1.809
It stresses me too much to work in direct contact with learners.	143	0	3.18	2.448
I feel like I'm at the end of my rope.	143	0	3.01	2.382

The first dimension that identifies burnout is emotional exhaustion. The descriptive statistics for Section A provide insight into how teachers perceive their emotional and physical strain in relation to their teaching duties. The results are based on a sample of 143 valid responses for each item, with no missing data, ensuring consistency and reliability in the interpretation. This analysis presents the mean responses for emotional exhaustion, a core dimension for burnout, as measured on a rating scale from 0 (never) to 6 (every Day).

Furthermore, the first item which recorded the highest mean score at M = 5.50 (SD = 1.26) is *"Working with learners all day long requires a great deal of effort"*. These results which indicate strong agreement among respondents, suggest that teachers generally perceive the daily demands of direct interaction with learners as intensely effortful. Consequently, the results reinforce the idea that classroom engagement is a major source of professional pressure.

Additionally, certain items also exhibit high mean values such as *"I feel I work too hard"* (M = 4.83, SD = 1.81) and *"I feel like teaching is breaking me down"* (M = 4.76, SD = 1.86), which can be interpreted as indicating a high level of emotional drain. This interpretation aligns with symptoms of burnout such as fatigue and emotional depletion. Meanwhile, the statement *"I feel emotionally drained by my work"* had a moderate mean of M = 3.57 (SD = 2.35). Although it is lower than the first items, the wide standard deviation suggests a broad range of feelings, with some teachers feel severely drained and others feel less. The items *"I feel frustrated by my work"* (M = 3.22, SD = 2.41), *"It stresses me too much to work in direct contact with learners"* (M = 3.18, SD = 2.45), and *"I feel like I'm at the end of my rope"* (M = 3.01, SD = 2.38) show moderate to low average levels.

To summarize, the overall average for Section A is M = 3.29 (SD = 1.92) falls within the moderate range on the response scale. This suggests that, on average, teachers are experiencing moderate to high emotional strain. Consequently, the analysis of Section A confirms that emotional exhaustion and professional strain are prevalent among the teachers surveyed.

2.2.3.2 Section B: Cynicism (depersonalization).

Table 2.2 Statistical analysis of Section B: Cynicism

	Valid	Missed	mean	Std. Deviation
Section B	143	0	1.41	1.609
I feel I look after certain learners impersonally, as if they are objects	143	0	1.56	1.833
I feel tired when I get up in the morning and have to face another day at work	143	0	2.79	2.334
I have the impression that my learners make me responsible for some of their problems	143	0	1.70	2.116

I am at the end of my patience at the end of my work day	143	0	4.14	2.277
I really don't care about what happens to some of my learners.	143	0	0.74	1.669
I have become more insensitive to people since I've been working.	143	0	1.24	1.996
I'm afraid that teaching is making me uncaring.	143	0	1.26	2.145

Section B measures the second dimension of burnout. It assesses the emotional detachment, lack of empathy, and depersonalization teacher may experience in their profession. The statistical data in the table highlights the item *"I am at the end of my patience at the end of my workday"*, which scores the highest mean (M = 4.15, SD = 2.28). This result shows that many teachers feel mentally and emotionally exhausted by the end of the day. Similarly, the item *"I feel tired when I get up in the morning and have to face another day at work"* also had a notable mean (M = 2.79, SD = 2.33). Hence, it indicates that some teachers' fatigue begins even before the workday starts; this shows an early sign of burnout. On the contrary, these two items *"I feel I look after certain learners impersonally"* (M = 1.56) and *"I'm afraid that teaching is making me uncaring"* (M = 1.26), received lower average scores. These low scores indicate that most respondents do not generally show impersonal, insensitive, and uncaring feelings. Significantly, the high standard deviations on these items suggest that some teachers do experience emotional distancing, even if it's not widespread across the sample. The lowest average score matches the item *"I really don't care about what happens to some of my learners"* (M = 0.74, SD = 1.67). It shows a strong sense of professional responsibility remains among the majority. It can be seen that the responses in this section suggest that teachers continue to care about their students; even though most of them feel emotionally fatigued and drained by the end of the day.

