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HOW DO SCHOOL LEADERS INFLUENCE WORKERS' STRESS?

EVIDENCE FROM A SCHOOL DISTRICT IN CHILE

A dissertation
by

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Abstract

Stress among school workers and teachers is a growing global concern, specifically in Chile. This has worsened in post-pandemic times. School leadership can be a key factor for school performance and employee well-being. In Chile, although research in this area is still limited, it has suggested the importance of the role of school leaders in the work environment. The local context seems to affect the school leaders' capacity to promote well-being. While the leaders' influence on workers' work stress and well-being is well established, we don't know its mechanisms. It is not clear how personal and local contextual factors that influence school leaders' ability to manage work psychological risks are associated with work stress.

Informed by conceptual frameworks of risk management, this dissertation helps to address current gaps in knowledge by probing the impact that leaders have on work stressors in a school setting within a school district in Chile. The author used mixed methods to accomplish this study's objectives. Quantitative data were obtained from the Questionnaire of Psychosocial Risk Surveillance in the Workplace collected from 1,194 school workers of Talcahuano School District (DAEM) in 2018. The Qualitative data was obtained by conducting 12 semi-structured interviews with principals and pedagogical heads of the Talcahuano School District in 2022.

Four key findings from this study will advance empirical knowledge of School leaders' abilities to manage and change the work environment: (1) The extent of school leaders' influence on job stress is significant and relative. This influence is not the same for all psychosocial risks; for some, the leaders had no impact. Also, leaders' capacity to influence the work environment varied by the school setting's meso and macro level factors that constrain leaders' abilities to mitigate these risks. (2) In addition to contextual constraints, School leadership substantially influences some risk factors compared to other predictors related to the school context and school leader characteristics. In the quantitative analysis, Q*uality of Leadership* is a significant predictor of some stress-related risks and alone explains 8% of the variance in *Psychological Demand* and 23% of the variance in *Meaningful Work.* Qualitative results also suggest some possible ways for leaders' practices and behaviors to influence other risks. (3) Leaders' general approach to work stress is characterized by their idea that work stress is a reaction to the whole environment of the educational system (micro, meso) and that they can manage stress among staff by focusing primarily on the socio-emotional aspect of the school and its environment. (4) School leaders implied that they can better reduce the stress level of workers with support at the meso and macro levels of management. The results also shed light on trends in pandemic and post-pandemic Schools' work-stress.

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Dedicated to my family: Esteban, Amanda, Gregorio and Joaquin.

To Fabiola, Pablo and their roots: their aunts, uncles, cousins, who were public school principals and teachers who made education their passion and believed they could build a better country from there.

To Eloisa: the future.

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Preface

While practicing in mental health services, I began to develop this dissertation a long time ago. Chile had embarked on a rapid development path, and work-life had begun to accelerate. Work stress began to be a frequent theme of the consultants, and the figure of the boss emerged in their stories continuously. In these stories, I found that people placed a lot of importance on what they said, did, or didn't say or do. Interaction with bosses positively or negatively impacted their daily mood or careers. Sometime later, I started working in organizations where I met many managers. Some showed a genuine interest in the health or stress of their employees, while others saw this condition as something alien to them. Many wondered what they should or could do to help. Many felt their stress and the pressure from higher levels on them. Meanwhile, stress at work was becoming a trending topic. Many organizations began implementing intervention programs and training people to deal with it. Although they were helping people to manage it better, the overall work environment remained unchanged. As a practitioner and university teacher, I began to wonder how to deal with work-related stress more effectively. In organizations, leadership has long been studied and used in intervention. Especially in the context of public education in Chile, there are high expectations of what school leaders can do to bring about positive change.

Feeling the growing stress challenge at work for individuals and organizations, I asked about everyday issues in work-stress and leadership. These questions stayed with me until they became the questions of this dissertation: Does Leadership practice affect the work environment – psychosocial risk factors – to prevent stress and promote wellbeing/welfare among the school workers? How does Leadership practice influence the work environment and change wellbeing

among the school workers? What personal and contextual factors influence a leader's capability

to influence the work environment in the school context?

CHAPTER 1: INTRODUCTION

1.1. Statement of the Research Focus

Work or employment-related stress is a global problem. Psychosocial risks and stress at work are growing concerns in both developed and developing countries. The International Labor Organization (ILO) states that healthy working environments are fundamental to decent work. Moreover, the risks associated with COVID-19 have exacerbated existing psychosocial vulnerabilities in the workplace (International Labour Organization, 2020). According to scholars, the pandemic will also show a long-term impact on how work is organized and how psychosocial risk factors and coping resources are addressed in the future as work-life relevant challenges for societies, organizations, and workers (Rigotti et al., 2021).

The research on occupational health and safety began in the 1950s with a strong emphasis on safety-related to physical health. Since 1995, occupational health has been expanded to include the physical, mental, and psychosocial well-being of workers (Jain, Leka, & Zwetsloot, 2018). Changes in the last decades concerning globalized markets, technology developments, large amounts of information, and hard competition have impacted private and public organizations around the globe, which operate under significant pressure (for speed and volume of work, flexibility, and slimming). These developments have had profound implications for the workplace conditions and consequences for the health of employees, including injuries, diseases, illnesses, psychosocial strain, mental health problems, and premature retirement.

In Europe, 25% of workers experience work-related stress for all or most of their working time (Eurofound & EU-OSHA, 2014). Additionally, 40% of workers feel that stress is not handled well in their workplace settings (European Agency for Safety and Health at Work [EU-OSHA], 2013). In the USA, 37% of workers experience work-related stress (Harvard School of

Public Health, 2016) and according to a Gallup study, 28% of full-time employees reported feeling burned out at work "very often" or "always" (Gallup, 2020).

Longitudinal studies and systematic reviews have indicated that stress at work is associated with heart disease, depression, and musculoskeletal disorder (Leka & Jain, 2010). Stress can also influence the incidence of occupational injuries (Johannessen et al., 2015). Depression has been associated with stress worldwide; 8% of depression has been attributed to work-related stress (Jettinghof & Cedillo, 2008). Work-related stress goes together with exposure to psychosocial risks at work. A poor psychosocial work environment can have adverse effects on work experience and the health and mental health of workers (Cox, Griffiths & Rial-González, 2000; Stansfeld & Candy, 2006; Kivimäki et al., 2006; Leka, Jain & Lerouge, 2017; Ilić, Arandjelović, Jovanović, & Nešić, 2017). In Europe, 25% of the workers believe that work conditions negatively affect their health (Eurofound, 2017). A deficient psychosocial work environment is not only detrimental to the health and safety of workers but is also burdensome to individuals, organizations, and society as a whole (Hoel et al., 2001).

Since the total cost of work-related stress globally is unknown, the overall cost of work-related stress to the society is enormous. Research suggested that between 50% and 60% of the lost working days have some association with work-related stress (Leka et al., 2015). Good physical and social environments are strongly associated with less general absence (Eurofound, 2017). A systematic review of the evidence available on the financial burdens linked to psychosocial risks and work-related stress at the social level conclude that the total estimated cost ranged from US $221.13 million to $187 billion across different studies. The components of the total costs included production loss, sickness-related absences, and costs of health care or medical services (Hassard, Teoh, Visockaite, Dewe, & Cox, 2018).

1.1.1. Work-Related Stress in Chile

As in other Latin American countries, the context of work in Chile has undergone significant transformations in the last decades with profound changes in the organization of the labor processes, management styles, labor relations, technological trends, and organizational cultures (Ramos, 2009; Martinic & Stecher, 2020). There is also a growing concern about the work environment and psychosocial risk factors at work in Chile. Studies show that the work environment plays a fundamental role in the psychological health of the Chilean population (Ansoleaga, Montaño, & Vézina, 2013; Stecher & Sisto, 2019). In 2019, Chile experienced great social tension and mobilizations asking for changes. Researchers have argued that people's experience of poor working conditions and environments (low wages, long working hours, emotional and physical exhaustion, lack of support) has affected people's mental health and perception of social unrest (Araujo, 2019).

A cross-sectional study with a representative probabilistic national sample concluded that 18% of the population reported work-related stress (Ansoleaga, Díaz, & Mauro, 2016). According to the National Labor and Health Employment Survey (Ministry of Health, ENETS 2011), the main symptoms that Chileans associate with work are a continuous feeling of fatigue, headaches, sleeping disorders, and feeling tense or irritable. According to the workers' opinion, 24.7% of companies have harmful environments that contribute to mental health problems among workers, such as stress, depression, and anxiety (Eighth Labor Survey, ENCLA 2014). The Zoom to Work Survey (Polizzi, Bargsted & Caro, 2019, Visión Humana, 2022) showed an alarming increase in the perception of stress at work, with 42% reporting high level of stress in 2019 and 34% in 2022. In the last 20 years, in Chile, sickness absences due to mental health has been the most frequent (first or second) reason for absenteeism and sick leaves and

have shown an increasing trend (Miranda, Alvarado, & Kaufman, 2012), reaching 24% of all causes in 2019 (Superintendence of Social Security [SUSESO], 2016, 2019).

1.1.2. Stress Among Workers in Educational Institutions

Educational workers are considered a vulnerable population regarding stress at work (Skaalvik & Skaalvik, 2015). Around 33% of teachers suffered from various types of occupational stress worldwide (Wengel-Woźny, Szefczyk-Polowczyk & Zygmunt, 2015). Reports in Europe showed that at least one-third of teachers said their workload in the past years has never been manageable, and 81% said they have considered leaving teaching because of workload and stress (Walker et al, 2019). In the U.S.A, teachers are more stressed at work than average people (Gallup, 2014).

Among several countries in Latin America, previous research has shown that workers in Chile's educational sector have a higher prevalence of mental health problems (UNESCO, 2005). Also, this sector has shown more significant mental health problems than the Chilean population (Valdivia et al., 2003). As a proportion, vendors and teachers had a higher percentage of mental health leaves than other groups (Miranda et al., 2012). Several studies have confirmed high levels of stress, burnout, and related symptomatology among teachers (Gonzalez & Gonzalez, 2007; Cornejo, 2009; Jiménez et al., 2012; Zuniga-Jara & Pizarro-Leon, 2018). Since 2014, the National Teachers' Association has been in negotiations with the Ministry of Education with regard to teachers' stress (Colegio de Profesores de Chile, 2020). Surveys during the pandemic show that in May 2020 there were 23% of teachers with high levels of stress; by the end of 2021 that percentage had risen to 80% (Elige Educar & Centro de Políticas Públicas UC, 2022).

1.1.3. Work-Related Stress Policies

Faced with the reality of work stress, the ILO, the World Health Organization (WHO), the European Agency for Safety and Health at Work (EU-OSHA), and government agencies in many countries have expressed their concern and promoted initiatives to make these risks visible (ILO, 2019). Surveillance of the psychosocial environment has been a widespread step up in the international policy agenda. This policy requires organizations to conduct risk assessments for psychosocial hazards in the workplace. Since 2013, the Chilean state has enforced the *Protocol of Psychosocial Risks Surveillance at Work*. This *Protocol* mandates the measurement of psychosocial risks both in private and public organizations. The *Protocol's* short version is mandatory for risk assessment in all types of organizations and encourages enterprises and institutions to establish intervention strategies. The results of this *Protocol* have shown that the percentage of educational organizations reporting high/medium risk is higher than the country average: 64.4% vs. 46.7% in 2018 and 51.5% vs. 33.8% in 2021 (Superintendence of Social Security Chile [SUSESO], 2018, 2021). In the same sector, leadership quality was the second aspect with the highest risk of stress for workers (Superintendence of Social Security Chile [SUSESO], 2018). Chilean scholars have highlighted that this regulation is still in a recent implementation phase. Even though it is a relevant policy effort to face stress at work, there is not enough research on psychosocial risk factors to guide interventions, strategies, and new policies to manage the psychosocial environment at work (Pérez-Franco, 2016; Leyton, Valdés, & Huerta, 2017).

The evidence above shows that the work environment is a critical concern regarding workers' wellbeing in the Chilean population. The school workers have been recognized as a vulnerable group. Although there are new policy initiatives to measure risks, little is known about how to change and manage these risks (Leyton, Valdés, & Huerta, 2017). Studies have

also confirmed the association between leadership behaviors and employees'

stress/health/wellbeing (Arnold, 2017). The role of leaders seems to be a possibility to bring

about a change in the work environment.

In particular, school leadership is a priority in public policies at national and

international levels. Current research reinforces the evidence that school leadership is very

crucial to ensuring a better organizational environment since they play a decisive role by

influencing the motivations and capacities of teachers, as well as the school environment,

atmosphere, and climate (Mulford, 2003; Leithwood, 2009; Bolívar, 2010). But a growing body

of research now emphasizes how cultural, economic, and other situated local contextual factors

influence, and to some extent restrain, leaders' actions, practices, and behaviors (Leithwood,

Harris, & Hopkins, 2020). In Chile, as there is limited research on the impact that leaders can

have in real school settings, we know little about the personal and contextual factors that

influence principals' and heads' ability to perform the roles expected from them (Aravena, 2016;

Aravena & Hallinger, 2018; Weinstein, Muñoz, & Rivero, 2018). This study is focused on

exploring the school leaders' agency or capacity in changing the work environment to reduce the

worker's stress.

1.2. Study Context

The research will be conducted at the School District of Talcahuano (Department for the

Administration of Municipal Education [DAEM] Talcahuano). Talcahuano is a city-port and

municipality (a local area with its own government for local affairs). It is located in the south of

central Chile in the Biobío Region (VIII Region of Chile). Its name derives from a Mapudungun

sound (the language of the indigenous people) Tralkawenu ("Thundering Sky"). About 99.4% of

the Talcahuano population lives in urban areas (Sub-Secretaría de Desarrollo Regional

[SUBDERE], 2020). In the late 1980s, it grew and merged with the city of Concepción and received the treatment of "Intercomuna Concepción-Talcahuano." Together with other cities, it forms what is known as "Great Concepción", the second most populated area in Chile. The *Regional Development Index* (IDERE) shows that the Bio-Bio Region has a low level of socio-economic wellbeing compared to other regions of Chile but a higher level of security (Vial, 2017). The Human Development Index (HDI) of the Bio-Bio Region is also lower than the national average (BCN, 2020).

The School district (DAEM) of Talcahuano aims to administer the public education service in the municipality according to the guidelines and policies emanating from the Ministry of Education. Administratively, it is dependent on the Municipality of Talcahuano, which provides relevant technical, administrative and financial responsibilities. It is important to keep in mind some ongoing changes in public education in Chile. Between 1980 and 1986, during the period of the military dictatorship, public basic and secondary education establishments were transferred to the municipalities. In the last few decades, this municipal system has generated many criticisms, such as the inequity of the social structure of the municipalities, the low priority given to education by some districts, the sustained decline in enrollment and quality, and the loss of relevance of public education as a space for integration and social mobility. In 2017, a new law changed the institutional framework of public education. The Ministry of Education and the *Local Public Education Services* replaced the municipalities administering the local school system. These *Local Public Education Services* contemplate the participation of different members of the school communities: teachers, education assistants, students, parents, and local authorities. This participation will be expressed in two instances: The *Local Steering Committee*

and the *Local Public Education Council*. The transfer will be gradual; the *DAEM Talcahuano* will be transferred after 2025 (BCN, 2022).

The *DAEM Talcahuano* manages 43 public establishments: 23 elementary schools – corresponding to elementary and middle schools –; five secondary (High Schools) institutions; two schools with both elementary and secondary education; two kindergarten pre-schools; eight nurseries; two special education institutions, and one integrated center for adults. The total number of students is 11,284. Around 1,000 teachers are working in this district, and 500 administrative personnel are within the schools. The district's general administration has one director, one vice-director, and six heads of units (Plan Anual de Desarrollo Educativo Municipal [PADEM], 2019).

The Education Quality Assurance System evaluates the country's schools with different instruments:

- *Learning Standards*, such as *SIMCE* ("Education Quality Measurement System"), which measures the content of specific subjects;

- *Indicators of Personal and Social Development*; self-esteem, coexistence, citizenship and healthy life; and

- *School Vulnerability Index* (IVE SINAE), which is a measure of poverty and social disadvantage.

Each school is also classified according to Performance Categories, which is considered an integrative measure. This classification is obtained considering all the above tests, except the School Vulnerability Index.

The *School Vulnerability Index of DAEM* Talcahuano has increased in recent years (2018: 90,4%; 2019: 94.3%; 2020: 92%), showing greater vulnerability which is higher than the

national average of 81% (Ministry of Education, 2022). In 2019, *DAEM Talcahuano* had

approximately 20 points lower than the national average in pedagogical learning score of SIMCE

(232.3 vs 256.3). In 2019, only one school was in the high-performance category; 17 achieved a

medium performance category; 9 obtained a medium-low category and 4 obtained an insufficient

category (PADEM, 2021).

The School Climate of Coexistence Indicator, which is part of the Personal and Social

Development Indicators, was 72.3 points in 2017 and 73 in 2018 – there is no data for recent

years –, which is considered an adequate range according to the national standard. However,

according to the perception of the educational community, it would be necessary to strengthen

the socio-emotional areas, as they are already debilitated (PADEM 2021).

According to the Strategic Plans of DAEM Talcahuano (PADEM 2019 and 2021), well-

being and psychosocial environment have been a growing concern of *DAEM Talcahuano.* The

need to develop leadership capacities to improve the school's psychosocial environment

community and reduce risk factors has been raised.

Chile is amid an ambitious educational reform whose main objectives are focused on

prioritizing and strengthening public education, eliminating asymmetries between educational

entities, and strengthening the teaching profession. This reform is being deployed in the context

of Chile with a high pace of development in recent decades, but with inequality indicators that

remain among the highest in the world and the OECD (OECD, 2019). According to the OECD

(2015), one important priority for Chile is to strengthen and support school leadership, enhancing

a school environment that supports learning and teaching.

The Chilean school system presents an extreme social segregation (Valenzuela, Bellei, &

de los Ríos, 2014). Consequently, it is more frequent that schools with better average academic

performance are located in higher-income territories. From the perspective of educational research, it is important to consider Chile's geographic and sociodemographic diversity, identify the challenges of different contexts and focus research in areas with territorial segregation gaps (Rodríguez et al., 2016).

As described in the previous paragraphs, the Talcahuano DAEM has some characteristics that make it suitable for this dissertation. It is located in a region with vulnerability indexes higher than the country's average. The center-south of Chile concentrates the poorest municipalities (Ministry of Social Development, 2017). Also, Talcahuano is an expanding urban area where a high percentage of vulnerable families live. It is the district with the highest number of schools and students in the public system among those that make up the "Greater Concepción." Different actors consider Talcahuano as a logistic center of vital importance for the future development of the central-southern zone of Chile (OECD/Bio Bio's Regional Steering Committee, 2009), and therefore, contribute to improve the schools' environment is fundamental. In order to be effective in the long term, educational improvements must target disadvantaged schools.

1.3. Purpose of the study

This mixed-methods case study approach research aims to examine the School leaders' abilities to manage and change the work environment, including four psychosocial risk factors: *Meaningful Work, Psychological Demand, Job Insecurity,* and *Work-Home Interference*. With the purpose to attain this aim, this study used data from the *School District of Talcahuano*, in Chile. More specifically, this study aims to answer the following three research questions.

- Does *Quality of Leadership* practice affect the work environment (psychosocial risk factors) to prevent stress and promote well-being among the school district workers?

- How does Leadership practice influence the work environment and change wellbeing among the school district workers?

- What personal and contextual factors influence a leader's capability to influence the work environment in the school context?

Qualitative and quantitative methods will be used to answer these questions. The quantitative component will involve analyzing secondary data from the *Chilean Protocol of Psychosocial Risks Surveillance* of the *School District of Talcahuano* (DAEM Talcahuano) collected from 1,194 school employees in 2018. Descriptive statistics will be used to assess the psychosocial stress risk among employees in the district. Using mixed-effects regression models, it will be evaluated whether the *Quality of Leadership* practice is a protective or exacerbating factor for different psychosocial risk factors among these workers. The qualitative component of this study will use primary data from semi-structured interviews with principals and other key stakeholders at the School District of Talcahuano. This part will record leaders' voices to explore their general approach to workers' stress. In addition, the leader's beliefs and self-expectation to promote well-being in the school context will be explored. The study will also explore the school leaders' current decision-making capacities to reduce psychosocial risk factors. Moreover, the research will identify competencies and practices considered the most appropriate in their context to manage the psychosocial environment, and the organizational support needed to act on those competencies and reduce psychosocial risk factors among workers.

The results can help researchers and practitioners expand the knowledge about the school leaders' role and contextual factors that serve as facilitators/barriers to managing the work environment to prevent stress and promote well-being/welfare at work. To the extent that leadership contributes to the psychosocial work environment, a complete account of such enrichment effects depends on a more nuanced understanding of the influence of managerial role (leadership) over these risks in schools' complex settings. Moreover, this research will have practical implications. Understanding these factors will help policymakers and practitioners broaden their perspectives and develop more targeted interventions to help leaders improve their management practices, specifically considering the competencies and risks that managers can change and the organizational support needed for these practices.

CHAPTER 2: BACKGROUND AND SIGNIFICANCE

This chapter starts with the definition of key terms and provides a previous research overview or the state of knowledge on work-related stress, leadership and wellbeing in organizations and in educational institutions particularly. This research builds upon two different concepts: *psychosocial work environment* and *leadership at work*.

2.1. Defining Key Terms

2.1.1. Defining Psychosocial Work Environment

Researchers have used the terms "*psychosocial work environment*" or "*workplace stressors*" or "*work-related stress*" synonymously to reflect stress associated with workplaces. While work-related stress is a complex concept, with more than 100 years of evolution, there has been a considerable discussion about defining and operationalizing it (Cox, Griffiths, & Rial-Gonzalez, 2000; Cooper, Dewe, & O'Driscoll, 2001; Bliese, Edwards, & Sonnentag, 2017). Scholars usually distinguish three significant lines of research that reflect different understandings of the concept; these approaches have emphasized stress either as a dependent, independent, or mediator variable (Cox, Griffiths, & Rial-Gonzalez, 2000; Milczarek et al., 2009). Recent research regarding the state of affairs in the field of Work Stress over the last two-decade period showed that the most used strands to approach stress are those exploring the psychosocial aspects of work stress (interaction between people and their work environment) and those exploring the more cognitive/physiological elements of the process (internal processes and the extent to which the body mechanisms react to the impact and experience of stress at work), (Cassar et al., 2020).

Stress as a psychobiological response, a dependent concept, focuses on stress as an individual non-specific response to pressure or demanding situations, as supported by Selye's

model of the General Adaptation Syndrome (GAS) (Selye, 1956). This model emphasizes the study of reactions or symptoms (physiological, psychological, and behavioral correlates) when confronted with a negative stimulus. Stress is a defensive mechanism and follows three stages: alarm, resistance, and exhaustion. Subsequently, chronic work stress may contribute to psychiatric disorders, such as depression and post-traumatic stress (McEwen, 2017); and burnout (Salvagioni et al., 2017), a syndrome observed first in young laborers with low wages, working in demanding jobs for long hours (Freudenberger, 1974). The World Health Organization (2019) defines burnout as a syndrome resulting from unmanaged chronic workplace stress. It describes three dimensions of employee symptoms: feelings of energy depletion or exhaustion, increased mental distance from one's job, and reduced professional efficacy.

In stress as a mediated response, emphasis is placed on the individual's cognitive processing when confronted with triggering situations. The assumption is that individuals will evaluate the situation as threatening or not and act accordingly. This line of research has advanced such integrated theoretical models as the "demand and control" of Karasek (1990), the "effort-reward" of Siegrist (2002), and the "Job Demands – Resources" (Bakker, Demerouti, & Euwema, 2005). Karasek's model (1990) is based on three variables: the margin of decision or control over the situation; the demands to which people are subjected; and their social support. Siegrist's model (2002) states that any experience of imbalance or inequity between the effort and reward (salary, recognition, opportunities for development, status consistency) contributes to stress. In the "Job Demands – Resources" model (Bakker, Demerouti, & Euwema, 2005), work is classified into two categories: work demands and work resources. The former contributes to exhaustion, while the latter reflects engagement. Work resources can mitigate the impact of work demands on stress. Also, personal resources such as optimism and self-efficacy can play a

similar role as work resources. Several empirical studies support these models (van Vegchel, Jonge, Bosma, & Schaufeli, 2005; Luchman & González-Morales, 2013; Bakker & Demerouti, 2017).

Stress as an antecedent or independent concept refers to examining environmental factors that may induce the stress response. The pioneers of this approach were the stress scales of Holmes and Rahe (1967). Environmental stressors, such as change, uncertainty, ambiguity, and duration, are identified as the sources of stress, which negatively affects people's health and well-being (Cox & Rial-Gonzalez, 2000). Accordingly, current research on work stress emphasizes the organizational dimensions that constitute risk factors, considering that the stress reaction would be induced by these elements (PRIMA-EF Consortium, 2008; Milczarek et al., 2009). The psychosocial risk factors paradigm (Lavicoli & Di Tecco, 2020) then proposes that the stress sources are the so-called stressors or psychosocial risks. This approach shifts the interest from individual's factors to environmental or organizational factors that contribute to stress. This is also the most popular way of approaching occupational stress for policy making in the European and Hispanic context (Hassan et al., 2009; Green, 2006, EU-OSHA, 2012; Moncada et al., 2005).

Work stressors can be primarily attributable to organizational practices (work content and context). In contrast, other stressors derive mostly from prevailing socioeconomic and broad social factors (unemployment, health insurance, laws of working hours, informal work, wage structure) (Sauter et al., 2002; Dollard, Skinner, Tuckey, & Bailey, 2007). A broad and consensual definition of these risks defines them as: "those aspects of the design and management of work, and its social and organizational contexts that have the potential for causing psychological or physical harm" (Cox and Griffiths, 1995, p. 69). Organizational

stressors may come from the content and context of work (Cox et al., 2000). The factors associated with the context of work include organizational culture, interpersonal relationships (social support, leadership), role definition, career development, rewards, *Job Insecurity, Work-Home Interference* (Cox et al., 2000); also, issues of power, conflict, justice, equity, violence, bullying, and harassment (Peiro & Rodríguez, 2008; Jain, Leka, & Zwetsloot, 2018). The content of work includes: job content (variety, meaning, skill development); work overload, demand, and intensity (pace, load, pressure, speed); work schedule (inflexibility, shift work, long hours); control (control over task, participation, autonomy) and equipment and physical component of the task (Cox et al., 2000; Jain, Leka, & Zwetsloot, 2018).

This research is based on the psychosocial risk factors approach of stress as a conceptual framework. Although there is significant variation among different classification systems for these risks, there is also a considerable understanding of occupational stress antecedents (Kompier, 2003; Dollard, Skinner, Tuckey, & Bailey, 2007). Consequently, the study is grounded in a widely agreed definition that identifies organizational stress as "an emotional, cognitive, behavioral and psychological pattern of reaction to disruptive and adverse aspects of the work organization; work content and work environment" (PRIMA-EF Consortium, 2008, p. 3). Accordingly, the terms work-related stress, psychosocial work environment, and psychosocial risk factors are used as interchangeable (Kortum, Leka & Cox, 2011). This study will focus on risk factors primarily attributable to organizational practices (work content and context).

2.1.2. Defining Leadership at Work

Leadership, a multidisciplinary concept, is one of the most studied areas in the social sciences (Burns, 1978; Humphreys, 2001; Muhammad & Sadia, 2018). Definitions vary in emphasis on leader's abilities and behaviors, personality traits, processes of influence, or

contextual factors (Nyberg, Bernin, & Theorell, 2005). Most definitions share the similarity that leadership is an effort/ability to *influence* relationships. This process can involve lateral, upward, or downward influences of team members (Tafvelin, Hasson, Holmström, & von Thiele Schwarz, 2019). According to the direction and type of this influence, leadership can be considered formal or informal (Pielstick, 2000).

This research focuses on the influence of an individual — holding a formal managerial position — on subordinates or collaborators (Nyberg, 2009) or, as some scholars have defined, downward leadership (Conger & Pearce, 2003). The main interest is the way people who exercise managerial roles – School's principals and other managers – hold the leadership or exert influence over others within this organizational structure (Weinstein, Muñoz, & Rivero, 2018) with a focus on stress/heath/wellbeing as outcomes. Specifically, educational leadership in Chile is defined as those practices that depend on the *school principals'* and the *pedagogical director's* actions. Both have a critical influence on school management and wellbeing (Marfan & Pascual, 2018).

2.2. Overview of Previous Research

2.2.1. Work-Related Psychosocial Risk Factors and Stress

The research on exposure to psychosocial factors and stress is interrelated: psychosocial hazards go along with work stress. Stress is the reaction that people may have when presented with these aspects (Leka & Jain, 2010). Overall, psychosocial risk factors in the workplace are important aspects of workers' well-being; the academic literature has increasingly focused on the measurement, diagnosis, and description of the different risk factors at work (Wang, Cheng, Lee, & Hsu, 2010; Leka & Jain, 2010; Leka, Jain, & Lerouge, 2017). Exposure to risk factors can have direct or indirect negative influences on workers' health and mental health. Risk factors

have been associated with psychological/mental health conditions such as: changes in mood, fatigue, depression, anxiety, stress, burnout, low self-esteem, among others (Cox, Griffiths, & Rial-González, 2000; Leka & Jain, 2010; Rau, Morling, & Rosler, 2010; Bailey, Dollard, & Richards, 2015; Fernandes & Pereira, 2016; Jain et al., 2017). Deteriorated work-related psychosocial environment has been associated with weak physical health indicators such as headaches, back pain, shoulder pain, sleep disturbance, hypertension, heart disease, musculoskeletal disorders, metabolic syndrome, and diabetes, among others (Leka & Jain, 2010; Rau, Morling, & Rosler, 2010; Bailey, Dollard, & Richards, 2015; Fernandes & Pereira, 2016; Jain et al., 2017). The development of these clinical conditions from moderate to severe gravity can cause the workers' absence in their work, more sick leaves, or the intention to leave (Fernandes & Pereira, 2016). Overall, the psychosocial work environment has been found to predict rates of sickness absence in longitudinal studies (Leka & Jain, 2010) and eventual death through cardiovascular mortality (Kivimäki et al., 2002). Employees' mental health and psychosocial wellbeing appear to deteriorate regardless of the specific psychosocial factor evaluated, increasing individual stress levels (Fernandes & Pereira, 2016; Rosário, Fonseca, & Nienhaus, 2016). According to a systematic review, the most studied categories of exposure to psychosocial factors in the workplace are labor demands, work organization, work content, social relationships, leadership, work-home interference (Fernandes & Pereira, 2016).

Some other scholars have pointed out that psychosocial factors with the more robustly demonstrated epidemiological evidence on their prevalence and the sizes of their health effects are: work–family conflict, low job control, high job demands, low social support at work, and low organizational justice (perception of unfairness at work) (Goh, Pfeffer, Stefanos, & Zeniosm, 2015).

Qualitative studies have offered insights close to the experience of participants. In one in-depth analysis considering different organizations, the main perceived risks of stress at work were workload – long working hours, heavy workload, and understaffing –, and managerial practices were considered one of the most common risks of job stress. The management practices that contribute most to employees' stress were: unrealistic demands, lack of support, unfair treatment, poor decision-making freedom, lack of appreciation, effort-reward imbalance, conflicting roles, lack of transparency, and poor communication. (Bhui, Dinos, Galant-Miecznikowska, de Jongh, & Stansfeld, 2016).

In Chile, research has also established that as the perception of psychosocial risk factors at work increases, the stress levels, and other mental health condition also increases (Alvarado et al., 2012; Silva, Lefio, Marchetti, & Benoit, 2014; Rocha et al. 2014; Güilgüiruca et al., 2015; Ansoleaga, 2015; Bravo & Nazar, 2015; Castro, 2018). Research has also found that being exposed to risk factors as high demands, low decision latitude, low social support, and imbalance in efforts-rewards had a higher probability of experiencing stress in the country context (Ansoleaga, Díaz, & Mauro, 2016).

2.2.2. Macro Environment-Related Psychosocial Risk Factors and Stress on School Workers

Scholars have described several macro factors impacting and challenging the work environment in the teaching professions around the globe as reduced funding, increasing regulations, high-stakes testing; political incrimination of teachers for shortcomings of education; larger proportion of students from underprivileged, ethnic minority or special needs backgrounds (Dupriez, Delvaux, & Lothaire, 2016). Teachers' actual salaries are lower than similarly educated workers on average across the Organization for Economic Co-operation and Development (OECD) countries (OECD, 2019). International studies have reported that lower

teacher salaries, an increasingly demanding environment, and poor working conditions affect teachers' motivation, dissatisfaction, and high attrition rates (Akiba, Chiu, Shimizu, & Liang, 2012).

Moreover, in general, workers have had to adapt to the new accelerated working conditions, where information, technological tools, knowledge, structures and standards are changing at an accelerated pace. As the world of work has changed, most countries are implementing profound reforms to the education system that involve implementing new educational programs, new teaching methods and new skills in teachers and students. Scholars generally agree that teachers' work is associated with different psychosocial health risks (Alvites-Huamaní, 2019; Wischlitzki, Amler, Hiller, & Drexler, 2020).

Chilean research has emphasized the impact of the complex transformation of the public education sector during recent decades on the wellbeing of the School's workers. Changes such as intensification and standardization of working time, lack of technical support, deterioration of infrastructure, social role and working environment and organizational change tension have impacted schools' work environment (Cornejo, 2009; Weinstein, Muñoz, & Rivero, 2018). Chile has the longest teaching hours and below-average teacher salaries and cost of teachers per student compared to any other OCDE country (OCDE, 2019). In elementary and secondary education, the number of direct teaching hours is remarkably high, among the highest in OECD member and associate member countries (OCDE, 2018). Also, the country shows a higher student-teacher ratio and therefore a larger group of students and a higher load of non-school hours. Also, teachers perceive their profession less valued in society than the average across OECD countries (OCDE, 2020; Ministry of Education, 2019).

Different psychosocial risks at work have been significantly associated with the worker's wellbeing of Chilean schools, such as: the meaning of work and job demand (Cornejo, 2009); and the social support (Jimenez et al., 2012). A direct relationship has been found between gender and mental health and related conditions among teachers. Women experience higher stress/poorer mental health than men (Reynaldos, Gray, & Alfaro, 2015; Perez-Franco, 2014). Recent research shows the impact of the pandemic on teachers' psychosocial risks, highlighting work-home imbalance and excessive work demands (Orrego, 2022; Cabezas et al., 2022).

It is clear that teachers face various job demands; however, little is known about how to identify and address these risks. Wischlitzki, Amler, Hiller, & Drexler (2020) conducted a recent systematic literature search on managing psychosocial risks in the teaching professions and found surprisingly just a few research despite their extensive, sensitive and comprehensive examination. One important recommendation is to develop research at organizational-level to understand the problems source. To this end, it is necessary to consider school leadership as a key factor in psychosocial risk management because of their potential impact on the overall system (Wischlitzki, Amler, Hiller, & Drexler, 2020, p.394)**.**

2.2.3. Leadership Practice and Work-related Stress

As mentioned before, research has been exploring that the manager-employee relationship is a commonly reported cause of stress (Tepper, 2000). Manager behavior can significantly impact employees' health and mental health outcomes (Stansfeld & Candy, 2006). In the last decades, studies have been conducted to test the impact of specific leaders' styles or behaviors on employees' psychosocial well-being or stress. In recent years, several meta-analyses on previous research have confirmed the effect that leaders have on the welfare/wellbeing of their employees (Peiro & Rodríguez, 2008; Donaldson-Feilder, Lewis, & Yarker, 2009; Skakon,

Nielsen, Borg, & Guzman, 2010; Hillage, Holmes, Rickard, & Marvel, 2014; Schaufeli, 2015; Montano, Reeske, Franke, & Hüffmeier, 2017; Tepper, Simon, & Park, 2017; Harms, Credé, Tynan, Leon, & Jeung, 2017; Gayed et al., 2018). The overall conclusion of these findings has pointed out the following:

- Leader behaviors, such as consideration, support, high level of communication, good relationship quality and conflict managing were positively related to employee wellbeing and low stress levels;

- The lack of support from the supervisor is negatively related to employee wellbeing at work;

- Behaviors of task orientation had often an indirect positive effect on work stress, mediated by reducing the role ambiguity and perceptions of task clarity.

Overall, research on the models of leadership styles and leadership quality showed that leaders can contribute either to the production or reduction of stressful working conditions. A recent Gallup study (2020) revealed five factors that correlate most highly with employee perception of burnout: unfair treatment at work; unmanageable workload; unclear communication from managers; lack of manager support and unreasonable time pressure. The study concludes that the primary factors that influence burnout are largely related to leadership at work: "leaders can prevent and reverse burnout" (Gallup, 2020, p.6). Leadership has been proposed as a critical factor in the occupational health and psychosocial wellbeing of an organization, and a key element in policy development for health at work (Peiro & Rodríguez, 2008; Wegge, Shemla, & Haslam, 2014). In Chile, there is little empirical evidence on this topic compared to the global arena, but research has also supported the important influence of leaders

on employee stress and wellbeing (Espinoza-Parra et al., 2015; Araneda-Guirriman et al., 2016; Rodríguez-Ponce, Pedraja-Rejas, & Ganga-Contreras, 2017).

2.2.4. Leadership Practice and Work-Related Stress Among School Employees

The international literature has established the critical role that principals and school leaders have in addressing school problems, achieving school's goals, and school improvement (Hallinger, 2011; Flessa, Bramwell, Fernandez, & Weinstein, 2018; Gumus, Bellibas, Esen, & Gumus, 2018). Also, the OECD promotes school leadership as a key factor for school performance (Mulford, 2003; Flessa, Bramwell, Fernandez, & Weinstein, 2018). In addition, research indicates that principals play several crucial roles:

- They are considered a significant factor – among all school related ones – contributing to student learning outcomes (Hallinger, 2011; Leithwood & Sun, 2012);

- They influence staff motivation, commitment, and working conditions (Leithwood, Harris, & Hopkin, 2008), as well as teacher effectiveness and commitment to the school (Bolivar, 2010);

- They improve teacher retention rates, climate, and culture (Leithwood, 2009).

Other strategic roles for principals have been identified, such as political actors implementing school change and new initiatives (Spillane & Kenney, 2012; O'Laughlin & Lindle, 2015; Mei Kin & Abdull Kareem, 2019) and active sense makers in times of educational reforms (Ganon-Shilon & Schechter, 2019).

In general, in Latin America, research on school leadership is still underdeveloped but growing in the last decade (Flessa, Bramwell, Fernandez, & Weinstein, 2018). In Chile, research has found that leadership practices can impact overall teacher performance and wellbeing by means of the influence they have on their work, mental health, motivation, development, and the

working environment in the school and classroom (Horn, 2013; Robinson et al., 2009; Weinstein & Muñoz, 2012; Bellei et al., 2014; Marfan & Pascual, 2018). Following these results, it is considered an important variable for school change since it appears to be a dimension "more susceptible to being modified through training those who exercise these functions" (Alvarado, Valdivia, & Piñol, 2010, p. 85). Although Chilean research on this topic has grown over the last decade, there is a need for additional research. According to a systematic review of the scientific production between 2015-2020 regarding the role of principals in the Chilean educational system, what the principal does has a clear impact on the commitment of the work teams. However, there are also possible limitations to the leader's action since the Chilean school system is described as a bureaucratic system that overloads the different levels with tasks and where the management of time and resources is a constant concern of principals and leaders. (Manríquez-Gutiérrez & Reyes-Roa, 2022).

One relevant aspect is to understand the influence of the local context on leadership practices, the extent of their capacity, and the opinions of these actors on how to implement change and public policy (Flessa, Weinstein, Bramwell, & Fernandez, 2018; Weinstein, Muñoz, & Rivero, 2018) since the managerial role is characterized by facing a multifactorial and contextual scenario (Manríquez-Gutiérrez & Reyes-Roa, 2022).

Scholars have pointed out some successful leadership styles employed by principals such as transformational and transactional type leadership simultaneously (Leal et al., 2016); while other studies highlighted distributed leadership as necessary for effective leadership, due to the fact that it fosters cooperation and participation of work teams in the decision-making process. In addition, it is directly related to school performance (López & Gallegos, 2017; Maureira et al., 2019).

Despite the importance attributed to school leadership, few studies have examined this variable specific relationship with psychosocial risk management; hence, there is a need to deepen the study of leadership and its impact on school occupational health and stress (Echerri, Santoyo, Rangel, & Saldaña, 2019).

2.3. Current Gaps in the Literature

Work-related stress has become a major occupational hazard in all countries, although comparatively less is known within many newly industrialized and developing countries compared with developed ones (Kortum, Leka, & Cox, 2010). Scholars have also pointed out that in the last two decades, most of the relevant studies on work- stress were quantitative and were conducted in Europe and the United States (Cassar et al., 2020).

Research has established that work-related stressors can take different forms depending on the workplace characteristics and may be unique to an organization or an industry, and we need to advance in this contextual difference (Bhui, Dinos, Galant-Miecznikowska, de Jongh, & Stansfeld, 2016). It is unclear how different risk factors relate to each other or the relative contribution of single factors (Nieuwenhuijsen, Bruinvels, & Frings-Dresen, 2010).

The research on reducing stress at work is still developing. A critical gap in the literature is a need for an in-depth understanding of how to manage the work environment for stress prevention and promote wellbeing at work (Cox, Taris, & Nielsen, 2010; Biron, Karanika-Murray, & Cooper, 2012; Bliese, Edwards, & Sonnentag, 2017). To manage work-related stress, scholars have posited that several workplace risk factors can be modified through decisions, which managers are often better able to undertake (Gayed et al., 2018; Gallup, 2020). As mentioned above, the direct relationship between leadership and stress at work has been extensively studied with strong evidence that leader behaviors affect both psychological and

physical health. However, this knowledge has not led to a significant breakthrough in organizational practices and social policies related to employees' leadership and health/wellbeing (Wegge, Shemla, & Haslam, 2014). There are still several gaps in the research to understand the relationships between a leader's behavior and their employees' wellbeing.

Researchers have identified the need to better understand what specific practices of leaders are related to particular psychosocial risks and what contextual factors impact a leader's agency and capacity to influence work environment and the employee's stress.

The role of school leaders is an important factor in both school performance and employee's wellbeing (Leithwood, Harris, & Hopkins, 2008). Educational leadership research is new in Chile and Latin America as it is in other parts of the globe, presenting multiple challenges (Flessa, Bramwell, Fernandez, & Weinstein, 2018). An important gap is how to move towards establishing the eventual impacts of educational leadership, considering different educational settings (Weinstein, Muñoz, Sembler, & Marfán, 2019; Hallinger, 2019; Oplatka, 2018), and exploring how school leaders, within their cultural context, enact certain practices and can bring change upon work-enviroment (Leithwood, Harris, & Hopkins, 2019; Aravena & Hallinger, 2018).

These research needs are related to sensitive and familiar everyday issues in work contexts. For instance, what risk factors present in their environment can leaders influence/manage? What specific practice can help leaders to manage these risks? How does the specific organizational context where leaders/employees are embedded influence the capacity to change the work environment? Are the leader's agency/capacity to manage risk the same in all working conditions? Is the leader's capacity to manage risks the same for all the risks? These questions are highly relevant to design interventions and to train school leaders to strengthen

their capacity to reduce stress among their employees and improve work environment. They are also the focus of this dissertation.

CHAPTER 3: THEORETICAL FRAMEWORKS

3.1. Overview of Theoretical Frameworks

This chapter presents some of the theoretical frameworks that help us understand the relationship between leadership capacity and work-related stress. The first section describes one specific model of the *psychosocial risks approach* to stress. The second part describes models of *leadership style* and how they have been used to predict stress and other related health outcomes in the organizational setting. The calls for new approaches to understand the link between leadership capacity and worker stress is introduced. Specifically, the *model of manager competency* for the prevention of stress at work shows how specific manager behaviors and capacity are related to stress prevention and can focus on intervention for change in an organizational setting.

3.1.1. Stress Model for Psychosocial Risk Surveillance

There is evidence of an association between work-related stress and exposure to psychosocial risks in the workplace (Cox, Griffiths, & Rial-González, 2000; Leka, S. & Jain, 2010). The psychosocial risks approach explains stress in workers due to the design of work environment. Different models try to explain how the psychosocial aspects manifest themselves as workplace hazards. The *Copenhagen Psychosocial Questionnaire* is both a model and an instrument created by Denmark's *National Institute for Occupational Health and Safety*. This framework focuses on several psychosocial risks that have the potential to induce stress. It is part of the paradigm of psychosocial risks as an organizational stress approach.

It is one of a few research-based models and instrument developed for use at workplaces as well as for research purposes (Berthelsen, Hakanen, & Westerlund, 2018). The conceptual basis of the model integrates relevant dimensions of the different work stress theories discussed

in the previous section (Kristensen et al., 2005). The main influence is the demand and control model (DCS) of Karasek (1990) and the effort-reward model (DER) of Siegrist (2002). The simplicity of these models (DCS and DER) makes them attractive for application, and experience has shown them to be useful (Delgado, Rey, & Arquillos, 2021). They have several limitations: (a) their potential for detecting harmful exposures in work environment is limited because they leave out many risks or group them into the same category (Delgado, Rey, & Arquillos, 2021); (b) they are not aligned with the data held by organizations that currently use a psychosocial risk-based approach by law. This makes it difficult to use results obtained with these models for intervention (Cox, Griffths, & Randall, 2002; Useche et al, 2019); (c) researchers agree on using a more pragmatic research orientation whose conceptual language facilitates the identification of psychosocial risks for organizational change (Cox, Griffths, & Randall, 2002; Kristensen et al., 2005; Useche et al., 2019); (d) overall, there is a call to bridge the gap between theory, research, policy and practice. The Copenhagen Psychosocial Questionnaire has had an influential impact on all of them and is considered a comprehensive accomplishment, not tied to just one theory (Kompier, 2002; Nübling, Burr, Moncada, & Kristensen, 2014; Berthelsen, Hakanen, & Westerlund, 2018; Useche et al., 2019).

The broad conceptual basis of the framework facilitates dialogue with different approaches to stress and its use for variable construction (Fransson et al., 2012). The framework postulates that the following five factors influence job stress:

- Job demands

- Active work and skill development

- Social support in the company and *Quality of Leadership*

- Compensations

- Double presence

Large groups of psychosocial risk factors are subdivided into smaller units. Thus, each of these broad dimensions corresponds to a varying number of specific psychosocial domains (Delgado, Rey, & Arquillos, 2021). Figure 1 presents a more detailed definition of each dimension of ISTAS 21 and its related theoretical assumptions based on the literature (SUSESO, 2016; Kristensen et al., 2005).

Figure 1. General Definition of the Dimensions of ISTAS 21 (SUSESO, 2016; Kristensen et al., 2005).

a. Job Demands

It considers both qualitative elements (emotional, creative, sensory demands) and quantitative elements (quantity and rhythm of work, distribution of work). It contains the "demand" dimension of the DCS model (Karasek and Therorell, 1990), and the "effort" dimension of the DER model (Siegrist, 1996).

b. Active work and skill development

It is about the autonomy perceived by the worker (how much he can decide on schedules, pace, methods, variety, initiative, quality). It has as a foundation the "control" dimension of the DCS model (Karasek and Therorell, 1990).

c. Social Support in the Company and Quality of Leadership

This dimension is equivalent to "social support" in the DCS model (Karasek and Theorell, 1990), as a moderating effect of the previous two. It also contains elements of leadership as support.

d. Compensations

It is equivalent to the dimension "rewards" of the DER model of Siegrist, allowing measurement of the effort-reward imbalance, as well as the control of status (employment stability, unwanted changes).

e. Double presence

Measures the concern to comply with domestic tasks, in addition to the tasks of the work. It can be done partially equivalent to what some authors call "work-family interference".

As indicated above, the *Copenhagen Psychosocial Questionnaire* is widely used as an instrument for risk assessment. The instrument was validated and standardized in several European countries (Germany, Spain, Denmark, among others) and translated into Spanish and

called ISTAS 21 (Moncada et al., 2005). It is considered a reliable tool for measuring different

psychosocial variables related to employee wellbeing (Merino et al, 2017; Clausen & Borg,

2010; Nübling et al., 2013). It assesses different dimensions and has well-tested items to study

working environments. For example, leadership quality and social capital constructs have been

measured by creating an index from the COPSOQ items (Strömgren et al., 2017). Other such

constructs as job demands, job resources, job control and engagement have also been addressed

using three items and, in some cases, two items (Fransson et al., 2012; Berthelsen, Hakanen, Jari,

& Westerlund, 2018).

In Chile, the Superintendence of Social Security decided to validate the Spanish version

of COPSOQ (ISTAS 21) at the national level (Alvarado et al., 2012) and use it as the

Surveillance Protocol Instrument for Psychosocial Risks at Work (SUSESO, 2016). Figure 2

shows the *Psychosocial Risk Factors Model* of stress/wellbeing based on the ISTAS21

instrument, adapted for the Chilean context.

Figure 2. Stress Model for Psychosocial Risk Surveillance Based on Chile Instrument (SUSESO,

2016; Kristensen et al., 2005).

PYCHOSOCIAL RISK FACTORS MODEL OF STRESS/WEWLLBEING AT WORK CONTEXT

Based on Copenhagen Psychosocial Questionnaire Model (COPSOQ) (Kristensen, et al. 2005)
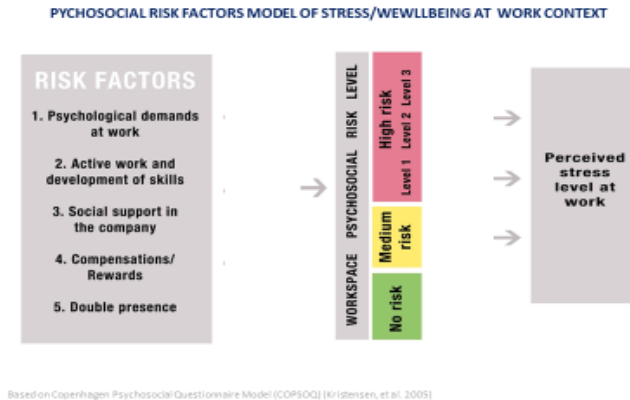
3.1.2. Theories of Leadership Style and Work-Related Stress

As previously stated, different leadership models were used for conceptual and operational variable definitions to test hypotheses. The general proposition is that exist a significant relationship between perceived leadership style/behaviors/quality and some direct measure of stress or health. Three conceptual models have often been employed in research on stress at work.

The first theoretical leadership model is the classic one of Halpin and Winer (1957). They define two basic leader's behaviors: a) Initiation of structure and b) consideration. Initiation of structure is defined as the behaviors that the leader shows related to the task or production; while consideration are those behaviors related to support and show interest in people. Building on this conceptualization, Hersey, Blanchard, and Johnson (1996) propose the *Situational Model* of leadership, widely disseminated in the organizational context. Within this model, the different leadership styles include: a directive style (high structure and low support); a coaching style (high structure, high support); a participating style (low structure and high relationship); or a

delegating style (low structure and low relationship). Overall, both *consideration and structure* behaviors of leaders showed significant correlations with stress at work (Peiro & Rodríguez, 2008).

The second model is *Transformational Leadership* (TFL) (Bass, 1995). It has been defined as a leadership style that can motivate and inspire followers. The original model has been expanded to the *Full Range Leadership Model* that include*s Transformational-Transactional-Laissez Fare* (Avolio & Bass, 1991). The *Transformational* leadership style is the far end pole of a full spectrum with a complete connection between the leader and followers. The opposite pole would be *Laissez-Faire* leadership style, which views a poor connection between leader and followers. In the middle would be situated *Transactional Leadership*, which focuses on a transactional exchange between the leader and the employee for task performance. The main leader's behavioral dimensions considered in the *Transformational* leadership style are: idealized influence, inspirational motivation, intellectual stimulation, and individual consideration. Instead, the components of *Transactional* behaviors are: contingent rewards performance and management by exception (tracking errors and corrective actions). This full-range model has been the most studied style regarding stress and wellbeing in the last 20 years (Skakon, Nielsen, Borg, & Guzman, 2010). *Transformational* leadership showed a positive relationship to wellbeing. Behaviors of leaders such as individual consideration and trust in workers, empowering approach, helping solve problems, and showing enthusiasm about tasks and goals were the most related dimension to wellbeing and less stress (Skakon et al., 2010; Harms et al., 2017).

Regarding the Transactional leadership style and employee stress, the results were mixed. Some studies showed an association with less stress and more wellbeing, while other studies

showed the opposite (Skakon, Nielsen, Borg, & Guzman, 2010). For example, high levels of error tracking may be detrimental; this negative impact may be reduced if the same supervisors also exhibit transformational or support-focused behaviors (George, Chiba, & Scheepers, 2017). Several researches demonstrated that using a composite measure of transactional and transformational leadership, as well as a combination of task orientation and close support contribute to reduce stress and promote wellbeing (Peiro & Rodríguez, 2008).

The third approach is *Leader-Member Exchange (LMX) Theory* (Graen & Scandura, 1987). The *Leader-Member Exchange (LMX)* Theory focuses on the closeness of the relationships between leaders and their employees. It posits that leaders develop different forms of relation – or exchange – with their employees and those who maintain good and close exchange (in-group) are treated differently from others who maintain a distant and formal (out-group) relation (Graen & UhlBien, 1995). A curvilinear relationship between closeness and wellbeing has been found; to be in the in-group with the leader sometimes can be positive; and other times too much closeness can be negative for the worker's wellbeing depending upon the situation (Harris & Kacmar, 2006; Sui, Wang, Kirkman, & Li, 2015). This may imply that although the wellbeing of an employee is related to closeness, people feel more pressured to meet expectations if they have higher levels of closeness with the leader.

3.1.3. A Call for New Approaches in Leadership and Stress

While ample evidence showed a strong association between manager's styles and employees' stress/wellbeing, the phenomenon has been inadequately explored to reduce the prevalence of stress at work. First, there has been no attempt to systematically organize and summarize this literature to help managers and organizations change the work environment (Harms et al., 2017). Second, stress and wellbeing have often been treated as global dependent variables and

leadership as a global measure of some specific type of leadership. Scholars have recognized several different possible pathways of the relationship between leaders and wellbeing – stress or related outcomes –, direct, indirect, or moderating effect (Nyberg, 2009) (see appendix B). In the last years, scholars have concluded that the direct pathway of leadership on subordinates' wellbeing has been extensively investigated, while other paths have received almost no attention (Nyberg, 2009). One overlooked path in the relation between leadership and stress is leaders' possibilities to influence work design and work environment (psychosocial risks) and contribute to a healthy or unhealthy environment (Wegge, Shemla, & Haslam, 2014). The relation between leadership behaviors and specific risk factors is lacking. The indirect path in the relation between leadership and employees' wellbeing through risk factors management has been tested and supported (Lornudd, Tafvelin, von Thiele Schwarz, & Bergman, 2015; Arnold, 2017; Toderi & Balducci, 2018). Scholars have pointed out the need to know more about the pathways of a leader's specific practices/behaviors over specific psychosocial factors at work and how to bring change upon them (Skakon, Nielsen, Borg, & Guzman, 2010; Harms et al., 2017).

Third, other consensual aspects of this field research agenda are the need to embrace complexity in organizational settings. This complexity refers to recognition of managerial leadership as embedded in a social structure that requires a "more broadly conceived and eclectic" framework for research (Greasley & Edwards, 2015, p. 356), as well as innovative, comprehensive, and participative approaches (Biron, Karanika-Murray, & Cooper, 2012). In other words, the emergence and implementation of leaders' behavior may vary according to the context, so it is important to know how the context facilitates or restricts different practices of leaders.

3.1.4. A Competency-Based Approach to Positively Influence Workplace Environments

Competency-based approach of management behaviors required for psychosocial safety and health has been developed in recent years. A seminal work by Yarker, Lewis, & Donaldson-Feilder (2008) through a research project commissioned by the UK Health and Safety Executive (HSE), developed a competency framework to fill the gap in understanding the specific managerial practices needed by managers to reduce psychosocial risk at work and prevent stress. The contribution of this approach is related to the use of systematic evidence-based research, with a qualitative, participatory, and bottom-up methodology that allows identifying the specific set of managers' behaviors/practices required to prevent and reduce work stress from a bottom-up perspective instead of a theoretical style. The method enables managers' involvement in constructing the competencies associated with leader management of work conditions related to stress using experiential, "practical evidence," "critical incident," and also "two-dimensional approach" (what works and what does not work). It also allows a deep understanding regarding contextual aspects that act as a facilitator or barrier for managers. This is critical learning to develop intervention focus on managing risk factors in the organizational setting. It provides a deep understanding from the actors' point of view around contents, process, and context factors relevant to intervention for psychosocial risk factor management (see Appendix C). They found 19 managerial competencies associated with the reduction of stress and the promotion of wellbeing at work. The most relevant clusters included: 'Managing Workload Resources,' 'Participative Approach to Problem Solving,' 'Respectful and Responsible Management of Emotions,' 'Individual Consideration and Understanding of Individual Differences.' (Lewis et al., 2009; Donaldson-Feilder et al., 2011; Lewis et al., 2012). This competency framework was recently empirically tested by Toderi & Balducci (2018); the result confirmed that these

managerial competencies were related to employees' wellbeing through the employees' experience of a better psychosocial work environment. Even though this research has helped develop specific competencies that managers can practice to promote wellbeing, some critical gaps need to be addressed.

First, it is not yet clear that these specific practices can be applied to all contexts. This approach gathered data from five industrial sectors (Healthcare, Finance, Education, Local Government and Central Government) all in the UK (Lewis et al., 2009; Donaldson-Feilder et al., 2011; Lewis et al., 2012) and recently in Italy (Toderi & Balducci, 2018).

Second, scholars have proposed the need to delve in a better understanding of contextual and personal factors that affect a leader's possibilities to influence risk factors (Greasley & Edwards, 2015). In some contexts, managers can feel they do not have the authority to modify the work environment due to perceived constraints of higher pressures or environmental threats. Yet, they can also feel they do not have the necessary skills to manage risk factors, are not willing to, or do not have the organizational support they need (Lewis, Yarker, & Donalson-Feilder, 2012; Greasley & Edwards, 2015). Thus far, there is limited research on how manager's behaviors can be a critical element for work environment change (Lewis, Yarker, & Donalson-Feilder, 2012; Nielsen & Noblet, 2018).

Overall, an important need for further research is a more precise understanding of how managers' preventive capacity can vary according to the specific type of psychosocial risks they face and the particularities of the context in which they are found (Torderi & Balducci, 2018). This line of research is essential since current policies related to stress prevention worldwide are based on the assessment of psychosocial risks in the work environment and the need to bring change upon them.

3.1.5. A Competencies Framework for Chilean School Principals

An important milestone in Chile's educational policies on school leadership is the Framework for Good School Management and Leadership (Ministry of Education, 2015). This policy aims to guide the action and management practices to effectively influence the improvement of educational institutions. This instrument based on Leitwood et al. (2006), developed in recent years a competency framework at the public education system. It proposes 14 practices that can be grouped into four dimensions: setting directions, redesigning the organization, developing people and managing teaching/learning programs. These are the expected practices for managers in public School. The premise is that observing these practices will improve school performance overall. It is not specific to psychosocial working conditions but includes some competencies related to the organizational environment.

Current research on school leadership highlights how personal, cultural, and contextual factors influence, and to some extent constrain or facilitate the actions, practices, and behaviors of school leaders, so it is important for a better understanding of how they elaborate their responses to their own particular and unique contexts (Leithwood, Harris, & Hopkins, 2019). Scholars in the field of psychosocial risk management have pointed out that school leaders need to be considered for change, but at the same time, they are in a challenging position: "they are expected to take on management and leadership roles, while at the same time they are executives with sometimes little options of action and job control themselves" (Wischlitzki, Amler, Hiller, & Drexler, 2020, p. 394).

Chilean scholars have raised concerns about the high expectations placed on school leaders as a key driver of change. Recent research has shown that school principals perceive difficulties in exercising their leadership role, such as lack of attributions or autonomy in

managing resources and lack of support from higher levels. These are considered essential obstacles, among others (Weinstein, Muñoz, Sembler, & Rivero, 2019). Consistent with these factors there is a call for research to raise the voice of the educational managers. This strategic information (the heads' point of view) should be known and considered by decision-makers (Manríquez-Gutiérrez & Reyes-Roa, 2022). The materialization and translation of educational policies into better learning opportunities in the school environment ultimately require the active participation of school leaders (Rivas, 2015; Vázquez, Bernal, & Liesa, 2014; Young & Lewis, 2015; Weinstein, Muñoz, & Rivero, 2018). Consequently, this research will incorporate concepts of personal beliefs, space for decision-making, and organizational support.

3.2. Conceptual Framework of the Proposed Research

The conceptual framework for this research comes specially from three sources: literature on psychosocial risk factors approach to stress on the workplace (Cox & Griffiths, 1995; Kristensen et al., 2005; Leka, Jain, & Lerouge, 2017); research on leadership and stress at work (Peiro & Rodrigues, 2008; Skakon, Nielsen, Borg, & Guzman, 2010; Harms, Credé, Tynan, Leon, & Jeung, 2017); and the Competency-based Approach to leadership and wellbeing (Donaldson-Feilder, Lewis, & Yarker, 2011; Lewis, Yarker, & Donalson-Feilder, 2012). Thus, the proposed study integrates some elements of these approaches to develop a comprehensive theoretical framework to analyze school leaders' role in influencing risk factors. Figure 2 shows the conceptual framework based on the complex relationship between leaders' roles and work environment. The framework provides a big picture of the interaction between leadership practices and the organization's psychosocial work environment. It is based on the Psychosocial Risk Framework (Cox et al., 2000; Kristensen et al., 2005) and the Competency-based Approach (Donaldson-Feilder, Lewis, & Yarker, 2011; Lewis, Yarker, & Donaldson-Feilder, 2012).

Figure 3. Conceptual Framework of the Research. Leadership and Wellbeing at Work.
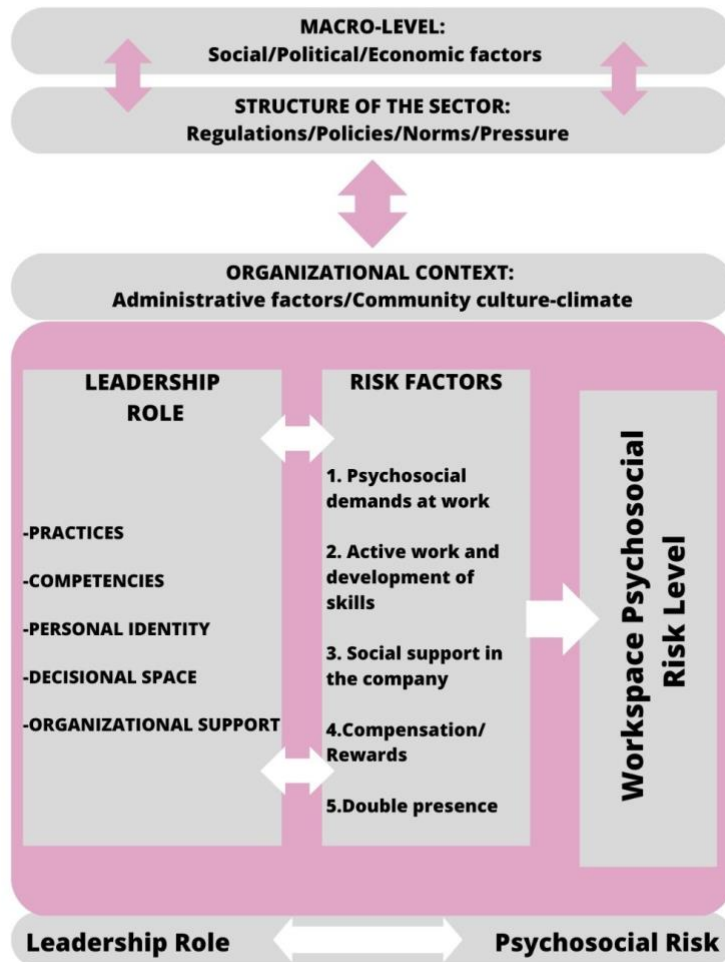
The social, political and economic environment is the bigger scope to understand the macro-level influences that shape the internal organization risks. However, this dissertation's focus will be mezzo and micro-level concepts to understand how leaders' roles and practices impact workers' wellbeing and risks at the organizational level. Therefore, this study utilizes some aspects of the conceptual framework. The following section will review this framework

key dimensions and how they may relate to understanding leaders' influence on the work environment.

3.2.1. Leaders Role and Practices

As indicated before, literature recognizes formal leaders, those in a leadership position, and informal leaders, who are not in a formal position of leadership but others recognize them as leaders. This research focuses on leadership as a social, formal position and in the individual's behavior /practices/experience in the context of the leader's role requirements. The leadership role in an organization is influenced by the individuals who hold it and the organizational context, which assigns certain areas of functions, attributions, and resources (Winkler, 2010). In this research, we will explore personal experience regarding leadership as well as contextual factors.

Literature reveals some confusions concerning leadership conceptual and operational variable definition. Research often has used the notion of leadership styles and/or leadership competencies. In contrast, some scholars consider both terms interchangeable and others have stated that they are different but related concepts (Riaz & Noor, 2016). Leadership style (for example *Transformational Leadership*) is a theoretical and global construct as a joint outcome of leaders' typologies that include personal traits, cognitive characteristics and motives (Toor & Ofori, 2008). Research on styles uses predominant empirical measures in a deductive strategy. Instead, the competencies framework is based originally on Boyatzis (1982). It refers to an articulate collection of motives, skills, behaviors, attitudes and practices that an individual requires to develop and perform a role or task.

Competencies – for example, *understanding of individual differences* – are often raised from the bottom to top with qualitative methods can be at the same time grouping into a cluster

of related dimensions or broken down into specific practices, can be observable, improved, and developed (Riaz, Simon, & Farooq-e-Azam, 2020). On the other hand, some scholars have proposed an alternative to *competencies,* the notion of *practices* (Carroll, Levy, & Richmond, 2008). Both approaches can be considered highly related and complementary since they approximate leadership to understand what leaders do rather than what leaders conceptually are.

The notion of *competencies* has been widely used in the organizational context as a technical approach that defines standards of expected behaviors. The idea of leadership practices emphasizes a perspective focused on understanding leadership actions from 'the unheroic work of ordinary practitioners in their day-to-day routines' (Whittington, 1996, p. 734).

To clarify, the terms practices and competencies are used in this research. It is valuable to know the specific leadership practices involved in changing risk factors and to understand how managers' behaviors can be a critical element of change in their own context (Lewis, Yarker, & Donalson-Feilder, 2012; Nielsen & Noblet, 2018). This research will use the *competency* approach to understand, bottom-up, the point of view of these actors (leaders) and the notion of *practices* to highlight the "experiential, interactive, situated and embodied" (Carroll, Levy, & Richmond, 2008. p. 375) actions that leaders actually perform.

Research on school leaders' competencies for the good management of school organization in Chile has highlighted that leaders must have skills and competencies such as: social skills, ethical commitment to the educational community, ability to foster a positive relational environment, be able to orchestrate collaborative work, possess technical skills and personal resources according to the role they develop (Galdames & González, 2019; Rivero et al., 2019; Parra & Carmen, 2020; Manríquez-Gutiérrez & Reyes-Roa, 2022).

Therefore, the current inquiry explores practices and competencies educational leaders consider for psychosocial risk management in their context (what works and what does not work).

As mentioned above, the notion of *leadership styles* has been used frequently in the empirical measurement of leadership; however, different scholars have used leadership quality in recent years as a worker' appraisal of the effectiveness or quality of leaders. Often this involves an overall assessment of leaders in their capacity to perform some practices. Instead of an abstract style, individuals are requested to rate a leader by assessing their overall effectiveness/quality based on different practices (Madanchian, Hussein, Noordin, & Taherdoost, 2017). According to Francioli et al., (2018):

> An alternative approach could be focusing on an employee's general appraisal of leadership quality instead of assessing his/her perception of one or more specific leadership styles. For instance, the Copenhagen Psychosocial Questionnaire II (COPSOQ II, Pejtersen et al., 2010) measures global perception of ''leadership quality'' by assessing an employee's appraisal of the immediate superior in terms of his/her capacity of ensuring good development opportunities and promoting job satisfaction as well as of his/her effectiveness in planning work and solving conflicts (p. 890).

Accordingly, along with the notion of practices/competences this research uses in the quantitative part a global measure "*Quality of Leadership* practices" to empirically test leaders' influence over specific risks.

3.2.2. Personal Beliefs and Role Identity

Identity arises when people internalize the meanings associated with their social roles and personalize them, imbuing them with a unique meaning. For instance, although the meanings associated with the manager's role may be widely socially understood, each manager will personalize these meanings/associations with their own beliefs and therefore have a slightly different conceptualization of their identity role (Ramarajan, 2014, p. 120). Some researchers

have studied managers' understanding of stress and their personal approaches to it. Some of these studies concluded that managers perceive stress as an individual problem and, therefore, its management is the responsibility of the individual and not the organization (Gardner, 2015). This contrasts with studies on the personal beliefs of workers in general (regardless of their role), which showed their beliefs of that stress at work causes was perceived as predominantly organizational (Kinman & Jones, 2005).

Therefore, this research will explore beliefs, feelings, and self-expectation regarding leaders' role in managing the work environment.

3.2.3. Decisional Space/ Capacities for Decision-Making

According to Arnold (2008), an organization is fundamentally a complex decision space. Not all members have the same decisional abilities. The hierarchy reduces the complexity of decision communication in its vertical dimension. The organization assigns responsibility to decide to certain individuals, specifying the scope of their jurisdiction, possibilities, and restrictions (Arnold, 2008; Opazo & Rodríguez, 2017).

As mentioned earlier, there are possible limitations to the leaders' action and decision-making, since the Chilean school system is highly bureaucratic. On the issue of decision-making capacity and autonomy of school leaders in Chile, it has been suggested that leaders with a higher level of autonomy in the administration of their human resources (personnel administration in general) seem to have better educational results, while schools with greater autonomy in the pedagogical area would have a negative impact on their results (Leyton et al., 2008).

The study will explore leaders' decisional space to propose changes in the work environment and change different risk factors.

3.2.4. Organizational Support

Managers and employees interpret different environmental signals as indications of organizational support (or lack of it). This perception will influence their judgment regarding whether the organization values behaviors related to promoting wellbeing and reducing stress (Casper & Harris, 2008). The inquiry explores participants' perceptions of the actual support they receive, and the potential support needed to manage risk factors. In public education in Chile, several stakeholders or agents are involved that have a role as "organizational support" (or not) for leaders in the School. The most significant are: (a) the Municipal Administration (Municipal Council); (b) DAEM administration; (c) the Teachers' labor association and (d) Education Assistants' labor association (PADEM; 2019). The study will explore school principals' perceptions of the support they receive from these different agents.

3.2.5. Psychosocial Risk Factors

As established in the section above, the psychosocial risk factors approach in the workplace has been increasingly recognized as a means of measuring and researching stress at work. The Chilean Model of Risk Factors (ISTAS 21) based on the Copenhagen Psychosocial Questionnaire (COPSOQ) model represents a pertinent approach for this research as it is an ongoing public policy in the country context. It explores different dimensions, sub-dimensions (or scales), and items regarding psychosocial risks within a broad and comprehensive theoretical background. Specifically, the quantitative component of this research will use different variables composed from scales of ISATS21. The independent variable will be the *Quality of Leadership* practices, and the dependent variables will be *Psychological Demand, Meaningful Work, Job Insecurity,* and *Work-Home Interference* (see Figure 5 on page 51).

3.3. Research Question and Objectives

Consistent with the conceptual framework described above and the current literature gaps, this study aims to answer the following general research questions.

- Q1. Does Leadership practice affect the work environment (psychosocial risk factors) to prevent stress and promote well-being/welfare among the school district workers? The question aims to analyze the psychosocial risks level among workers of Talcahuano school district and examine the quality effect of leadership practices on different psychosocial risk factors. Secondary quantitative data from the ISTAS21 questionnaire, collected from school workers of DAEM in the year 2018 will be used.

- Q2. How does Leadership practice influence the work environment (psychosocial risk factors) and change wellbeing (stress/welfare) among the school district workers? This question explores how school leaders' approach and deal with the work environment and the practices/competencies they use. Primary qualitative data from semi-structured interviews with School managers of DAEM will be used.

- Q3. What personal and contextual factors influence a leader's capability to influence the work environment in the school context? The question examines personal and contextual factors that affect a leader's capability to influence the work environment, including beliefs, self-expectation, decision capacities, as well as obstacles, resources, and support needs from the organization. Primary qualitative data from semi-structured interview to managers will be used.

The objective is to explore the influence of school's leader's role/practices on managing psychosocial risk factors to impact the psychosocial well-being of their co-workers.

CHAPTER 4: METHODOLOGY

4.1. Research Design

The present study was located in one specific School District of Chile: *Talcahuano Department of Municipal Education Administration (DAEM Talcahuano)*. The study is defined as a mixed-methods case study approach. According to Guetterman & Fetters (2018), "Case study integrates well with mixed methods, which seeks a more complete understanding through the integration of qualitative and quantitative research" (p. 900). The term "case study" has multiple definitions and meanings. It is often associated with a type of design (*e.g.* ethnographic), method (*e.g.* qualitative) or instruments (*e.g.* participant observation). In this research, a more precise and encompassing definition of case study is used: "it could be considered a trans-paradigmatic and transdisciplinary heuristic that involves the careful delineation of the phenomena for which evidence is being collected (event, concept, program, process)" (VanWynsberghe & Khan, 2007, p. 80). A case can be an individual, an organization, or an activity that is bounded by certain criteria (Creswell & Plano Clark, 2018).

The general methodological strategy used was mixed methods. Both quantitative and qualitative research methods were used. According to Creswell (2003), this design uses the potential strength of both. Existing quantitative secondary data was used, which is part of new public policy, and also qualitative primary data (the voice of managers), which is essential for new policies and interventions. The use of both sources allowed to confirm, correlate and corroborate the results.

A mixed-methods design should consider four dimensions: a) sequence of data collection, b) weight given to quantitative and qualitative research, c) stage of integration, and d) use of theoretical perspective (Creswell, 2003). This process of the project was sequential (quantitative followed by qualitative approach), unequal weighting approach (giving priority to qualitative

over quantitative method), the integration occurred at the discussion and interpretation stages, and as the study was directly related to theoretical frameworks.

The research process also considered the characteristics of an emergent design. A key defining feature of emergent designs is their flexibility, as they allow some interaction degree between different lines of data at different points in the research (Busetto et al., 2017). This was especially relevant in the complex context of the School District in Chile, which is exposed to broader social and political dynamics and pandemic issues nowadays. During the qualitative data collection process, it was necessary to make some amendments to the criteria and protocols for recruiting participants.

Quantitative data analysis and qualitative data collection began after securing IRB approval from Boston College Institutional Review Board.

Figure 4. Methodological Overview of the Study Approach.
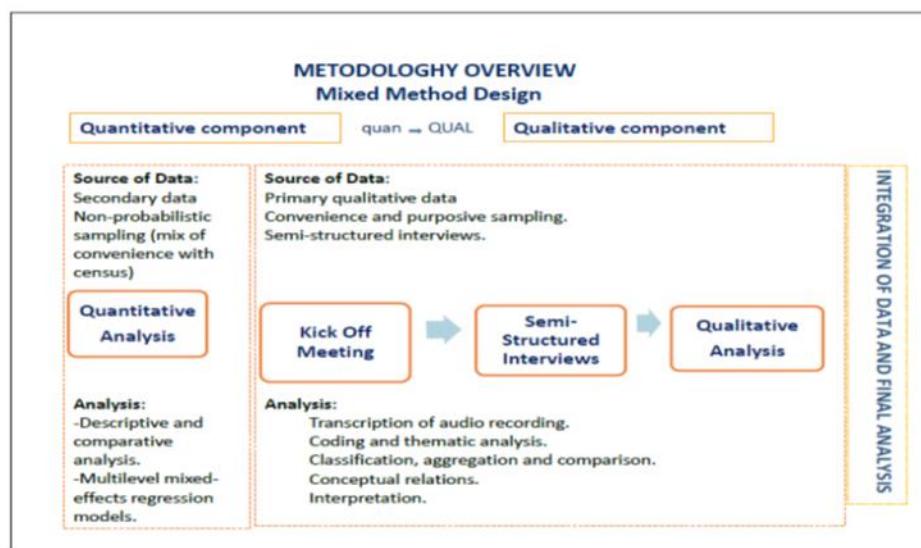
4.2. Quantitative Study

Secondary data were analyzed to address research question 1: Does the *Quality of Leadership* practice affect the work environment (psychosocial risk factors) to prevent stress and promote the wellbeing of school district workers? The level of psychosocial risks among Talcahuano school district workers was analyzed and the effect of leadership quality on different psychosocial risk factors controlling for individual and school-level characteristics was examined.

The model presented in Figure 5 was tested and the magnitude of psychosocial risks affecting DAEM Talcahuano was reported. Also, the *Quality of Leadership* practice correlated with psychosocial wellbeing through 4 psychosocial risks as outcomes (*Psychological Demand, Meaningful Work, Job Insecurity,* and *Work-Home Interference*) was examined.

Figure 5. Quantitative Study Model.
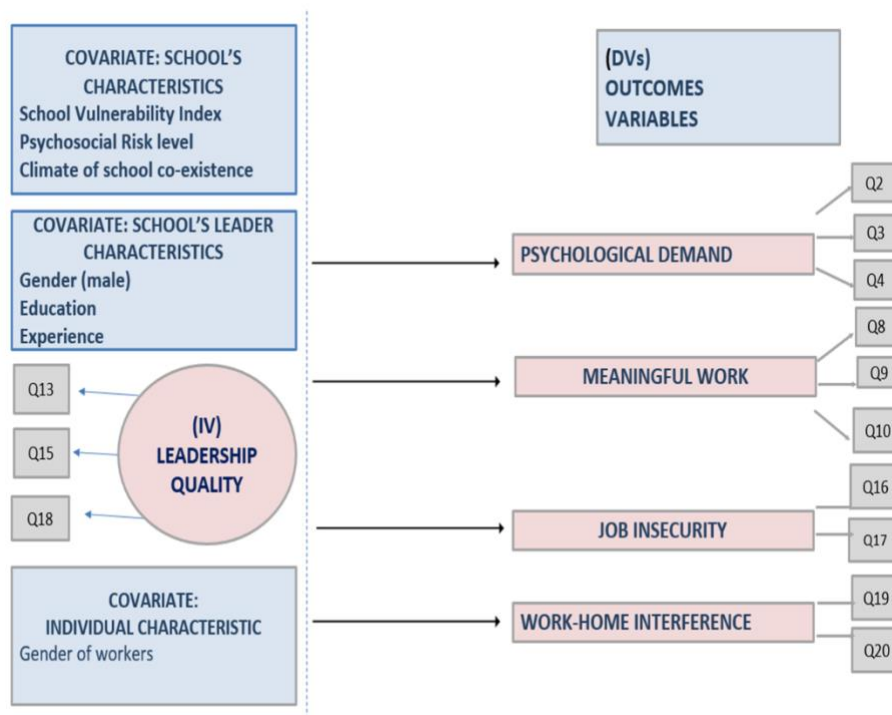
4.2.1. Study Design for Secondary Data

Cross-sectional secondary data, *Protocol of Psychosocial Risks Surveillance* (ISTAS21 short version) collected in 2018 was used. Workers from 24 elementary to secondary Schools of DAEM, including 17 elementary Schools, and 7 secondary Schools were studied. A total number of 1,194 completed an online questionnaire provided by the Superintendence of Social Security (SUSESO). The data was stored by SUSESO and Talcahuano School District. SUSESO classified, with this information, each school in three general risk categories (Low, Medium, or High Risk).

For this study, access to data was provided to the Principal Investigator by the authorities of Talcahuano School District (see Appendix A for the letter supporting data sharing). Data was shared in Excel containing schools' workers' answers for ISTAS21 questionnaire (Protocol of Psychosocial Risks Surveillance, 2018).

Data was shared in different Excel files for each school. Each Excel file contained separate tabs for ISTAS21 responses to the questionnaire associated with each of the demographic variables included in the questionnaire (gender, age, job position, and department). Given the way in which the data were received, namely, the absence of an original identification variable; the different order of the observations in separate excel tabs, there was no way to make a precise correspondence between the demographic variables of the tabs present in each Excel document. From the Excel files, each of the tabs was imported creating a separate database for each of them. These variables had 0 %; 7.6 %; 37.1 % and 30 % of missing cases, respectively. For this reason, it was only possible to use the gender variable, from the respondents' demographic characteristics. Gender is a relevant variable since has been associated with school workers' stress in Chile (Reynaldos, Gray, & Alfaro, 2015; Perez-Franco, 2014; Cabezas et al.,

2022). DAEM administration also provided in Excel information related to the general characteristics of the schools and the features of the school' principals at the time of the questionnaire. School-level variables were created with this information.

Data from schools with preschools only and from the administrative office of the DAEM were excluded since the focus of the analysis was on schools from primary to secondary education.

Sampling was a mix of census with a convenience sample. All school workers were invited to volunteer, and 24 out of 30 Schools unit responded. The average School response rate was 90.6%, ranging from 100% to 42%. Data was nested in Schools units.

4.2.2. Measures

The study employed the ISTAS21 questionnaire (*Protocol of Psychosocial Risks Surveillance*) to describe the risks level and tested the association between the *Quality of Leadership* practice and different risk factors. The current study used items from this questionnaire to construct the independent and dependent variables. The gender of workers' respondents to the questionnaire was also used as a control variable at the individual level.

As noted above, others control variables were created at the school level and referred to school and principal characteristics. All variables correspond to the 2018 measurements.