In a nutshell, this low overall mean score (M = 1.41, SD = 1.609) for Section B clearly indicates that teachers generally do not exhibit high levels of cynical attitudes towards their students or their profession, despite the emotional demands and challenges of the profession. While the majority may not experience high levels of depersonalization, a subset of teachers may experience some degree of emotional detachment.

2.2.3.3 Section C: Personal Accomplishment.

Table 2.3 Statistical Analysis of Section C: Personal Accomplishment

	Valid	missed	mean	Std. Deviation
Section C	143	0	2.08	1.242
I accomplish many worthwhile things in teaching	143	0	2.11	1.575
I feel full of energy	143	0	2.46	1.573
I am easily able to understand what my learners feelings	143	0	2.12	1.503
I look after my learners problems very effectively	143	0	2.02	1.456
In my work, I handle emotional problems very calmly	143	0	2.03	1.538
Through teaching, I feel that I have a positive influence on people	143	0	1.73	1.316
I am easily able to create a relaxed atmosphere with my learners	143	0	1.94	1.410
I feel refreshed when I have been close to my learners at school	143	0	2.04	1.574

Section C evaluates teachers' sense of personal accomplishment and effectiveness. It is a core dimension in understanding teacher burnout, particularly its long term internal consequences. All the 143 participants responded to the eight items, with no missing data. Analyzing the above data (M = 2.08, SD = 1.24) indicate that teachers show low levels of

personal accomplishment. The highest score was for the item *"I feel full of energy"* (M = 2.46, SD = 1.57), but even this suggests that most teachers feel tired**.** Most other items, such as *"I accomplish many worthwhile things in teaching"* (M = 2.11, SD = 1.575) and *"I handle emotional problems very calmly"* (M = 2.03, SD = 1.538) highlights that teachers do not strongly perceive themselves as effective**.** Furthermore, the lowest scores were for items such as*"I have a positive influence on people"* (M = 1.73, SD = 1.316) and *"I create a relaxed atmosphere with my learners",* which indicate that many teachers struggle to maintain a positive classroom environment and make a meaningful impact on others.

To conclude, the analysis of Section C shows that teachers do not feel effective or emotionally connected in their roles. They feel emotionally drained**,** which is a key sign of burnout.

Q3. How are teachers in this study categorized into distinct groups according to their responses?

The dendrogram serves as a visual map that illustrates how groups are categorized. According to the responses similarities, participants are systematically categorized into groups. Teachers who give similar answers grouped progressively together into clusters, based on the closeness of their responses.