The Independent variable was the *Quality of Leadership practice* (3 items). Pejtersen et al., (2010) measured a ''*Quality of Leadership*'' global perception by assessing an employee's general appraisal of his/her immediate superior with 3 similar items of the long version of the questionnaire ISTAS21.

Dependents variables correspond to four dimensions of psychosocial risks. These outcome variables have been selected because of previous evidence showing that these risk factors are

relevant to school worker stress. In Chile, research has established that Job meaningfulness and Job demands are highly associated with stress/wellbeing at work in the teaching profession (Cornejo, 2009). In international research *Job Insecurity* and Work family-conflicts have been associated with Schools workers' strain/wellbeing at work (Dicke et al., 2018). Also, in a previous study, all 20 items of this questionnaire (ISTAS21) with the national consolidate dataset from 2017 (229,308 workers around the country) were subjected to exploratory factor analysis (EFA) (Pallamar, 2020. Publishable Paper, in process of publication). These scales represent the highest factor loadings. Therefore, the four outcome domains are theoretically informed and constructed from previous empirically tested scales (see table 1 for the operational description of each variable). They include:

- *Psychological Demand* (3 items): This dimension can be defined as "those aspects of the job that require sustained emotional effort" (Madsen, Diderichsen, Burr, & Rugulies, 2010, p. 435).

- *Meaningful Work* (3 items): According to Steger, Dik, & Duffy (2012) *Meaningful Work* refers to a subjective experience that work one is doing has personal significance, is meaningful and also has a positive valence (growth- and purpose-oriented).

- *Job Insecurity* (2 items): Dachapalli & Parumasur (2012) propose that there is cognitive *Job Insecurity*, which refers to "the likelihood of job loss" and there is affective *Job Insecurity*, which refers to "the fear of job loss" (p. 32). Two items to measure *Job Insecurity* that get at affective *Job Insecurity* will be used.

- *Work-Home Interference* (2 items): Refers to the extent to which work life and home life interfere with each other. According to Greenhaus & Beutell, (1985) family-work conflict

is a form of role conflict in which the demands of work and family functions are mutually

disruptive in some respect.

4.2.2.1. Covariates. Seven covariates were included: 1) individual characteristics such as

the respondents' gender of the workers who responded to the risk factor evaluation

questionnaire. It was coded as 0 (female) or 1 (male). 2) Two types of school-level variables

were included in the analysis. One type is the school's characteristics such as (a) Psychosocial

risk level of the Schools, which refers to low, medium, or high risk according to the result of

ISTAS21 (2018). It was coded as 0= Low Risk; 1 = Medium Risk and 2 = High Risk; (b)

Vulnerability Index of the Schools (IVE) of each school, according to the Ministry of Education,

is based on several dimensions related to the socioeconomic situation of the School's student, it

takes values from 0 to 100%, with higher scores representing higher school vulnerability; (c)

School Climate of Coexistence; this indicator considers the perceptions and attitudes of students,

teachers, parents and guardians regarding the presence of a respectful, organized and safe

environment in the school. It includes questions referring, for example, to the respect level in the

treatment between the different actors of the educational community, the existence of rules of

coexistence, and the management of situations of school violence. It takes values from 0 to 100,

with higher scores representing a better school climate of coexistence. Three variables regarding

the Schools leader's characteristics, all referred to the principal at the time of the questionnaire

(2018), were also included, (d) School leaders' gender, which was coded as 0 = male and 1=

female; (e) School leader's educational level, referred to the educational level attained by the

principal which was coded as 0 = licensed in education and, 1 = Master and doctoral degree and

(f) School leaders' managerial experience, referred to the managerial experience of the school

principals. Two possibilities were considered: Novice (first-time principal) or Senior as a leader

(not first time or more than two years if first-time appointed). It was coded as 0 = Novice and 1 = Senior. Table 1 shows the operational definition of each variable included in the study.

Table 1. Operational Definition of Each Measure.

Variable Type	Construct	Measure
Dependent Variable	*Psychological Demands*	This dimension was measured using three items. The response options ranged from 0 (never/ hardly ever) to 4 (always). a) Does your work require you to make difficult decisions? b) Is your work emotionally exhausting? c) Does your work require that you hide your feelings? A summated index score was created, that ranges from 0 to 12, where higher scores indicate higher levels of *Psychological Demands*.
Dependent Variable	*Meaningful Work*	Scale of three items with response options ranging from 0 (always) to 4 (never/ hardly ever): a) Do you feel that the work you do is important? b) Do you feel that your workplace is of great personal importance to you? c) Do you have the opportunity to learn new things through your work? The responses were reverse coded and then summated for an overall score that ranges from 0 to 12, where higher scores indicate higher levels of perceived meaning.
Dependent Variable	*Job Insecurity*	Scale of two items, the response options ranged from 0 (never/ hardly ever) to 4 (always). a) Are you worried about becoming unemployed? b) Are you worried about being transferred to another job against your will? The responses were summated for an overall score that ranges from 0 to 12, where higher scores indicate higher levels of *Job Insecurity*.
Dependent Variable	*Work-Home Interference*	Scale of two items, the response options ranged from 0 (never/ hardly ever) to 4 (always). a) When you are at work, do you think about your domestic and family requirements? b) Are there situations when you should be at work and at home at the same time?

		The responses were summated for an overall score that ranges from 0 to 12, where higher scores indicate higher levels of *Work-Home Interference*.
Independent Variable	*Quality of Leadership* Practice	Scale of three items, the response options range: 0 (always), to 4 (never/ hardly ever). a) How often do you get help and support from your immediate supervisor? b) To what extent would you say that your immediate superior is good at solving conflicts? c) My superiors give me the recognition I deserve. The responses were reverse coded and then summated for an overall score ranging from 0 to 12, where higher scores indicate better leadership quality.
Co-variate	Respondent's Gender	This variable refers to the gender of school workers who respond to the ISTAS21 questionnaire. Including in the questionnaire 0 (female) or 1 (male).
Co-variate	Psychosocial Risk level of the School	It refers to the general level of psychosocial risk of each School: Low, medium, or high risk according to the questionnaire ISTAS21 general result. It will be code as 0= Low Risk; 1 = Medium Risk and 2 = High Risk.
Co-variate	Vulnerability Index of the Schools	It refers to the general vulnerability index of each School. It takes values from 0 to 100%, closer to 0 is less vulnerable, and closer to 100 more vulnerable.
Co-variate	School Climate of Coexistence	It refers to the climate of coexistence of each School. It takes values from 0 to 100. On this scale, a value closer to 100 indicates a higher level of School climate of coexistence (better coexistence climate) and a value closer to 0 indicates a lower level of School climate of coexistence.
Co-variate	School leaders' gender	It refers to the school principal at the time of the questionnaire. It was coded as 0 = Male and 1= Female
Co-variate	School leader's educational level	It refers to the level of university degree attained by the school principal at the time of the questionnaire. It was coded as 0 = licensed in education and, 1 = Master and doctoral degree.
Co-variate	School leaders' managerial experience	It refers to the managerial experience of the school principals at the time of the questionnaire. Two possibilities were considered: Novice (first-time principal) or Senior as a leader (not first time or more than two years if first-time appointed) It was coded as 0 = Novice and 1 = Senior.

4.2.3. Data Analysis

        4.2.3.1. **Initial work**. The first step involved data management and importing excel data to Stata 16; data were screened for missingness; variables were created and examined. No missing data were found for items of the psychosocial risk questionnaire.

        A summated index score was created for each dependent variable and the main independent variable. The scales range from 0 to 12 (scales with three items) or 0 to 8 (scales with two items); higher scores indicate higher levels of the variable. As for reliability, these scales had modest to moderate Cronbach's alpha reliability scores:

Psychological Demand (3 items), Cronbach's α: 0.65;

Meaningful Work (3 items), Cronbach's α: 0.63;

Job Insecurity (2 items), Cronbach's α: 0.60;

Work-Home Interference (2 items), Cronbach's α: 0.73; and

Quality of Leadership (3 items), Cronbach's α: 0.80.

        Data was also screened to examine the correlation between all study variables. The relationships were in the expected directions, with some significant positive or negative linear relationships) between the dependent variables and the continuous independent variables. The only exception was the correlation between *School climate of coexistence* and *Job Insecurity* which was not significant. The matrix and scatter graphic suggest a linear correlation, but not very high between independent and dependent variables. Pearson's *r* ranged from 0.02 to 0.5; the strength of the association ranged from weak to moderate. The main explanatory variable (*Quality of Leadership*) showed a significant and negative association with all the dependent variables.

In addition to statistical tests, the normality of the variables, histograms, kernel density, and quantile plots with the normal curve were used. In the case of *Meaningful Work and School Vulnerability Index*, a curve moderately skewed to the left was found. *School Climate of Coexistence* also has a moderate deviation from normality. An inspection of the possible transformation of the variables did not suggest any significant improvement in the normality of the distribution; therefore, the original variables were used.

4.2.3.2. **Descriptive Analyses**. Based on the variables presented above include frequency distributions, measures of central tendency, and variation were first used to analyze:

- General description of DAEM contextual variables: Including the vulnerability index of the schools, the general psychosocial risk of the schools as well as main characteristics of school's managers at DAEM (gender and managerial experience).

- Description of psychosocial risk factors at DAEM using ISTAS21 data. Gender, age of respondents as well as the level of each risk factor of interest (*Psychological Demand; Meaningful Work; Job Insecurity; Work-Home Interference* and *Quality of Leadership* practices).

A two-level multilevel model was developed to explore the effect of schools on each psychological risk factor of interest, using null models (Steele, 2008) the researcher obtained:

- A ranking of the school's level in each variable was obtained and presented.

Next, the *Quality of Leadership* practice correlated with psychosocial well-being through *Psychological Demand, Meaningful Work, Job Insecurity, and Work-Home Interference* were examined. Four different psychosocial risks (outcomes variables) were regressed on the explanatory variable (leadership quality) controlling for the covariates.

4.2.3.3. **Accommodating the nested data structure**. The dataset had a nested data structure: individuals were nested within Schools. This makes it difficult to separate an individual from School-level effects (Garson, 2013). Multilevel mixed-effects models are appropriated for modeling nested data and account for unit-specific effects (schools) in estimating coefficients and standard errors (Leeuw & Kreft, 1995).

In coherence, the original model-building strategy contemplated four steps frequently recommended in multilevel analysis (Hox, 2010):

- First step. Model one –A null model including just the dependent variable (or a model without any predictors) for each outcome variable to estimate the inter-class correlation (ICC) for the model, which provides the portion of the total unexplained variance by grouping (i.e., the degree of clustering in the data) and as a baseline against which the contribution of predictors could be compared.

- Second Step. Model two - the dependent variable is regressed on only individual demographic variables (gender of workers in this case).

- Third Step. Model three - the dependent variable is regressed on covariates that were significant in model two and school-level covariates variables (School vulnerability; School Psychosocial Risk; School Climate of Coexistence; School leaders' gender; School leader's educational level; School leaders' managerial experience).

- Fourth Step. Model four - the dependent variable is regressed on covariates that were significant in models two and three and the independent variable (*Quality of Leadership* practice) is entered in the regression.

In the Multilevel mixed-effects model output, the likelihood ratio test is used to compare the current model to a single-level model with no school (or group) effect (i.e. linear regression).

After each step, *lrtest* command is also used to perform the likelihood ratio test (LR), to check if the additional predictors significantly improved the model's fit. Intraclass Correlation Coefficient (ICC) statistics is used after each model to calculate the degree of clustering in the data. The latter, along with the LR test help to decide whether or not a linear mixed model is necessary. If ICC is zero, the observations within clusters are no more similar than observations from different clusters (Leckie, 2013).

In the preliminary analysis, after running the first step models for each outcome variable, the LR test statistic for all null models showed that a two-level model provided a better fit to the data than the single-level model for all variables, although the level of clustering in the data was (ICC, statistic) low for all variables (reported in results).

In the third step when school-level covariates variables regarding school leaders' characteristics (gender, experience, education) were added a progressive decrease in the Intraclass Correlation (ICC) was observed, remaining essentially at zero. Also, LR test vs. linear model was not any more significant. From that point, the researcher continued with standard regression, keeping the significant models in previous exploratory analysis for each outcome (reported in the results).

4.2.3.4. **Multiple linear regression analyses.** Two different models were used to explore the effect of *Quality of Leadership* on each psychological risk factor of interest. Assuming that each psychological risk has some specificity, the first model (Model 1) included the covariates selected in the previous exploratory analyses specifically for each outcome, adding the covariates related to school principal characteristics (gender, experience, and level of education). In the second model (Model 2) the main predictor variable (*Quality of Leadership*) was included. After

running final models, using the *estat esize* command, the effect size, eta-squared (eta^2) and partial eta^2 were calculated.

Basic assumptions of multiple regression analysis were tested, such as normality of residuals, linearity, multicollinearity and homoscedasticity. Slight evidence of heteroscedasticity related to some outcome variables was found. Therefore, the models were run using a robust adjustment for Standard errors (SEs) and found almost no differences or very small differences in SEs. Nonetheless, robust results are reported for all models. Therefore, just the Adjusted R^2 were reported for all models.

4.3. Qualitative Study

Qualitative data to address research questions 2 and 3 was primary used:

- How does leadership practice influence the work environment and change wellbeing among the school district workers? To answer this question, the qualitative results were considered to understand how school leaders deal with work environment, their practices and competencies.

- What personal and contextual factors influence a leader's capability to influence the work environment in the school context? To answer this question, the qualitative findings will be explored and contextual factors that affect leader's capability to influence the work environment, including beliefs, self-expectation, decision capacities, as well as obstacles, resources and support needs from the organization will be examined.

4.3.1. Sampling/Participant and Recruitment

Participants were leaders/managers (principals or pedagogical head) of Elementary and Secondary Schools of the Talcahuano School District (DAEM Talcahuano). The initial design for participant selection criteria included (1) being a current employee of DAEM Talcahuano and

(2) being the current principal or the pedagogical head of the school for at least six months. Due to the many administrative changes that the school district has undergone in recent times, there were many recently appointed leaders, so the criteria and the form had to be changed to three months. Also, the original version of the recruitment form stated that people must write their names in some place in the mail and get back to the researcher. But potential participants preferred to confirm by phone or WhatsApp, so this possibility was added to the form.

The study used a mix of convenience and purpose sampling to recruit participants for interviews, "from which one can learn a great deal about issues of central importance to the purpose of the inquiry" (Patton, 2002, p. 230).

A key characteristic defined as relevant to guide the recruitment of study participants was the level of psychosocial risk of schools during 2018. The objective was to have leaders from schools with high, medium, and low-risk levels, at that time. This variable is a key aspect to find diversity in the attitudes and beliefs of the subjects in this context (structural saturation).

Data saturation can be understood as the point in data collection and analysis at which new information produces little or no variability in subjects and codes (Guest, Bunce, & Johnson, 2006). Consistent with researchers' suggestions for most research enterprises in which the goal is to understand common perceptions and experiences among a relatively homogeneous group of subjects, "variability in code frequency appears to be relatively stable by the twelfth interview" (Guest, Bunce, & Johnson, 2006, p. 74). According to these criteria, the expected number of managers to be included in the sample was approximately 12 or once saturation was reached.

The agency (DAEM Talcahuano) was involved in accessing the community and the School's managers. The initial tool for recruitment was a kick-off meeting organized by the

DAEM director and DAEM head of the technical pedagogical unit with the Board of Principals. At this meeting, the study's objectives were presented and also an overview of the research plan. The DAEM board expressed their interest in the research topic and agreed to support the research project in two ways: by providing access to secondary data and by introducing the researcher to the principals and heads. After the meeting, one of the board members sent an informative e-mail to all principals and pedagogical heads to inform them about the content of the research; clarifying that participation was voluntary; informing them that each school can participate either through the principal or the pedagogical head; and that researcher would potentially contact them by e-mail to explore their interest in participating.

After this meeting, recruitment emails were sent in waves, considering the variables described above to guide the recruitment (see Table 2). The first wave considered 6 managers from different schools considering the level of risks (low, medium, and high). Within two weeks, another 6 were sent, and successively. Finally, 12 participants were recruited, although after around the ninth interview, no new relevant content came up, indicating saturation had been reached.

Table 2 shows a matrix guide with the dimensions of interest and the final number of participants in each category.

Table 2. Matrix Guide of Purposeful Sampling and Participants in Each Category.

School Psychosocial Risk Level		
Number of participants in each category		
Low Risk: 3	Medium Risk: 5	High Risk: 4

Once the individuals had expressed their intention to participate by answering recruitment mail or contacting the researcher by WhatsApp, the informed consent was sent to participants by mail. The participants signed the consent and email back the form to the

researcher. If participants reported problems with returning the consent document and using a written signature, oral consent was obtained before the interview starts, and it was recorded. In all cases, information was discussed with each participant at the beginning of the interview.

4.3.2. Data Collection

The specific research questions that guide the interview as principal topics are presented in Table 3. For data collection, an interview protocol for semi-structured interviews was developed, with a complete set of interview questions (See Appendix G). Each interview followed the same script, asking the same line of questioning as a systematic way to interview all participants (Stephens, 2021).

Interviews were organized and conducted mostly through the BC Zoom platform, using the command that allows recording the session on the researcher's computer and not in the cloud. Some participants stated that Zoom did not work for them, in these, TEAMS was used, and a couple of participants asked to use Meets. On average, each interview lasted 90 minutes (range 50 to 126).

Table 3. Research Questions Guiding the Qualitative Interview.

What is your approach to solving the work-related stress of your employees?
What are your beliefs, feelings and self-expectation regarding managing of psychosocial risk among your employees?
In your experience, what leadership practices have you found to be the most useful to reduce work-related stress among employees?
What decision capacities do leaders like you currently have to reduce the risk factors among your employees?
What organizational obstacles have you encountered to work toward reducing employee stress?
What organizational support do you need to reduce/prevent employees stress?

4.3.3. Qualitative Data Analysis

First, the audio-recorded interviews were stored in the Boston College secured server. Second, each audio was transcribed as a Word file document.

The data analysis took place in the following stages: 1) Introductory saturation in the data: recording, transcription, and review of data transcription; 2) Reduction or breakdown of the text: summary of each interview and summary of responses to main questions across interviews; 3) Exploration of the text: assembly of themes and coding, using a mixed strategy of "down-coding" from existing categories and "up-coding" from themes that emerge inductively (Padget, 2008). From the protocol, some domains or themes explored in the questions were defined (guided by the theoretical framework), and from there, the themes emerging directly from the experience of the interviewees on each domain were ordered and coded: "A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (Saldaña, 2016, p.3); 4) Organization and integration: underlying patterns and common structures that converged among the participants were identified, and categories were created to represent similarities within the core ideas of each domain among the leaders, final review of categories, creation of tables to sort information and presentation of results (Bernard, 2017; Attride-Stirling, 2001).

Following Padget (2017) recommendation in the results, numbers were presented just in some clear-cut findings:

> The problematic aspects of using numbers should not be ignored. First, numerical findings can give a false impression of precision where none exists… As such, any count of the number of respondents who gave certain information is probably an undercount (a numerator without a denominator) and is thus misleading for those who assume it is a true measure of frequency" (P.323).

As the norm: *all, most, majority, generally, several, many, half, some, few, or a couple* were used, referring to the approximate number of participants for each theme and category emerging from the text (Weiss, 1994; Hill et al., 2005).

4.4. Quantitative and Qualitative Data Integration

To ensure the quality and credibility of the study, the design incorporates data triangulation, including the collection of different data sources (primary and secondary data); quantitative and qualitative data analysis was used.

After conducting data analysis for quantitative and qualitative data, an integration process was performed through conceptual and contrast analysis, where qualitative and quantitative were compared for similarities and differences, integrated, and combined as appropriate to answer research questions (Creswell, 2015). Data is presented in a table as a joint visualization that shows both quantitative and quantitative results simultaneously. This visualization has been proposed to better understand the separate information, from the two methods, in an integrated and unified visual outcome (Guetterman, Fetters, & Creswell, 2015).

4.5. Research Ethics

The study was approved by the Institutional Review Board of Boston College (BCIRB). Approval for the analysis of secondary data was obtained and the collection of primary data from BCIRB (IRB Protocol Number: 22.169.01). The researcher has approved and upgraded the "*Human Research/Social and Behavioral Research Course*" from the Collaborative Institutional Training Initiative (CITI) program.

Upon completion of the data collection process, the BCIRB Quality Assurance Program selected the protocol for a quality review. They determined that all consent forms had been

reviewed and collected correctly and that no compliance issues with information storage had been detected. And conclude no more reviews were needed for this project.

4.5.1. Research Ethics to Analyze Secondary Data

Quantitative, secondary data already existed and was de-identified. The authorities of Talcahuano School District (DAEM Talcahuano) granted formal access to the data to the principal investigator (see Appendix A for the letter supporting data sharing).

4.5.2. Research Ethics to Collect and Analyze Primary, Qualitative Data

During all instances of recruitment (meeting with the Board, recruitment mailing) the voluntary nature of participation was emphasized.

An Informed Consent letter was developed considering all required elements of BC (see Appendix F). All participants were over 18 years old and were the heads of their schools (the principal or head of the technical unit). They were capable of reading and understanding the content of the form. The written informed consent procedure for interviews was sent by email before the interviews and after subjects had expressed their willingness to participate by answering the recruitment mailing (see Appendix E). Participants were asked to sign the consent before the interview. In most cases, their written consent was obtained before the interview. Some of them (4) expressed difficulties to print and send back the document, in these cases, their oral consent was obtained at the beginning of the interview and it was recorded on video. Three of them sent written permission after the interview, but one participant gave just the recorded oral consent.

During the meetings, the consent form was discussed at the beginning. Feedback questions were included in the middle and at the end. Examples include, how do you feel about our conversation? Do you prefer to stop here or continue? At the end of the meeting a closure

question was added: How do you feel about this conversation? All participants expressed that they felt it was a very good experience. Several detailed that it had allowed them to observe and think in perspective; and that in a way it had relieved them to be able to talk about this topic. The researcher told them she was available for further meetings if needed. Debriefing meetings with the DAEM head of the technical pedagogical unit were conducted to monitor possible effects on participants during data collection, no issues were reported.

The participant did not receive a payment and the incentive will be a learning experience through a two days' Workshop on Leadership Development. This incentive has been discussed with the DAEM administration and will be organized during the end of 2023 (see Appendix A).

All qualitative data was stored in the principal investigator folder on the secure Boston College server. All qualitative data were de-identified, and an electronic copy of the interviews was kept as interview transcripts. Each person was assigned a random ID, through a random number generator. This number is associated with the audio and word file. IDs linked to the participants were kept separate from the data that was in the server.

 The audio files will be deleted after the research is finished within 12 months.

CHAPTER 5: RESULTS

This chapter reports the main findings of the research. As described in the previous sections, this study is located in a specific school district in Chile: The Talcahuano Municipal Education Administration Department (DAEM, Talcahuano). A mixed methods analysis was conducted using quantitative and qualitative data. Accordingly, the section consists of two parts. First, the quantitative results will be presented, and then, the qualitative results.

5.1. Results of Quantitative Data

First, descriptive data analyses are presented, including the contextual variables of DAEM Talcahuano, as well as the description of the psychosocial risk factors of interest: *Psychological Demand, Meaningful Work, Job Insecurity, Work-Home Interference* and *Quality of Leadership* practices. For each psychological risk factor, a ranking of schools is presented, as well as the schools that differ significantly from the overall schools' average in each risk. The results of the effect of *Quality of Leadership* on the different psychosocial risk factors, controlling for individual and school characteristics, are presented next. The data utilized correspond to secondary data collected by DAEM in 2018; it had not been analyzed in research before.

5.1.1. Descriptive Analysis

Means, standard deviations and ranges for study variables are presented in Table 4 for the full sample (1,194).

Table 4. Descriptive Statistics of Quantitative Study Variables (N: 1,194).

Variable	N°	Percent	Mean	SD.	Skew	Kurt	Min.	Max.
Psychological Demands	1,194		7.09	2.69	-.26	2.52	0	12
Meaningful Work	1,194		9.90	2.17	-1.29	4.97	0	12
Job Insecurity	1,194		3.56	2.50	0.19	1.98	0	8
Work-Home Interference	1,194		3.63	2.19	0.18	2.23	0	8
Quality of Leadership	1,194		7.38	3.09	-0.41	2.5	0	12
Psychosocial Risk level of the School	1,194							
0. Low risk	293	24.54						
1. Medium	642	53.77						
2. High risk	259	21.69						
Respondent Gender	1,194							
0. Female	903	75.63%						
1. Male	291	24.37%						
School Climate of Coexistence	1,194		72.80	4.70	0.42	2.66	63	84.5
School Vulnerability Index	1,194		88.26	6.5	-0.46	2.53	74.16	99.53
School leaders' gender	1,194							
0. Female	734	61.47						
1. Male	460	38.53						
School leaders' managerial experience	1,194							
0 = Novice	191	16.00						
1 = Senior	1003	84.00						
School leaders' educational level	1,194							
0 = Licensed	449	37.60						
1 = Master/doctoral	745	62.40						

Note: SD= Standard deviation; Skew= Skewness; Kurt= Kurtosis

In the sample of those who responded to the questionnaire, 75.63% of the workers were female and 24.37% were male. These figures are consistent with the information the Ministry of Education provided on gender distribution in the teaching profession in the public system (Study Center, Ministry of Education of Chile, 2021).

As it was previously defined, Psychosocial Risk Factors are those characteristics of working conditions and their organization that affect people's health through psychological and physiological mechanisms that we also call stress (Moncada, Llorens, Navarro, & Kristensen, 2002). According to the general risk measurement of each establishment (Psychosocial Risk level of the School), the following can be observed: 24.54% of the schools have low risk, 53.77% have medium risk, and 21.69% of the Schools have high risk. Overall, 78.31% of the schools reported an appropriate risk level (low or medium).

All dependent and main explanatory variables represent different and specific psychosocial risks. All were measured on a scale of 0-12 or 0-8. Regarding each risk factor, it was observed that on average, workers report an intermediate to high level of *Psychological Demands* (M=7.09, SD=2.69). Higher scores indicate higher levels of *Psychological Demand* and, therefore, more stress risk. A high level of *Meaningful Work* was reported (M=9.90, SD= 2.17). In other words, higher scores in the level of *Meaningful Work* indicate higher levels of perceived meaningfulness and a lower risk of stress. On average, workers reported an intermediate *Job Insecurity* level (M=3.56, SD= 2.50) and *Work-Home Interference* (M=3.63, SD=2.19). For both scales, higher scores indicate higher levels of risk in this dimension.

Regarding the explanatory variable, on average, an intermediate to a high level of *Quality of Leadership* (M=7.38, SD=3.09) was reported; higher scores indicate better *Quality of Leadership* and, therefore, less risk of stress.

Overall, we see that the main psychological risks are related to *Psychological Demands*, *Job Insecurity*, and *Work-Home Interference*. The main protective factor is *Meaningful Work* which is associated with a high positive evaluation.

The other factors refer to the school's characteristics and leaders' (principals') characteristics at the time of the survey (questionnaire) provided by the DAEM Talcahuano administration. On average, Schools reported a high Vulnerability Index (M=88.26, SD=6.5), with high scores indicating a population with poverty and marginalization. On average, *School Climate of Coexistence* was intermediate-low (M=72.80, SD=4.70). This index evaluates the presence of an environment of respect in the establishment; a value closer to 100 indicates a higher achievement in the indicator and, therefore, better climate quality (Chilean Agency for Quality Education, 2016). The characteristics of School leaders (school principals during the year of the questionnaire) show that 61.47% of workers had a female principal, 84% of workers had a senior leader and not novices, and 62.4% of workers had a postgraduate (master's or doctorate) principal.

5.1.2. Comparing Schools by Psychosocial Risk Factors

A two-level multilevel model (see table 6) was developed to explore the effect of schools on each of the psychological risk factors of interest, a model for the mean of the variable with no explanatory variables (null or empty model). From this model, a ranking of schools on each variable of interest was obtained, along with 95% confidence intervals to determine the schools that differ significantly from the overall School mean (Steele, 2008).

The ranking is ordered from 1 to 24. The first positions represent a lower psychosocial risk, while the last positions represent a higher risk in the dimension. In the case of the variables *Psychological Demand*, *Job Insecurity, and Work-Home Interference*, the lower psychosocial risk is associated with lower scores on each of them, as they represent a lower perceived degree of the variable. In the case of *Meaningful Work* and *Quality of Leadership*, the first positions in the ranking also represent a lower psychosocial risk. In comparison, the last positions represent a

higher risk in the dimensions. But in these cases, the lower risk is associated with higher scores. For example, higher scores in leadership quality represent a better-perceived *Quality of Leadership*. In summary, the first positions represent better psychosocial wellbeing for all variables.

Table 5. Schools Rank on Each Psychological Risk of Interest (1= Lowest rank, less risk; 24= Highest rank, more risk).

Rank	*Psychological Demands*		*Meaningful Work*		*Job Insecurity*		*Work-Home Interference*		*Quality of Leadership*	
	School Name	*Mean*	*School Name*	*Mean*	*School Name*	*Mean*	*School Name*	*Mean*	*School Name*	*Mean*
1	A*+	6.45	G*	10.59	A*	2.58	F*	3.08	G*	9.29
2	B*	6.47	A*	10.42	L*	3.07	A	3.30	A*	8.51
3	C+	6.55	D*	10.41	F	3.09	G	3.31	O*	8.36
4	D+	6.56	O	10.39	J	3.15	B	3.40	D	8.07
5	E	6.61	L	10.12	H	3.15	I	3.43	S	7.97
6	F+	6.82	X	10.10	G	3.27	H	3.43	N	7.79
7	G	6.90	J	10.06	E	3.32	Q	3.45	X	7.74
8	H+	6.91	U	10.06	Q	3.35	D	3.49	L	7.74
9	I	6.95	S	10.06	R	3.35	L	3.53	B	7.51
10	J	6.95	C	10.04	N	3.43	C	3.61	C	7.50
11	K+	6.98	I	10.02	B	3.47	R	3.62	U	7.47
12	L	6.99	N	9.99	I	3.48	J	3.63	E	7.42
13	M+	7.10	Q	9.93	C	3.65	W	3.66	I	7.35
14	N+	7.11	R	9.84	M	3.67	E	3.67	H	7.29
15	O	7.13	P	9.80	D	3.68	X	3.75	K	7.17
16	P+	7.24	E	9.74	W	3.71	T	3.75	P	7.09
17	Q	7.26	K	9.73	P	3.81	K	3.76	W	7.07
18	R+	7.26	F	9.72	Y	3.83	O	3.78	F	6.98
19	S	7.35	B	9.70	O	3.94	N	3.81	M	6.82
20	T	7.46	W	9.70	K	3.99	P	3.81	J	6.80
21	U	7.60	M	9.64	U	4.06	U	3.82	R	6.79
22	W*+	7.61	Y*	9.45	T	4.09	S	3.87	Q	6.74
23	X*	7.77	H*	9.41	S*	4.16	M	4.05	Y*	6.71
24	Y*+	7.99	T*	9.09	X*	4.55	Y*	4.10	T*	5.66

* Differ significantly from the average school (95% Confidence Interval)

+ Schools participating in the qualitative part

Table 5 presents the schools' ranking for each psychosocial risk at the time of the questionnaire. In the case of *Psychological Demand*, it was observed that five schools differ significantly from the school's means. Two Schools (A and B) scored significantly below the mean, showing a lower risk in this variable. Three schools (W, X, and Y) scored significantly above the mean, thus showing a higher *Psychological Demand* than the other schools.

Regarding *Meaningful Work,* the three Schools that occupied the first place in the ranking (G, A, D) scored higher than the average Schools. This means less risk and more *Meaningful Work* for staff in these three Schools. Three schools (Y, H, T) scored lower than the average Schools, indicating less *Meaningful Work* and more risk for staff.

In the case of *Job Insecurity*, two schools (A, L) scored significantly lower than average Schools and, therefore, have less risk in this dimension. Two Schools (S, X) scored significantly higher than the average, showing more *Job Insecurity*.

Regarding *Work-Home Interference,* only one school scored significantly lower than the average score (F), showing less *Work-Home Interference* than the others, while one school scored higher than average (Y), showing more *Work-Home Interference*.

As for the independent variable, *Quality of Leadership*, three schools ranked first (G, A, O). A higher score than average schools on this scale means less risk and better leadership quality than the others. Two schools ranked last and scored lower than average schools (Y, T), implying the lowest *Quality of Leadership* and more risk for staff.

School A is distinguished from the others by having a significantly lower psychosocial risk than the average school in four risks: *Psychological Demand, Meaningful Work, Job Insecurity,* and *Quality of Leadership*. It is also observed that this school is the second with the least *Work-Home Interference* score, although the difference is not statistically significant with

respect to the average school. Overall, it stands out from the others as a school with lower risk and higher wellbeing.

School G shows significantly lower psychosocial risk than the average school score on two variables: *Meaningful Work* and *Quality of Leadership*. It is also noted that it ranks third in the *Work-Home Interference* score, which implies less interference; although, it is not a significant difference from the average. It also stands out as a school with lower risk.

School D shows a lower psychosocial risk in *Meaningful Work* than the average school score. This school also shows a high score (rank 4) on two risks: *Psychological Demands* and leadership quality (implying lower risk); however, the difference is not statistically significant with respect to the average school.

On the other hand, school Y shows significantly higher psychosocial risk than the overall school average on four variables: *Psychological Demand, Meaningful Work, Work-Home Interference, and Leadership Quality*. This school stands out from the others as a school with higher risk and lower wellbeing.

School T shows significantly higher psychosocial risk in *Meaningful Work* and *Quality of Leadership* than the overall school average. This school also shows a low ranking (20 and 22) on *Psychological Demands* and *Job Insecurity*, and therefore, more risk; although, this is not a statistically significant difference compared to average schools.

School X shows significantly higher psychosocial risk than the average school on two variables: *Psychological Demands* and *Job Insecurity*.

5.1.3. Exploring the Effect of Leadership Quality on Different Psychological Risk factors

In order to test the first research question –*Does the Quality of Leadership practice affect the work environment (psychosocial risk factors) to prevent stress and promote the wellbeing of*

school district workers? –, a two-level mixed-effects regression model was first specified for each dependent variable.

   5.1.3.1. Nested data structure. As described in the methodology chapter the dataset has a nested data structure: workers are nested within schools. This makes it difficult to separate individual effects from organizations (schools) level effects (Garson & Garson, 2014). Multilevel modeling allows researchers to investigate the nature of between-group variability and the effects of group (Schools) level characteristics on individual outcomes. Thus, mixed-effects regression models were estimated to control for the nested nature of the data. The most common rule of thumb with regard to sample size for multilevel models is at least 20 groups and at least 30 observations per group (Heck & Thomas, 2020). In this sample, 1,194 workers from 24 schools (17 elementary and 7 secondary Schools) were included.

   In multilevel analysis, the recommendation is to follow the bottom-up strategy (Hox, 2010). Adding complexities in steps can help complex models converge while keeping simple model interpretation.

   Table 6 shows the results of the multilevel analysis. First, the ICC was calculated based on the unconditional model (null model) to specify and fit the two-level model. The ICC indicated that the proportion of variance to be explained in the DVs at the school level: "the proportion of the variance explained by the grouping structure in the population" (Hox 2002, p.15). For all outcomes variables, ICC ranged from 5% to 2% (*Psychological Demands*= .04; *Meaningful Work* = .04; *Job Insecurity* = .05; *Work-Home Interference*= .02). The LR test statistic for all null models showed that a two-level model provides a better fit to the data than the single-level model for all outcome variables, although the level of clustering in the data was low for all variables (Leckie, 2013).

In the second step, Level 1 covariates –variables at the individual level – were added to the null model, a model with the worker's gender and their associated fixed effects. Using the likelihood ratio test, the deviance difference between this model and the previous model (null model) was calculated and was not significant for any of the dependent variables. For all dependent variables, gender was not significant. As the LR test did not confirm that the additional predictor significantly improved the model fit, the gender was not added to the fixed effects in the next phase of the analysis.

Table 6. Multilevel Mixed-Effects Regression Models for Each Outcome Variable (n=1,194).

	Psychological Demands		Meaningful Work		Job Insecurity		Work-Home Interference	
NULL MODEL								
Fixed Effects	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Constant	7.08***	.13	9.91***	.11	3.58***	.13	3.63***	.09
Random Effects								
Organization level Variance (cons)	.26	.11	.18	.08	.28	.12	.11	.06
Person-Level (Residual)	6.94	.29	4.53	.19	5.98	.25	4.70	.19
LR test vs. linear model: chi2(2)	24.02***	-	18.27***	-	27.34***	-	10.82***	
Intra-Class Correlation								
Organization level	.04	.01	.04	.02	.05	.02	.02	.01
GROUP LEVEL COVARIATES								
Fixed Effects								
School Vulnerability	.05***	.01	-	-	.05***	.01	-	-
School Climate	-	-	-	-	-	-	-	-
School Psychosocial Risk								
Medium Risk	53**	.19	-.32	.19	.70***	.21	.37*	.19
High risk	1.07***	.24	-.98***	.24	.88***	.26	.82***	.23
Constant	2.23*	1.12	10.29***	.16	-1.21	1.17	3.26***	.16
Random Effects								
Organization level Variance (cons)	.02	.04	.06	.05	.05	.05	.05	.04
Person-Level (Residual)	6.94	.29	4.54	.19	5.99	.25	4.69	.19
Intra-Class Correlation								
Organization level	.003	.006	.01	.01	.01	.01	.01	.01
Likelihood-ratio test (LR chi2)	10.30***	-	12.91***	-	11.53**	-	10.70**	

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

In the third step, group (school) level covariates were included for each outcome variable in the null model. Two types of school-level variables are included in the analysis. One type is general school characteristics: school vulnerability, level of psychosocial risk, and school climate. The second type is school leaders' characteristics (gender, experience, education) at the time of the questionnaire. Given the low level of clustering, careful consideration was needed in order to avoid introducing too many variables at the same time. Firstly, one variable at a time was added, representing the general school characteristics. After each regression model, the Likelihood-ratio test (LR chi2) was performed to compare the model with the previous model and confirm if the additional predictor significantly improves the model's fit in each case. The final model (reported) included predictors that significantly improved it.

In the case of *Psychological Demand* and *Job Insecurity*, it is observed that School Vulnerability and the School Psychosocial Risk level are significantly and positively associated with these outcomes. *School Climate* was not associated with any of them; the likelihood ratio test did not confirm that this predictor significantly improves the model fit in both cases.

As for *Meaningful Work* and *Work-Home Interference*, only *School Psychosocial Risk* is significantly associated with these outcomes. Specifically, being in a high-risk school –compared with being in a low-risk school – was associated with a decrease in workers' vision of having a meaningful job. On the other hand, being in an intermediate or high-risk school – compared with being in a low-risk school – was associated with an increase in workers' *Work-Home Interference*. The other two covariates showed no association with these outcomes and the likelihood ratio test did not confirm that any of these predictors significantly improved the previous model fit. It is interesting to note that *School Climate* was not associated with any of the psychological risks of interest.

With the inclusion of the other covariates –not reported here – related to school leader characteristics (gender, experience, education), a progressive decrease in Intra-class, Correlation (ICC) was observed, remaining essentially at zero. That means that all variability within the model has been accounted for, and adding school-level clustering adds nothing to the model. Also, LR test vs. linear model was not any more significant when adding these variables. This was followed by standard regression, keeping the significant models in previous exploratory analysis for each outcome.

In summary, in the final models (with the general characteristics of the schools), a substantial reduction in the *Intraclass Correlation* was observed –ICC of the null model ranged between 5% and 2% –, for all outcome variables. The ICC of the final models now ranged from 1% to 0.03% (*Psychological Demands* = 0.003; *Meaningful Work* = 0.01; *Job Insecurity*= 0.01; *Work-Home Interference*= 0.01). When new variables related to the characteristics of principals from each school are included, the Interclass Correlation practically registered a value of zero. In line with this, a reduction of the variance parameters at the organizational level could be observed at each successive step the between-school variance reached zero, but the between-subject variance showed very small changes.

 It can be stated that the predictors added to the model reduced the between-school variance to zero. But since very few individual-level variables (only gender) were available as predictors, the models did not add significant changes within individual level variance.

5.1.4. Testing the Effect of Leadership Quality on Different Psychosocial Risks Among Schools' Workers: Multiple Regression Analysis

To predict each *Psychosocial Risk Factor* (*Psychological Demands, Meaningful Work, Job Insecurity, Work-Home Interference*), two sets of multiple regression models were tested. In

Model 1, the dependent variable (e.g. *Psychological Demands*), was regressed on the School

Characteristics selected in the previous exploratory analyses specifically for each outcome,

controlling for the covariates related to the school principal's characteristics (gender, experience

and level of education). In Model 2, *Quality of Leadership* was added to Model 1. In other

words, Model 2 tested if the *Quality of Leadership* explained any additional variance in a

Psychosocial Risk Factor, after controlling for School and School Principals' characteristics.

Table 7 shows the regression results predicting *Psychosocial Risk Factors* (*Psychological*

Demand; Meaningful Work; Job Insecurity; Work-Home Interference). More detailed results for

each Model are provided in Appendix G.

Table 7. Regression Results for Predicting Psychosocial Risk Factors from Leadership Quality.

Table 7 *Regression results for predicting Psychosocial Risk Factors from Leadership Quality*

	Psychological Demands				Meaningful Work				Job Insecurity				Work-Home Interference			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
Variable	*B* (SE)	β	*B* (SE)	β	*B* (SE)	B	*B* (SE)	β	*B* (SE)	B	*B* (SE)	β	*B* (SE)	β	*B* (SE)	β
School Vulnerability	0.05*** (0.01)	0.12	0.05*** (0.01)	0.13					0.04** (0.01)	0.11	0.04*** (0.01)	0.11				
Psychosocial Risk																
Medium Risk	0.46* (0.20)	0.09	0.39* (0.19)	0.07	-0.25 (0.17)	-0.06	-0.15 (0.14)	-0.04	0.80*** (0.18)	0.16	0.77*** (0.18)	0.15	0.30 (0.16)	0.07	0.29 (0.16)	0.07
High Risk	0.62* (0.25)	0.09	0.39 (0.23)	0.06	-0.83*** (0.21)	-0.16	-0.53** (0.19)	-0.10	0.88*** (0.24)	0.14	0.76*** (0.24)	0.13	0.80*** (0.21)	0.15	0.77*** (0.22)	0.14
Leader Experience																
Senior	-0.60* (0.25)	-0.08	-0.45 (0.25)	-0.06	0.13 (0.20)	0.02	-0.05 (0.18)	-0.01	-0.28 (0.23)	-0.04	-0.20 (0.24)	-0.03	-0.05 (0.21)	-0.01	-0.04 (0.21)	-0.01
Leader Gender																
Male	0.52** (0.17)	0.09	0.39* (0.16)	0.07	-0.05 (0.14)	-0.01	0.15 (0.12)	0.03	-0.22 (0.16)	-0.04	-0.29 (0.16)	-0.06	-0.18 (0.14)	-0.04	-0.20 (0.14)	-0.04
Leader Education																
Master/Doctoral	0.15 (0.17)	0.03	0.18 (0.16)	0.03	0.21 (0.15)	0.05	0.15 (0.13)	0.03	0.29 (0.16)	0.06	0.31 (0.16)	0.06	-0.17 (0.14)	-0.04	-0.17 (0.14)	-0.04
Leadership Quality			-0.24*** (0.02)	-0.28			0.34*** (0.02)	0.48			-0.13*** (0.03)	-0.16			-0.03 (0.02)	-0.04
Constant	2.47* (1.24)		3.94** (1.19)		10.00*** (0.26)		7.47*** (0.30)		-0.53 (1.17)		0.23 (1.15)		3.52*** (0.25)		3.74*** (0.31)	
Observations	1194		1194		1194		1194		1194		1194		1194		1194	
F-test	10.08***		23.25***		6.30***		53.11***		8.98***		11.96***		4.28***		3.96***	
Adj R²	0.05		0.12		0.03		0.25		0.04		0.06		0.02		0.02	
AIC	5705.93		5608.84		5217.30		4903.26		5542.52		5514.97		5254.46		5254.54	

Overall, when comparing both models (1 and 2) for each outcome variable, it is observed that all models are significant (F p<.0001). The independent variables in each model jointly explain between 2% and 25% of the variance in the outcome variable (adjusted R^2 comparison between Models). For three of these psychosocial risks (*Psychological Demands*, *Meaningful Work,* and *Job Insecurity*) Model 2 incorporating leadership quality clearly explains more variance in the outcome variable (adjusted R^2 "*Psychological Demands* ": model 1 = 5%; model 2=12% =; " *Meaningful Work* ": model 1 = 3%; model 2: 25%; "*Job Insecurity*": model 1 = 4%; model 2: 6%). In the case of "*Work-Home Interference*", no difference was found between the two models (adjusted R^2: Model 1= 2%; Model 2: 2%).

It is important to note that the Adjusted R^2 can indicate the usefulness of a model, adjusted for the number of predictors in a model. A higher adjusted R^2 indicates that additional input variables are adding value to the model. Besides, observing the Akaike's Information Criterion (AIC) for *Psychological Demands*, *Meaningful Work,* and *Job Insecurity*, it is noted that the Model 2, incorporating *Quality of Leadership,* has a lower AIC (AIC: "*Psychological Demands*": model 1 = 5705,93; model 2=5608,84; "*Meaningful Work*": model 1 = 5217,30; model 2: 4903,26; "*Job Insecurity*": model 1 = 5542,52 model 2=5514,97), and therefore offers a better fit for the data (Bevans, 2022).

Model 2, predicting *Psychological Demand*, shows that its regression on the predictor variable *Quality of Leadership* and covariates (School Vulnerability; School Psychosocial Risk: Leader Experience; Leader Gender and Leader Education) is statistically significant with F (7, 1,186) 23.25=, p<.001. All these predictors jointly account for 12 % of the variance in *Psychological Demand* (Adj. R^2=0.12). There is a statistically significant and negative relationship between the *Quality of Leadership* and *Psychological Demand* (b=-0.24; t=-9.52;

p<.0001). As the mean *Quality of Leadership* score improves by 1 unit, the *Psychological Demand* score decreases by 0.24 of a unit, controlling for other factors. Therefore, improvement in *Leadership Quality* is associated with a decrease in *Psychological Demand* and the risk of stress on this dimension.

Looking at the general characteristics of the schools, there is a statistically significant relationship between school vulnerability and *Psychological Demand* (b=-0.05; t=-4.45; p<.0001); as the mean school vulnerability score increases by 1 unit, the *Psychological Demand* score increases by 0.05 of a unit. In the case of the general psychosocial risk of the schools, if all the variables remain constant, those who are in medium risk schools have, on average, 0.39 unit (b=-0.39; t=-2.06; p<.05) higher level of *Psychological Demand* compared to those who belong to low risk schools. Surprisingly, high risk is not significantly associated with *Psychological Demand* (a significant association was observed in the previous model) when leadership quality is introduced as a predictor variable. It is likely that there is an overlap between school risk and leadership quality, as the latter is a specific type of risk and thus could drown out the former.

Regarding the school leader's characteristics, just gender was significantly associated with the outcome variable. If all the variables remain constant, those in schools with male principals have on average 0.39 (b=-0.39; t=-2.47; p<.05) higher level of *Psychological Demand* compared to those who belong to schools with female principals. This result needs further research but is in line with some research in Chile which indicates that female principals have higher scores in leadership competencies that potentially influence the stress (psychosocial risk) of school workers, such as cordial treatment, feedback and constant monitoring (Castro et al., 2019).

Meaningful Work Model 2 shows that the regression on the predictor variable *Quality of Leadership* and covariates (School Psychosocial Risk; Leader Experience; Leader Gender and Leader Education) is statistically significant with $F_{(6, 1187)}$ 53.11=, p<.001. All these independent variables jointly account for 24.9 % of the variance in *Meaningful Work* (Adj. R^2=0.249). There is a statistically significant relationship between *Quality of Leadership* and *Meaningful Work* (b=-0.34; t=-16.10; p<.0001). As the mean *Quality of Leadership* score improves by 1 unit, the *Meaningful Work* score increases by 0.34 of a unit.

In the case of general psychosocial risk of the schools, if all the variables remain constant, those in higher risk schools have on average 0.53 (b=-0.39; t=-2.06; p<.05) lower level of *Meaningful Work*, compared to those who belong to low-risk schools. No relationship was found between medium risk and *Meaningful Work*. As for the characteristics of school leaders, none showed any association with *Meaningful Work*.

The regression *Job Insecurity* on the predictor variable, *Quality of Leadership* and covariates (School Vulnerability; School Psychosocial Risk: Leader Experience; Leader Gender and Leader Education) is statistically significant with $F_{(7,1186)}$ 11.96=, p<.001. All these independent variables jointly account for 6 % of the variance in *Job Insecurity* (Adj. R2=0.06). There is a statistically significant and negative relationship between leadership quality and *Job Insecurity* (b=-0.13; t= -4.86 p<.0001). As the mean leadership quality score improves by 1 unit, the *Job Insecurity* score decreases by 0.13 of a unit, controlling for other covariates. Looking at the general schools' characteristics, there is a statistically significant relationship between school vulnerability and *Job Insecurity* (b=-0.04; t=-3.60; p<.0001), as the mean school vulnerability score improves by 1 unit, *Job Insecurity* score increases by 0.04 of a unit.

As for general psychosocial risk, holding all other variables constant, those who are in medium risk schools have on average 0.77 unit (b=-0.77; t=-4.29; p<.001) higher level of *Job Insecurity* compared to those who belong to low-risk schools. Besides, on average, those in high-risk school have 0.76 (b=-0.76; t=-3.17; p<.001) higher level of *Job Insecurity* compared to those who belong to low-risk schools. Regarding the school leader characteristics none showed any association with *Job Insecurity.*

Work-Home Interference Model 2 shows that its regression on the predictor variable *Leadership Quality* and covariates (School Psychosocial Risk: Leader Experience; Leader Gender and Leader Education) is statistically significant with F (6, 1187) 3.96=, p<.001. The independent variables jointly account for a total of 1.9 % of the variance in *Work-Home Interference* (Adj. R^2=0.019). Leadership quality was not related to *Work-Home Interference*. As for the Psychosocial risk of the School, if all the variables remain constant, those in a high-risk school have, on average, 0.77 unit (b=-0.77; t=-4.29; p<.001) higher *Work-Home Interference* compared to those who belong to low-risk schools. None of the characteristics of school principals were associated with *Work-Home Interference*.

After running the final models, the effect size was calculated using eta-squared (eta^2) and partial eta^2, using the estat size command. Effect size measures the size of the association between variables in the model. This represents the unique variance explained by each predictor in the model. The epsilon option was also used. This option represents the adjusted partial eta squares in the context of multiple predictors. This is similar to the "adjusted R-square." Table 8 shows that the *Quality of Leadership* variable alone explains about 8% of the observed variation in *Psychological Demand*, 23% in *Meaningful Work*, 2% in *Job Insecurity*, and 0.2% of *Work-Home Interference*.

Table 8. Effect Sizes for the Effect of Quality of Leadership on Each Outcome Final Model.

	Eta2 [95% Conf. Interval]	Epsilon-Squared
Psychological Demands	.08 (053 .110)	.08
Meaningful Work	.23 (.192 .272)	.23
Job Insecurity	.02 (.010 .044)	.02
Work-Home Interference	.002 (… 009)	.0007

Table 9. Effect Sizes for All Variables in Each Outcome Final Model.

Variables	*Psychological Demands*	*Meaningful Work*	*Job Insecurity*	*Work-Home Interference*
	eta^2	eta^2	eta^2	eta^2
Vulnerability	.02		.01	
Risk	.004	007	.02	.01
Managerial Experience	.003	.000	.000	.000
Leader Gender	.004	.001	.003	.002
Educational Level	.001	.001	.003	.001
Leadership Quality	.08	.23	.02	.002
Model	.12	.25 .	.06	.02

Table 9 shows the unique variance explained by each variable in the outcomes. For *Psychological Demands*, *Meaningful Work* and *Job Insecurity*, *Quality of Leadership* explains the largest unique percentage of variance.

The results of the analysis indicated that the influence of *Quality of Leadership* makes a larger relative contribution to explaining variation in two outcomes: *Psychological Demands* and *Meaningful Work*. It is interesting to note that *Psychological Demand* is a relevant risk in this context (intermediate high level). On the other hand, *Meaningful Work* shows a low risk and can be seen as a protecting factor. It also affects – although to a lesser extent –the perception of *Job Insecurity*, which remains statistically significant.

A limitation of the quantitative results is the models are weak at best in explaining the outcome variables (the adjusted R^2 showed that the models explain between 1.8% and 24.9% of the response variability). It is important to keep in mind that this analysis leaves out multiple individual-level covariates that were not accessible and some contextual factors of the

organization that can enable or constrain the effects of leaders. The extent of the leadership quality influence in the context of public education in Chile will be examined in greater depth in the qualitative component of this dissertation.

5.2. Results of Qualitative Data

This section presents the results of qualitative data associated with research questions 2 and 3 of this dissertation:

2. How do leadership practices influence the work environment and change wellbeing among school district workers?; and
3. What personal and contextual factors influence a leader's capability to influence the work environment in the school context?

The results come from twelve semi-structured interviews with leaders of the Talcahuano Department of Municipal Education Administration (DAEM Talcahuano) conducted in 2022.

The first section presents demographics and descriptive data regarding the participants' characteristics (school directors and technical heads) and the schools they lead. The second section presents qualitative analyses of the results collected.

5.2.1. Participant Characteristics

Twelve leaders from different schools of DAEM Talcahuano participated in the study. From each of the 12 schools, either Principals or Pedagogical Heads were interviewed. Table 14 shows the participant's characteristics and some relevant characteristics of the school to which they belong.

Table 10. Participant and School Characteristics of the Qualitative Study.

Participant Label	Gender	Title	Education	Experience	School label	School Type	Number of students in each school	The risk level of the school (2018)
P1	Female	Principal	Licensed /Certificate	Senior	A**	Elementary/ Middle	388	Low Risk
P2	Male	Head	Licensed/ Master	Novice	C	Elementary/ Middle	378	Medium Risk
P3	Female	Principal	Licensed/ Master	Senior	D**	Elementary/ Middle	400	Low Risk
P4	Male	Principal	Licensed/ Master	Senior	F**	High School	1005	Medium Risk
P5	Female	Principal	Licensed	Senior	H	Elementary/ Middle	279	Low Risk
P6	Female	Principal	Licensed/ Master	Senior	K	Elementary/ Middle	106	High Risk
P7	Female	Head	Licensed /Certificate	Senior	M	Elementary/ Middle	134	High Risk
P8	Female	Principal	Licensed/ Postgraduate	Senior	N	Elementary/ Middle	267	Medium Risk
P9	Male	Head	Licensed	Senior	P	High School	213	Medium Risk
P10	Male	Head	Licensed	Senior	R	High School	249	Medium Risk
P11	Female	Head	Licensed/ Master	Senior	W*	High School	601	High Risk
P12	Female	Principal	Licensed/ Master	Senior	Y*	High School	498	High Risk

*** Schools that differ significantly from the average school (better psychosocial wellbeing) in some of the psychosocial risk factors measured in 2018*

** Schools that differ significantly from the average school (lower psychosocial wellbeing) in some of the psychosocial risk factors measured in 2018*

As shown in Table 14, one-third of the participants were male and two-thirds female; five pedagogical heads and seven principals. Six participants have a Master's degree in addition to their Licentiate degree. Almost all were senior in their positions (more than two years as leaders). Seven of the twelve belonged to elementary/middle schools and five to high schools. Three of them belonged to schools with low psychosocial risk levels in the 2018 measurement, five with medium risk, and four to high-risk schools. The researcher intended to purposefully select individuals at

each institution type to explore the variation in experience. The questionnaire, *Protocol of Psychosocial Risks Surveillance, 2018*, is the last complete measurement of psychosocial risk that schools have. This measurement was repeated in 2022, but the results were not yet available on December 2022. The number of students in each school ranged from 106 to 1005.

Research Question 2 explored how leadership practice influenced the work environment and changed wellbeing among school district workers. Moreover, principals and heads were asked about their appreciation of the stress sources in schools, and their approach to the role of leadership in employee stress. They also were asked about their beliefs, feelings, and self-expectations regarding psychosocial risk management and the leadership practices and competencies for psychosocial risk management they considered the most appropriate for educational leaders (see Appendix G for more detailed questions). This section presents the general understanding of leaders regarding research question 2. Some queries asked about this question were:

- How do you understand stress at work?
- Do you find your job stressful? How?
- What work stress issues do employees and managers face daily in this organization?
- How well do you feel you can handle stress issues affecting your team members? Have you ever felt that something you have done, or even haven't done, has been the cause of stress in your team?
- What personal qualities do you identify that help you to deal with stress on workers and teams?
- In your view, what are a leader's role and your role in dealing with people's stress at work?
- How do you approach other people's stress at work?
- Can you describe behavior, competencies, practices, actions or strategies you feel were effective at a time when an employee (or employees) were under pressure or stress?

The analyses of the responses to the above questions, resulted in three main domains:

    2.1. Meaning and causes of stress at work;
    2.2. Beliefs, feelings, and self-expectation regarding the managing of psychosocial risks; and
    2.3. Practices and competencies for psychosocial risk management.

5.2.2. Meaning and Causes of Stress at Work

The participants provided two types of general understanding of stress at work. Some defined stress as the consequences of people´s reactions to diverse stressful stimuli such as work-related tension, pressure, fatigue, sudden mood changes, anxiety, and disabling emotional state. For example, P2 said:

> It is like a state of discomfort that contaminates all areas of personal and work life. It has its origin in multiple factors and one person may have more tools to manage stress than others, which is why we are all affected and manifests itself in different ways (...)".

All participants acknowledged that their work as managers was –to varying degrees – stressful. Some of them felt their job was very stressful. One of the leaders (P3) acknowledged having had, several years ago, a severe case of stress related to work, experiencing sweating, tachycardia, and lack of sleep.

Some participants also reported protective factors. As noted by a respondent below, professional satisfaction, "vocation" or the enjoyment and taste for teaching, were considered protective factors.

> From my experience, I think that my job is stressful, it is more stressful when I don't have control of my job, and I think that…I have always believed that teachers, those of us who work in education, definitely have to have a vocation. Because I believe that without a vocation, there is a lot of stress in this profession. (P8).

Several participants defined stress directly by pointing to the external causes that trigger it. The main causes of their stress are the workload; the permanent state of alert due to being in charge of everything; managing different types of people (teachers, students and parents), especially parents; the vulnerable social context in which they work; the high emotionality of students and parents during the pandemic; and the complex handling of school coexistence. They also highlighted many schools' lack of infrastructure, equipment, and supplies. Several referred to the

constant changes of regulations and guidelines that come down from the central level (especially during the pandemic and post-pandemic emergency) that directors must implement.

Several of them thought they managed their stress well, and some enjoyed their work, but all recognized that it was stressful for the teachers in charge. The main cross-cutting causes of employee stress attributed by leaders are summarized in the following seven themes (see Appendix H, Table 15).

5.2.2.1. Workload and Working Hours. A common topic among respondents is that the pedagogical work in Chile, especially in the public sector, consumes time and energy. Leaders perceived that workload and working hours were heavy:

> In Chile, the time teachers have for planning and organizing the class, reflection, sharing, or monitoring learning is insufficient; that is to say, it does not exist… to be a good teacher in Chile you have to work 365 days a year, 24 hours a day; otherwise, it cannot be done. (P5).

Some interviewees mentioned law 20,903 (2016). Before that law, 75% of the teachers' contract time was destined for developing direct classroom teaching activities and 25% for non-teaching curricular activities. As of 2019, classroom teaching time was set at 65% and non-teaching time at 35%. They considered that this allocation of time is still insufficient:

> "we observe how the classroom teacher is taking work home. After work, he/she comes home to review assignments, review quizzes and evaluations. And logically everything that has to do with planning, planning their classes. All of this is generally done at home..."(P4).

They highlighted they are exposed to a vulnerable school population that also requires extra efforts from teachers beyond the teaching class time.

5.2.2.2. Pandemic Consequences. The effect of the pandemic on teachers' work stress is a cross-cutting theme among interviewees. Uncertainty was a very relevant aspect as a stress factor. A concrete example is the management of virtual media. Many teachers did not properly handle

these resources and had to be trained. On the other hand, the families of the students and the students themselves were not prepared for the technology of virtual classes.

"The pandemic hit us hard. The first line was Health, but behind was Education, in general, because we could not abandon our task at any moment, we did not have the competencies, nor were we prepared for it" (P8).

Several of them confirm that during the pandemic period, teachers worked from home but without time limits, talking to parents and students to maintain online attendance. The teachers' planning, executing, monitoring, and evaluating of student progress online were complicated. Also, internet access/availability was a problem at the beginning. The school district (DAEM Talcahuano) provided most students with tablets and Internet connections. Consequently, only 3% of the students were left without technical access to virtual classes (DAEM information). However, according to the directors, the online attendance of students remained a relevant problem, particularly in cases of a lack of parental support/involvement.

Another difficult situation was registering the continuity of studies and attendance online, combined with the perceived ambiguity regarding the promotion policy at virtual times:

Some students had no clear continuity of virtual studies attendance… And we were faced with the question of whether to make them pass or fail…So, suddenly, all these things that have been happening due to pandemic issues have generated uncertainty because the students ask questions, the teaching staff asks… (P9).

For managers, school workers are still experiencing some psychosocial consequences of the pandemic.

5.2.2.3. Return to Face-to-Face Attendance. All participants considered the return period after confinement as a source of multiple stressors. From the shortage of public transportation to the learning gap between children and youth. Several stressful daily situations marked the return to face-to-face: fear of contagion, struggle for students to maintain protocols, and rooms not adequate for the demanded social distance, among others.

Leaders noted that teachers found it difficult return to normality. Life events that before the pandemic would not have been considered a problem for teachers to attend work are now a problem, such as having a sick child or a shortage of transportation. Before the pandemic, they seem to have had more support networks to deal with these eventualities.

Several managers shared that medical leave increased significantly among teachers the last year:

> Fifty percent of the teachers at my school this year have been on leave, more or less extensive... or due to Covid or whatever, but half of us have been absent and that is striking… there are causes associated with psychiatric leave, and others also associated with burnout, because there are people who have been taking care of an elderly person during the pandemic; others with muscle injuries or chronic decompensated diseases during this period (P1).

The administrative (DAEM) replacement provision has been slower than expected. The absence of some teachers increased the workload of those who remained at work.

5.2.2.4. Supporting Vulnerable Students. A topic associated with the workload is the teacher's intensive work in handling people in vulnerable contexts, not only students, but also their families. According to the national indicator (IVE /SINAI), most students are at risk of dropping out of school through a socio-economic evaluation of their situation. These schools have an average IVE of 90%, which is considered high in vulnerability and higher than the national average of 81% (Ministry of Education, 2022). Through most of the leader's narratives, different expressions of this vulnerability appear:

> I think that, in our field, in education, and in dealing directly with people... the stress level is quite high. It is an issue that we must face because working with people is complex (...) We have to adapt ourselves from within the system to be able to navigate with many people who are stressed, who are going through complex social situations, and who suddenly come to their children's school to release that tension and are against everything (...)(P1).

The vulnerability of the target population is perceived as higher in post-pandemic times. Indeed, almost all schools (except two) slightly increased their vulnerability index compared with

2018, when the average IVE of DAEM Talcahuano was 88%. Especially, the respondents noted an increase in violence and the use of weapons by students and parents. Some students and parents have used weapons, threatened teachers and assaulted others in the school. The most extreme situation experienced was the attack on a teacher by a parent with a knife:

> (...) our children come from difficult family contexts, so the way they have to solve their conflicts is through physical and verbal violence... and this has happened historically; it is not just now, now it has increased, now it is noticeable... due to these years of confinement, well, all the factors that lead to the issue of violence and the social explosion also had an impact… (P11)

Another participant expressed: "our context is very vulnerable; therefore, students live in places where risky situations occur, situations that are outside the law, therefore they normalize these situations…(P12).

Some respondents noted that students with extreme behaviors are few, "between 5% to 10% of schools' student population" (P12, P4). These students, however, generate strong stress on the workers: fear, insecurity and difficulties in dealing with these students and their parents. It also generates an alarm in the community and the media, which in turn increases the fear of other parents, who are very sensitive to any hint of a fight between students at school. This creates a tense climate in most of the schools:

> (…) parents and guardians are predisposed to the idea that something must necessarily happen to their children, or that someone is going to attack them. Their fear is so great that they take everything out of context, so we are working hard to win their trust again. (P5).

5.2.2.5. Challenging Behavior of Students and Parents. Most participants considered that one relevant current cause of stress is related to a climate of aggressiveness:

> Today we work under the pressure of aggressiveness and intolerance from parents and guardians, and also from students… It is complex to be in the classroom for a teacher because he/she has to face situations that before didn't exist or were not visualized. (...) and we are constantly supporting teachers to deal with it (P5).

Participants noticed several behavioral changes in students after confinement. Some of these behaviors influenced students' ability to engage in learning and decreased their capacity for attention and task completion. Students are very reactive to the teacher's requests and interventions, answering rudely or refusing to follow instructions. A lower tolerance to frustration and difficulties in managing emotions were also observed, both of which lead to increased fighting among students and impact human relations in the classroom.

Daily, the most complex challenge is to be able to maintain a good relationship within the classroom… we must also understand that the students were during a whole process in which they did not have time habits, study habits, or social interaction. In return to face-to-face classes, it has been difficult to recover them… this also undermines and, in a certain way, affects human relations within the school (P10). Parents are also described as more intolerant and defiant in front of the teacher:

> You call parents and the truth is that parents respond in such a bad way as students... we are facing threatening parents, parents who raise their voices and want to endorse schools with full responsibility for why their children are doing poorly (P4).

5.2.2.6. Student Learning Gap and Absenteeism. The majority of participants described student learning losses during the pandemic and the current discrepancy between what students have learned and what they were expected to learn in normal time as an important determinant of teacher stress. Some participants remarked:

> … I believe that there is a learning gap in our students... it is difficult to achieve all the normal learning expected in students, so we have to focus on the objectives that are a priority, those that are essential for students... we have to consider that our children come with a gap since 2019 (social uprising)... for example, if I have a student in ninth grade, I have to think that from the expected academic knowledge and skills that student is from a lower grade... so it has been super complex for teachers…(P11).

> … teachers who are in face-to-face classes are assuming the consequences of the two years of remote work and the curricular gap...The students are re-taking these routines of what is the habit of the classroom and a more systematic study… for the third-grade teacher to meet with children who are at the level of first grade is complex... (P6).

Participants also reported higher impacts on learning during the pandemic for students from more disadvantaged sectors, which are significant in these schools, due to different factors such as differential access to technology, lack of parental supervision, and space with high distraction.

Some participants also mentioned that they had been immersed in a vulnerable environment before the pandemic and that learning gaps have now spread to a larger proportion of children after the pandemic. Therefore, in their opinion, it has always been stressful for teachers to address the learning gaps of certain students, those with a home environment less suitable to learning and greater social vulnerability. The Pandemic has further exacerbated learning gaps for these students:

> If I have a child in second or third grade, who still cannot read and you know that they may be in danger of failing... it is also a cause of stress because... the child who did not come, who did not give the test... the teacher is worried… and the parent does not answer... sometimes the family does not support these children, so teacher begins to think what else to do… then someone may think that you did not do anything, that you did not support them as a teacher or as an assistant, that also generates stress… (P7).

A couple of directors also mentioned as a source of stress the decrease in students' academic commitment and the increase in absenteeism:

> ... There is the issue of what to do with the students who do not want to come to class, or what to do with the students who are working since the pandemic... One of the most serious problems we have now is absenteeism… I would say that there is an attendance rate of 65%, not 85% (expected)… And that leads us to look for the problems, the reasons and to generate actions to revert it... But sometimes teachers feel that they do not achieve the expected results (P9).

For some high schools, this situation has implied maintaining a hybrid system this year, with a percentage of students still in a remote format in parallel with the on-site group, which has an impact on teachers' workload. In the case of some elementary/middle schools, absenteeism is a threat to the school's sustainability, as some have reduced enrolment and are at risk of closing, which causes *Job Insecurity* for teachers.

5.2.2.7. Infrastructure, Equipment and Resources. Almost all the participants pointed out that infrastructure deficiencies and lack of equipment and materials were direct or indirect

sources of stress. Some of them reported that they had experienced severe infrastructure losses due to tornadoes, landslides, and flooding. Others noted problems with bathrooms, kitchen, elevator, and lack of electricity. They also reported a lack of equipment such as photocopiers, projectors or malfunctioning of the Internet. In addition to the shortage of school supplies relevant to day-to-day teaching: school uniforms for students, sheets of paper, pencils, etc.:

> ... There are supplies that we asked for in March and we are in August and they still do not arrive... So how do the teachers work without printing sheets, without cardboard, without pencils, without glue?... We try not to ask the parents for anything... However, things do not arrive due to bureaucracy, so that generates stress... (P7).

These shortages generate strain in the schools and have even been the cause of strikes by students and/or teachers in several schools:

> We have a severe infrastructure problem here, a whole floor flooded, we had to change children in classrooms... For two years we have been asking the DAEM, with photos, with everything, to make the repairs... They did not do them… And now we have a takeover of the school by the students because there was no response… (P12)

The main responsibility for these problems lies with the administrative management of the central DAEM, since principals request these resources from that office. Participants expressed excessive delay in response, the bureaucratization of procedures, and even a lack of response from the central office of DAEM. A participant said, "…we receive resources late, too late... and not only economic resources, but also human resources; for example, a replacement teacher arrived two weeks ago, who should have arrived six months ago…" (P2). These situations generate a tense environment at the schools:

> … For example, when faced with concrete requests from the teachers for some material or educational resource, DAEM shows an extreme delay in this purchase, then... There is the impression of a bad administration, and the workers even begin to doubt the honesty of the administration... Maybe why this is happening, what they are doing with these funds... They ask... (P1).

5.2.3. Beliefs, Feelings, and Self-Expectation Regarding the Management of Psychosocial Risk

Overall, the leaders' mindset toward school workers' stress can be summarized into four following themes:

5.2.3.1. Leaders as a Source and Resource in Workers' Stress. Throughout the majority of the interviews, it became clear that participants imply that leaders'/managers' behavior influences employee stress and can also play an important role in workers' stress management at school. Some mentioned having personal experiences with a leader/manager that negatively impacted their lives or the school climate. The leader, who reported having severe stress previously, attributed her condition primarily to the relationship with a boss who had negative leadership over her. Three participants belonging to the highest-risk schools (2018) attributed part of the stress problem experienced by these schools to the leaders' characteristics at that time:

> "... In this school, there were very serious difficulties in the relationship with the management team... It was a time when a DAEM director (who lasted a short time in his position) together with a coordinator from here in the school started to treat us badly, to make a kind of persecution, he came here, hit the table, shouted, treated the teachers badly, showed up in the teachers' councils, started to divide us, to undermine us... Well, all this happened a little before 2018 and the psychosocial risk survey showed all these results and we had to work hard to reverse this situation, we felt very damaged, very vulnerable and mistreated... It was too much... I believe that you learn from these experiences (P6).

Along the same lines, a couple of participants consider that the change of leadership always entails a certain amount of stress and mention the effect that the constant changes in the general direction of DAEM (School District Office) have been complex for the schools:

> When there is a new leader, for example, a change of principal influences a lot of stress because you do not know what that person wants or he/she tries to do things his/her way when you had another leader who did it differently, so breaking with those habits generates a certain level of stress. (P6).

They mentioned they had had around seven different DAEM directors in five years: "... I can't understand that we've had like five DAEM heads... let's see, how many we've had [mentions them] ... We've had seven in like 6 or 5 years..." (P12).

5.2.3.2. Clear Awareness of Their Own Influence on Worker Stress. All participants expressed their conviction that their behaviors, practices, and attitudes impact the wellbeing of the people they are in charge of: "… Yes, as a boss, I can reduce as well as provoke stress; it can be for better or for worse..." (P12).

Most recounted specific episodes where they felt that they affected either positively or negatively some person or team:

> ... It would be very rare for a leader not to feel that he/she influences the stress of others, I have felt it concretely. Teachers, for example, we have to plan… I start to push them and I see the faces, the emotions; they get stressed..."(P8).
> A couple of them feel that it is a strong responsibility on them and that there are occasions

that this influence exceeds even their awareness of it:

> "… Sometimes you are so busy that you don't perceive the impact you have on people. Today a colleague thanked me a lot for what I had done for her, but I didn't understand... why she was thanking me?" (P7).

All participants feel that they have the ability to manage (decrease) the stress of the people in charge. Half of them emphasized that while they have that ability, they also have limitations:

> "… As pedagogical leaders in schools, principals in this case, have a great responsibility regarding stress, but we don't have a magic wand... Sometimes we want to look for the best strategy to reduce a little bit of that stress, but we don't have this magic wand to address all aspects... (P6).

These limitations refer to a variety of issues. Some of them are administrative and normative aspects which do not depend on them but on higher spheres (DAEM, Ministry). Others refer to worker's personal situations that increase their stress, for example, mental health problems that are difficult to manage for the leaders and have increased in the last years, or the own fatigue of the leaders that reduce their management ability. Other limitations of this ability come from the direct relationship of teachers with students and parents.

5.2.3.3. Their Role in School Stress Management: Human Relations, Coexistence, Teachers' Needs, Climate and Student Learning. Most participants believe their role as leaders in stress management is fostering good human relations –not only among teachers but also with students and parents –, good coexistence, and cooperative work among the different groups:

> "… Treating people well... I feel that the issue of stress also has a lot to do with this issue... employees, parents or whoever comes… The issue of treatment is essential... I feel that this is something that one should constantly develop to improve the management of the establishment… I feel that this also as a leader must be propagated..." (P10).

Most of them also affirm their role is to support, contain, facilitate and accompany the teacher's function. Different aspects of this support are mentioned, such as: solving daily situations; providing what they need; facilitating the balance between work and home; modulating the workload, and filtering pressures from above (DAEM, Ministry, etc.):

> "… For example, what we should do.... From not overloading them so they do not work excessively. In being flexible when they need to... Go to the doctor for example. Also, simplify planning... give them more time for deadlines. Making things easier for them, and providing them with materials. We have always been aware that… The hard work is inside the classroom..." (P3).

Half of the participants emphasize the role of leadership (and their own role) in effective stress management using meso or macro-organizational level concepts such as climate, culture, or constructs such as role models or buffering roles:

> ... The leaders' role (in stress management) is moderating and filtering the pressures towards the team, and that generates wear and tear on one, for example, a concrete problem in the actuality... That are guidelines that come down from the central level, from the ministry, the constant changes in information can be very stressful if the leadership teams do not handle them well… Then we have to filter a little and show certainty regarding the decisions that are being made trying to impact as little as possible on the rest of the team. (P1);

> ... One of the hallmarks of our school is precise that… One of the institutional hallmarks that I try to promote is good climate and coexistence and good treatment within the establishment in a transversal way, not only among adults but also with the students, and this is perceived by the children and transcends since it is also perceived by the parents (P7).

They recognized that organizational climate matters a lot in employee stress and also acknowledged that one of the management roles of leaders is to promote a good organizational climate and culture in line with people's wellbeing:

... The global management of the establishment implies being able to maintain a healthy coexistence, especially in the situation we are in today, in the current context... A need that has arisen at a national level is the management of a healthy coexistence and that as a leader one has to manage and have certain skills to be able to manage it well… (P10);

... Our leaders are the ones who establish some things of the institutional culture and the approaches we can give to human relations. We can choose between having a verticalized leadership or a more horizontal leadership... Then it is in that way… That we directly influence the stress of the community. (P2).

A couple of them explicitly reflect on the relationship between school climate and student outcomes:

... The classroom climate and the climate of our community also influence our students' learning, if I see a motivated teacher, who has high expectations for his students, and who is eager to get to the teacher's room, who shares, who laughs with others, clearly influences the students, in the end, this is a chain... This is not only the stress or the climate that can be generated in a community of teachers, this has a direct impact on our students and they perceive it. (P11).

Almost half of the participants commented that the ultimate goal of having a good coexistence and climate is to achieve student learning. Social support to teachers is also understood as a tool to fulfil the organization's goal. "… I definitely want teachers working happily… Teachers for whom the focus is on the students and for parents to see that we are concerned about the children..." (P3). Most participants felt that teachers have a high commitment to student learning: "... I know how my colleagues make great efforts to get the children to succeed, most of them with a tremendous commitment..."(P5). Some felt that – especially in recent times –teachers have been overwhelmed by personal issues that can sometimes interfere with focusing on student learning:

… Some situations make me uncomfortable, for example, I ask teachers what is the most important thing about our job?... And I tell them: To take care of the students. That is everyone's first mission. If a teacher is absent, another teacher, the technical head, the inspector general, or the principal must go to the classroom. We cannot leave a class alone. Some are bothered by it... When we greet each other in the mornings and someone starts

to raise problems… I tell them: colleagues, at this moment the priority is to attend the classes" (P4).

5.2.3.4. Personal Qualities and Barriers to Handling Stress Among Workers.

Regarding this theme, main findings are presented (see Appendix H, Table 16). All participants considered strengths in their communication skills and relations-oriented behavior. The most mentioned qualities are: listening, empathy, conversation skills, and relation skills (welcoming, care, respect, and concern for others). Some of them also mentioned flexibility as an important personal quality.

A couple of them mention personal skills in guiding, counseling, and mentoring:

> I am very studious, and I prepare myself to give them professional feedback... One is not in this position because one is nice or a good person, but because one also has professional competencies with which I can guide my colleagues... I tell them how to do it better… It is not only good treatment because there is also knowledge in your function and role" (P11).

A couple also mentions personal qualities associated with task-oriented behavior such as solving problems, organizing, and structuring.

Regarding the perceived personal barriers to stress management, several leaders mentioned emotional barriers such as anxiety, losing one's temper, insecurity, intolerance to criticism, and the excessive or low manifestation of emotions. A couple mentioned problems with work/life balance due to difficulties setting work limits. Several participants also had issues with task-oriented skills like slow decision-making; lack of direction; insufficient organization skills; insufficient delegation and difficulties in giving corrective feedback to others. A couple of them also felt that their workers perceive them as being too demanding in the face of tasks. Interestingly, one participant reported lacking skills confronting the higher authority and yet needed to do so due to the administrative dependence they have on the DAEM for the acquisition of material and human resources:

... Was a challenge for me to knock on the door of the mayor, the councilors, and others to achieve things for the school; it is an aptitude that was not in me... I was the teacher who just worked... I am very respectful of the authorities, shy, and it is hard for me to approach them... At that moment; I saw myself in another role where I had to challenge myself because, in these five years, I have been confronted with a lot of things, a lot of things to resolve... (P8).

5.2.4. Practices and Competencies for Psychosocial Risk Management.

In the following sections, the leaders' general approach to managing worker stress and the specific practices they found helpful in promoting wellbeing and reducing stress are described. Regarding leaders' general approach to dealing with worker stress, participants raised two broad themes.

5.2.4.1. Relations-Oriented Behavior of Leaders. Overall, through the interviews, it is clear that the general and shared approach most in the leaders' hands to deal with the work stress of their employees is the ability to establish good interpersonal relationships with workers and teams based on Relations-Oriented Behavior. Soft skills were highlighted as a relevant resource for establishing these good relationships and thus helping to manage stress. The skills valued by the management team to improve professional and personal relationships to reduce stress include kindness, good treatment, open communication, closeness, support, recognition (positive feedback), active listening, motivating, guiding, and responding to concerns.

Most of the participants described certain attributes or leadership styles that they try and find desirable to display as a leader to help workers with stress: "democratic style", "consensual and horizontal leadership", "collaborative leadership", and "participative leadership".

Some respondents emphasize the importance of flexibility as a characteristic and skill of leaders, especially in the post-pandemic period. This ability allows both leaders and workers to adapt to changing situations such as online classes, absenteeism of teachers, and students, family

problems that interfere with work, sudden changes in regulations, etc. Some participants pointed

out:

> As for stress, if I see teachers troubled by a small child, they are stressed because they have to run here and there... I became aware of this situation and tried to provide them with facilities so they can be well... These measures have been valued" (P4);

> ... listening, observing, containing and above all having the ability to be flexible, to understand that people are more important than the institution... Sometimes... We are not living a normal reality, we did not live it in these two years and we are not living it now. (P1).

A few of them also emphasize some competencies such as guiding, directing, providing

technical feedback, and problem-solving skills as leaders' behaviors that help manage stress. One

of the leaders of a school where a teacher was attacked by a student said:

> "... I will reduce stress insofar as I can provide solutions. I have had to apply a "safe classroom" (administrative measure to deal with violence) to several students, and we have managed to get some of them to withdraw, in others, we have reached a consensus with the parents so that they can finish their school year in a different way... As this happens, the tension goes down, but I see that therapy or activity done with teachers will not improve the emotional situation; it may cause tranquillity for a while, but if a student is out of control ... That will affect teachers" (P12).

5.2.4.2. Practices and Strategies Leaders Find Effective in Dealing with Worker

Stress.

The leaders identified seven common practices to be effectively in dealing with stress

(see Appendix B, table 17).

5.2.4.2.1. Moments of Interaction and Social Coexistence. Most participants found that

organizing regular activities where all school members interact is a resource that has helped to

improve the climate and human relations among the different actors. These activities take various

forms, from recreational activities, sports tournaments, celebrations of important events, and

shared breakfasts, among others. Some participants also emphasized the importance of including

parents in these activities. A participant reported:

... It was clear to us that we had to approach the issue of school coexistence through recreational activities... Through sports and artistic activities... The whole community participates in these activities, which has allowed students to get to know each other better and share with teachers outside the classroom, which has been very useful for us (P9).