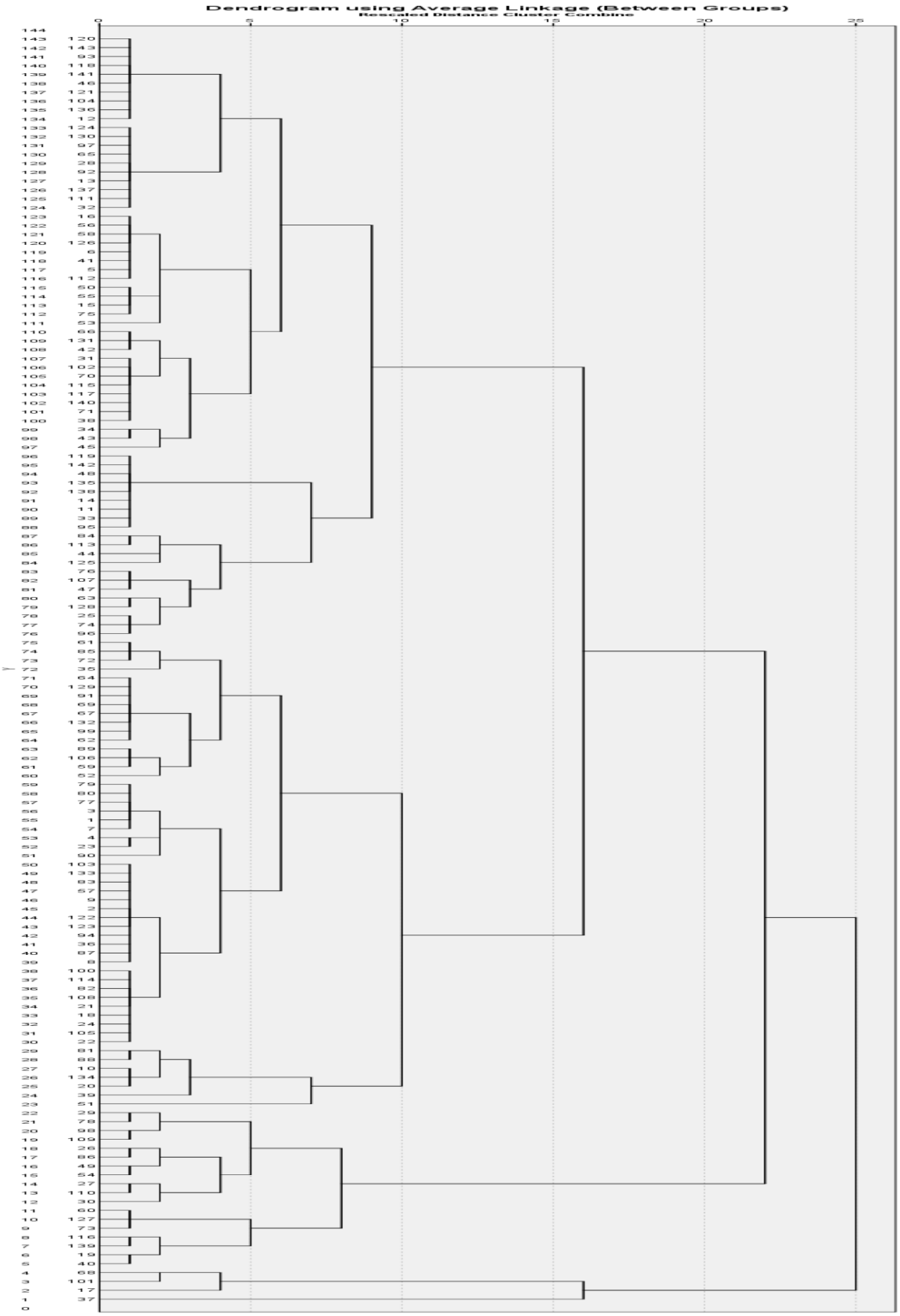

Figure 2.4 Dendrogram using average linkages (between groups)

A hierarchical cluster analysis was conducted to explore patterns in teachers' responses across Section A, Section B, and Section C of the burnout part of the questionnaire. The analysis used between-groups average linkage as the clustering method and squared Euclidean distance as the measure of dissimilarity. The dendrogram produced from this analysis visually represents how participants were grouped based on the similarity of their burnout-related responses. Furthermore, the initial stages of clustering show that many participants were merged at a linkage distance of 0.000, indicating that these individuals gave identical or nearly identical responses across the three sections. These early-stage merges represent a highly homogeneous group, which became part of what was later interpreted as Cluster 1. Moreover, as the clustering continued, the linkage distances began to increase, indicating greater differences in participant responses. A noticeable jump in linkage distance occurred around 4.5, marking a natural cutoff point for forming clusters. Using this cutoff, a three cluster solution was identified:

- **Cluster 1** ($n \approx 60$): Participants with highly similar responses and primarily associated with moderate to high burnout scores.
- **Cluster 2** ($n \approx 50$): Participants with moderately similar responses associated with moderate burnout.
- **Cluster 3** ($n \approx 33$): Participants with more dissimilar or unique response patterns aligned with low burnout.
- Consequently, overlaying these burnout levels on the cluster structure reveals a clear relationship between cluster memberships, burnout level. Firstly, Cluster 1, with the largest group of teachers, mostly consists of those in large classes experiencing moderate to high burnout. Cluster 3 is composed primarily of teachers from small classes, which reflects the lowest burnout levels.

2.2.4 Burnout levels by class size

Table 2.4 Burnout Levels by Class Size

Class Size	Low Burnout (%)	Moderate Burnout (%)	High Burnout (%)
Small	**80%**	**20%**	**0%**
Medium	**60%**	**32%**	**8%**
Large	**25.9%**	**49.1%**	**25%**

Table 2.2 illustrates a clear relationship between class size categories and the reported levels of teacher burnout. The data clearly demonstrate that as class size increases, the percentage of teachers experiencing moderate to high burnout also rises, while concurrently, the percentage of low burnout decreases. In small classes 80% of the teachers show low burnout, while 20% indicate moderate burnout, and none report high burnout. This group represents the healthiest burnout profile. It suggests that small environments are associated with significantly lower stress levels among educators. For instance, teachers in medium classes show (60%) low burnout and (32%) moderate, while only (8%) of teachers report high burnout.