5.2.4.2.2. One-to-One Support for Teachers. Most participants reported specific

practices they developed to support teachers on a one-to-one basis. Many mentioned having

individualized meetings to hear the problems and provide emotional support to teachers. Several

also mentioned having individualized meetings to give support and feedback to the teachers'

pedagogical work:

> … I talk to each of them, and I frame it within the institutional project, but we have a free dialogue, and there I tell them what can be improved... I talk individually with each one and then they come out different... I create spaces so that at some point, they can tell me "I am tired, I need this"... From there, I try to give support... In this office, there is a lot of crying too (P8).

The management team also tries to support or reduce the administrative workload of

teachers, sometimes taking on this work themselves. They also mentioned the importance of

facilitating work-life balance and accommodating teachers' needs in informal ways by making

some adjustments to the routine case-by-case basis.

5.2.4.2.3. Collaborative Pedagogical Approach. Most participants reported that a

practice which has helped them to improve coexistence has been to have interdisciplinary

meetings with different actors in the school. These meetings are focused on improving teaching-

learning practices, and the development of workers' competencies through the sharing of

experiences, reflections, and the development of pedagogic improvement projects:

> ... We work together based on learning communities, where we strengthen the professional development plan for teachers, we carry out curricular adaptation plans and technical-pedagogical strengthening of planning, so that has given us a great strengthening as a basis for daily work... (P6).

A highly valued aspect for participants is teachers' time to reflect and share their

pedagogical work in a group. This practice has had an impact on wellbeing by taking teachers

out of the busy teaching routine. Through pedagogical reflection, teachers can not only improve

technically but also reconnect with the meaning of their work and their vocation:

> ... In a similar line to these pedagogical group works... When we reformulated the institutional educational project (2018)… That was a nice experience... We invited to participate the different actors, the parents, the children... And also us as a team... That was a good experience of reflection that allowed us to recover the meaning of our work (P1).

5.2.4.2.4. Flexible Schedules. A practice valued by the majority is the ministerial

regulation that made it possible to shorten the duration of each lesson and the total time spent in

school. The participants believe that a shorter lesson duration helps make it more effective. This

measure has also provided more time for collaborative pedagogical work among teachers. Some

leaders feel that taking time to reflect on pedagogical practice and establish improvement

strategies is a luxury teachers can barely afford:

> … In conversation with teachers, we have noticed that having less time inside the classroom is helpful... They have commented that it makes the class more effective... Being able to go down from 45 to 35 minutes, from 1 hour and a half to 1 hour 10 makes the student more focused... Shorter periods to achieve the objectives… With this, the teacher has more time to do technical pedagogical work, preparation of material, and other types of activities... I feel that the time factor within the educational systems is a big issue… (P10).

5.2.4.2.5. Simplify Processes and Adjust Policies to the Reality of the School. Several

leaders raise the importance of simplifying and improving internal procedures to make them more

efficient. An example of this is the unification of the information of students who are special cases

and are being attended to by different actors in the system. Also, to have standardized, clear, and

communicated procedures of the steps to follow in those same cases.

Another administrative aspect raised is the practice of prioritizing and adjusting the

requests and requirements that come from the central level. They state that these requirements

should be adjusted and fulfilled in a planned manner so that stress is not generated at school:

"... At the national level, there are many policies… As we are an insufficient school, we have the Quality Agency, the Provincial Directorate, and the DAEM with us... we are asked for many actions… As directors, we try to implement them all, and we request many things from the teachers, which generate an overload in them... It is important to prioritize and good planning of this…" (P 9).

A good practice described that is good for the school to have an annual improvement plan with realistic goals that guide the school's prioritization.

5.2.4.2.6. School Communication Practices. Most participants mentioned different communication practices that have been useful in managing wellbeing in their schools. Some of them are:

- Homogenizing the information delivered to the different actors (workers, teachers, students, parents);
- Communicating constantly through the school channels;
- Communicating clear guidelines for different contingent situations;
- Communicating with parents frequently;
- School principal and management team with a constant presence in the field, greeting and talking with the different actors;
- Constant presence of the management team in the schoolyard;
- Brief daily group meeting with all teachers;
- Frequent communication of the school's objectives and institutional project;
- Frequent messages about the importance of mental health care.

5.2.4.2.7. Clear Answers to Coexistence Issues. Some participants reported it as an effective practice to have assertive responses to coexistence problems. This would mean solving quickly and decisively the matters of coexistence that are generated by the aggressive behavior of parents or students. When faced with these situations, good practices are reported, such as responding quickly and establishing clear action plans; keeping everyone informed, especially parents; having clear protocols based on school regulations on how to act step by step; clarifying the administrative procedures that teachers must follow when faced with violent students; applying the "safe classroom" regulation in cases where it is required. A participant shared:

... If a child is bullying another one, we intervene immediately, the school coexistence team, the psychologist, the principal… It is a job that is done by

everyone... The teachers... They take immediate measures; the coexistence team, they intervene immediately in the problems; the inspector... To call parents frequently… (P3).

Another practice mentioned is to accompany teachers in the handling of complex students or parents, accompanying them with the coexistence team or with the management team, the idea is that they never feel alone in front of these actors.

Research Question 3 captured the contextual factors that influenced a leader's potential to influence the work environment in the school context. Here, the author asked the following questions (see Appendix G for more detail):

- What decision capacities do leaders like you currently have to reduce the risk factors among your employees?
- What organizational obstacles and support have you encountered in working toward reducing employee stress?
- What organizational support do you need to reduce/prevent psychosocial risk at schools?

The two domains that emerged were as follows:

5.3.1. School leaders' autonomy and decision-making capacity for psychosocial risk management; and

5.3.2. Organizational support, barriers, and improvement proposals for the mitigating of psychosocial risks.

5.3.1. School Leaders' Autonomy and Decision-Making Capacity for Psychosocial Risk Management

Through the analysis of interviews, it became clear that participants differentiate specific areas or domains of autonomy for decision-making: autonomy to influence the interpersonal-social climate and coexistence within the school; autonomy to decide on administrative aspects (recruitment, hiring, distribution of teachers' time and organization of school activities);

autonomy to decide on financial and infrastructure aspects; and autonomy to decide on

pedagogical and curricular aspects.

5.3.1.1. Autonomy to Influence the Social Climate. All participants consider that they

have decision-making autonomy over the school's interpersonal climate and social coexistence.

The degree of this autonomy is not perceived homogeneously among the participants. At the

extremes, one participant speaks of having almost total autonomy: "… to handle the overall

coexistence of my school depends in large part on the leadership I provide." (P5). While another

quantifies his influence at 25% or a quarter of the total social climate. The majority perceive

themselves as having high autonomy to influence the social-relational aspect of the climate.

The aspects perceived as barriers to having more influence in the social-interpersonal

climate are the greater vulnerability of families; children and parents with aggressive behavior

(some of whom use weapons); the significant increase in mental health problems among students

and school workers; the increase in work-life balance problems of schools' workers after the

pandemic lockdown. In general, they refer to the social context in which schools are embedded

as a factor that influences the internal climate and as a limitation to their capacity.

A couple of leaders emphasize that there are unreasonable expectations from stakeholders

about the role of teachers and leaders in the psychosocial climate of the school:

> … The level of stress in our profession is a weakness... In education, we have been
> burdened with responsibilities that are not ours to bear… We have to contain children who
> are stressed... But... Why do we have to play the role of a social worker, psychiatrist, and
> psychologist?... More specialists are needed in schools (P7).

A particular aspect addressed regarding the interpersonal climate was the relationship

with labour associations. About 50% of the participants pointed out that labour associations can

be a potential problem for leaders' decision-making. Most refer to the Association of Education

Assistants as an entity that can paralyze leaders in their decisions (work distribution, schedules,

etc.). The other half of the participants consider these associations neutral for their management. Several point out that the teachers' association is generally supportive of leaders. All of them state that interpersonal relations with the members of associations are going well within the school.

5.3.1.2. Administrative Autonomy. Most participants feel that they have limited decision-making capacity in administrative aspects related to perceived risk factors in their schools. Two aspects appear as the most critical for them: They cannot vary the distribution of hours that the contract teacher must be in front of the classroom; They cannot change school activities or suspend classes without authorization from higher entities:

> We wanted to do some tutoring to support students who were behind in the curriculum... For them we wanted to reduce the class hour by 5 minutes, to generate a pocket of time without shortening the entire school day, but they said we could not do that (P9).

Another aspect mentioned is that they can neither recruit nor hire teachers in cases of replacements, this is done centrally through the DAEM, which is perceived as a slow and time-consuming process by all.

5.3.1.3. Financial Autonomy Over Infrastructure and Supplies. Regarding their capacity to decide and influence physical aspects of the school, the perception of all participants is that it is low or null. On the one hand, they do not influence maintenance and infrastructure repair decisions. Neither do they have the financial resources to buy implements (computers, for example), school materials (sheets, pencils, uniforms), or day-to-day needs (changing a broken glass, broken lights, curtains, etc.). Their primary role is to report the requests and follow up on them so that they are resolved. For most of the participants, this aspect is also a stress source that impacts not only physical but also emotional wellbeing (it leads to discomfort and anger). A principal comment:

I believe that there are certain decisions for which I have full autonomy... But there are other decisions that do not go through me, no matter how hard I have pushed, no matter how hard I have tried to have the school repaired... (P6).

Some participants point out that they do not have the autonomy to control the funding that schools receive from the ministry. However, they are the ones who decide how to invest it. These funds are additional resources for schools with high vulnerability indexes (Preferential School Subsidy, SEP). A principal pointed out:

"We don't manage even a small amount for daily things... With the funds that come to us, like the preferential school subsidy, we can decide what to invest in. But the process of purchase and payment goes through DAEM… And it can be very slow... Another example, we pay for the curtains of the teachers' rooms ourselves… Almost all of us, directors, put our hands in our pockets for the people's welfare (P4).

5.3.1.4. Pedagogical Autonomy. Most of them perceive to have medium-high decision-making capacity, both among technical directors and principals. Some mentioned that the policies, regulations, and pedagogical orientations that come from the ministry generally contribute to their function. Some point out as a problem that many pedagogical orientations arrive each year and these are not always adapted to the reality of each school:

I feel that education regulations are an ideal far from reality... Introduced from top to down... We have to take that regulation to reality and that is a great weight that we principals and teachers have.... The school is charged with all the things discussed in instances far away from us… (P5).

Along these lines, some believe that leaders have to manage the way to implement these guidelines so as not to generate stress. The autonomy to adopt these guidelines and norms is related to prioritization and timing. Several believe it would be desirable for leaders to have the flexibility and more capacity to adapt the content aspects of these guidelines. Some of them refer specifically to the Teacher Evaluation System (mandatory assessment of public sector teachers in Chile), a process that school leaders currently cannot adapt to local contexts. This process, although not continuous over time, is highly stressful for the teachers who are involved in it:

> If we talk about teacher stress... The issue of Teacher Evaluation... Every year some teachers have to do it... It is an issue that generates high pressure... I have known teachers who have had facial paralysis... From pure stress... I think it should be done differently... now we don't have a way to mitigate it... (P7)

5.3.2. Organizational Support, Barriers, and Improvement Proposals for the Mitigation of Psychosocial Risks

Respondents identified a wide range of facilitating factors and barriers to managing psychosocial risk factors, as well as possible measures to mitigate them. (See appendix H, Table 18). The results of the data analysis were classified into two organizational levels of analysis: Macro level, which includes the perception of the role of the Ministry of Education; Meso level, which includes the perception of the role of Talcahuano Municipality and DAEM Talcahuano (Department for the Administration of Municipal Education). Not all participants referred to all these levels on which they depend; some referred to all of them, and most only to one.

5.3.2.1. Ministry of Education. About half of the participants raised issues related to this level. In general, there is a positive evaluation of the Ministry's actions in terms of the technical-pedagogical orientations it provides and the policies and programs to improve school coexistence:

> If I think about the macro level, we take very well the guidelines given by the Ministry to transform them into the reality of the context, especially the socio-emotional plan, which was born during a pandemic.... However, we have maintained it over time... The "school coexistence plan" launched by the Ministry to promote good treatment and good coexistence has been key, especially in the establishment where we work. (P10).

As described in a previous section, the majority positively valued the measure adopted by the Ministry, during the return of the pandemic, which allowed shortening (by a few minutes) the school day and school hours.

Respondents agreed that the main obstacle to the improvement of wellbeing coming from the macro level is the insufficient amount of non-teaching hours assigned to teachers and to those who are homeroom teachers (who looking after a particular class):

> In a certain way, teachers are paid by the hour... Almost all teachers are contracted for approximately 30 hours, it is very difficult for any teacher in the public system to have 44 hours... And 35% of that time is for work outside the classroom... And it's like crazy... Because in the end, one sees that the teacher still spends the whole week at the school, full time… And if a teacher is given the position of homeroom teacher… It means that he will have more administrative work, he also has to organize the Teachers' Council and attend to parents... And is assigned one more hour (P2).

The most common issues raised by respondents about improving the capacity of schools to promote wellbeing from this level would be:

- Increase non-teaching hours for teachers and hours assigned to homeroom teachers.

- Increase the autonomy of managers to distribute teaching hours, make changes in activities and adapt guidelines and regulations to the school context.

- Strengthen the coexistence plan, increasing professional hours of both teams: psychosocial and internal coexistence.

The following passages reflect shared opinions among some leaders:

> ... I would say that the Ministry... should reduce, as they have in other countries, the number of hours that the teacher is in front of the students, especially considering that this is a school with a 92% vulnerability rate... as are most of the schools in the district. That could help... (P3);

> To improve the psychosocial risks... I think they could give us more autonomy to make decisions... I think that at the national level, this idea is on the table, but one would like this autonomy, to be implemented now... To be able to manage the school day with more freedom, in terms of minutes… There are many actions that teachers have to do and the central level says "let them to do them during administrative hours"... But let's add up all those actions that have to be done and see if they can be done in two or three non-teaching hours, it is very complex... I can give a clear example from the Language Department, they are in charge of (DIA), an application where they have to tabulate data, they have to analyze data, they have to create presentations among themselves, apart from their planning and so on... They don't have the time (P9).

5.3.2.a. Talcahuano Municipality and Council. This is the entity to which the participants referred the least; in general, it was considered a distant entity. Respondents identified very few facilitating factors coming from this level.

A couple of participants reported receiving support from the mayor for infrastructure improvements. Another valued aspect mentioned is the school worker self-care program delivered in the post-pandemic period: "Skills for Life".

The most significant barrier at this level is the lack of response and proactivity regarding infrastructure, equipment, and materials problems. Also, some mentioned a distant attitude, lack of visits to schools, and the municipal council members' controlling rather than supportive attitude.

In terms of improving the capacity of schools to promote wellbeing, participants believe that the city council could help in the following aspects:

- Resolve infrastructure funding,

- Strengthen school security, and

- Improve the work with vulnerable families at the community network level. Some participants pointed out:

It seems to me that we teachers are not the only ones responsible for the families... There are children who go from house to house, who do not know where they are going to sleep one day and the next... How does a teacher deal with the parents who do not make sure that their children come to class, that they attend in a presentable way, that they have materials, sometimes it is not only because of an economic issue but also because there is a neglect of the families... There should be more communal or national interventions... There are municipal institutions such as the OPD (Office for the Protection of Children's Rights), or other institutions that should strengthen the work with the family. Still, sometimes they do not work fast, they work slowly, so what is the support given? What is the solution? (P7).

Some respondents also mentioned that the city council and the Mayor should reinforce and recognize the teacher's role at the social level; and have more contact with schools, by visiting them periodically to learn about their needs and coordinate solutions.

5.3.2.b. DAEM Talcahuano (Department for the Administration of Municipal Education). All participants had something to say about this level. The most common issues raised by respondents as facilitating factors are:

> The capacity demonstrated by the current DAEM management team of being attentive and listening to the needs of the school leaders, along with some of the support staff having a collaborative attitude towards the schools; and
> Several participants appreciated the network meetings of principals and technical-pedagogical teams from all schools organized by the DAEM during the last year. There is the opinion that work has been very isolated from one school to another, with no common strategies or guidelines. This makes the schools feel they are in competition with each other. These opportunities for coordination and communication between schools have been useful for school management and feeling more united and accompanied.

Some participants noted:

If we were working in an integrated and complementary way among the schools... This would relieve stress... We have asked for this in many meetings... For example, when the pandemic happened, when nobody was prepared and the online classes began, each school worked at its own pace, not all schools worked the same hours per day... And not being aligned in this meant a drop in enrolment for some schools... For example, when the full school day began, there were schools that worked until 2 PM, and others left at 4 PM, so the lack of organization is seen at the community level... Each school should have its own identity, but there are things that we should all have the same... (P6).

I cross the street here and I find a school that has a capacity for a thousand students that today has 200 students and has a room for each class, a room for the special educator, a room for the psychologist, one for the parents' centre, one for the librarian, and we have only two rooms, we are working from pre-kindergarten to fourth grade, so our teachers feel these differences (P7).

A couple also mentioned the implementation of the psychosocial risk assessment policy in conjunction with the mutual insurance company and the support of the DAEM's pedagogical technical team.

Almost all participants mentioned poor infrastructure management, bureaucracy in acquisition processes, and slow recruitment of replacements as the main barriers to wellbeing in schools:

> ... The purchasing process is very bad because we need ink to operate to print educational material and we have run out... I asked for it three months ago, and they still haven't bought it... Because they are waiting for several schools to ask for the same thing and then they make the bidding process... But what do we do in the meantime?... It is a great weakness... The other thing has to do with replacements. I always propose someone or look for someone to replace a teacher quickly, I manage it, I go and propose it... Even so they (DAEM) are late and the replacement does not arrive in time... (P12)

> I was telling you that we are in a takeover, and this takeover is already because many steps have been taken to solve the problems and the DAEM has not responded. The infrastructure problems are the ones that make people feel uncomfortable, in a comfortable working environment, with the cold, with the leaks, with the floods. Unfortunately, I have not seen concrete support to solve these problems... The truth is that I believe that on the one hand, there is a lack of financial resources, but there is also a lack of operational efficiency on the part of the departments in charge of these works in the DAEM… As well as the municipality that prepares the bidding process, which generates a whole bureaucratic process that many times does not materialize the bidding... (P4).

Reflecting on school infrastructure problems, a couple of participants mentioned the contradiction between the demand made on managers to improve the number of students in schools and the lack of response to requests from DAEM because infrastructure also influences the school's ability to attract new students:

> I feel that DAEM ignores the need we have and they ask you how the enrolment is going, and what are you doing to improve the enrolment... When we still don't have the school repaired, you look at it... They ask you for results in numbers and they are not visualizing that we have almost two classrooms to function... Before the tornado (2019) we were going up in the graph with the enrolment, and little by little we were deflating again… Because for the parents the infrastructure matters in the decision to enrol their children... The complex thing is that enrolment (the number of students) is not a strength for us, it is a weakness... There would be an alternative at a national level which is applying for funds from the Ministry for repairs... But what is the first indicator that the ministry considers to finance a reconstruction... It is the enrolment… (P6).

Another aspect mentioned is the lack of alignment and equity among schools. There are many material differences between them and many procedures that are addressed independently by each school.

> There are these big differences between one school and another... Here I have a school three blocks in front of ours where there are many empty rooms, and in our school, we need rooms, because we have only two rooms... Why doesn't the DAEM do something to say that the other school should be divided into two and lend us a part, even then there would be enough space, I don't understand why it was not done... Our teachers feel these differences (P6).

Almost all the participants stated that the most important thing for the wellbeing of the schools is to improve the DAEM's administrative management: infrastructure, purchases and other procedures that affect the schools:

> I think that all the directors' requirements are not for bothering, they are not for pleasure, it is because they are needed, so that is why we need that articulated management within all the areas that the DAEM has to fulfil: acquisitions, personnel and finances so that the schools do not have to complain (P12).

As mentioned above, the participants positively valued the meetings between the leaders of all the schools carried out by the DAEM. In this line, some participants propose to reinforce and intensify the networking of all schools so that they work in a cooperative and aligned manner. As a counterpoint, some mentioned that although the support and advice provided by the DAEM's technical and pedagogical team are valuable for the schools, it would also be desirable to have more personalized assistance on a school-by-school basis, especially in the coexistence area.

For some leaders, it is essential to address mental health and psychosocial risks in schools in a comprehensive and integrated manner from the DAEM. Some more specific proposals related to addressing the comprehensive mental health of school workers are: induction and training in the management of vulnerable communities and conflict management; coaching and personalized accompaniment for teachers who manage complex situations; training leaders in

stress management of teams; systematic self-care instances; training for teachers in the management of stress in vulnerable context; having a unified welfare department for all schools, with specialized staff and resources. The following passages reflect some of these proposals among some leaders:

> We do not have training in conflict resolution, and we have to make sure that teachers come prepared and know what they have to do, because they are not just going to teach mathematics... In the classroom, there is going to be conflict and I have to have the tools, but what happens if I do not have the tools to solve that conflict? I get stressed and frustrated. And then we have frustrated teachers who leave the school... (P8).

> … Institutionally, we can provide more self-care training, and tools for stress in schools... We can also look for ways to give teachers tools for dealing with parents, for example, or put-up protective barriers as well... In fact, we have had to do it. With complicated parents, you can no longer interview alone... Institutionally, give teachers more tools to deal with the parents (P1).

> It is super important that mental health is approached as a national issue, as a regional, communal, institutional, and local, DAEM issue... It has always been said that health is important, but it seems that only now society is taking mental health into account, but the help has to be personalized, open, flexible, with different options... I imagine a program that includes several options, for example, the DAEM of Talcahuano has five psychologists or specialists with whom you can make an appointment; have different spinning workshops, trips to the mountains, yoga courses, talks with different people. Also, have some leadership courses but focused on stress management and that they are more real and grounded in what is taught in those courses, for example, effective tools for stress management in our context... It is not useful for me to be shown a slide of what burnout is… (P2).

Summary of Qualitative Findings

In this section, I will highlight key findings from qualitative results.

First, the most significant causes of employee stress in the context of DAEM Talcahuano were: workload and work hours; pandemic and post-pandemic consequences; supporting vulnerable students; coping with challenging student and parent behavior; student learning gap and absenteeism; infrastructure deficiencies; and lack of equipment and resources. As a protective factor, the participants highlighted "vocation" and the meaning of teaching.

In terms of leaders' beliefs, feelings, and self-expectations regarding psychosocial risk management, all participants emphasized their conviction and feeling that their behaviors and attitudes had a clear impact on the workers' wellbeing. Some emphasized that, although they have this capacity, they also have several contextual constraints to manage risks. Most of the participants believe their role as stress management leaders is to foster good human relations and cooperative work between teachers, students and parents. As for personal qualities to manage stress among workers, all participants felt that their communication skills and relationship-oriented behavior were strong points. In terms of personal barriers, leaders mentioned emotional barriers such as anxiety and some slight weaknesses with task-oriented skills.

Key findings about the practices and competencies leaders considered most effective for risk management in an educational context were a general approach based primarily on Relationship-Oriented Behavior. Most of the participants considered "democratic", "horizontal", "collaborative" and "participative" leadership styles to be effective.

Participants identified seven common practices to be effective in dealing with stress: fostering social coexistence among the entire school community; one-to-one support for teachers; fostering group meetings for pedagogical reflection; reducing the duration of each lesson and the total time of the school day; simplification and improvement of internal procedures and adaptation of policies to the context; effective management of school communication; and assertive and prompt responses by leaders to coexistence problems.

Most of participants felt they have a high degree of autonomy to influence the climate socio-relational aspect; most participants felt they have limited decision-making capacity in administrative aspects related to risk factors in their schools; all participants affirmed they have little or no autonomy to decide on financial and infrastructure aspects that impact wellbeing; and

most of them felt they have a medium-high decision-making autonomy to decide on pedagogical and curricular aspects: Most participants pointed out that the Labour Association of Education Assistants is an entity that can block leaders in their decision-making.

Regarding organizational support and barriers to the mitigation of psychosocial risks, participants valued positively the support of the Ministry in terms of pedagogical guidelines and policies, as well as programs to improve school coexistence. The main barrier from this level was the insufficient amount of non-teaching hours assigned to teachers. As for the Municipality and Council of Talcahuano, it was considered a distant entity; the most significant barrier at this level was the lack of response and proactivity in terms of infrastructure. Regarding the DAEM Talcahuano, the participants valued the greater closeness of the current management team and the coordinated networking with all the schools. As the main barriers, the participants agreed on the poor management of infrastructure, acquisitions, and administrative bureaucracy. For each organizational level, participants identified several proposals to reduce risks and improve wellbeing.

CHAPTER 6: DISCUSSION

This study aimed to understand the influence/impact that leaders can have on work stressors in a real school setting within a school district in Chile. Analysis of the results provided evidence relevant to this understanding. Several relevant findings from this study will advance practical and theoretical knowledge on the role of school leaders in preventing stress and promoting wellbeing.

Quantitative analyses made advances in showing that the *Quality of Leadership* is a significant and relevant predictor for some – not all – risk factors, compared to other predictors related to school and school leader characteristics in this context in Chile. The effect of leadership quality is not the same for all psychosocial risks and even appears unable to influence some. Qualitative analyses made progress in revealing the sources affecting the psychosocial risks of school workers; the mindset and general approach of school leaders about their role in stress reduction and prevention; and the contextual and organizational factors that enable or constrain the agency or capacity of school leaders to change the work environment.

First, this chapter presents and describes the main results from the integrated analysis of the qualitative and quantitative findings. Second, key findings are discussed in light of the literature review and the theoretical framework to answer research questions. Third, the research limitations and strengths are presented.

6.1. Integrated Analysis

The integration of the qualitative and quantitative results of the previous sections was organized using the variables and results of the quantitative study. In the interview protocol, a control question directly probed the leaders' opinion on the prevalence in their schools of the psychosocial risks of interest used as dependent and independent variables in the quantitative study: *Psychological Demands, Meaningful Work, Job Insecurity, Work-Home Interference, Quality of Leadership* (see Appendix I, table I5).

Mixed methods results were organized using a side-by-side joint display table. The results are presented in Table 11. In the present research, the qualitative results converge and diverge from the quantitative results; moreover, the qualitative results allow for a deeper understanding of some of the quantitative outcomes.

Mixed methods analysis converged on the following findings:

- *Psychological Demands* were considered one of the most prevalent risks in both methods. In addition, interviews revealed beliefs about the causes of *Psychological Demands* in workers not present in the questionnaire. Leaders indicated that workload, contextual vulnerability, and challenging student and parent behavior are a source of emotional demand and exhaustion for workers.

- Medium-high *Quality of Leadership* was reported when direct leadership of schools was considered. Qualitative interviews also revealed that part of the stress problem experienced by high-risk schools (2018) was directly related to the characteristics and management style of the school leaders at that time. It is also mentioned that leadership was a protective factor in some schools during the interviews. A high level of distrust towards the leadership of DAEM Talcahuano was revealed.

The mixed methods analysis showed partial convergence on the following findings:

- The qualitative and quantitative results converged in showing a high School
  Vulnerability. In the qualitative interviews, most participants considered this variable
  higher than before the pandemic and a relevant source of stress for workers. Findings are
  divergent regarding the impact of Vulnerability on other variables. In the quantitative
  study, it was only associated with *Psychological Demand* and *Job Insecurity*. Instead,
  participants associated the high Vulnerability with all risks: a higher *Psychological
  Demand* due to the intense work with vulnerable students and their families; a lower
  sense of *Meaningful Work*, due to a larger gap in the academic performance of vulnerable
  students that teachers perceived as a lack of results; a higher *Job Insecurity*, due to higher
  absenteeism in this population and the risk of enrollment loss; a higher *Work-Home
  Interference* due to the extra effort of teachers that the vulnerable student needs.

- Mixed methods converged to show *Meaningful Work* as a resource and protective factor.
  The qualitative results revealed some mixed perceptions of this dimension. Some
  participants pointed out that it is a teacher strength related to vocation, which was
  reinforced during the pandemic. But it is also threatened by different aspects such as
  workload, and the low social valuation that teachers receive. In the post-confinement
  context, it is also diminished by poor academic results and challenging student behavior.
  For those reasons, the school leader with the highest *Meaningful Work* in 2018 (School
  A) pointed out that it is currently a potential risk.

- An intermediate level of *Job Insecurity* was reported in the questionnaire (2018). Job
  Insecurity was also associated with medium and high-risk schools, holding all other
  variables constant, those who are in medium or high-risk schools have on average higher

level of Job Insecurity compared to those who belong to low-risk schools. The qualitative results revealed that, although it is not considered high risk for most schools, some participants believed this was the first or second most important risk at their schools. There are workers in some schools who feel threatened by absenteeism and declining school enrollment (after confinement) because it affects their potential future employability and contract hours.

- Mixed methods seem to converge in that gender is not associated with all risks. In general, participants reported a high level of stress for both men and women. The results diverged in the sense that some participants reported that women had more *Work-Home Interference* problems.

- Regarding the Schools leaders' characteristics, although the data from both studies do not converge exactly, they complement each other on one point. As for the effect of leader characteristics on risks, the quantitative data showed that only the leader's gender was associated with *Psychological Demand*. Workers with a female leader had lower levels of *Psychological Demand* on average than those with a male leader. In the qualitative study, it can be highlighted that most of the female leaders consider empathy and welcoming attitudes as personal characteristics that help them to manage workers' stress. The male leaders did not mention these skills (see Appendix I Table I2), this information can helps understand the quantitative results. The studies diverge in that some leaders felt that their experience as a leader (seniority) has helped them to better manage the work environment and, therefore, is a factor in managing the work environment. The quantitative study did not show an association between School leaders' managerial experience with risks.

- Regarding the influence of *Quality of Leadership* on the different risks, mixed methods converged to show that leaders have a significant influence on psychosocial risks, which is not the same for all risk dimensions. In both, the *Quality of Leadership* made a larger contribution to managing those risks associated with the socio-emotional aspect of the job and work environment (such as *Psychological Demands* and *Meaningful Work*) and has less influence on risks related to *Job Insecurity*. In quantitative results, the *Quality of Leadership* did not influence *Work-Home Interference*. In the interviews, several leaders felt they have some influence in decreasing *Work-Home Interference* through flexibility to facilitate worker adjustment to life and work.

  Qualitative and quantitative analysis showed divergent results on the following findings:

- Results from ISTAS21 in 2018 reported only 21,69% of Schools with high risk. In the interviews, most leaders perceived high levels of stress in Schools workers.

- An intermediate-level *Work-Home Interference* was reported in the questionnaire. Qualitative results revealed that *Work-Home Interference* is considered one of the most prevalent risks after confinement. In addition, the interviews revealed beliefs about its causes. Participants noted that school workers had fewer support networks and faced more family challenges in handling this interference than before the pandemic.

An intermediate-low level School Climate of Coexistence was reported in the quantitative study. School Climate was not associated with any of the psychological risks of interest. In qualitative interviews, most participants considered this aspect a very high present risk and associated this aspect with several risks, especially with high Psychological Demands. The behavior of parents and students (more demanding, impulsive and irritable) affects the social climate and the emotional burden on teachers.

Table 11. Mixed Methods Side-by-Side Joint Display of Results.

	Quantitative Results from ISTAS21 (2018)	Qualitative Results from the Interview (2022)	Mixed Method Result
Psychosocial Risk Level of the School	24.54% of the Schools reported low-risk, 53.77% had medium risk, 21.69% had high risk. Overall, 78.31% of the schools reported low or medium levels of risk.	Participants reported high risk and stress at schools.	Qualitative and quantitative analysis show divergent results. Leaders perceived high-stress levels in Schools' workers to be more prevalent than the results from ISTAS21 in 2018, which reported only 21.69% with high-stress risk.
Psychological Demands	Intermediate to high levels of *Psychological Demands* was founded (M=7.09, SD=2.69).	Most participants think that *Psychological Demands* are the first or second most important risk at their Schools.	The qualitative results converged with quantitative analysis. *Psychological Demands* were considered one of the most prevalent risks in both methods. In addition, interviews revealed beliefs about the causes of *Psychological Demands* in workers that were not present in the quantitative questionnaire. Leaders indicated that workload, vulnerability of the context, and challenging behavior of students and parents are very demanding for workers.
Meaningful Work	A high level of *Meaningful Work* was reported (M=9.90, SD= 2.17), and therefore a lower stress risk.	Participants thought that workers had a high level of *Meaningful Work*, which was considered a protective factor. One participant thought that this variable was a stress risk at their school. Some leaders believe strengthening teachers' sense of work; some aspects of it were weakened in the post-pandemic.	Partial convergent results. Qualitative and quantitative results converge to show *Meaningful Work* as a resource and protective factor. The qualitative results revealed some tensions and contradictions to how this dimension is perceived since it is also threatened by different aspects such as workload, and the low social valuation the teachers received. It is also influenced by the lack of expected academic results.

Job Insecurity	An intermediate level of *Job Insecurity* (M=3.56, SD= 2.50) was reported. Job Insecurity was associated with medium and high-risk schools.	Some participants believed that this was the first or second more important risk at their schools.	Qualitative and quantitative analysis show divergent results. The qualitative results revealed that, although not a high risk for most schools, there are workers in some schools who feel threatened by absenteeism and enrollment (after confinement) because it affects their potential future employability and contract hours.
Work-Home Interference	An intermediate-level *Work-Home Interference* (M=3.63, SD=2.19) was reported.	Most participants believed that this was the first or second more important risk at their schools.	Qualitative and quantitative analysis show divergent results. The qualitative results revealed that *Work-Home Interference* is one of the most prevalent risks after confinement. In addition, interviews revealed beliefs about the causes of this. Workers appeared to have fewer support networks or more family vulnerabilities to manage this interference than before the pandemic.
Quality of Leadership	An intermediate to a high level of *Quality of Leadership* (M=7.38, SD=3.09) was reported.	Few participants refer to this variable as a present risk. A couple also mentioned that it is a protector factor at their schools.	Results converged partially, leaders revealed some additional insights Some participants belonging to the most at-risk schools (2018), attributed part of the stress problem experienced by these schools to the leaders' characteristics at the time. Some participants believe that there is a strong distrust from workers towards the DAEM leadership due to administrative weaknesses and constant leadership changes.
Gender of Workers	Most of the workers were female (75.63%) and 24.37% were male. Gender was not associated with psychological risks.	Most schools' leaders were female: two-thirds were female and one-third were male. Some participants said that women's *Work-Home Interference* was higher.	Results converged partially. Qualitative and quantitative results show that gender was not significantly associated with all risks. In qualitative interviews, gender was linked with *Work-Home Interference* for some participants, since women have a heavier workload in the household.
School Climate of Coexistence	An intermediate-low level risk (M=72.80) was reported. School Climate was not associated with psychological risks.	Most participants consider this variable a very high present risk. Most of them also refer to this variable	Qualitative and quantitative analysis show divergent results. The qualitative results revealed that the School Climate of co-existence is one of the most prevalent risks after confinement.

		as a strong source of stress.	
School Vulnerability Index	A high Vulnerability Index (M=88.26) was reported. School Vulnerability was significantly and positively associated with *Psychological Demands* and *Job Insecurity*.	Most participants considered this variable higher than before the pandemic.	Partial convergent of results. Both results showed high School Vulnerability. In qualitative interviews, most participants considered this variable higher than before the pandemic and a relevant stress source for workers. Some of the participants related high Vulnerability to different risks: a higher *Psychological Demand* (intense work with vulnerable students); a lower sense of *Meaningful Work* (due to a larger gap in academic performance); higher *Job Insecurity* (due to higher absenteeism in this population); higher *Work-Home Interference* (due to the extra effort of teachers that the vulnerable student needs).
Schools leader's characteristics: gender, educational level, managerial experience	Those in schools with male principals, on average, have higher levels of *Psychological Demand* compared to those who belong to female principals' schools. Leaders' other characteristics did not matter.	Some leaders feel that their experience as a leader (seniority) has helped them to better manage their work environment.	The qualitative and quantitative diverge. Most of the women leaders reported empathy and a welcoming attitude as personal strengths. These qualities were not emphasized by male leaders. See Appendix I, Table I2. This can help to understand quantitative results. Qualitative result showed that seniority influence leaders' capacity to manage risk of the environment.
Influence of *Quality of Leadership* over different psychosocial risk	*Quality of Leadership* explains about 23% of the variance in *Meaningful Work*, 8% in *Psychological Demand*, and 2% in *Job Insecurity* and these relationships were statistically significant. Leadership quality was not related to *Work-Home Interference*.	Most participants felt that they can greatly influence schools' social and emotional climate, although they also acknowledged their limitations. From their narratives, it can be deduced that they consider it possible to exert some influence on the other risks also.	Partial convergent results. The qualitative and quantitative results converge to show that although leaders have an influence on risk management, this influence is not the same for all risk areas. There is also agreement that the aspects most likely to be addressed are those related to socio-emotional aspects and less influence on risks related to contextual aspects. In qualitative and quantitative results contrasted to *Work-Home Interference*, leaders felt that they have some influence in decreasing *Work-Home Interference* through flexibility to facilitate worker adjustment. Less addressed is Job Insecurity, although some point out certain strategies to reduce it.

6.2. Key Findings Discussion

Overall, four key findings from this integration emerges from our analysis for deeper consideration.

6.2.1. The Extent of Leaders' Influences on Risk Factors and Limitations
6.2.2. Leaders' Capacity and Resources to Influence Risks Factors
6.2.3. Leaders' General Mindset and Approach to Work Stress Management.
6.2.4. Leaders Support Needs and Expectations of Change for Stress Risk Management

6.2.1. The Extent of Leaders' Influences on Risk Factors and Limitations

A key finding is that while leadership is a significant predictor of some risks, there are many contextual factors that can limit leaders' abilities to mitigate these risks. In quantitative analysis controlling for other covariates*, Quality of Leadership* explained about 8% of the observed variance in *Psychological Demand*, 23% in *Meaningful Work*, 2% in *Job Insecurity*, and 0.2% in *Work-Home Interference*. Also, the overall models are weak at best, with adjusted R^2 between 1.8% to 24.9%. It is essential to keep in mind that, in social science research, a regression model should not be discarded just because it has a low R^2. The decision as to whether the model is good should take into account the question being explored and the statistical significance of the explanatory variables in the model (Ozili, 2022). In this sense, in the present research, the central objective was the effect of the leadership quality on the outcome variables. Controlling for other factors, leadership quality explains more variance in *Psychological Demands*: *Meaningful Work* and *Job Insecurity*. Leadership quality had no influence on *Work-Home Interference*.

A plausible interpretation is that the independent variables identified, although significant, do not explain most of the mean of the dependent variables. This reflects that there

are other variables that are not present in the models and affect the association. From the interviews, it emerged that there are indeed different contextual factors that limit the leaders' action to improve the psychosocial context and increase stress. The main limitations and barriers in the capacity to influence the work environment are related to other meso and macro factors level of the school setting.

Leaders expressed multiple factors that limit their effectiveness in reducing risk factors, such as lack of autonomy, contextual vulnerability, and rising mental health problems in the school environment. Of these, leaders expressed that the most relevant limitations are related to the lack of autonomy in decision-making in the administrative and financial aspects of the schools. Also, they lacked resources to effectively address the vulnerable social context of students and families. This result expands on previous studies which have posited that there are contextual factors and those related to teachers' working conditions that are a significant source of work stress (Cornejo Chávez, 2009; Johnson et al., 2012, Cabezas et al., 2022) and advanced this knowledge suggesting how these factors impact leaders' ability to manage stress at work.

Regarding administrative autonomy, the key limitations were: 1) They cannot vary the hours' distribution that the hired teacher must be in front of the classroom; 2) They cannot change school activities or suspend classes without authorization from higher entities; 3) They cannot recruit or hire teachers in cases of replacements. The first two aspects correspond to policies of the central level of the Ministry of Education and affect the leaders' ability to influence the teaching workload and job demand. The last one is related to administrative aspects dependent on the meso level, DAEM Talcahuano. The poor conditions of the physical environment and the lack of supplies generate discomfort, anger, impotence and distrust towards

the higher levels of the organization. These emotions increase conflicting climates and the emotional demands of the environment.

These results are consistent with recent studies conducted in Chile, according to which school principals perceive little autonomy in decision-making and a lack of attributions from higher levels, and policy restrictions to their effectiveness (Weinstein, Muñoz, Sembler, & Rivero, 2019; Weinstein, Muñoz, & Flessa, 2019; Campos, Valdés, & Ascorra, 2019; Hargreaves & Fullan, 2020). Other studies have also confirmed that poor physical environment and lack of material resources are significant factors that increase stress in the educational context (Chiang, Heredia, Santamaría, 2017). This research expands on how low autonomy in administrative and materials decision-making affects leaders' capacity in the management of psychosocial risks, besides the effect on the School's pedagogical results, on which most other studies focus.

The other factor leaders highlighted as a constraint in their capacity to mitigate work stress is the pervasive effect of context vulnerability. In the quantitative analysis, *School Vulnerability* (IVE) was only associated with *Psychological Demand* and *Job Insecurity*. In contrast, participants identified *School Vulnerability* as a source of several risks. A plausible rationale for these results is the difference between how the *School Vulnerability* (IVE) is constructed and measured using primarily socio-economic information and the leaders' broader concept of vulnerability and how it is expressed in the school.

It is interesting to note that a similar situation occurred with the *School Climate of Coexistence*; no association was found with any psychosocial risk, but the participants related it to several of them. It is possible that this is due to the way the variable is measured, which includes aspects beyond social climate, such as administrative order, and safety also considers

the evaluation of parents and not only school members. Although in 2018 the *School Climate of Coexistence* was not high risk, the school strategic plan (PADEM) stated that the school community considered it as a fragile condition and in need of improvement. This could also suggest that the indicator, being composed of different aspects, tends to measure less risk than that perceived by the community. This is consistent with studies that have pointed out that the indicator is a limited measure of school coexistence (Ascorra, et al., 2021).

On the other hand, participants noted that during the post confinement and post-pandemic period, the School Climate became a high-risk variable in the school context in Chile. Recent studies confirmed this, suggesting a relationship between this increase with social confinement effect on behaviors; greater social vulnerability and greater exposure to the internet and social networks (Bravo-Sanzana, et al., 2019; Troncoso, 2022; Bravo & Ramírez, 2022).

Participants related *School Vulnerability* to aggressive behavior towards teachers from students and parents due to social frustration, which generates a tense relationship and greater conflict inside the School. Violence and aggression at school have been increasing in recent years in Chile. Vulnerability is also related to low student academic results, low parental involvement, absenteeism, and school dropout. Conditions that increase the effort and work demands, generate frustration and demotivation in teachers. These relations have been well established in Chile (Cornejo, 2009; Pino & Pasmanik, 2021; Elige Educar y Centro de Políticas Públicas UC, 2022; Cabezas et al., 2022). Leaders perceive that there are causes of these behaviors and emotions that are beyond the school's capacity to manage and beyond their leadership capacities to reduce the intensity of their effects on school workers' stress. These results confirm and expand previous research suggesting that some conflicts present in Chilean schools are primarily related to the social, economic, and cultural context, not only to issues that

arise within the schools (Cornejo, 2009; Villalobos, Peña, Aguirre, & Guerrero, 2017; Cabezas et al. 2022).

Finally, increasing mental health problems among school workers are challenging for leaders. Leaders are overwhelmed and limited in their management capacities due to increased mental health problems in both students and teachers after confinement. In the case of teachers, this translates into a greater intensity of stress symptoms and a significant increase in sick leave, which increases the workload in the centers. Different studies in Chile have confirmed increased mental health problems and sick leaves among teachers during post-pandemic (Orrego, 2022; Bruna, Villarroel, & Hojman, 2021; Cabezas et al., 2022). This research expands on teacher mental health suggesting that leaders may have none or limited capacities to support people with these conditions within the school. Further research is needed to understand if School Leaders can be a protective or reducing factor for clinical mental health conditions among School workers.

6.2.2. Leaders' Capacity and Resources to Influence Risks Factors

Although several contextual factors limit leaders' ability to manage risk factors, leaders have ample capacity and resources to influence risks, especially those associated with the work environment's relational and socioemotional aspects. A relevant contribution of this research provides evidence that the *Quality of Leadership* of direct supervisors or direct bosses of School workers can significantly and positively influence – through different behaviors and practices – the levels of *Psychological Demands* and *Meaningful Work*. Marginally significant evidence of this impact on *Job Insecurity* was also found. The impact of leadership quality on *Psychological Demands* and *Job Insecurity* should be interpreted both with caution due to the small effect size found (8% and 1%).

Leaders recognized different degrees of this capacity and different practices and behaviors they performed to reduce risks. Interestingly, these results complement research in Chile which shows that the two most important risk predictors of teachers' wellbeing and stress are work meaningfulness and job demands (Cornejo, 2009). These results also confirm and expand on previous findings in Chile which show that school leaders have an essential role to play not only in school results but also in schools' wellbeing. In this literature, wellbeing was mostly associated with teacher commitment. (Horn, 2013; Horn & Murillo, 2016; Robinson et al., 2009; Weinstein & Muñoz, 2012; Bellei et al., 2014; Marfan & Pascual, 2018). This research advances previous knowledge by revealing which specific psychosocial risk associated with work stress can leaders significantly influence and suggesting how.

Given that *Meaningful Work* is considered a key factor in work stress in the Chilean school context, the results on leaders' significant influence on this risk is a highly relevant finding. *Meaningful Work* can be considered from both analyses as a protective factor against stress, associated with teachers' vocation. Previous studies support that a high level of *Meaningful Work* is associated with wellbeing and better organizational outcomes. (Pratt & Ashforth, 2003; Wrzesniewski & Dutton, 2001; Wingerden, van der Stoep, & Joost, 2017). Research in Chile has pointed to a significant relationship between principal leadership and teacher commitment (Horn, 2013; Horn & Murillo, 2016; Pino & Pasmanik, 2021).

The qualitative study allowed for a deeper understanding of how managers view their ability to promote the meaning of work in teachers. As noted above, managers felt that this dimension is a strength and a resource – vocation, commitment to the teaching role – that allows workers to better cope with their complex situations. At the same time, they argue that adverse factors in the work environment can diminish commitment and sense of work, especially, the

workload and pace of work, the lack of social appreciation felt by teachers, the conflict with

parents and students and also, the student's poor academic achievement. Leaders pointed out that

the practices of teacher follow-up in teaching tasks – individual or group follow-up – have an

impact on the strengthening of the work meaning. They also attach great importance to the

possibility of making time available for teachers to reflect on their practice and from there

improve it. The practice of collaborative pedagogical work and pedagogical reflection in groups

is valued as a means of promoting the sense of work. *Meaningful Work* is threatened by the time

scarcity and the pace of work at school, which mechanizes teachers' work. Managers also

emphasize the importance of constant practices of recognizing teachers' work to make visible the

importance of the work they performed. This finding supports and extends recent research

suggesting that principals' instructional management practices (supporting teachers' pedagogical

work) are associated not only with pedagogical outcomes but also with higher levels of teacher

wellbeing and satisfaction (Liebowitz & Porter, 2019; Alcaide, 2017). A specific finding of the

qualitative study suggests that these practices exercised by leaders can enhance the meaning of

work. Further research is needed to better understand other specific practices leaders can use to

enhance *Meaningful Work* and the extent of the protective influence in work stress of this

variable.

Given that *Psychological Demands* are a major stressor in the Chilean school context, the

results on the significant – even small – influence of leaders on this risk is also an important

finding. This research broadly defines this variable as "those aspects of work that require

sustained emotional effort" (Madsen, Diderichsen, Burr, Rugulies, 2010, p. 435). The qualitative

research confirmed this influence. Leaders perceived a high capacity to influence the socio-

relational aspect of the climate, which relates to fostering good interpersonal relationships and

collaboration to reduce stress. In studies on job demand – a concept related to *Psychological Demands* –, interpersonal conflicts at work, organizational constraints, and workload are the most relevant factors in inducing high psychological demand (Ibrahim, et al., 2021). Research has also shown that school leaders play a key role in maintaining good relationships within the school that affect the overall climate and, in turn, the stress level and wellbeing of teachers (Gray, Wilcox, & Nordstokke, 2017; Halawah, 2005). Research in Latin-American and Chile has also suggested a significant relationship between educational leadership and the degree of collaboration and joint work of teachers (Bolívar et al., 2016; Parra, 2017; Bada et al., 2020). This evidence suggests that leaders' actions on interpersonal climate and coexistence can reduce *Psychological Demand*. Overall, the qualitative finding supports the importance of School leaders fostering a good social climate, collaboration and better human relations among different actors as a means to reduce *Psychological Demands* and promote wellbeing.

In addition to their active influence on the social climate, leaders also felt they could act by filtering pressures and demands on teachers by supporting, containing, and facilitating the teacher's role. This buffering effect on demands has been extensively studied with respect to leader support (Peiro & Rodríguez, 2008). These findings also confirm research results in Chile which showed that school leaders' behaviors associated with supporting pedagogical work and concern for teachers' needs significantly increase schools' outcomes (Horn, 2013; Weinstein & Muñoz, 2012; Bellei et al., 2014; Alcaide, 2017; Marfan & Pascual, 2018). These results expand this knowledge by showing how principals can promote wellbeing through these practices and affect *Psychological Demands* in the work environment.

This study shows that school leaders' gender was significantly associated with *Psychological Demands*. On average, workers in schools with male principals have higher levels

of *Psychological Demands* than those with female principals. Although research on school

leadership and gender is of recent development, these results are consistent with recent studies

finding that female school leaders reported a greater capacity to sustain the wellbeing of their

school community during the COVID-19 pandemic (Global School Leaders, 2021). They seem

to care more about the teacher and all members of the school community. Research in Chile has

highlighted that women leaders are characterized by promoting collaboration, participatory

decision-making, recognizing the emotions of others, showing closeness and concern for others,

tending to develop listening skills and enhancing empathy (Carrasco & Barraza, 2020; Alcaide,

2023). All of these behaviors and attitudes have been widely associated with stress reduction and

worker wellbeing. The qualitative results revealed that female school leaders emphasized

empathy, as a personal skill that helped them manage the stress of their co-workers. This was not

mentioned by male managers, although both emphasize through communication and relational

skills. This finding is consistent with recent research in Chile which shows that gender is a strong

independent variable related to leadership practices influencing School outcomes (Weinstein, et

al., 2021; Alcaide, 2023). Further research is needed to understand the differential skills of male

and female leaders in managing wellbeing in schools.

Interestingly, quantitative and qualitative results were mixed regarding the relationship

between *Quality of Leadership* and *Job Insecurity*. In the former, a marginal effect was found

between leadership quality and *Job Insecurity*. In addition, it was associated with both medium-

risk and high-risk schools. *Job Insecurity* may be highly related to the general level of stress in

the organization, as school workers may evaluate this condition as a source of increased

absenteeism and dropout and, therefore, as a potential threat to their employment. Consistent

with this, leaders report that absenteeism and dropout may affect enrollment levels, and these

variables affect teachers' contract hours. These results are in line with other research indicating that teachers' working conditions tend to be precarious and increase psychosocial risks (Cornejo, 2009). In the interviews, participants recognized that *Job Insecurity* is difficult to mitigate because school leaders have limited autonomy to change the meso and macro factors associated with it (e.g., contracting modalities, the loss of enrollment in public schools as a general trend, poor infrastructure in some schools). Yet, they believed they can influence it by taking care of the existing labor force, improving enrollment, and engaging teachers on this strategy. Several said they have been improving.

In Chile, research has studied *Job Insecurity* as an important source of stress in teachers, as well as contextual aspects that trigger it, it has also been established that leaders have restrictions on aspects that can potentially influence it (Cornejo, 2009; Leyton et al., 2008; Weinstein, Muñoz, Sembler, & Rivero, 2019). Overall, the specific relationship between *Job Insecurity* and leadership has been less studied than other risk relations. Some recent studies suggest that supportive leadership decreases this insecurity, but further research is needed to understand this effect (Richter, Tafvelin, & Sverke, 2018).

Finally, it is important to discuss the relationship between *Quality of Leadership and Work-Home Interference.* An interesting finding is that leaders considered they have some influence in decreasing *Work-Home Interference* through flexibility to reconcile the needs of teachers with work demands and obligations. However, the quantitative results did not confirm this finding. One possible explanation for this difference is how the quantitative variable is measured, centered on the psychological strain generated by this duality (how worried are workers about this). It is possible that leaders can help reconcile events. But this may not translate into a decrease in the associated psychological tension.

Another possible explanation is that in pandemic and post-pandemic times, the relationship between the two variables has changed. In line with this, quantitative results showed that *Work-Home Interference* was not a high risk at that time, but qualitative results revealed that this risk is considered one of the top stressors in times of post-confinement and post-pandemic. These results have been confirmed by recent studies in Chile, which reported a high prevalence of this risk, suggesting that this may be due to the increased pressure for hyper-connectivity and the greater need to care for people at home (Orrego, 2022; Cabezas et al., 2022; Andrada & Mateus 2022; Villarroel & Hojman, 2022;). As noted in the integrated analysis, participants reported that school workers had fewer support networks and faced more family challenges in handling this interference than before the pandemic. Due to this change, it is possible that leaders will pay more attention to this aspect and attempt to mitigate it, as most spoke of the importance of helping teachers manage this interference.

Previous research suggests that leaders' support for facilitating practical work-home balance has an effect on reducing *Work-Home Interference* for workers, but this relationship requires further research to understand the specific aspects involved (Blomme, Sok, & Tromp, 2013). The effect of leaders on *Work-Home Interference* has not been studied in Chile yet.

Overall, the results provided evidence on how perceived *Quality of Leadership* of workers' direct supervisors or direct managers – through different leader behaviours and practices – can be an important resource for reducing *Psychological Demands* and increasing *Meaningful Work*. Results also suggest some possible ways for leaders' practices and behaviors to influence the other risk of interest in this study: *Job Insecurity* and *Work-Home Interference*.

The findings are highly pertinent, as teachers face high levels of stress. Participants considered that there was a high level of psychosocial risk at their schools. In contrast, the

questionnaire (2018) reported only 21.69% of schools with high risk. These results are consistent with recent studies in Chile which have found an alarming stress level in teachers and educational workers. Recent surveys showed that by the end of 2021, 80% of teachers reported significant stress (Elige Educar & Centro de Políticas Públicas UC, 2022). Participants attributed this increase to work intensification due to the pandemic and post-pandemic. Intensification is related to the use of new technologies; changes in the behavior of students and their families; the greater need for student support; and the multiple tasks, such as taking care for their homes teacher faced. Studies in Chile have confirmed this relevant effect of the pandemic and post-pandemic on teachers' psychosocial risks, highlighting the work-home imbalance and excessive work demands as key factors to understanding this condition (Orrego, 2022; Cabezas et al., 2022). Scholars have pointed out the urgent need to seek resources to promote and manage the well-being and mental health of teachers and prevent further damage and the subsequent impact on teaching (Cabezas, et al., 2022; Glazzard & Rose, 2020). The results shed light on this path.

6.2.3. Leaders' General Mindset and Approach to Work Stress Management.

A unique contribution of this dissertation is to shed light on the general mindset of school leaders and their approach to managing work stress. This section describes and discusses the main characteristics of these leaders' approaches in light of the theoretical framework.

School Leaders interpreted work stress as a reaction primarily induced by micro, and especially meso-macro factors of the environment. When asked to define the nature of stress, most leaders considered it as a reaction to external events. They focused on explaining the events that produce stress, rather than on individual responses. This approach follows one of the most important theoretical lines of research on stress today: those that explore the psychosocial

aspects of the environment that have the potential to induce work stress. (Leka, Jain, & Lerouge, 2017; Lavicoli & Di Tecco, 2020; Cassar et al., 2020).

Previous studies on the conception of stress argued that leaders or managers tended to define stress as an individual reaction without considering the events themselves as relevant, thus, dismissing the need for organizational interventions. On the contrary, workers perceived it as predominantly organizational (Kinman & Jones, 2005; Gardner, 2015). These results show that the conception of school leaders in this context is consistent with the organizational-level approach regarding interventions and solutions.

Another relevant finding is that leaders tend to refer to meso, macro, and also physical characteristics of the environment as sources of stress beyond the psychosocial environment of the organization. When talking about workload, the leaders directly refer as a cause of this risk to allocating teachers' contractual time for non-teaching curricular activities, which is considered low and is established by law. In addition, they directly associate workload with the teacher's intense work in dealing with vulnerable students and families.

This finding reaffirms the call of some researchers on the need to use holistic and comprehensive conceptual frameworks of psychosocial risks in the organization, taking into account the multiple elements that drive the phenomenon of work stress in a more integrated way (Cassar et al., 2020). In this line, these results refine the Theoretical Framework since they show that organizational Psychosocial Risks and the macro social, political, and economic factors that affect the environment of the organizations should be conceived in a less separate way since in the experience of the subjects they appear as direct factors of stress in the organization.

This study found that leaders have a clear conviction that they can both induce and reduce stress. They also feel responsible for helping workers cope with it and believe they can

significantly reduce or prevent it but are contextually constrained. They see their role in managing stress as leaders, fostering good human relations and cooperative work among the school community. They also recognize that one of the management roles of leaders is to promote a good organizational climate and culture consistent with people's wellbeing. Leaders also believe their role is to support, contain, facilitate and accompany the teacher's pedagogical work. Both aspects of the leader's role mentioned above are consistent with previous literature that supports both functions as fundamental in the management of employee stress (Peiro & Rodríguez, 2008; Donaldson-Feilder & Yarker, 2009; Skakon, Nielsen, Borg, & Guzman, 2010; Schaufeli, 2015; Montano, Reeske, Franke, & Hüffmeier, 2017; Harms, Credé, Tynan, Leon, & Jeung, 2017; Gayed et al., 2018). As we noted earlier, they also felt constrained to exercise these roles, mainly because of the context vulnerability and working conditions that are beyond their attributions to manage. Leaders' perceptions of these limitations have been confirmed by research in Chile as characteristics present in the School context, affecting wellbeing (Cornejo, 2008; Weinstein, Muñoz, & Rivero, 2018; Cabezas et al., 2022. The beliefs and self-expectations of school leaders seem to be pertinent in the face of the context complexity, although the leaders point out that there are disproportionate expectations on the stakeholders' part (Ministry, DAEM, parents) regarding the role of teachers and leaders in managing the school's psychosocial environment. These expectations placed by stakeholders on leaders for managing the socio-emotional aspects of school climate are an important need for future research.

Given the context, leaders considered specific competencies and practices more effective. The most effective competencies for managing risk are related to relationship-oriented behavior, communication skills, and "democratic", "horizontal", "collaborative" and "participative" leadership styles. Consistent with this, leaders also believe that the personal strengths which

most help them manage stress among workers are relationship-oriented behavior: listening, empathy, conversational skills, welcoming, caring, respect, concern for others and flexibility to the needs of teachers. Task-oriented skills such as guiding, counseling, mentoring, solving problems, organizing, and structuring are infrequently mentioned.

Most of the previous research on leadership behaviors for stress management posits that both types of behaviors, Relation-Oriented and Task-Oriented are associated with workers' less stress. (Peiro & Rodríguez, 2008; Skakon, et al., 2010; Harms et al., 2017; Gayed et al., 2018). Also, recent competency models for good leadership stress management have included competencies associated with both aspects (Donaldson-Feilder & Yarker, 2009; Toderi & Balducci, 2018). In Chile, research on leaders' competencies to enhance school outcomes has indicated that both aspects are relevant, but this relationship in terms of stress and well-being in this context has not been extensively studied.

This results do not support the statement that leaders do not use task-oriented behaviors – in fact, they do propose task-oriented practices –, but are less valued as a personal skill for work stress management. One possible explanation is that in the complex social context of schools – high conflict, vulnerability, and lack of resources – and given leaders' limited attributions, these skills seem more appropriate. Leaders perceive teachers as overwhelmed by workload and emotional strain, so focusing on the task may seem like a way to increase pressure. Instead, focusing on emotional support might relieve the stress.

Consistent with this explanation, research on the skills required to be a good public-school principal in Chile emphasizes social skills; ethical commitment to the educational community; the ability to foster a positive relational environment; orchestrate collaborative work and use distributive leadership as appropriated for this context (Rivero et al., 2019; Parra &

Carmen, 2020; Manríquez-Gutiérrez & Reyes-Roa, 2022). The balance between the two sets of skills (Relation and Task-oriented) and their impact on stress management in this context requires further study.

The results showed seven practices that leaders consider effective in managing stress. Consistent with the school leaders' conception of stress, the practices are mainly at the organizational level and only one at the individual level. Those at the organizational level focused on improving or promoting coexistence, communication, procedures and solving coexistence problems. The other practices refer to the management of the pedagogical task.

Individual and group monitoring of the pedagogical task is a practice that research in Chile has proposed as effective in improving the results and motivation of teachers (Anderson, 2010; Bolivar, 2010; Leiva & Vasquez, 2019). This research confirms the potential of these practices to foster wellbeing and suggests them as a resource to increase *Meaningful Work* and reduce *Psychological Demands*.

Special consideration needs to be given to reducing, even very slightly, the length of the class time and the length of the workday, which the leaders value as fundamental to having more time for pedagogical preparation. This measure used in pandemic and post-lockdown may be key to sustain over time. This finding confirms recent research indicating that time management and its scarcity in schools appears as a fundamental factor to consider in understanding and promoting the wellbeing of school workers in Chile (Cabezas et al., 2022).

Overall, the proposed practices by school leaders, are consistent with those considered in the theoretical framework as relevant to stress reduction (Donaldson-Feilder & Yarker, 2009; Toderi & Balducci, 2018).

School leaders' capacities for decision-making on psychosocial risk factors outlined in the theoretical framework as a dimension of the model seem fundamental to understanding the role of leaders in managing stress in the particular context in which they find themselves. As developed in the previous section, school leaders have different levels of autonomy in decision-making. The most limited levels relate to the administrative aspects of personnel management and the management of the physical and material environment of the school. School leaders perceive a medium level of pedagogical autonomy, but believe that greater autonomy, especially in local adaptation of public policies, would increase their ability to prevent stress. This is an area scarcely explored in research in Chile and contradictory results have been found. While some research suggests that greater autonomy in the pedagogical area would have negative impacts on Schools results (Leyton et al., 2008), others affirm the opposite (Manríquez-Gutiérrez et al., 2022). Further research is needed to understand how the level of autonomy in pedagogical decision-making affects the management of wellbeing at work.

6.2.4. Leaders Support Needs and Expectations of Change for Stress Risk Management

The perception of the support received by higher organizational levels and the expectations of changes placed on them by leaders allowed for a broader and more contextual understanding of school stress. The inclusion of this dimension in the theoretical model, integrated with the others dimensions, has made it possible to better account for the organizational complexity of stress at work. This has been raised as an important gap in work stress research (Casper & Harris, 2008; Greasley & Edwards, 2015).

In general, leaders perceive important support from the Ministry of Education in terms of the policies, programs, and technical-pedagogical orientations it provides for pedagogical results. Also, the programs to improve school coexistence are highly valued. The Municipality and the

Talcahuano Council were seen as distant and not very involved in school problems. The Talcahuano School District (DAEM) was valued to the extent that it has promoted, especially in the post-confinement period, school networking among principals and technical-pedagogical heads. This last finding is consistent with other recent studies in Chile which indicate that networking among schools allows for a profitable exchange of good practices and mutual support (Cabezas et al., 2022). This is perceived by leaders as fundamental in public education since schools are organized as a territorial unit (DAEM) and often act alone and in competition with each other.

For the wellbeing promotion and the reduction of psychosocial risks, the most relevant expectations of leaders at the macro level (Ministry) are the change of the policy regarding the distribution of teacher contract hours between teaching and non-teaching hours. The relevance of this measure to impact on the life quality and wellbeing of school teachers in the public system has been recognized (Cornejo-Chávez, 2009; OECD, 2018, Cabezas et al., 2022; Elige Educar y Centro de Políticas Públicas UC, 2022). Leaders also believe that greater flexibility and autonomy to adapt policies and programs to local contexts would improve their capacities to reduce stress. Previous literature has confirmed the significant role of educational leaders in the adaptation of teachers to policies (Weinstein, Muñoz, & Rivero, 2017; Ganon-Shilon & Schechter, 2018).

At the meso level, leaders expect the Municipality and City Council to adopt measures to strengthen school safety, improve work with vulnerable families and strengthen the role of the teacher at the communal level. As for the School District Administration (DEAM Talcahuano), the main expectation for change include to improve infrastructure management, school acquisition of daily needs and administrative procedures (especially regarding teacher

replacement). And also, to develop a comprehensive and systematic program to address mental health in school communities. The literature has proposed meso-level measures in Chile as critical to improving school performance and well-being (Leighton et al., 2008; Cornejo, 2009; Cabezas et al., 2022).

6.3 Limitations and Strengths

The study has several limitations. First, quantitative data is cross-sectional. The selection effects could not be accounted for properly, restricting the possibility of establishing the causal direction of the relationships. Besides, it is not a random sample of School workers; however, given a large number of respondents by School (1,194 workers with an average rate of 90.6% by Schools) and the number of Schools involved (24 out of 30), the analytical results are likely to be suggestive of trends in similar DAEM in Chile.

Second, because of how the quantitative data were stored, the author could only control for the gender of survey participants. A variety of other potentially important sociodemographic information like age, and workers' role could not be obtained. From the DAEM administration, it was not possible to have access to other relevant organizational information like the number of sick leaves by Schools or type of contracts.

Third, the final models are weak in explaining the outcome variables. The adjusted R^2 showed that the models explain between 1.8% and 24.9% of the response variability. This analysis leaves out multiple individual-level covariates that were not accessible and some organization's contextual factors that can enable or constrain the effects of leaders. On the other hand, the main objective of this research was to explore the influence of one specific predictor (Quality of Leadership), in the school district context. Scholars have posited that a low R-square model is common in Social Science and it is not necessarily bad. This is because the goal of most

social research is not to predict human behavior. Rather, the goal is often to assess whether predictors or explanatory variables have a significant effect on the dependent variable. The decision on whether the model is good should consider the statistical significance of the explanatory variables of interest in the model (Ozili, 2022).

Finally, in the qualitative study, it was not possible to carry out the member-checking technique, mainly due to the workload of the participants, who did not have time to do so. However, other methodologies for the credibility of the results were used, such as triangulation of quantitative and qualitative data and their visual comparison. In addition, different tables of results were elaborated to increase the rigor of the information and the audibility of the data.

Despite these limitations, this study has several strengths. To our knowledge, it is one of the few studies to examine the impact of leadership practices on various risk factors and, at the same time, from the perspective of leaders, which sheds additional light on the sources of stress in the specific situation where public education is embedded. The mixed methods design allowed us to examine specific contextual factors that influence leaders' ability to manage risk in a much deeper and more comprehensive way than would be possible using one of the two methods separately. The conceptual framework reflects the complexity of the relationship between leadership and stress, incorporating different dimensions of the leader's role namely: beliefs, feelings, and self-expectations; personal qualities and barriers; practices and competencies; decision-making capacity; contextual barriers and resources; organizational support at higher levels. The qualitative data provided a rich insight into participants' practices and competencies that can help manage stress, as well as the measures that higher levels of leadership could implement to mitigate it.

Another contribution of this study is that it uses quantitative data that are generated by a public policy in Chile, which are intended to contribute to research and not only to risk measurement, however, these data have been little used to generate new knowledge. In this sense, the research design opens new paths for different school contexts to use data to deepen the knowledge of how to manage risks and improve the work environment in their specific context.

CHAPTER 7: IMPLICATIONS AND CONCLUSION

7.1. Implications for Future Research

This study's methodology, theoretical framework, and findings contribute to the current conceptual understanding of the relationship between leadership and stress. As noted, this relationship has been extensively studied and is well established; however, this knowledge has not led to significant improvement in leaders' abilities to change and manage risks in the natural environment of organizations. This research addresses the complexity and contextuality of the phenomenon in an integrated manner. To do this, the author uses quantitative and qualitative methods, a stress paradigm that includes different specific risks and a theoretical model that addresses the role of the leader in stress from a broader vision, including several attributes and conditions that affect their ability to influence the work environment.

Research in Chile on the school work environment has developed two lines: quantitative and qualitative. The quantitative one has generally used general measures of stress, such as Burnout or the demand-control-social support model proposed by Karasek; or associated measures of work wellbeing, such as engagement and commitment. Leadership has also been frequently measured with global concepts such as transformational or distributive styles. The psychosocial risks approach, which considers stress as an implicit feature of several aspects of

the environment, remains underexplored in research. On the other hand, qualitative research has predominated in studying school leaders and has focused on understanding their impact on results.

This research highlights the importance of embracing the complexity of the phenomenon and reaffirms the need to continue using integrative and comprehensive models. More research is needed to understand the influence of leaders on other psychosocial risks; the relationship between so-called psychosocial risks and macro and meso factors. It is also necessary to design research in several school contexts to define the common characteristics that impact the potential capacities of leaders to act and integrate the voice of other actors (teachers and workers) in a more holistic way.

An interesting finding for future research was the association between the gender of the school principal with the Psychological Demands of the workers. No other association was found between the characteristics of the leaders and the other stressors. Qualitative results revealed that the female school leaders emphasized empathy as a personal skill that helped them manage stress from their coworkers. The differences between male and female principals regarding the practices and the competencies they use to play this role have been increasingly investigated. Recent studies in Chile showed that principal gender is the variable that has more association with principals' practices and school results. (Weinstein, et al., 2021; Alcaide, 2023). Further research is needed to expand and understand these findings, the specific practices that males and females use to manage Psychological Demands, how this difference varies across other outcomes and different school contexts, and how this difference can impact leaders training for work stress management.

A relevant challenge for future research is to test interventions that develop school leaders' competencies and practices to manage stress based on the theoretical framework of this research, as well as its results. In Chile, the Burnout approach has been commonly used to investigate and address work-related stress in the school context. However, the national strategy for monitoring organizational work stress uses the Psychosocial Risk model approach, which has a broader perspective of the organizational stressors that induce stress in the work environment. Participants showed little knowledge of this model even though it has been used in their organizations for assessment; they expressed the need for more training in this approach. They also expressed a strong commitment to implementing practices to reduce the risk of stress among their school workers. Their perspective on managing worker stress values interventions at the individual level but primarily recognizes the effectiveness of practices that impact organizational factors. Leaders need to understand their potential impact on different stressors; quantitative and qualitative findings complement each other with respect to this impact. Particular attention should be paid to training in strategies for managing Psychological Demands and Meaningful Work of teachers, the latter of which is also considered a positive resource in this context. This intervention can be complemented by the findings of other research that are part of the theoretical background of this study. Leaders also consider the need to address organizational stressors more holistically, including the effect of other meso- and macro-level factors, such as community vulnerability and school resource scarcity, all of which affect school well-being. To help teachers better address school vulnerability, for example, leaders must understand and develop some human resource practices, such as teachers' induction and training. The intervention model must address these complexities.

Another line of future research is a deeper understanding of the relationship between so-called psychosocial risks and macro and meso factors. As described in the results, leaders noted as a limitation in their ability to manage work stress the pervasive effect of contextual vulnerability. Participants identified school vulnerability as a source of several risks, but in the quantitative analysis, school vulnerability was only associated with two risks. The influence of student vulnerability on school workers' stress seems a pertinent line of future research. Such a dimension is fundamental to understanding the school context in Chile. The divergent results (quantitative/qualitative) suggest the need to incorporate new ways of measuring vulnerability. Other variables related to family and individual factors can be measured at the student level, such as parents' level of schooling. Incorporating other variables associated with vulnerability will also allow a better understanding of the potential for leaders to manage its effects on worker stress.

7.2. Implications for Policy and Social Programs

Several recommendations for the formulation of public policies on teachers' wellbeing emerged from this dissertation.

First, it is fundamental to address the issue of time. The lack of this in schools is a structural factor related to the hiring policy of teachers that acts as a baseline of stress that is difficult for principals to manage as a source of teacher stress. This involves revising the policy that 65% of the teaching time should be allocated to direct classes and non-teaching time at 35%. Other research on teachers' mental health has highlighted the need for this revision. Especially previous literature indicates that teachers' lack of time for non-teaching activities negatively

influences their job satisfaction (Cabezas, et al., 2017). This study suggests it is a key factor in teacher health and stress management.

The proportions of direct teaching hours vary greatly among OECD countries. The lowest proportion of teaching hours among OECD countries is between 32% and 44% of total working hours, and the highest shares of teaching hours range between 63% and 78%. Chile's direct teaching time is one of the five highest in the OECD (Boeskens & Nusche, 2021). Currently, in the case of teachers in the first cycle of primary education (which includes grades 1 to 4) who work in schools with a concentration of 80% or more vulnerable students, 40% of their time must be available for non-direct teaching activities. The policy of increasing non-teaching hours should aspire, in the medium term and in a gradual process, to a percentage of teaching/non-teaching hours of 60-40 for all teachers, especially in schools with a high school vulnerability index. Insufficient time for activities such as lesson preparation, student follow-up, student and parent information, and peer collaboration undermine the quality of teaching and increases the burden of work hours at home.The policy of increasing non-teaching hours can be enhanced also with more autonomy for local School leaders in regulating the balance between teaching and non-teaching hours based on an assessment of contextual aspects such as class sizes, student, school, or teacher characteristics, competency, or experience.

The second aspect relevant to public policies, is the need to address at the public policy level the issue of the infrastructure of public schools. The physical deterioration and the constant pressure from the school community to solve this issue is a constant source of stress. Other literature has argued that parents' choice of school is significantly influenced by this dimension.

This research was able to detect the effect of the physical aspect on stress and in *Job Insecurity* due to the incidence of this aspect in the student's recruitment.

Third, the result suggests the need for reviewing policy regarding the leader's autonomy in financial and administrative matters. The findings of this dissertation revealed that school leaders felt a lack of autonomy in decision-making in administrative and financial management (infrastructure, equipment, resources) and that poor and slow responses to these needs were a source of workers' stress. These results suggest the importance of clearly providing school leaders with greater decision-making capacity and competencies in administrative and financial management.

Chile is in the midst of a reform that changes schools' dependence. They will no longer depend on the Municipalities, nor the Municipal Departments of Education, but on the Local Public Education Services. These new services are under the authority of the Ministry of Education. Researchers have drawn attention to the fact that this reform is a recent and evolving process that implies a level of centralization whose local-level management consequences are still unclear. Initial monitoring of the reform shows that school workers perceive more bureaucracy, slower procedures, slower financial management, and a lack of clarity in defining roles and responsibilities (Garreton, et al., 2022). This ongoing reform could be an opportunity to develop a clear policy that gives the principals more autonomy. Specifically, principals should have, as a minimum base, the ability to manage the basic resources necessary for the daily functioning of pedagogical activity (paper, pencils, books, etc.) and daily infrastructure needs (glass repair, curtains, bathrooms). Leaders' practical and strategic knowledge of the school

context can contribute to the efficient and timely management of resources to maintain the operational activities and well-being of the school.

Although there is a national framework that regulates and manages the teaching career, leaders also need greater autonomy in managing human resources. Two issues stand out as examples that would help leaders manage the well-being of workers: the ability to hire substitutes (as staff shortages lead to increased workloads) and greater leadership involvement in the teacher evaluation and promotion process. According to different actors, the balance between higher-level frameworks and local flexibility for leaders is a key challenge for school systems' more efficient policies (Boeskens & Nusche, 2021).

Fourth, the results highlight the need to strengthen existing programs in public education today:

- School coexistence programs need to be enhanced, as an example, including as an axis the development of competencies for the management of these issues in teachers and school workers in a systematic way;

- School Leadership Development Programs can include specific training for the management of psychosocial risks in coherence with the model and system for psychosocial risk surveillance;

- Profiles of managerial competencies established by different public entities, can include specific competencies for psychosocial risks, and occupational health prevention, although many profiles consider skills and competencies to manage the work environment, they are still not very specific with respect to stress.

7.3. Implications for Practice

The results of this research will have practical implications on how practitioners in schools and school districts can address wellbeing and occupational health.

Results shed light on the need for professionals in schools and school districts to strengthen leaders' competencies to manage work-related stress. In particular, it will contribute to developing better and more focused training models for leaders in this context, informing how they can address and manage different risks, taking into account specific competencies and practices and potential impacts at different organizational levels.

It will also contribute to the development of other organizational devices for change, such as the induction of leaders and their inclusion in the psycho-social risk assessment program in a more systematic way. At present, the leaders have little knowledge of the system and are a fundamental resource for influencing these risks.

7.4. Conclusion

Generating healthy work environments is a social imperative, especially in the school context, which impacts many people's lives. The author asked the following questions in this dissertation: Does leadership practice affect the work environment – psychosocial risk factors – to prevent stress and promote wellbeing/welfare among the school district workers? -How does Leadership practice influence the work environment and change wellbeing among the school district workers; -What personal and contextual factors influence a leader's capability to influence the work environment in the school context?. As noted in findings, the answers to these questions are not simple; it is shaded, but it does some justice to a complex phenomenon embedded in a complex social structure. This dissertation is an excellent starting point for future research to understand occupational health and promote wellbeing of workers in educational

settings, taking into account leadership as a natural resource for organizational health with its possibilities and limitations. This dissertation is also a foundation of my future research projects and research career, aims to contribute to understanding occupational health and promoting wellbeing in this pervasive setting of our lives.

REFERENCES

Agencia de Calidad de la Educación (2016). *Orientaciones de calidad 2016.*

https://archivos.agenciaeducacion.cl/Orientaciones_de_calidad.pdf

Akiba, M., Chiu, Y., Shimizu, K. & Liang, G. (2012). Teacher salary and national achievement:

A cross-national analysis of 30 countries. *International Journal of Educational*

Research(53), 171-181. http://doi.org/10.1016/j.ijer.2012.03.007

Alcaide A., L. (2017). Liderazgo instruccional y transformacional en los procesos de mejora en

establecimientos educacionales en Santiago de Chile. Tesis Doctoral, Pontificia

Universidad Católica de Chile. https://repositorio.uc.cl/handle/11534/21446

Alvarado, R., Valdivia, L. & Piñol, D. (2010). *Salud mental en los docentes de escuelas*

municipalizadas y resultados en la prueba SIMCE. Biblioteca Digital, Mineduc, Chile.

https://hdl.handle.net/20.500.12365/18212

Alvarado, R., Perez, J., Saavedra, N., Fuentealba, C., Alarcón, A., Marchetti, N. & Aranda, W.

(2012). Validación de un cuestionario para evaluar riesgos psicosociales en el ambiente

laboral en Chile. *Revista médica de Chile, 140*(9) 1154-1163.

http://dx.doi.org/10.4067/S0034-98872012000900008

Anderson, S. (2010). Liderazgo Directivo: Claves para una Mejor Escuela. *Psicoperspectivas,*

9(2), 34-52. https://doi. org/10.5027/psicoperspectivas-Vol9-Issue2-fulltext-127

Andrada, P., & Mateus, J.-C. (2022). Percepciones del impacto de la pandemia en las prácticas

docentes de Chile y Perú. *Apuntes. Revista De Ciencias Sociales*, *49*(92).

https://doi.org/https://doi.org/10.21678/apuntes.92.1550.

Ansoleaga, E., Montaño, R., & Vézina, M. (2013). Validation of two complementary instruments for measuring work stress in Chilean workers. *Scandinavian Journal of Organizational Psychology, 5*(2): 5-14.

Ansoleaga, E. (2015). Indicadores de salud mental asociados a riesgo psicosocial laboral en un hospital público. *Revista médica de Chile, 143*(1), 47-55. https://dx.doi.org/10.4067/S0034-98872015000100006

Ansoleaga, E., Díaz, X., & Mauro, A. (2016). Asociaciones entre distrés, riesgos psicosociales y calidad del empleo en trabajadores/as asalariados/as en Chile: Una perspectiva de género. *Cadernos de Saúde Pública, 32*(7), http://dx.doi.org/10.1590/0102-311X00176814

Araneda-Guirriman, C., Neumann, N., Pedraja, L., & Rodríguez, E. (2016). Análisis Exploratorio de las Percepciones sobre los Estilos de Liderazgo de los Directivos Universitarios en el Norte de Chile. *Formación universitaria, 9*(6), 139-152. http://dx.doi.org/10.4067/S0718-50062016000600013

Araujo, K. (Ed.). (2019). *Hilos Tensados. Para leer el octubre chileno*. Colección Idea/ Editorial USACH. ISBN: 978-956-303-438-7

Aravena, F., & Hallinger, P. (2018). Systematic review of research on educational leadership and management in Latin America, 1991-2017. *Educational Management Administration & Leadership, 46*(2), 207-225. https://doi.org/10.1177/1741143217745882

Aravena, F. (2016). Preparing school principals in the Chilean scenario: lessons from Australia, England and the United States, *Journal of Educational Administration and History, 48*(4), 1-16. http://doi.org/10.10180/00220620.2016.1210586

Araya, E. & Mendieta, L. (2013). *Revisión de la evidencia reciente sobre los principales métodos de prevención primaria en riesgo psicosocial en el trabajo* [Tesis de Pregrado

para optar al título de Psicólogo, Universidad de Chile]. Repositorio Académico de la Universidad de Chile.

Arnold, K. (2017). Transformational leadership and employee psychological well-being: A review and directions for future research. *Journal of Occupational Health Psychology, 22*(3), 381-393. http://doi.org/10.1037/ocp0000062

Arnold, M. (2008). Las organizaciones desde la teoría de los sistemas sociopoiéticos. *Cinta de Moebio, 32*, 90-108. https://www.redalyc.org/articulo.oa?id=10103202

Ascorra, P., Cárdenas, K., Gálvez, P., Ávila, A., González, C., & López, V. (2021). Relación entre estilos de convivencia e indicadores de desarrollo personal y social en escuelas chilenas. *Revista de psicología (Santiago), 30*(2), 86-99. https://dx.doi.org/10.5354/0719-0581.2021.57840

Attride-Stirling, J. (2001). Thematic networks: An analytic tool for qualitative research. Qualitative Research, 1(3), 385–405. https://doi.org/10.1177/146879410100100307

Avolio, B., & Bass, J. (1991). *The full range leadership development programs: Basic and advanced manuals.* Bass, Avolio & Associates, Binghamton, NY.