Importantly, according to the results in the table, it is highly noticed that the most pronounced effects are evident in large classes. Percentages show, in large classes, only 25.9% of the teachers report low burnout, the majority of teachers in large classes experience moderate burnout (49.1%), while 25% report high burnout. These results suggest that large class sizes are strongly linked to elevated levels of stress, emotional exhaustion, and professional strain. Overall, the table directly addresses the relationship between class size

and teacher burnout. It demonstrates that larger class sizes significantly contribute to higher levels of teacher burnout.

2.2.5 The Chi-square Test

Table 2.5 Chi-square test

	Value	Df	Asymptotic significance (two-sided)
Pearson Chi-Square	**50,598**	**24**	**,001**
Likelihood Ratio	**30,968**	**24**	**,155**
Linear-by-Linear Association	**14,765**	**1**	**,000**
N of Valid Cases	**143**		

Chi-Square test conducted to ascertain whether there is a statistical significant relationship exists between teacher burnout and class size. The value 50.598 with 24 degrees of freedom and a significance level of $p = 0.001$ indicates that the observed differences in burnout across class sizes are clear and reliable. These significant results lead to the rejection of the null hypothesis, which confirm the existence of statistically significant relationship between teacher burnout and class size. Furthermore, the Linear-by-Linear Association test was significant ($\chi^2 = 14.765$, $p < 0.001$), which support the established relationship between the two variables.

In conclusion, the statistical evidence clearly indicates that larger class sizes are significantly associated with higher levels of teacher burnout, while smaller class sizes appear to offer a protective effect. It rejects the null hypothesis.

2.2.6 Discussion of the Findings

The purpose of this study is to explore the relationship between class size and teacher burnout. It surveyed 143 teachers using a structured questionnaire. The first part of the questionnaire highlights the teachers' years of experience. Its results reveal that the majority of teachers are highly experienced and possess over 10 years of teaching. Therefore, the second part of the questionnaire asks about the size of the classes. The classes are categorized into large (more than 30), medium, and small (fewer than 20).

Moreover, burnout in this survey is assessed across three sections such as, emotional exhaustion, depersonalization, and reduced personal accomplishment. Section A measures the emotional exhaustion. It reveals moderate to high levels of stress and fatigue. These results reflect the mental and physical exhaustion due to workload and daily classroom demands. Section B, which emphasizes depersonalization or cynicism highlights that some teachers are in their beginning to experience emotional distancing, but it is not a dominant trend. Finally Section C that measures reduced personal accomplishment presents the most critical findings, it reveals that many teachers are struggling to feel effective, fulfilled, or impactful in their teaching roles.

The analysis of the teachers' responses provides an opportunity to gain valuable insights into the burnout dimensions and levels. In this study the teachers' responses is subjected to a cluster analysis using SPSS 26. The clustering was interpreted using a dendrogram based on burnout responses, resulting in the identification of three clusters. These clusters are characterized in terms of high, moderate, and low burnout. The first cluster shows moderate to high burnout scores. The second one indicates moderate burnout. The third cluster aligns with low burnout.

The Chi-square test result (χ^2 (24) = 50.598, p = 0.001) confirms a significant association between large class size and teacher burnout levels. Thus, burnout levels vary according to the class size categories. The Linear-by-Linear Association test (χ^2 = 14.765, p = 0.000) also supports a strong positive relationship,

As a result, this research provides answers to the research questions raised in the present study. In regard of the question about how teachers cluster in terms of their levels of burnout, it is clear that teachers manifest the three levels of burnout (high, medium, and low). In terms of the number of students in their classrooms, teachers are classified into three categories: small (less than 20), medium, and large (more than 30). As an answer to the research question about the presence of an association between the size of the class and the teacher burnout, the findings of this study reveal that there is a significant association between class size and teacher burnout. Consequently, class size is a statistically significant contributing factor to the rise of teacher burnout. These results reject the null hypothesis.

2.3 Part Three: Limitations, Implications, and Recommendations

2.3.1 Limitations of the Study

Every research endeavours encounter constraints that can influence the results and their interpretation. The sample in this study does not represent the broader population of educators. Although the total sample is 143 teachers, the number of participants in small classes was very low (n= 5) compared to large classes (n= 112). In addition to that, the burnout scores derived from self-reported questions, which may result in the subjective responses. Teachers' answers can be affected by their mood or perceptions.

2.3.2 Implication of the Study

The findings of this study have important implications for educational policy, school leadership, and teacher support practices. The significant association between class size and teacher burnout requires great changes in classrooms and schools in general. Reducing class size is an important strategy to mitigate stress and emotional exhaustion that lead to teacher burnout. Therefore, the supporting system, training and professional development are essential to prevent teacher burnout.

2.3.3 Recommendations for Research and Pedagogy

The current study, which is conducted as a quantitative investigation, attempts to shed light on the relationship between teacher burnout and class size. Therefore, it is construed as an indispensable step that might pave the way for other research works to be carried out with the purpose to study the mentioned topic profoundly. Furthermore, the relationship between class size and teacher burnout is complex and needs further research to be explored. Importantly, it is recommended from researchers to examine how burnout develops over time and whether prolonged exposure to large class size increases the risk of chronic emotional exhaustion. Significantly, researchers may consider additional factors that may influence teacher burnout such as teaching experience, subject specialization, administrative support, personal traits and coping mechanisms. Lastly, researchers should ensure the use of validated measurement tools for assessing burnout, as this will enhance the accuracy and reliability of the results in diverse educational contexts.

First, we suggest for future teachers to cultivate positive relationships with colleagues, as these connections provide emotional comfort, professional satisfaction, and a crucial support system against burnout. Second, it is important for future teachers to implement strict

boundaries on working hours, combined with evidence-based stress regulation techniques like cognitive restructuring, to prevent occupational burnout before it develops.

Conclusion

This chapter is concerned with the practical part of the current study that explores the relationship between class size and teacher burnout. The study seeks to categorize educators according to standardized burnout levels (low, moderate, and high); also it classifies teachers according to their class size (small, medium, and large classrooms). The analysis of the teachers' questionnaire reveals the significant relationship between class size and teacher burnout, which indicates that class size is a key factor in teachers' well-being. Importantly, these results highlight the urgent need for structural and pedagogical changes. These changes aim not only to minimize class sizes but also to reduce burnout and to support teachers' emotional and professional health.

General Conclusion

Teacher burnout and class size are two critical factors shaping educators' well-being and instructional effectiveness. All along the current research work, it is reiterated that the relationship between teacher burnout and class size constitutes the main focus of this quantitative study. An attempt was made to examine whether such a relationship exists between the variables. The study further aims of assessing teachers' stress levels, job satisfaction, and perceived workload in relation to class size categories. In search of achieving the aims of the study, a questionnaire was administered to 143 middle school teachers. The obtained findings from the research instruments provided answers to our research questions and test its hypotheses. Therefore, this research consists of two chapters. The first chapter offers theoretical insights into the two variables of the current study which are teacher burnout

and class size. The second chapter covers the fieldwork, including the research methodology, data analysis, description, interpretations, and discussion of the findings.

In order to see how the respondents cluster in terms of teacher burnout, the sample was subjected to a cluster analysis based on their answers using the MBI scale. The analysis was run using SPSS 26, resulting in the identification of three distinct clusters as a main finding. Once the clusters were determined, a Chi-square test was conducted to reveal whether there was an association between teacher burnout and class size. Analysis of the collected data reveals another main finding: a statistically significant relationship between the variables, indicating that teachers with large class size experience higher burnout.

Ultimately, it is noteworthy that the current study affords valuable intuitions into the significant challenges teachers face in large classrooms. The findings reveal that teachers' main difficulty in overcrowded classes is the high level of burnout. Teachers consistently explain how class size relates to their professional experience. They demonstrate that student numbers fundamentally connect to their stress levels and job satisfaction and effectiveness. In this respect, it is worth noting that the current research can help educational institutions reflect upon the extent to which they prioritize reasonable class sizes and support systems in schools for the sake of preventing teacher burnout and preserving educational quality.

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Appendix

1. Teachers' Questionnaire

The Relationship between Classroom Size and Teacher Burnout

Teachers' Questionnaire

Dear teachers,

Thank you for participating in this important study exploring the relationship between classroom size and teacher burnout. Your honest responses will help us better understand the challenges faced by teachers. All your answers will be kept strictly confidential and anonymous. No individual teacher or school will be identifiable in the data.