Bada, O., Salas, R., Castillo, E., Arroyo, E., & Carbonell, C. (2020). Estrés laboral y clima organizacional en docentes peruanos. *MediSur, 18*(6), 1138-1144. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1727-897X2020000601138&lng=es&

Bailey, T., Dollard, M., & Richards, P. (2015). A National Standard for Psychosocial Safety Climate (PSC). PSC 41 as the Benchmark for Low Risk of Job Strain and Depressive Symptoms. *Journal of occupational health psychology, 20(*1), 15-26. https://doi.org/10.1037/a0038166

Bakker, A., Demerouti, E., & Euwema, M. (2005). Job Resources Buffer the Impact of Job

    Demands on Burnout. *Journal of Occupational Health Psychology, 10*(2), 170–180.

    https://doi.org/10.1037/1076-8998.10.2.170

Bakker, A. & Demerouti, E. (2017). Job demands–resources theory: taking stock and looking

    forward. *Journal of Occupational Health Psychology, 22*(3), 273-285.

    https://doi.org/10.1037/ocp0000056

Bass, B. (1995). Theory of Transformational Leadership Redux. *The Leadership Quarterly, 6*,

    463-478. https://doi.org/10.1016/1048-9843(95)90021-7

Bernard, H. (2017). *Research Methods in Anthropology: Qualitative and Quantitative*

    Approaches. Lanham, MD: Rowman & Littlefield.

Berthelsen, H., Hakanen, J., & Westerlund, H. (2018). Copenhagen Psychosocial

    Questionnaire—A validation study using the Job Demand- Resources model. *PLoS ONE,*

    13(4), Article e0196450. https://doi.org/10.1371/journal.pone.0196450

Bhui, K., Dinos, S., Galant-Miecznikowska, M., de Jongh, B., & Stansfeld, S. (2016).

    Perceptions of work stress causes and effective interventions in employees working in

    public, private and non-governmental organisations: a qualitative study. *BJPsych*

    Bulletin, *40*(6), 318-325. https://doi.org/10.1192/pb.bp.115.050823

Biblioteca del Congreso Nacional de Chile (BCN). (2020). *Índice de Desarrollo Humano (IDH)*

    en Chile a nivel nacional, regional y en las comunas de Chillán y San Carlos. Informe

    BCN. Elaborado por Mario Poblete.

    https://obtienearchivo.bcn.cl/obtienearchivo?id=repositorio/10221/29047/1/BCN_Poblete

    _IDH_en_Chile_final.pdf

Biblioteca del Congreso Nacional de Chile (BCN). (2022). *Ley Chile. Decreto 162, EDUCACIÓN.* https://www.bcn.cl/leychile/navegar?idNorma=1184373

Biron, C., Karanika-Murray, M., & Cooper, C.. (2012). *Improving organizational interventions for stress and well-being: Addressing process and context.* Routledge/Taylor & Francis Group.

Bliese, P., Edwards, J. & Sonnentag, S. (2017). Stress and well-being at work: A century of empirical trends reflecting theoretical and societal influences. *Journal of Applied Psychology, 102*(3), 389-402. http://doi.org/10.1037/apl0000109

Boeskens, L. and D. Nusche (2021), "Not enough hours in the day: Policies that shape teachers' use of time", *OECD Education Working Papers*, No. 245, OECD Publishing, Paris, https://doi.org/10.1787/15990b42-en.

Bolívar, A. (2010). El liderazgo educativo y su papel en la mejora: una revisión actual de sus posibilidades y limitaciones. *Psicoperspectivas, 9*(2), 9-33. https://doi.org/10.5027/PSICOPERSPECTIVAS-VOL9-ISSUE2- FULLTEXT-112

Bolívar, A., López-Yañez, J., y Murillo, F. (2016). Liderazgo en las instituciones educativas. Una revisión de líneas de investigación. *Revista Fuentes,* (14), 15-60. https://redined.educacion.gob.es/xmlui/bitstream/handle/11162/112503/Bolivar%202.pdf?sequence=1

Boyatzis, R. (1982). *The Component Manager.* New York: John Wiley and Sons.

Bravo, C., & Nazar, G. (2015). Riesgo psicosocial en el trabajo y salud en conductores de locomoción colectiva urbana en Chile. *Salud de los Trabajadores, 23*(2), 105-114.

Bravo, M. & Ramírez, P. (2022). Denuncias por convivencia escolar al segundo trimestre de 2022: una mirada territorial. *Informe del Observatorio de Ciudadanía, Convivencia y Bienestar Escolar de La Araucanía, Noviembre 2022*. ISSN 2810-6288.

Bravo-Sanzana, M., Miranda, E., Huaiquián, E., & Miranda, C. (2019). School social climate in students of la Araucanía region, Chile. *Journal of Sport and Health Research. 11*. 23-40.

Bruna, D., Villarroel, V., & Hojman, V. (2021). *Emociones y salud mental de los profesores en la educación remota en pandemia. Un estudio en el sistema escolar chileno.* CIME – U. del Desarrollo. https://psicologia.udd.cl/files/2021/05/Salud-Mental-de-docentes-en-pandemia-CIME.pdf

Busetto, L., Luijkx, K., Calciolari, S., González-Ortiz, L., & Vrijhoef, H. (2017). The Development, Description and Appraisal of an Emergent Multimethod Research Design to Study Workforce Changes in Integrated Care Interventions. *International journal of integrated care*, *17*(1), 1-10. https://doi.org/10.5334/ijic.2510

Cabezas, V., Narea, M., Torres, D., Icaza, M., Escalona, G., & Reyes, A. (2022). Bienestar Docente durante la Pandemia de COVID-19 en Chile: Demandas y Recursos para Afrontar la Angustia Psicológica. *Psykhe, 31*(1), 1-24. https://doi.org/10.7764/psykhe.2020.22427

Campos, F., Valdés, R., & Ascorra, P. (2019). ¿Líder pedagógico o gerente de escuela? Evolución del rol del director de escuela en Chile. *Calidad en la Educación,* (51), 53-84. https://doi.org/10.31619/caledu.n51.685

Carrasco, A. & Barraza, D. (2020). La confianza y el cuidado en el liderazgo escolar de directoras chilenas. *Calidad en la educación, 53*, 364-391. doi: http://dx.doi.org/10.31619/caledu.n53.830

Carroll, B., Levy, L., & Richmond, D. (2008). Leadership as Practice: Challenging the

Competency Paradigm. *Leadership, 4*(4). 363-379.

https://doi.org/10.1177/1742715008095186

Casper, W., & Harris, C. (2008). Work-life benefits and organizational attachment: Self-interest

utility and signaling theory models. *Journal of Vocational Behavior, 72*(1), 95-109.

https://doi.org/10.1016/j.jvb.2007.10.015

Cassar, V., Bezzina, F., Fabri, S., & Buttigieg, S. (2020). Work stress in the 21st century: A

bibliometric scan of the first 2 decades of research in this millennium. *The Psychologist-

Manager Journal, 23*(2), 47–75. https://doi.org/10.1037/mgr0000103

Castro, N. (2018). Riesgos Psicosociales y Salud Laboral en Centros de Salud. *Ciencia &

trabajo, 20*(63), 155-159. http://dx.doi.org/10.4067/S0718-24492018000300155

Chiang, M., Heredia, S., & Santamaría, E. (2017). Clima Organizacional y Salud Psicológica.

Una Dualidad Organizacional. *Dimensión empresarial, 15*(1), 73-86.

http://dx.doi.org/10.15665/rde.v15i1.641

Clausen, T., & Borg, V. (2010). Do positive work-related states mediate the association between

psychosocial work characteristics and turnover? A longitudinal analysis. *International

Journal of Stress Management, 17*(4), 308–324. https://doi.org/10.1037/a0021069

Colegio de Profesores de Chile (2020). *Logros de la agenda corta.*

https://www.colegiodeprofesores.cl/logros-de-la-agenda-corta/

Conger, J., & Pearce, C. (2003). *Shared leadership: Reframing the hows and whys of

leadership.* Sage.

Cooper, C., Dewe, P., & O'Driscoll, M. (2001). *Organizational stress: A review and critique of

theory, research, and applications.* Sage Publications.

https://doi.org/10.1111/1468-0432.00006_4

Cornejo, R. (2009). Condiciones de trabajo y bienestar/malestar docente en profesores de enseñanza media de Santiago de Chile. *Revista Educação e Sociedade, 30*(107), 409-426.

Cox, T. (1993). *Stress research and stress management: Putting theory to work.* Health and Safety Executive (HSE).

Cox, T. & Rial-González, E. (2000). *Risk management, psychosocial hazards and work stress, Copenhagen:* World Health Organization, Regional Office for Europe.

Cox, T., Griffiths, A., & Rial-Gonzalez, E. (2000). *Work-related stress.* Office for Official Publications of the European Communities, Luxembourg.

Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. (2015). *A Concise Introduction to Mixed Methods Research*. Sage.

Creswell, J. & Plano Clark, V. (2018). *Designing and Conducting Mixed Methods Research* (3rd ed.). Thousand Oaks, CA: SAGE.

Dachapalli, P., & Parumasur, S. (2012). Employee susceptibility to experiencing *Job Insecurity*. *South African Journal of Economic and Management Sciences, 15*(1), 31-43. http://doi.org/10.4102/sajems.v15i1.125

Delgado-Fernandez, V., Rey-Merchan, M., & Arquillos, A. (2021). Estudio comparativo de los riesgos psicosociales laborales entre profesionales médicos. *Revista de la Asociación Española de Especialistas en Medicina del Trabajo, 30*(1), 24-33. ISSN 1132-6255.

Diario de Concepción (2019). *Edicion Especial: Aniversario de Talcahuano.* https://assets.diarioconcepcion.cl/2019/11/EE-Talcahuano-29-11-2019.pdf

Dicke, T., Marsh, H., Riley, P., Parker, P., Guo, J., & Horwood, M. (2018). Validating the

    Copenhagen Psychosocial Questionnaire (COPSOQ-II) Using Set-ESEM: Identifying

    Psychosocial Risk Factors in a Sample of School. *Frontiers in Psychology, 9*(584), 1-17.

    http://doi.org/10.3389/fpsyg.2018.00584

Dirección del Trabajo (2014). *ENCLA 2014. Informe de resultados Octava Encuesta Laboral.*

    Santiago de Chile. ISBN: 978-956-9661-22-8

Dollard, M., Skinner, N.,Tuckey, M., & Bailey, T. (2007). National surveillance of psychosocial

    risk factors in the workplace: An international overview, *Work & Stress, 21*(1), 1-29.

    https://doi.org/10.1080/02678370701254082

Donaldson-Feilder, E., & Yarker, J. (2010). Using a competency-based approach to identify the

    management behaviors required to manage workplace stress in nursing: A critical

    incident *study. International Journal of Nursing Studies 47*(3), 307-13.

    https://doi.org/10.1016/j.ijnurstu.2009.07.004

Donaldson-Feilder, E., Yarker, J., & Lewis, R. (2011). *Preventing Stress in Organisations: How

    to Develop Positive Managers*, Wiley-Blackwell.

Dupriez, V., Delvaux, B., & Lothaire, S. (2016). Teacher shortage and attrition: Why do they

    leave?. *British Educational Research Journal, 42*(1), 21-

    39. https://doi.org/10.1002/berj.3193

Echerri, D., Santoyo, F., Rangel, M., & Saldana, C. (2019). Efecto modulador del liderazgo

    transformacional en el estrés laboral y la efectividad escolar percibida por trabajadores de

    educación básica de Ciudad Guzmán, Jalisco. RIDE. *Revista Iberoamericana para la

    Investigación y el Desarrollo Educativo 9*(18), 845-867. ISSN 2007-7467.

    https://doi.org/10.23913/ride.v9i18.477.

Elige Educar & Centro de Políticas Públicas UC (2022). *Voces Docentes: Quinta versión de la encuesta nacional a profesores/as y educadores/as de párvulos con funciones en el aula.* https://eligeeducar.cl/investigaciones-realizadas/voces-docentes-v/

Espinoza-Parra, S., Molero, F., & Fuster-Ruizdeapodaca, M. (2015). Transformational leadership and job satisfaction of police officers (carabineros) in Chile: the mediating effects of group identification and work engagement / Liderazgo transformacional y satisfacción laboral en carabineros de Chile: los efectos mediadores de la identificación con el grupo y el work engagement, *Revista de Psicología Social, 30*(3), 439-467, DOI: 10.1080/02134748.2015.1065087

EU-OSHA (2012). *Management of psychosocial risks at work: An analysis of the findings of the European Survey of Enterprises on New and Emerging Risks (ESENER) European Risk Observatory Report.* Publications Office of the European Union. http://doi.org/10.2802/92077

EU-OSHA (2013). *European opinion poll on occupational safety and health 2013*. https://osha.europa.eu/en/facts-and-figures/european-opinion-polls-safety-and-health-work/european-opinion-poll-occupational-safety-and-health-2013

Eurofound & EU-OSHA (2014). *Psychosocial risks in Europe: Prevalence and strategies for prevention,* Publications Office of the European Union, Luxembourg. https://irep.ntu.ac.uk/id/eprint/31136/1/PubSub8692_Hassard.pdf

Eurofound (2017). Sixth European Working Conditions Survey – Overview report (2017 update), Publications Office of the European Union, Luxembourg. doi: 10.2806/422172

Flessa, J., Bramwell, D., Fernandez, M., & Weinstein, J. (2018). School leadership in Latin
America 2000–2016. *Educational Management Administration & Leadership*, *46*(2),
182–206. http://dx.doi.org/10.1177/1741143217717277

Francioli, L., Conway, P., Hansen, Å. et al. (2018). Quality of Leadership and Workplace
Bullying: The Mediating Role of Social Community at Work in a Two-Year Follow-Up
Study. *Journal of Business Ethics 147*, 889–899. https://doi.org/10.1007/s10551-015-
2996-3

Fransson, E., Heikkilä, K., Nyberg, S., Zins, M., Westerlund, H., Westerholm, P., Väänänen, A.,
Virtanen, M., Vahtera, J., Theorell, T., Suominen, S., Singh-Manoux, A., Siegrist, J.,
Sabia, S., Rugulies, R., et al. (2012). Job strain as a risk factor for leisure-time physical
inactivity: an individual-participant meta-analysis of up to 170,000 men and women: the
IPD-Work Consortium. *American Journal of Epidemiology, 176*(12):1078-1089. doi:
10.1093/aje/kws336.

Freudenberger, H. (1974). Staff burnout. *Journal of Social Issues, 30*(1), 159- 165.
https://doi.org/10.1111/j.1540-4560.1974.tb00706.x

Gandalmes, S. & Gonzalez, A. (2019). Directores fantásticos y dónde encontrarlos: lecciones
sobre la promoción interna de directivos elegidos por Alta Dirección Pública en Chile.
Revista Calidad en la Educación, 51. ISSN: 0717-4004/eISSN 0718-4565

Ganon-Shilon, S., & Schechter, C. (2018). School principals' sensemaking of their leadership
role during reform implementation. *International Journal of Leadership in Education,
22*(3), 279-300. https://doi.org/10.1080/13603124.2018.1450996

Gallup (2014). *State of America's Schools: The Path to Winning Again in Education.* https://nurturingfaith.files.wordpress.com/2014/04/gallup-report-state-of-americas-schools.pdf

Gallup (2020). *Gallup's Perspective on Employee Burnout: Causes and Cures*. Gallup, Inc. https://www.gallup.com/workplace/282659/employee-burnout-perspective-paper.aspx

Gardner, J., & Sharpley, C. (2015). Managers' understanding of stress and its effects in the workplace. *Journal of Applied Health Behavior, 3*, 24-30. https://www.researchgate.net/publication/232509175_Managers'_understanding_of_stress_and_its_effects_in_the_workplace

Garretón, Matías, Sanfuentes, Matías, Valenzuela, Juan Pablo, & Núñez, Isabel Margarita. (2022). Brechas y desafíos organizacionales en la implementación temprana de la Nueva Educación Pública en Chile. *Pensamiento educativo, 59(1)*, 00110. https://dx.doi.org/10.7764/pel.59.1.2022.10

Garson, G. (2013). Fundamentals of hierarchical linear and multilevel modeling. *Hierarchical linear modeling: Guide and applications*, 3-25.

Gayed, A., Milligan-Saville, J., Nicholas, J., Bryan, B., LaMontagne, A., Milner, A., & Glozier, N. (2018). Effectiveness of training workplace managers to understand and support the mental health needs of employees: a systematic review and meta-analysis. *Occupational and Environment Medicine, 75*(6), 462-470. http://doi.org/10.1136/oemed-2017-104789

Gayed, A., et al. (2018). A New Online Mental Health Training Program for Workplace Managers: Pre-Post Pilot Study Assessing Feasibility, Usability, and Possible Effectiveness. *JMIR Mental Health, 5*(3), 105-117. http://doi.org/10.2196/10517

George, R., Chiba, M., & Scheepers, C. (2017). An investigation into the effect of leadership style on stress-related presenteeism in South African knowledge workers. *SA Journal of Human Resource Management, 15*(0), a754. https://doi.org/10.4102/sajhrm.v15i0.754

Glazzard, J. & Rose, A. (2020), "The impact of teacher well-being and mental health on pupil progress in primary schools", *Journal of Public Mental Health, Vol. 19 No. 4*, pp. 349-357. https://doi.org/10.1108/JPMH-02-2019-0023

Global School Leaders. (2021). Annual Pulse Survey Report 2021. San Francisco: GSL. https://www.globalschoolleaders.org/resources

González, R. & González, V. (2007). Diagnóstico de necesidades y estrategias de formación docente en las Universidades. *Revista Iberoamericana de Educación, 43*(6), 1-14. https://doi.org/10.35362/rie4362365

Graen, G. & Scandura, T. (1987). Toward a psychology of dyadic organizing. *Research in Organizational Behavior, 9,* 175–208.

Graen, G. & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly, 6*(2), 219–247. https://doi.org/10.1016/1048-9843(95)90036-5

Gray, C., Wilcox, G., & Nordstokke, D. (2017). Teacher Mental Health, School Climate, Inclusive Education and Student Learning: A Review. *Canadian Psychology/Psychologie Canadienne, 58*(3), 203-210. https://doi.org/10.1037/cap0000117

Greasley, K., & Edwards, P. (2015). When do health and well-being interventions work? Managerial commitment and context. *Economic and Industrial Democracy, 36*(2), 355-377. http://doi.org/10.1177/0143831X13508590

Green, F. (2006). *Demanding work: The paradox of job quality in the affluent economy,* Princeton University Press.

Greenhaus, J., & Beutell, N. (1985). Sources of conflict between work and family roles. *The Academy of Management Review, 10*(1), 76-88. https://doi.org/10.2307/258214

Guest, G., Bunce, A. & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods, 18*(1). DOI: 10.1177/1525822X05279903 http://fmx.sagepub.com/cgi/content/abstract/18/1/59

Guetterman, T., Fetters, M., & Creswell, J. (2015). Integrating Quantitative and Qualitative Results in Health Science Mixed Methods Research Through Joint Displays. *Annals of Family Medicine*, *13*(6), 554-561. https://doi.org/10.1370/afm.1865

Guetterman, T., & Fetters, M. (2018). Two Methodological Approaches to the Integration of Mixed Methods and Case Study Designs: A Systematic Review. *American Behavioral Scientist, 62*(7), 900–918. https://doi.org/10.1177/0002764218772641

Güilgüiruca, M., Meza, K., Góngora, R., & Moya, C. (2015). Factores de riesgo psicosocial y estrés percibido en trabajadores de una empresa eléctrica en Chile. *Medicina y Seguridad del Trabajo, 61*(238), 57-67. https://dx.doi.org/10.4321/S0465-546X2015000100006

Gumus, S., Bellibas, M., Esen, M., & Gumus, E. (2018). A Systematic Review of Studies on Leadership Models in Educational Research from 1980 to 2014. *Educational Management Administration & Leadership, 46,* 25-48. https://doi.org/10.1177/1741143216659296

Hallinger, P. (2011). Leadership for learning: Lessons from 40 years of empirical research. *Journal of Educational Administration, 49*(2), 125-142. http://doi.org/10.1108/09578231111116699

Halpin, A. & Winer, B. (1957). A factorial study of leader behaviour description, Stodgill, R. M. and Coons, A. E. (eds.) *Leader Behaviour: its Description and Measurement,* Bureau of Business Research, Ohio State University, Columbus.

Harms, P., Credé, M., Tynan, M., Leon, M., Jeung, W. (2017). Leadership and stress: A meta-analytic review. *The Leadership Quarterly, 28*(1), 178-194. https://doi.org/10.1016/j.leaqua.2016.10.006

Harris, K., & Kacmar, K. (2006). Too much of a good thing: the curvilinear effect of leader-member exchange on stress. *The Journal of Social Psychology, 146*(1), 65-84. https://doi.org/10.3200/SOCP.146.1.65-84

Harvard School of Public Health (2016). News, Multimedia Archives. https://www.hsph.harvard.edu/news/multimedia_categories/2016/

Hassan, E., Austin, C., Celia, C., Disley, E., Hunt, P., Marjanovic, S., Shehabi, A., Villalba-van-Dijk, L., & van Stolk, C. (2009). *Health and wellbeing at work in the United Kingdom*. The RAND Corporation. https://www.rand.org/content/dam/rand/pubs/technical_reports/2009/RAND_TR758.pdf

Hassard, J., Teoh, K., Visockaite, G., Dewe, P., & Cox, T. (2018). The cost of work-related stress to society: A systematic review. *Journal of Occupational Health Psychology, 23*(1), 1-17. http://dx.doi.org/10.1037/ocp0000069

Hersey, P., Blanchard, K., & Johnson, D. (1996). *Management of organisational behaviour.* London: Prentice-Hall International.

Hill, C., Knox, S., Thompson, B., Williams, E., Hess, S., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counseling Psychology, 52*(2), 196–205. https://doi.org/10.1037/0022-0167.52.2.196

Hillage, J., Holmes, J., Rickard, C. & Marvel, R. (2014). *Workplace policy and management practices to improve the health of employees.* Institute for Employment Studies.

Hoel, H., Sparks, K., & Cooper, C. (2001). The cost of violence/stress at work and the benefits of a violence/stress-free working environment. Report Commissioned by the International Labour Organization (ILO) Geneva. University of Manchester Institute of Science and Technology. https://www.ilo.org/global/topics/safety-and-health-at-work/resources-library/publications/WCMS_108532/lang--en/index.htm

Holmes, T., & Rahe, R.(1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research, 11*(2), 213–218. https://doi.org/10.1016/0022-3999(67)90010-4

Horn, A. (2013). *Liderazgo escolar en Chile y su influencia en los resultados de aprendizaje* (Doctoral dissertation, Universidad Autónoma de Madrid).

Horn, A., & Murillo T., F. (2016). Incidencia de la dirección escolar sobre el compromiso de los docentes: Un estudio multinivel. *Psicoperspectivas, 15*(2), 64-77. https://dx.doi.org/10.5027/psicoperspectivas-Vol15-Issue2-fulltext-746

Hox, J. (2002). *Multilevel analysis techniques and applications.* Lawrence Erlbaum Associates Publishers.

Hox, J. (2010). *Multilevel Analysis: Techniques and Applications* (2nd ed.). New York: Routledge. https://doi.org/10.4324/9780203852279

Ibrahim, R., Zalam, W., Foster, B., Afrizal, T., Johansyah, M., Saputra, J., Bakar, A., Dagang, M., & Ali, S. (2021). Psychosocial Work Environment and Teachers' Psychological Well-Being: The Moderating Role of Job Control and Social Support. *International Journal of Environmental Research and Public Health, 18*(14), 7308. https://doi.org/10.3390/ijerph18147308

Ilić, I., Arandjelović, M., Jovanović, J., & Nešić, M. (2017). Relationships of work-related psychosocial risks, stress, individual factors and burnout - Questionnaire survey among emergency physicians and nurses. Relationships of work-related psychosocial risks, stress, individual factors and burnout. *Medycyna Pracy, 68*(2), 167–178. http://doi.org/10.13075/mp.5893.00516

Instituto de Salud Pública de Chile (2018). *Instrumento para la Gestión Preventiva del Riesgo Psicosocial en el Trabajo.* Instrumento ISP - GRPS. Segunda versión. www.ispch.cl/saludocupacional

International Labour Organization (2020). *Managing work-related psychosocial risks during the COVID-19 pandemic*. Geneva: ILO 2020. https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/instructionalmaterial/wcms_748638.pdf

Jain, A., Leka, S., & Zwetsloot, G. (2018). Approaches to Managing Health, Safety and Well-being in *Managing Health, Safety and Well-Being: Ethics, Responsibility and Sustainability* (pp.33-65). Springer Nature. DOI:10.1007/978-94-024-1261-1_2

Jettinghof, K. & Cedillo, L. (2008). Sensibilizando sobre el Estrés Laboral en los países en desarrollo. Un riesgo moderno en un ambiente tradicional de trabajo: Consejos para empleadores y representantes de los trabajadores. OMS. https://apps.who.int/iris/bitstream/handle/10665/43770/9789243591650_spa.pdf?sequence=1

Jimenez, D., Bartels, S., Cardenas, V., Dhaliwal, S., & Alegría, M. (2012). Cultural Beliefs and Mental Health Treatment Preferences of Ethnically Diverse Older Adult Consumers in Primary Care February. *The American journal of geriatric psychiatry: official journal of*

the American Association for Geriatric Psychiatry 20(6), 533-542

DOI:10.1097/JGP.0b013e318227f876

Johannessen, H., Gravseth, H., & Sterud T. (2015). Psychosocial factors at work and occupational injuries: A prospective study of the general working population in Norway. *American Journal of Industrial Medicine, 58*(5), 561-567. doi: 10.1002/ajim.22431

Karasek, R. & Theorell, T. (1990). *Healthy Work: Stress, Productivity, and the reconstruction of Working Life.* New York: Basic Books.

Kinman, G., & Jones, F. (2005). Lay representations of workplace stress: What do people really mean when they say they are stressed? *Work & Stress, 19*(2), 101–120. https://doi.org/10.1080/02678370500144831

Kivimäki, M., Leino-Arjas, P., Luukkonen, R., Riihimäki, H., Vahtera, J., & Kirjonen, J. (2002). Work stress and risk of cardiovascular mortality: Prospective cohort study of industrial employees. *British Medical Journal, 325*(7369), 857. http://dx.doi.org/10.1136/bmj.325.7369.857

Kivimäki, M., Virtanen, M., Elovainio, M., Kouvonen, A., Väänänen, A., & Vahtera, J. (2006). Work stress in the etiology of coronary heart disease--a meta-analysis. *Scandinavian Journal of Work, Environmen and Health, 32*(6), 431-442. doi: 10.5271/sjweh.1049. PMID: 17173200.

Kompier M. (2002). The psychosocial work environment and health. What do we know and where should we go? *Scandinavian Journal of Work, Environment and Health, 28*(1):1-4. doi: 10.5271/sjweh.639. PMID: 11871847.

Kompier, M. (2003). Job design and well-being. In Schabracq, M., Winnubst, J., & Cooper, C. (Eds), *The handbook of work and health psychology*, pp. 429-454. John Wiley & Sons, Ltd.

Kortum, E., Leka, S., & Cox, T. (2010). Psychosocial risks and work-related stress in developing countries: health impact, priorities, barriers and solutions. *International Journal of Occupational Medicine and Environment Health, 23*(3), 225-238. doi: 10.2478/v10001-010-0024-5. PMID: 20934955.

Kortum, E., Leka, S., & Cox, T. (2011). Perceptions of psychosocial hazards, work-related stress and workplace priority risks in developing countries. *Journal of Occupational Health, 53*(2),144-155. http://doi.org/10.1539/joh.o10016

Kreft, I., de Leeuw, J., & Aiken, L. (1995). The effect of different forms of centering in hierarchical linear models. *Multivariate Behavioral Research, 30*(1), 1–21. https://doi.org/10.1207/s15327906mbr3001_1

Kristensen, T., Hannerz, H., Hogh, A., & Borg, V. (2005). The Copenhagen Psychosocial Questionnaire--a tool for the assessment and improvement of the psychosocial work environment. *Scandinavian Journal of Work, Environment & Health, 31*(6), 438-449. http://doi.org/10.5271/sjweh.948

Lavicoli, S., & Di Tecco, C. (2020). The management of psychosocial risks at work: state of the art and future perspectives. *La Medicina del Lavoro*, *111*(5), 335-350. http://doi.org/10.23749/mdl.v111i5.10679

Leal, F., Albornoz, M., & Rojas, M. (2016). Liderazgo directivo y condiciones para la innovación en escuelas chilenas: el que nada hace, nada teme. *Estudios Pedagógicos, 42*(2), 193-205. https://dx.doi.org/10.4067/S0718-07052016000200011

Leckie, G. (2013). *Three-Level Multilevel Models.* Web Publication Site Centre for Multilevel Modelling. *http://www.bristol.ac.uk/cmm/learning/course.html*

Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School Leadership and Management, 28*(1), 27-42. https://doi.org/10.1080/13632430701800060

Leithwood, K. (2009). *¿Cómo liderar nuestras escuelas? Aportes desde la investigación.* Fundación Chile. https://directivos.minedu.gob.pe/wp-content/uploads/2021/01/C%C3%B3mo-liderar-nuestras-escuelas.pdf

Leithwood, K., & Sun, J. (2012). The nature and effects of transformational school leadership: A meta-analytic review of unpublished research. *Educational Administration Quarterly, 48*(3), 387-423. https://doi.org/10.1177/0013161X1143626

Leithwood, K., Harris, A., & Hopkins, D. (2019). Seven strong claims about successful school leadership revisited. *School Leadership & Management, 40*(1), 5-22. https://doi.org/10.1080/13632434.2019.1596077

Leka, S. & Cox, T. (Eds.) (2008). *The European Framework for Psychosocial Risk Management: PRIMA-EF.* I-WHO Publications, Nottingham. ISBN 978-0-9554365-2-9.

Leka, S., Jain, A., & World Health Organization (2010). *Health Impact of Psychosocial Hazards at Work: An Overview.* https://apps.who.int/iris/handle/10665/44428

Leka, S., Van Wassenhove, W., & Jain, A. (2015). Is psychosocial risk prevention possible? Deconstructing common presumptions. *Safety Science*, *71*A, 61-67. ISSN 0925-7535, https://doi.org/10.1016/j.ssci.2014.03.014. (https://www.sciencedirect.com/science/article/pii/S0925753514000836)

Leka, S., Jain, A., & Lerouge, L. (2017). Work-Related Psychosocial Risks: Key Definitions and an Overview of the Policy Context in Europe. In *Psychosocial Risks in Labour and Social Security Law* (pp. 1–12). Springer International Publishing. https://doi.org/10.1007/978-3-319-63065-6_1

Leiva-Guerrero, M. & Vásquez, C. (2019). Liderazgo pedagógico: de la supervisión al acompañamiento docente. *Calidad en la Educación,* (51), 225-251. https://doi.org/10.31619/caledu.n51.635

Leyton, C., Castillo, P., Guerrero, C., González, A., Muñoz, G., & Puga, I. (2008). *Autonomía en la toma de decisiones y organización escolar: Su relación con el desempeño escolar.* FONIDE – Fondo de Investigación y Desarrollo en Educación. Ministerio de Educación, Chile.

Leyton, C., Valdés, S., Huerta, P. (2017). Metodología para la prevención e intervención de riesgos psicosociales en el trabajo del sector público de salud / Methodology for the prevention and intervention of psychosocial risks at work in the public health sector. *Revista Salud Pública, 19*(1), 10-16. https://doi.org/10.15446/rsap.v19n1.49265

Lewis, R., Yarker, J., & Donaldson-Feilder, E. (2012). The vital role of line managers in managing psychosocial risks. *Improving organizational interventions for stress and well-being. Addressing process and context*. Routledge. https://doi.org/10.4324/9780203723494

Liebowitz, D., & Porter, L. (2019). The Effect of Principal Behaviors on Student, Teacher, and School Outcomes: A Systematic Review and Meta-Analysis of the Empirical Literature. *Review of Educational Research, 89*(5), 785-827. https://doi.org/10.3102/0034654319866133

López, P., & Gallegos, V. (2017). Liderazgo distribuido y aprendizaje de la matemática en escuelas primarias: el caso de Chile. *Perfiles educativos, 39*(158), 112-129. https://www.scielo.org.mx/pdf/peredu/v39n158/0185-2698-peredu-39-158-00112.pdf

Lornudd, C., Tafvelin, S., von Thiele Schwarz, U., & Bergman, D. (2015). The mediating role of demand and control in the relationship betweenleadership behavior and employee distress: a cross-sectional study. *International Journal of Nursing Studies, 52*(2), 543-554. https://doi.org/10.1016/j.ijnurstu.2014.08.003

Luchman, J. & González-Morales, M. (2013). Demands, control, and support: A meta-analytic review of work characteristics interrelationships. *Journal of Occupational Health Psychology, 18*(1), 37–52. https://doi.org/10.1037/a0030541

Madanchian, M., Hussein, N., Noordin, F., & Taherdoost, H. (2017). Leadership Effectiveness Measurement and Its Effect on Organization Outcomes. *Procedia Engineering, 181*, 1043-1048. https://doi.org/10.1016/j.proeng.2017.02.505

Madsen, I., Diderichsen, F., Burr, H., & Rugulies, R. (2010). Person-related work and incident use of antidepressants: relations and mediating factors from the Danish work environment cohort study. *Scandinavian Journal of Work, Environment & Health, 36*(6), 435-444. http://www.jstor.org/stable/41151514

Malgorzata, M., Schneider, E., & Rial-Gonzalez, E. (2009). *OSH in Figures: Stress at Work – Facts and Figures*. EU-OSHA. ISBN 978-92-9191-224-7

Manríquez-Gutiérrez, K., & Reyes-Roa, M. (2022). Liderazgo educativo: una mirada desde el rol del director y la directora en tres niveles del sistema educacional chileno. *Revista Educación, 46*(1), 1-18. http://doi.org/10.15517/revedu.v46i1.44514

Marfan, J., & Pascual, J. (2018). Comparative study of school principals' leadership practices: Lessons for Chile from a cross-country analysis. *Educational Management Administration & Leadership, 46*(2), 279-300. https://doi.org/10.1177/1741143217732792

Martinic, R., & Stecher, A. (2020). Experiencias de trabajadores del retail en Chile. Aproximación desde la sociología de Dubet. *Convergencia*, *27*, 1-31. https://doi.org/10.29101/crcs.v27i0.11939

Maureira, O., Garay, S., Ahumada, L., & Ascencio, C. (2019). Perspectiva de diagnóstico sobre la distribución del liderazgo en organizaciones escolares: un análisis en dos dimensiones clave. *Calidad en la educación,* (51), 164-191. https://dx.doi.org/10.31619/caledu.n51.681

McEwen, B. (2017). Neurobiological and Systemic Effects of Chronic Stress. *Chronic Stress (Thousand Oaks). Jan-Dec, 1*. doi: 10.1177/2470547017692328.

Mei Kin, T., & Abdull Kareem, O. (2019). The relationship between emotional intelligence of school principals in managing change and teacher attitudes towards change, *International Journal of Leadership in Education, 22*(4), 469-485. http://doi.org/10.1080/13603124.2018.1481535

Merino-Salazar, P., Artazcoz, L., Cornelio, C., et al. (2017). Work and health in Latin America: results from the working conditions surveys of Colombia, Argentina, Chile, Central America and Uruguay. *Occupational and Environmental Medicine, 74,* 432-439.

Milczarek M., Schneider E., Rial González E. (2009). *OSH in figures: stress at work -facts and figures, Report for European Agency for Safety and Health at Work*, Luxemburg.

Ministerio de Desarrollo Social y Familia (2017). *Estimaciones de la Tasa de Pobreza y Multidimensional a Nivel Comunal.* Observatorio Social.

Ministerio de Educación, Chile (2015). *Marco para la buena dirección y el liderazgo escolar.* Publicación del Centro de Perfeccionamiento. Experimentación e Investigaciones Pedagógicas, CPEIP. https://liderazgoescolar.mineduc.cl/wp-content/uploads/sites/55/2016/04/MBDLE_2015.pdf

Ministerio de Educación, Chile (2016). *La Reforma Educacional está en marcha. Cuenta Pública 2015.* https://bibliotecadigital.mineduc.cl/bitstream/handle/20.500.12365/2134/mono-961.pdf?sequence=1&isAllowed=y

Ministerio de Educación, Centro de Estudios (2019). Education at a Glance 2019: Análisis de los resultados más relevantes para Chile. *Evidencias,45*. Santiago, Chile.

Ministerio de Educación, Chile (2019). Public Account Directorate of Public Education.

Ministerio de Educación, Chile (2020). Junta Nacional de Auxilio Escolar y Becas. Prioridades 2020 con IVE SINAE, comunal. https://www.junaeb.cl/ive

Ministerio de Educación (2021). *Resumen estadístico de la educación 2021*. Centro de estudios MINEDUC. https://bibliotecadigital.mineduc.cl/bitstream/handle/20.500.12365/18906/E22-0001.pdf?sequence=1&isAllowed=y

Ministerio de Salud, Dirección del Trabajo, & Instituto de Seguridad Laboral (2011). *Primera encuesta nacional de empleo, trabajo, salud y calidad de vida de los trabajadores y trabajadoras en chile. Informe interinstitucional ENETS 2009-2010.* https://www.dt.gob.cl/portal/1629/articles-99630_recurso_1.pdf

Miranda, G. (2012). *Protección de la Salud Mental en el trabajo: desafíos para la institucionalidad chilena.* (Tesis para optar al grado de Doctor en Salud Pública. Universidad Chile).

Miranda, G., Alvarado, S., & Kaufman, J. (2012). Duración de las licencias médicas FONASA por trastornos mentales y del comportamiento. *Revista Médica de Chile, 140*(2), 207-213. http://dx.doi.org/10.4067/S0034-98872012000200009

Moncada, S., Llorens, C., Navarro, A., & Kristensen, T. (2005). ISTAS21: Versión en lengua castellana del cuestionario psicosocial de Copenhague (COPSOQ). *Archivos de Prevención de Riesgos Laborales, 8*(1), 18-29. http://istas.net/descargas/8n1orig1.pdf

Montano, D., Reeske, A., Franke, F., & Hüffmeier, J. (2017). Leadership, followers' mental health and job performance in organizations: A comprehensive meta-analysis from an occupational health perspective. *Journal of Organizational Behavior, 38*(3), 327-350. https://doi.org/10.1002/job.2124

Mulford, B. (2003). *School Leaders: Challenging roles and impact on teacher and school effectiveness.* OECD. https://www.oecd.org/education/school/37133393.pdf

Nielsen, K., Taris, T., & Cox, T. (2010). The future of organizational interventions: Addressing the challenges of today's organizations. *Work & Stress, 24*(3), 219–233. https://doi.org/10.1080/02678373.2010.519176

Nieuwenhuijsen, K., Bruinvels, D., Frings-Dresen M. (2010). Psychosocial work environment and stress-related disorders, a systematic review. *Occupational Medicine, 60*(4), 277-286. doi: 10.1093/occmed/kqq081.

Nyberg, A., Bernin, P., & Theorell, T. (2005). *The impact of leadership on the health of subordinates.* National Institute for Working Life. http://www.su.se/polopoly_fs/1.51750.1321891474!/P2456_AN.pdf

Nyberg, A. (2009). *The impact of managerial leadership on stress and health among employees.* Institutionen för folkhälsovetenskap/Department of Public Health Sciences. https://openarchive.ki.se/xmlui/bitstream/handle/10616/38102/thesis.pdf?sequence=1&isAllowed=y

OECD/Bío Bío's Regional Steering Committee (2009). *The Bío Bío Region, Chile: Self Evaluation Report, OECD Reviews of Higher Education in Regional and City Development, IMHE.* www.oecd.org/edu/imhe/regionaldevelopment

OECD (2015). *Chile: Prioridades de políticas para un crecimiento más fuerte y equitativo.* Serie "Mejores Políticas". https://www.oecd.org/fr/chili/chile-prioridades-de-politicas-para-un-crecimiento-mas-fuerte-y-equitativo.pdf

OECD (2018). *Chile in Education at a Glance 2018: OECD Indicators*. OECD Publishing, Paris. https://doi.org/10.1787/kpiu8i-e

OECD (2019). *Education at a Glance 2019: OECD Indicators*. OECD Publishing, Paris. https://doi.org/10.1787/f8d7880d-en

OECD (2020). *TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals,* TALIS, OECD Publishing, Paris. https://doi.org/10.1787/19cf08df-en

Opazo, M. & Rodríguez, D. (2017). Repensando los límites de las organizaciones por medio de la teoría de sistemas organizacionales de Niklas Luhmann. *Revista Mad, 36*(2017), 21-37. https://doi.org/10.5354/0718-0527.2017.46140

Oplatka, I. (2018). *Emotions in Teaching and School Management.* Anthology of Articles. Tel-Aviv: MOFET Institute Press (Hebrew).