Part One: **Background Knowledge**

Teaching experience:

Less than 1 year ☐

1 – 5 years ☐

6 – 10 years ☐

10 – 20 years ☐

More than 21 years ☐

Part Two: Class Size

How many learners do you have in your class?. ....

Part Three: Teacher Burnout: Maslach Burnout Inventory (MBI). (Maslach et al,. 1996)

Questions:	Never	A Few Times per Year	Once a Month	A few times per month	Once a Week	A few times per week	Every day
Section A:	0	1	2	3	4	5	6
I feel emotionally drained by my work.							
Working with learners all day long requires a great deal of effort.							
I feel like teaching is breaking me down .							
I feel frustrated by my work.							
I feel I work too hard.							
It stresses me too much to work in direct contact with learners.							
I feel like I'm at the end of my rope.							

questions	Never	A Few Times per Year	Once a Month	A Few Times per Month	Once a Week	A Few Times per Week	Every Day
Section B:	0	1	2	3	4	5	6
I feel I look after certain learners impersonally, as if they are objects.							
I feel tired when I get up in the morning and have to face another day at work							
I have the impression that my learners make me responsible for some of their problems..							
I am at the end of my patience at the end of my work day.							
I really don't care about what happens to some of my learners							
I have become more insensitive to people since I've been working							
I'm afraid that teaching is making me uncaring.							
Total score – SECTION B							

Questions:	Never	A Few Times per Year	Once a Month	A Few Times per Month	Once a Week	A Few Times per Week	Every Day
Section C:	0	1	2	3	4	5	6
I accomplish many worthwhile things in teaching..							
I feel full of energy.							
I am easily able to understand what my learners feel.							
I look after my learners problems very effectively.							
In my work, I handle emotional problems very calmly.							
Through teaching, I feel that I have a positive influence on people.							
I am easily able to create a relaxed atmosphere with my learners.							
I feel refreshed when I have been close to my learners at school.							
Total score – SECTION C							

Résumé

Les enseignants font face à des exigences considérables en termes de temps et d'énergie, ce qui se traduit souvent par un taux d'attrition élevé au sein de la profession, principalement dû à l'épuisement professionnel. Ce dernier est exacerbé par des problématiques telles que les difficultés de gestion du comportement des élèves, une charge de travail excessive et la problématique de la taille des classes. La taille des classes s'avère être un déterminant majeur de cet épuisement, dans la mesure où des effectifs pléthoriques intensifient la pression exercée sur les enseignants, compromettant leur capacité à maintenir un environnement d'apprentissage efficace et à préserver leur propre bien-être. La présente étude se propose d'examiner la corrélation entre l'épuisement professionnel des enseignants et la taille des classes, en mettant spécifiquement l'accent sur la manière dont les salles de classe surchargées contribuent à une augmentation des niveaux d'épuisement chez le personnel enseignant. Dans cette optique, l'étude s'articule autour des trois questions de recherche suivantes:(1) Comment les enseignants sont-ils catégorisés en fonction des niveaux d'épuisement professionnel (élevé, moyen, faible) ? (2) Comment les enseignants sont-ils classifiés en fonction des catégories de taille de classe (grande, moyenne, petite) ? (3) Existe-t-il une relation significative entre l'épuisement professionnel des enseignants et la taille des classes ? L'hypothèse formulée est qu'il existe une association significative entre l'épuisement professionnel des enseignants et la taille des classes, ou, à l'inverse, qu'il n'existe aucune association significative entre ces deux variables. Afin de répondre à ces questions de recherche et de valider les hypothèses, un questionnaire a été administré à un échantillon de 143 enseignants de collège. Ce questionnaire intégrait le Maslach Burnout Inventory (MBI), complété par des questions relatives à la taille des classes. Les données recueillies ont été analysées à l'aide du logiciel SPSS. Suite à l'identification des catégories, un test du Chi-carré a été utilisé pour évaluer l'association entre les catégories de taille de classe et les dimensions de l'épuisement

professionnel (épuisement émotionnel, cynisme et inefficacité). Les résultats principaux de cette recherche indiquent qu'une combinaison des trois composantes de l'épuisement professionnel, agrégées en un score total d'épuisement, révèle une association hautement significative. Plus précisément, une association modérée a été identifiée entre les catégories d'épuisement professionnel (élevé, moyen et faible) et les catégories de taille de classe (grande, moyenne et petite), suggérant que les enseignants encadrant des classes à effectifs élevés sont davantage sujets à un niveau d'épuisement professionnel accru. Des analyses complémentaires des résultats sont également présentées. Enfin, cette étude conclut en abordant ses limites, ses implications pédagogiques et des recommandations pour la recherche future.

Mots-clés : épuisement professionnel des enseignants, taille des classes, Maslach Burnout Inventory, association, dimension

ملخص: العلاقة بين الإرهاق المهني للمعلمين وحجم الفصول الدراسية

يواجه المعلمون ضغوطًا زمنية وطاقية هائلة، مما يؤدي غالبًا إلى ارتفاع معدل التسرب من المهنة، ويعزى ذلك بشكل رئيسي إلى ظاهرة الإرهاق المهني .يتفاقم هذا الأخير جراء تحديات مثل صعوبات إدارة سلوك الطلاب، وعبء العمل المفرط، ومشكلة حجم الفصول الدراسية. يبرز حجم الفصول الدراسية كعامل محدد رئيسي لهذا الإرهاق، حيث تؤدي الأعداد الغفيرة للطلاب إلى تزايد الضغط على المعلمين، مما يعرّض قدرتهم على الحفاظ على بيئة تعليمية فعالة وعلى رفاههم الشخصي للخطر. تتناول هذه الدراسة العلاقة بين الإرهاق المهني للمعلمين وحجم الفصول الدراسية، مع التركيز بشكل خاص على كيفية مساهمة الفصول المكتظة في زيادة مستويات الإرهاق لدى الكادر التعليمي. لتحقيق هذا الهدف، تركز الدراسة على الأسئلة البحثية الثلاثة التالية:

1. كيف يتم تصنيف المعلمين بناءً على مستويات الإرهاق المهني (مرتفع، متوسط، منخفض)؟
2. كيف يتم تصنيف المعلمين بناءً على فئات حجم الفصول الدراسية (كبير، متوسط، صغير)؟
3. هل توجد علاقة ذات دلالة إحصائية بين الإرهاق المهني للمعلمين وحجم الفصول الدراسية؟

تمثلت الفرضية في وجود علاقة ذات دلالة إحصائية بين الإرهاق المهني للمعلمين وحجم الفصول الدراسية، أو على النقيض من ذلك، عدم وجود أي علاقة ذات دلالة إحصائية بين هذين المتغيرين. للإجابة على هذه الأسئلة البحثية والتحقق من الفرضيات، تم توزيع استبيان على عينة مكونة من 143 معلمًا ومعلمة في المرحلة الإعدادية .تضمن الاستبيان مقياس ماسلاش للإرهاق المهني(MBI) ، بالإضافة إلى أسئلة تتعلق بحجم الفصول الدراسية. تم تحليل البيانات المجمعة باستخدام برنامج.SPSS

بعد تحديد الفئات، تم استخدام اختبار مربع كاي ($\chi 2$) لتقييم الارتباط بين فئات حجم الفصول الدراسية وأبعاد الإرهاق المهني (الإرهاق العاطفي، التشكك، وعدم الكفاءة). تشير النتائج الرئيسية لهذا البحث إلى أن تجميع المكونات الثلاثة للإرهاق المهني في درجة إجمالية للإرهاق يكشف عن ارتباط ذي دلالة

إحصائية عالية. على وجه التحديد، تم تحديد ارتباط متوسط بين فئات الإرهاق المهني (مرتفع، متوسط، منخفض) وفئات حجم الفصول الدراسية (كبير، متوسط، صغير)، مما يشير إلى أن المعلمين الذين يشرفون على فصول دراسية ذات أعداد كبيرة من الطلاب يكونون أكثر عرضة لمستويات متزايدة من الإرهاق المهني. كما يتم تقديم تحليلات إضافية للنتائج.

ختامًا، تختتم هذه الدراسة بمناقشة حدودها، وتداعياتها التربوية، وتقديم توصيات للبحث المستقبلي.

الكلمات المفتاحية :الإرهاق المهني للمعلمين، حجم الفصول الدراسية، مقياس ماسلاش للإرهاق المهني، ارتباط، أبعاد.