Orrego, V. (2022). Educación remota y salud mental docente en tiempos de COVID-19. *Revista de Estudios y Experiencias en Educación, 21*(45), 12-29. https://doi.org/10.21703/0718-5162.v21.n45.2022.001

Ozili, P. (2022). The Acceptable R-Square in Empirical Modelling for Social Science Research. In *Social Research Methodology and Publishing Results*. http://dx.doi.org/10.2139/ssrn.4128165

Padgett, D. (2008). *Qualitative Methods in Social Work Research* (2nd ed.). Sage Publications.

Padgett, D. K. (2017). *Qualitative Methods in Social Work Research* (3rd ed.). Thousand Oaks, CA: Sage.

Parra, R. (2017). Gestión del clima social escolar desde el liderazgo educativo. *Revista Iberoamericana De Educación, 74(*1), 119-132. https://doi.org/10.35362/rie741630

Parra, R. & Carmen, R. (2020). Formación para el liderazgo escolar: Impacto del plan de formación de directores en Chile. *International Journal of Educational Leadership and Management 8*(2), 204-233. https://doi.org/10.17583/ijelm.2020.4730

Patton, M. (2002). *Qualitative Research & Evaluation Methods.* 3rd edition. Sage Publications, Inc.

Peiro, J. & Rodríguez, I. (2008). Estrés Laboral, Liderazgo y Salud Ocupacional. *Papeles del Psicólogo, 29*(1), 68-82. https://www.redalyc.org/articulo.oa?id=77829109

Pejtersen, J. & Kristensen, T. (2010). The development of the work environment in Denmark from 1997 to 2005. *Scandinavian Journal of Work, Environment & Health, 35*(4), 284-293. http://doi.org/10.5271/sjweh.1334

Pérez-Franco, J. (2016). Nuevos trabajos, nuevos riesgos. Chile y los factores de riesgo psicosocial laboral. *Revista Chilena de Salud Pública, 20*(1), 36-44. https://doi.org/10.5354/0719-5281.2016.39334

Pielstick, C. (2000). Formal vs. Informal Leading: A Comparative Analysis. *Journal of Leadership Studies, 7*(3), 99-114. https://doi.org/10.1177/107179190000700307

Plan Anual de Desarrollo Educativo Municipal [PADEM] (2019). *Talcahuano.* Internal document handed by DAEM Talcahuano.

Plan Anual de Desarrollo Educativo Municipal [PADEM] (2021). *Talcahuano.* Internal document handed by DAEM Talcahuano.

Polizzi, P., Bargsted, M., & Caro, C. (2019). *Estudio Zoom al Trabajo*. Universidad Adolfo Ibáñez. Chile. https://noticias.uai.cl/assets/uploads/2019/10/informe-zoom-al-trabajo-2019_v4-4.pdf

Pino, F. & Pasmanik, D. (2021). Creencias de directores de establecimientos educacionales municipales acerca del compromiso docente. *Estudios pedagógicos (Valdivia)*, *47*(1), 71-90. https://dx.doi.org/10.4067/S0718-07052021000100071

Pratt, M., & Ashford, B. (2003). Fostering meaningfulness in working and at work. In Cameron, K., Dutton, J., & Quinn, R. (Eds.), *Positive organizational scholarship: Foundations of a new discipline* (pp. 308-327). Berrett-Koehler.

Ramarajan, L. (2014). Past, present and future research on multiple identities: Toward an intrapersonal network approach. *Academy of Management Annals, 8*(1), 589-659. http://dx.doi.org/10.1080/19416520.2014.912379

Ramos, C. (2009), *La trasformación de la empresa chilena. Una modernización desbalanceada*. Universidad Alberto Hurtado.

Rau, R., Morling, K., & Rösler, U. (2010). Is there a relationship between major depression and both objectively assessed and perceived demands and control?. *Work & Stress, 24*(1), 88–106. https://doi.org/10.1080/02678371003661164

Reynaldos, C., Gray, N., & Alfaro, B. (2015). Riesgo en salud mental y burnout en docentes de establecimientos municipales. *UCMaule, (49)*, 9-22. https://revistaucmaule.ucm.cl/article/view/24/21

Riaz, A., & Noor, M. (2016). Differentiating between Leadership Competencies and Styles. *International Journal of Information Technology Project Management, 7*(1), 58-71. https://doi.org/10.4018/IJITPM.2016010105

Riaz, A., Simon, P., & Farooq-e-Azam, Ch. (2020) Systematic literature review of project manager's leadership competencies. *Engineering, Construction and Architectural Management*, 1-87. DOI:10.1108/ecam-05-2019-0276

Richter, A., Tafvelin, S., & Sverke, M. (2018). The Mediated Relationship of Leadership on Job Insecurity. *Scandinavian Journal of Work and Organizational Psychology*, *3*(1), p.2., 1-14. http://doi.org/10.16993/sjwop.43

Rigotti, T., Yang, L. Q., Jiang, Z., Newman, A., De Cuyper, N., & Sekiguchi, T. (2021). Work-Related Psychosocial Risk Factors and Coping Resources during the COVID-19 Crisis. *Applied Psychology*, *70*(1), 3-15. https://doi.org/10.1111/apps.12307

Rivas, A. (2015). América Latina después de PISA: Lecciones aprendidas de la educación en siete países (2000-2015). *Profesorado. Revista de Curriculum y Formación de Profesorado, 19*(3), 20-23. https://www.redalyc.org/pdf/567/56743410029.pdf

Rivero, M., Yañez, T., & Hurtado, C. (2019). Preparación para ejercer un liderazgo efectivo en Chile: estudio de opinión a directores a partir del marco para la buena dirección. *Archivos*

Analíticos de Políticas Educativas, 27(117), 1-

23. https://dialnet.unirioja.es/servlet/articulo?codigo=7434646

Rocha, K. et al. (2014). Clase social, factores de riesgo psicosocial en el trabajo y su asociación

con la salud autopercibida y mental en Chile. *Cadernos de Saúde Pública, 30*(10). 2219-

2234. https://doi.org/10.1590/0102-311X00176213

Rodríguez, P., Valenzuela, J., Suchan, K., Truffello, R., Norel, N., Allende, C., Mondaca, J., &

Céspedes, J. (2016). *La geografía de las oportunidades educativas: Determinando el*

acceso real de los estudiantes a establecimientos educacionales efectivos para generar

políticas públicas que mejoren la provisión de educación de calidad. FONIDE.

http://doi.org/10.13140/RG.2.2.17690.64968/1

Rodríguez-Ponce, E., Pedraja-Rejas, L., Ganga-Contreras, F. (2017). La relación entre los estilos

de liderazgo y el desempeño de los equipos de dirección intermedia: un estudio

exploratorio desde Chile. *Contabilidad y Negocios, 12*(23), 129-144. ISSN: 1992-1896

Rosário, S., Fonseca, J., Nienhaus, A. et al. (2016). Standardized assessment of psychosocial

factors and their influence on medically confirmed health outcomes in workers: a

systematic review. *Journal of Occupational Medicine and Toxicology, 11*(19), 1-13.

https://doi.org/10.1186/s12995-016-0106-9

Saldana, J. (2016). *The Coding Manual for Qualitative Researchers.* Sage Publications Inc.

Salvagioni, D., Melanda, F., Mesas, A., González, A., Gabani, F., & Andrade, S. (2017).

Physical, psychological and occupational consequences of job burnout: A systematic

review of prospective studies. *PloS one*, *12*(10), e0185781.

https://doi.org/10.1371/journal.pone.0185781

Sauter, S., Brightwell, W., Colligan, M., Hurrell, J., Katz, T., LeGrande, D., Lessin, N., Lippin, R., Lipscomb, J., & Murphy, L. (2002). The changing organization of work and the safety and health of working people: Knowledge gaps and research directions. *NIOSH (Vol. 2002*-116): DHHS (NIOSH).

Schaufeli, W. (2015). Engaging leadership in the job demands-resources model. *Career Development International, 20*(5), 446-463. http://doi.org/10.1108/CDI-02-2015-0025

Selye, H. (1956). The stress of life. McGraw-Hill.

Siegrist, J. (2002). Effort-reward imbalance at work and health. In P. L. Perrewé & D. C. Ganster (Eds.), *Historical and current perspectives on stress and health* (pp. 261–291). Elsevier Science/JAI Press. https://doi.org/10.1016/S1479-3555(02)02007-3

Silva, H., Lefio, A., Marchetti, N., Benoit, P. (2014). Riesgos Psicosociales en Conductores de Transporte de Carga y Pasajeros Urbanos e Interurbanos, y su Asociación con la Autopercepción de Salud y Siniestralidad Laboral. Ciencia & Trabajo, 16(50), 67-74. http://dx.doi.org/10.4067/S0718-24492014000200002

Skaalvik, E., & Skaalvik, S. (2015). Job Satisfaction, Stress, and Coping Strategies in the Teaching Profession. What Do the Teachers Say? *International Education Studies, 8*, 181-192. http://dx.doi.org/10.2466/14.02.PR0.114k14w0

Skakon, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' wellbeing, behaviors and style associated with the affective wellbeing of their employees? A systematic review of three decades of research, *Work & Stress 24*(2), 107-139. https://doi.org/10.1080/02678373.2010.495262

Sok, J., Blomme, R., & Tromp, D. (2013). The Use of the Psychological Contract to Explain Self-Perceived Employability. *International Journal of Hospitality Management, 34*, 274-284. http://dx.doi.org/10.1016/j.ijhm.2013.03.008

Stansfeld, S., & Candy, B. (2006). Psychosocial work environment and mental health—a meta-analytic review. *Scandinavian Journal of Work, Environment & Health, 32*(6), 443-462. http://doi.org/10.5271/sjweh.1050

Stecher, A. & Sisto, V. (2020). Trabajo y precarización laboral en el Chile neoliberal. Apuntes para comprender el estallido social de octubre 2019. En K. Araujo (Ed.), *Hilos tensados. Para leer el octubre chileno* (pp. 37–82). Editorial USACH.

Steele, F. (2008). Introduction to Multilevel Modelling Concepts. Centre for Multilevel Modelling. *LEMMA VLE Module 5.* http://www.bristol.ac.uk/cmm/learning/course.html

Steger, M., Dik, B., & Duffy, R. (2012). Measuring Meaningful Work: The Work and Meaning Inventory (WAMI), *Journal of Career Assessment 20*(3), 322-337, https://doi.org/10.1177/1069072711436160

Stephens, G., Rees, C., & Lazarus, M. (2021). Exploring the impact of education on preclinical medical students' tolerance of uncertainty: a qualitative longitudinal study. *Advances in Health Sciences Education, 26*(1), 53- 77. doi:10.1007/s10459-020-09971-0

Strategic Developmental Plan, (2019). *DAEM Reporte Anual Talcahuano School District (DAEM), Chile 2017.*

Strömgren, M., Eriksson, A., Ahlstrom, L., Bergman, D. & Dellve, L. (2017). Leadership quality: a factor important for social capital in healthcare organizations. *Journal of Health Organization and Management. 31*. DOI: 10.1108/JHOM-12-2016-0246.

Subsecretaría de Desarrollo Regional y Administrativo [SUBDERE] (2020). *Talcahuano.*

https://www.subdere.cl/divisi%C3%B3n-administrativa-de-chile/gobierno-regional-del-

biob%C3%ADo/provincia-de-concepci%C3%B3n/talcahuano

Sui, Y., Wang, H., & Kirkman, B., & Li, N. (2015). Understanding The Curvilinear

Relationships between LMX Differentiation and Team Coordination and Performance.

Personnel Psychology, 69(3), 559-597. https://doi.org/10.1111/peps.12115

Superintendencia de Seguridad Social, Chile [SUSESO], (2016). *Informe Anual de Estadísticas*

de Seguridad Social 2016. https://www.suseso.cl/607/articles-40371_archivo_01.pdf

Superintendencia de Seguridad Social, Chile [SUSESO], (2018). *Informe Anual de Estadísticas*

de Seguridad Social. https://www.suseso.cl/605/articles-578297_recurso_2.pdf

Superintendencia de Seguridad Social (2018). *Manual del Método del Cuestionario*

SUSESO/ISTAS21. Intendencia de Seguridad y Salud en el Trabajo. Unidad de Medicina

del Trabajo. https://www.achs.cl/docs/librariesprovider2/empresa/8-factores-

psicosociales/2-normativa/suseso-manual-del-m%C3%A9todo-del-cuestionario-suseso-

istas-21-2018.pdf?sfvrsn=6b9eb168_2

Superintendencia de Seguridad Social, Chile [SUSESO], (2019). *Informe Anual de Estadísticas*

de Seguridad Social 2016. https://www.suseso.cl/607/articles-595996_archivo_01.pdf

Tafvelin, S., Hasson, H., Holmström, S., & von Thiele Schwarz, U. (2019). Are Formal Leaders

the Only Ones Benefitting From Leadership Training? A Shared Leadership

Perspective. *Journal of Leadership & Organizational Studies*, *26*(1), 32-

43. http://doi.org/10.1177/1548051818774552

Tepper, B. (2000). Consequences of abusive supervision. *Academy of Management Journal,*

43(2), 178-190. https://www.jstor.org/stable/1556375

Tepper, B., Simon, L., Park, H. (2017). Abusive supervision. *Annual Review of Organizational Psychology and Organizational Behavior, 4*(1), 123-152. https://doi.org/10.1146/annurev-orgpsych-041015-062539

Heck R., Thomas S. (2020). *An Introduction to Multilevel Modeling Techniques: MLM and SEM,* 4rd Edn. New York: Routledge/Taylor & Francis.

Toderi, S., & Balducci, C. (2018). Stress-Preventive Management Competencies, Psychosocial Work Environments, and Affective Well-Being: A Multilevel, Multisource Investigation. *International Journal Of Environmental Research And Public Health, 15*(3), 397. https://doi.org/10.3390/ijerph15030397

Toor, S. & Ofori, G. (2008). Leadership for future construction industry: Agenda for authentic leadership. *International Journal of Project Management, 26*, 620-630. http://dx.doi.org/10.1016/j.ijproman.2007.09.010

Troncoso, J. (2022). ¿De vuelta a la normalidad? análisis psicológico de la vuelta a clases en tiempos de postpandemia covid-19. *Cuadernos de neuropsicología*, *16*(1), 94-99. https://dx.doi.org/10.7714/cnps/16.1.206

UNESCO (2005). *Condiciones de trabajo y salud docente: estudios de casos en argentina, Chile, Ecuador, México, Perú y Uruguay*. Santiago de Chile: UNESCO-OREALC. 209 p. ISBN :956-8302-42-5

Useche, M., Artigas, W., Queipo, B., & Perozo, E. (2019). *Técnicas e instrumentos de recolección de datos cuali-cuantitativos*. Universidad de la Guajira. https://www.researchgate.net/profile/Wileidys_Artigas/publication/344256464_Tecnicas_e_instrumentos_de_recoleccion_de_datos_Cuali-

Cuantitativos/links/5f610c62a6fdcc1164157d76/Tecnicas-e-instrumentos-de-recoleccion-de-datos-Cuali-Cuantitativos.pdf

Valdivia, G., Avendaño, C., Bastías, G., Milicic, N., Morales, A., & Scharager, J. (2003). *Estudio de la Salud Laboral de los Profesores en Chile*. Santiago: Pontificia Universidad Católica de Chile.

http://www.opech.cl/bibliografico/Doc_Docente/Estudio%20de%20Salud%20Laboral%20de%20Profesores%20en%20Chile.%20MINEDUC-PUC.pdf

Valenzuela, J., Bellei, C. & De Los Ríos, D. (2014). Socioeconomic school segregation in a market-oriented educational system. The case of Chile. *Journal of Education Policy, 29*(2), 217-241

Van Vegchel, N., de Jonge, J., Bosma, H., Schaufeli, W. (2005). Reviewing the effort-reward imbalance model: drawing up the balance of 45 empirical studies. *Social Science & Medicine*, *60*(5),1.117-31. doi: 10.1016/j.socscimed.2004.06.043.

VanWynsberghe, R. & KhanView, S. (2007). Redefining Case Study. *International Journal of Qualitative Methods, 6*(2), 80-94. https://doi.org/10.1177/160940690700600208

Vázquez, S., Bernal, J., & Liesa, M. (2014). La conceptualización del liderazgo: una aproximación desde la práctica educativa. *REICE. Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación, 12*(5), 79-97. https://www.redalyc.org/articulo.oa?id=55132460004

Vial, C. (2017). *Índice de Desarrollo Regional, IDERE 2017*. Santiago de Chile: Universidad Autónoma de Chile .

Villalobos, C., Peña, J., Aguirre, E., & Guerrero, M.. (2017). Liderazgo escolar y conflictos socioeducativos. Un estudio exploratorio en liceos públicos chilenos. *Calidad en la educación*, (47), 81-111. https://dx.doi.org/10.4067/S0718-45652017000200081

Vision Humana (2022). *Informe Tendencias en el Trabajo, Zoom al Trabajo, Chile.* https://visionhumana.cl/estudios/adquirir-estudio-zoom-al-trabajo/

Walker, M., Worth, J., Van Den Brande, J. (2019). Teacher workload survey 2019: Research report. UK Department for Education https://eric.ed.gov/?id=ED601913

Wang, C., Cheng, Y., Lee, Y., & Hsu, J. (2010). An international overview of national surveys for psychosocial hazards at work. *Taiwan Journal of Public Health. 29*(6), 551-560.

Weinstein, J., Muñoz, G., & Rivero, R. (2018). Los Directivos Escolares como Informantes Cualificados de las Políticas Educativas. Sus Opiniones bajo el Gobierno de Michelle Bachelet en Chile (2014-2017). *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación, 16*(3), 4-23. https://www.redalyc.org/articulo.oa?id=55160077001

Weinstein, J., Muñoz, G., & Flessa, J. (2019). Liderazgo directivo para la calidad de la educación: aprendizajes desde un campo de investigación emergente. *Calidad en la Educación,* (51), 10-14. https://dx.doi.org/10.31619/caledu.n51.793

Weinstein, J., Muñoz, G., Sembler, M., & Marfán, J. (2019). A decade of empirical research on educational leadership in Chile. A systematic review of articles published in indexed journals (2008-2019). Calidad en la Educación, (51). 15-52. https://dx.doi.org/10.31619/caledu.n51.671

Weinstein, J., Muñoz, G., Sembler, M., & Rivero, R. (2019). La opinión de directores de centros públicos y privados sobre las políticas educativas en Chile. *Profesorado. Revista de*

Currículum y Formación de Profesorado, 23 (2), 13-39.

http://doi.org/10.30827/profesorado.v23i2.9285

Weinstein, J., Sembler, M., Weinstein, M., Marfán, J., Valenzuela, P., & Muñoz, G. (2021). A female advantage? Gender and educational leadership practices in urban primary schools in Chile. *Educational Management Administration & Leadership*, 0(0). https://doi.org/10.1177/17411432211019407

Weiss, R. (1994). *Learning from Strangers: The Art and Methods of Qualitative Interview Studies.* The Free Press, New York.

Wegge, J., Shemla, M., & Haslam, S. A. (2014). Leader behavior as a determinant of health at work: Specification and evidence of five key pathways. *German Journal of Human Resource Management*, *28*(1-2), 6-23. http://doi.org/10.1688/ZfP-2014-01-Wegge

Wengel-Woźny, K., Szefczyk-Polowczyk, L., Zygmunt, A. (2015). Stress in the teaching profession. *Journal of Education, Health and Sport, 5*(6), 191-210. ISSN 2391-8306. DOI 10.5281/zenodo.18491

Whittington, R. (1996) Strategy as Practice. *Long Range Planning, 29*, 731-735. http://dx.doi.org/10.1016/0024-6301(96)00068-4

Winkler, I. (2010). Role Theory of Leadership. In: *Contemporary Leadership Theories. Contributions to Management Science.* Physica-Verlag HD.

Wischlitzki, E., Amler, N., Hiller, J., & Drexler H. (2020). Psychosocial Risk Management in the Teaching Profession: A Systematic Review. *Safety and Health at Work,11*(4), 385-396. doi: 10.1016/j.shaw.2020.09.007.

World Health Organization (WHO) (28 May 2019). *Burn-out an "occupational phenomenon":*

International Classification of Diseases https://www.who.int/news/item/28-05-2019-

burn-out-an-occupational-phenomenon-international-classification-of-diseases

Yarker, J., Lewis, R., Donaldson-Feilder, E. (2008). *Management Competencies for Preventing*

and Reducing Stress at Work, HSE Books: London, UK.

Young, T. & Lewis, W. (2015). Educational Policy Implementation Revisited. *Educational*

Policy, 29(1), 3-17. https://doi.org/10.1177/0895904815568936

http://affinityhealthhub.co.uk/d/attachments/5-hse-management-competencies-for-

preventing-and-reducing-stress-at-work-1553009680.pdf

Zuniga-Jara, S., & Pizarro-Leon, V. (2018). Mediciones de Estrés Laboral en Docentes de un

Colegio Público Regional Chileno. *Información tecnológica, 29*(1), 171-180.

http://dx.doi.org/10.4067/S0718-07642018000100171

APPENDICES

APPENDIX A

Support letter from the organization

LETTER OF DISSERTATION RESEARCH SUPPORT

From: **Departamento de Administración de la Educación Municipal de Talcahuano (DAEM Talcahuano)**
To: Boston College Institutional Review Board
Office for Research Protections
140 Commonwealth Avenue, Waul House
Chestnut Hill, MA 0246

Dear Boston College IRB:

On behalf of (DAEM Talcahuano), I am writing to grant permission for Alejandra Fabiola Pallamar Azua, a doctoral student at Boston College, to conduct her research focus on understand how school's leaders (principals and others) influence work environment (psychosocial risk factors) and affect the wellbeing and stress level of workers.

Our organization fully support this effort and commits its collaboration in various required activities, such as:

- Give access to use, for research purposes, the ISTAS 21 survey data (2018), in Excel format of each school.
- Give access to organizational information pertinent to the research objective.
- Give access to a group meeting with Schools Principals to present the research and encourage their voluntary participation as well as their teams, in interviews.
- Send emails to all the principals and the pedagogical heads, inviting them to voluntarily participate and informing them that each school can participate either through the Principal or the Pedagogical Director.
- Give Access to email address of all school's principals to recruit them for interviews.
- If necessary, provide the facilities to conduct the interviews in an atmosphere of confidentiality.

In return, at the end of the research we will receive as an organization a presentation of the results, their projections and possible applications. In addition to a workshop on Leadership Practices for our managers.

We are happy to participate in this study and contribute to this important research.

Sincerely,

Susana Mondaca Castro
Directora (R) DAEM Taalcahauno

Talcahuano, 30 de marzo de 2021

APPENDIX B

Possible pathways of the relationship between leaders and wellbeing (based on Nyberg, 2009)
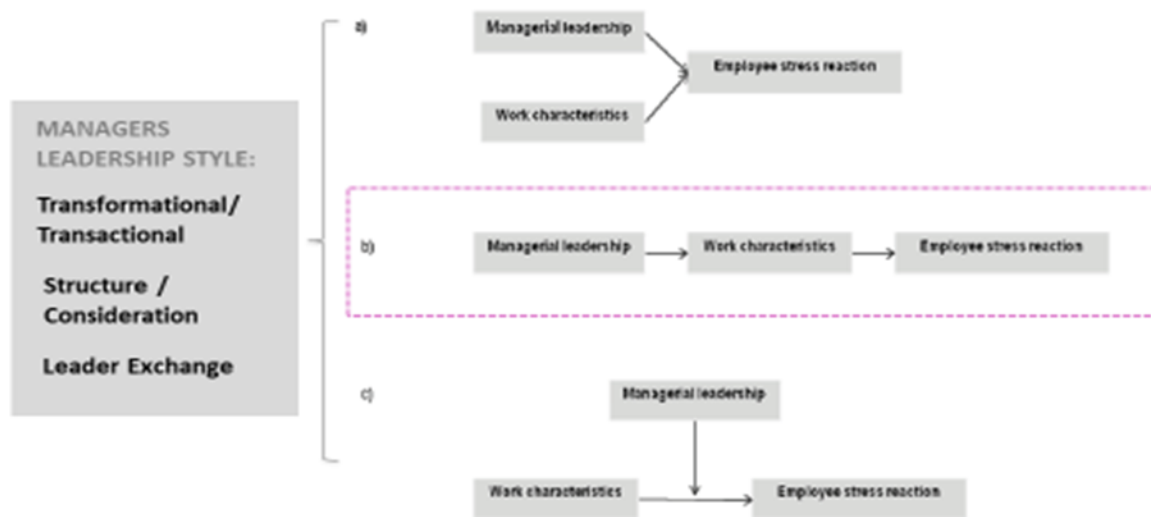
(Nyberg, 2009)

APPENDIX C

Model on Manager Competencies Development for preventing stress at work (adapted from
Donaldson-Feilder, Lewis & Yarker, 2011)

CONTEXTUAL FACTORS MODEL

1. The individual's intention: does the individual have a strong positive intention to show the behaviour?

2.-Environmental barriers or constraints: are these environmental factors that make the behaviour impossible?

3. Skills or ability: does the person have the necessary skills?

4. attitude or anticipated outcomes: does the person believe the benefits of behaving in this way outweigh the disadvantages?

5. Social norms: is there social pressure to perform the behaviour or not to perform the behaviour?

6. self-standards: is the behaviour consistent with the person's self-image

7. Emotional reactions: how does the person feel about the behaviour?

8. Self-efficacy: does the person believe that they have the capabilities to perform the behaviour under a number of different circumstances?

(Fishbein, 1995; Fishbein et al., 2001)

DEVELOPING MANAGER COMPETENCY FRAMEWORK
FOR PREVENTING AND REDUCING STRESS AT WORK

Feedback process

Policies and practices

Learning and development

Sustainable Impact
What more needs to be done to sustain change over time?

APPENDIX D

SUSESO ISTAS21 questionnaire (short version)

This is the secondary data already collected by SUSESO y DAEM Talcahuano

I. General demographic and labor data

Demographic data

A1. Gender

a) Male	
b) Female	

A2. How old are you?

a) Less than 26 years old	
b) Between 26 and 35 years old	
c) Between 36 and 45 years old	
d) Between 46 and 55 years old	
e) More than 55 years old	

Characterization of your current job.

A3. In what geographical unit do you work? (Branch, floor, workplace, etc.).

1		
2		
3		
4		
5		

A4. At what level of responsibility do you belong? (Operator, professional, technician, administrative officer, etc.)

1		
2		
3		
4		

A5. In which department, unit or section do you work?

1		
2		
3		
4		

II. Psychosocial Risks

	Psychological Demands Dimension	Always	Often	Someti mes	Seldom	Never/ hardly
1	How often can you take it easy and still do your					
2	Does your work require you to make difficult					
3	Is your work emotionally demanding?					
4	Does your work require that you hide your					
5	Does your work demand your constant attention?					
	Active Labor and Skills Development Dimension	Always	Often	Someti mes	Seldom	Never/ hardly
6	Can you influence the amount of work assigned to					
7	Can you leave your work to chat with a colleague?					
8	Do you have the opportunity to learn new things					
9	Do you feel that the work you do is important?					
10	Do you feel that your workplace is of great					
	Social Support and Leadership Quality Dimension	Always	Often	Someti mes	Seldom	Never/ hardly
11	Do you know exactly what is expected of you at					
12	Do you sometimes have to do things which ought to have been done in a different way?					
13	How often do you get help and support from your immediate supervisor?					
14	How often do you get help and support from your					
15	To what extent would you say that your immediate superior is good at solving conflicts?					
	Compensation Dimension	Always	Often	Someti mes	Seldom	Never/ hardly
16	Are you worried about becoming unemployed?					
17	Are you worried about being transferred to another					
18	My superiors give me the recognition I deserve.					
	Double Presence Dimension	Always	Often	Someti mes	Seldom	Never/ hardly
19	When you are at work, do you think about your domestic and family requirements?					
20	Are there situations when you should be at work and at home at the same time? (E.g., to take care of a sick son, because a relative has had an					

APPENDIX E

Subject recruitment form (original in Spanish)

Subject recruitment form by email

Dear [participant/name],

My name is Alejandra Pallamar a doctoral student in Social Work School at Boston College and University Alberto Hurtado. I am writing to invite you to participate in my dissertation research, the study aimed at exploring the effect of school's leader's managerial practices on the psychosocial well-being of their co-workers.

The purpose of the study is to understand the School's leaders' abilities to manage the psychosocial risk factors in the School to promote co-workers wellbeing. If you choose to participate, you will be asked to participate in an on line interview in the date and time you schedule with me.

The selection criteria to participate, include (1) to be a current employee of DAEM Talcahuano (2) **to be the current principal or the pedagogical head of the school for at least three moths.** It is important to note that your school can participate either through you as principal or through the pedagogical head of the school.

The participants will be interviewed for about 60 minutes. The interview will collect your point of view in topics related to psychosocial risks in the organization: how do you perceive and manage them on yourself and in your coworkers; and contextual aspect that influence managers' capacity to change/control them.

Study Benefit and cost:

By participating in the study, you will help expand the knowledge about school's leader's role, including personal and contextual factors that serve as facilitators/barriers on managing the psychosocial work environment to prevent stress and promote wellbeing/welfare among workers. Such information will help us design future intervention services in the school system and reduce stress among employees. If you decide to participate in the study, you will be compensated with a workshop on Leadership. The workshop will provide you with models and tools to develop further leadership skills and optimize the well-being of your teams. This workshop will be organized with DAEM Talcahuano and will be deliver after all the interviews are finished, the duration is approximately 12 hours, in two different days. The workshop will be online considering the actual development of pandemic.

Risks

Some questions asked during the interview may upset you. You do not have to answer the questions that upset you. Also, I am a trained psychologist and will be available for any counseling if needed.

Voluntary: Your participating in this study is voluntary. You are free not to participate in the study at any time for any reason. There are no service consequences for not being in the study. The expected number of persons to include in the sample is approximately 12.

Confidentiality: The answer you provide will remain confidential. Your name and any identifying will be stored in a separate file and will be replaced with a 5-digit ID number and a pseudo name to link with information you provide. All your information will be stored in a password-protected computer server at Boston College. I and my advisor at Boston College will be able to access the data you provide. Also, Boston College's Institutional Review Board and internal auditors will have access to the data. Please know that I will not release any information that identifies you with anyone else unless you give your permission, or unless I am legally required to do so. However, if I sense that your life is in danger, I will share your information with the proper authorities.

The results of this study will be reported in an aggregate format or without the mention of your real name. We hope to use the results of this research to understand and explore the effect of school's leader's role/practices on managing psychosocial risk factors to impact the psychosocial well-being of their co-workers

If you would like more information about being in this study, you can contact me, at the phone number [redacted] or email address Pallamar@bc.edu. You may also contact my thesis advisor Dr. Shanta Pandey (shanta.pandey@bc.edu) or Dr. Eduardo Abarzua Cruz, (eabarzua@uahurtado.cl) phone: [redacted]. If you have any questions about your rights as a research subject, you may contact: Director, Office for Research Protections, Boston College at +1-617-552-4778, or irb@bc.edu.

If you agree to participate in the study, you will receive a study consent form just before our interview. I will interview you only after you sign Consent Form and agree to participate in the study. Also, I will provide you a copy of consent form to keep for your records and future reference.

If you would like to participate in the study and would like to be included in the sampling pool, please email me back this letter with your name on it. I encourage you to respond within one week to ensure your participation.

By emailing back this letter with your acceptance, you agree to be included in the study or you can contact me by phone or WhatsApp to communicate your acceptance to be included in the study.

Thank you.

Sincerely,

Alejandra Pallamar

SPANISH

Estimado/a [participante/nombre]

Mi nombre es Alejandra Pallamar, soy estudiante de doctorado en la Escuela de Trabajo Social del Boston College (U.S.A) y de la Universidad Alberto Hurtado. Me dirijo a ustedes para invitarlo/a a participar en mi investigación de tesis. El estudio tiene como objetivo explorar el efecto de las prácticas de los líderes escolares en el bienestar psicosocial de sus colaboradores.

El propósito del estudio es comprender las habilidades, posibilidades y limitaciones de los líderes escolares para gestionar los factores de riesgo psicosocial y para promover el bienestar de los trabajadores. Si decide participar, se le pedirá que participe en una entrevista en línea en la fecha y hora que usted programe conmigo.

Los criterios de selección para participar, incluyen (1) ser un empleado actual del DAEM Talcahuano **(2) ser el actual director o el jefe pedagógico de la escuela durante al menos tres meses.** Es importante señalar que cada escuela puede participar a través de su director/a o a través del jefe/a técnico/pedagógico. Los participantes serán entrevistados durante unos 60 minutos.

La entrevista recogerá su punto de vista en temas relacionados con los riesgos psicosociales en la organización: cómo los percibe y gestiona en usted mismo y en sus colaboradores. También indaga como el aspecto contextual influye en la capacidad de los directivos para cambiarlos/controlarlos.

Beneficios y costos:

Al participar en el estudio, usted ayudará a ampliar el conocimiento sobre el papel del líder escolar, incluyendo los factores personales y contextuales que sirven como facilitadores/barreras en la gestión del entorno laboral psicosocial para prevenir el estrés y promover el bienestar entre los trabajadores. Esta información nos ayudará a diseñar futuros servicios de intervención en el sistema escolar y a reducir el estrés entre los empleados. Si decide participar en el estudio, se le compensará con una invitación a un entrenamiento/taller sobre liderazgo. El taller le proporcionará modelos y herramientas para desarrollar más habilidades de liderazgo y optimizar el bienestar de sus equipos. Este taller será organizado con el DAEM Talcahuano y se entregará una vez terminadas todas las entrevistas, la duración es de aproximadamente 12 horas, en dos días diferentes. El taller será online considerando el desarrollo actual de la pandemia.

Riesgos:

Algunas de las preguntas que se hacen durante la entrevista podrían molestarle, ya que se refieren al entorno laboral y vivencias de estrés suyas y de sus colaboradores. No tiene que responder a las preguntas que le molesten. Además, soy una psicóloga con experiencia y estaré disponible para cualquier asesoramiento si es necesario.

Voluntariedad:

Su participación en este estudio es voluntaria. Usted es libre de no participar en el estudio en cualquier momento y por cualquier motivo. No hay consecuencias de ningún tipo por no estar en el estudio. El número de personas que se espera incluir en la muestra es de aproximadamente 12.

Confidencialidad:

Las respuestas que usted proporcione serán confidenciales. Su nombre y cualquier identificación se guardarán en un archivo separado y se sustituirán por un número de identificación de 5 dígitos y un pseudo nombre para relacionarlo con la información que proporcione. Toda su información se almacenará en un servidor informático protegido por contraseña en el Boston College. Yo y mi asesor en el Boston College podremos acceder a los datos que nos proporcione. Además, la Junta de Revisión Institucional del Boston College y los auditores internos tendrán acceso a los datos. Por favor, sepa que no divulgaré ninguna información que le identifique con nadie más a menos que usted dé su permiso, o a menos que esté legalmente obligado a hacerlo. Sin embargo, si siento que su vida está en peligro, compartiré su información con las autoridades competentes.

Los resultados de este estudio se comunicarán en un formato agregado, sin la mención de su nombre real. Esperamos utilizar los resultados de esta investigación para entender y explorar el papel del líder escolar en la gestión de los factores de riesgo psicosocial para impactar en el bienestar psicosocial de sus compañeros de trabajo Si desea más información sobre la participación en este estudio, puede ponerse en contacto conmigo, en el número de teléfono ███████ o en la dirección de correo electrónico Pallamar@bc.edu. También puede ponerse en contacto con mi director de tesis, la Dra. Shanta Pandey (shanta.pandey@bc.edu) o el Dr. Eduardo Abarzua Cruz, (eabarzua@uahurtado.cl) teléfono ████████.

Si tiene alguna pregunta sobre sus derechos como sujeto de investigación, puede ponerse en contacto con Director de la Oficina de Protección de la Investigación de Boston College, en el teléfono +1-617-552-4778, o en el mail irb@bc.edu.

Si acepta participar en el estudio, recibirá un formulario de consentimiento del estudio justo antes de nuestra entrevista. Sólo le entrevistaré después de que firme el formulario de consentimiento y/o acepte participar en el estudio. Además, le proporcionaré una copia del formulario de consentimiento para que la conserve para sus registros y futuras referencias. Si desea participar en el estudio y quiere ser incluido en el grupo de muestra, envíeme por correo electrónico esta carta con su nombre. Le animo a que responda en el plazo de una semana para garantizar su participación.

Al escribir su nombre aquí...y responder este correo electrónico, acepta ser incluido en el estudio. Al responder a este correo con su aceptación, usted accede a ser incluido en el estudio o puede ponerse en contacto conmigo por teléfono o WhatsApp para comunicar su aceptación de ser incluido en el estudio.

Ante cualquier consulta no dude en contactarme. Muchas Gracias.

Alejandra Pallamar

APPENDIX F

Informed Consent (original in Spanish)
Boston College Consent Form
Boston College *School of Social Work*
Informed Consent to be in study: The Influence of Leadership Practices on Work Stressors (Psychosocial Risk Factors) among Principals of a School district in Chile
Researcher: Alejandra Pallamar Azua
Type of consent: Adult Consent Form

Invitation to be Part of a Research Study:

You are invited to participate in a research study. You are selected to be in the study because you are an educational manager/leader at DAEM Talcahuano and you showed interest to participate in the recruitment form that I sent earlier. Taking part in this research project is voluntary. My goal is to invite and interview nine managers/leaders like you.

Things you should know:

- The purpose of the study is to understand the School's leaders' abilities to manage the psychosocial risk factors in the School to promote workers wellbeing. If you choose to participate, you will be asked to participate in an on line interview in the date and time you schedule with me. This will take approximately about 60 minutes.

- Risks or discomforts from this research include: the use of time and on line context as well the recording of the interview. The questions can touch topics related to your or workers wellbeing and stress.

- The study will benefit you since it is a safe space to reflect upon an issue important to every day leadership role. You will be compensated with a workshop on Leadership.

- Taking part in this research project is voluntary. You don't have to participate and you can stop at any time.

Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

The purpose of the study is to explore the *influence of school's leader's role/practices on managing psychosocial risk factors to impact the psychosocial well-being of their co-workers*.

The specific objectives are:

1.- Analyze the level of psychosocial risks among workers of Talcahuano school district and examine the effect of School's leadership quality on different psychosocial risk factors in this context.

2- Analyze how school leaders' approach, including beliefs, self-expectation, practices, and decision capacities influence their impact on wellbeing of school co-workers.

3-Examine contextual factors that affect leader's capability to influence work environment: obstacles, resources and support needs from the organization.

If you agree to take part in this study, you will be asked to provide description of how you approach (manage, deal) psychosocial factors and stress that affect your co-workers such as work demand; *Meaningful Work; Job Insecurity; Work-Home Interference and Quality of Leadership* as a manager in the School context. Questions will also include personal beliefs, feelings, experience and opinions regarding this topic.

The interview will be conducted online preferably on the Zoom platform. The interview will be audio recorder using the command that allows recording the session on the researcher's computer and not in the cloud. If you consider that Zoom does not work for you, I will use TEAMS or the platform that best suits you (Skype, Meets). If you prefer, the interview will be recorded with an external recorder by the interviewer. We expect this to take about 60 minutes. The information collected will be linked to data from the ISTAS21 Questionnaire (Surveillance of Psychosocial Risks) of the Schools.

Although you will not directly benefit from being in this study, others might benefit because the results will help researchers and practitioners in two dimensions. First to expand the knowledge about school's leader's role, including personal and contextual factors that serve as facilitators/barriers on managing the work environment to prevent stress and promote wellbeing/welfare at work. Understanding these factors will help policy makers and practitioners broaden their perspectives and develop more targeted interventions to help leaders improving their management practices specifically considering the competences and the risk that managers are able to change and the organization support needed for these practices in the School context.

There are some risks you might experience from being in this study, such as sharing personal experience regarding the stress and wellbeing of your co-workers or yourself, we will constantly monitor that the interview is comfortable for you. You can end the interview at any time you wish.

The records of this study will be kept private. In any sort of report, we may publish, we will not include any information that will make it possible to identify you. Immediately after the interview, audio records will be transforms in electronic files and save in Boston College Serve, the audio in the device will be deleted. All electronic information will be coded and stored using a password-protected file at the Boston College server. The transcript of the audio recording will be assigned a five digit ID number and will not have any identifying information such as your name or role or the School you represent. The recordings will be deleted and destroyed after the

research is completed. We will not keep your research data to use for future research or other purpose. We will not share your research data with other investigators.

Mainly just the researchers will have access to information; however, please note that a few other key people may also have access. The Institutional Review Board at Boston College and internal Boston College auditors may review the research records. State or federal laws or court orders may also require that information from your research study records be released. Otherwise, the researchers will not release to others any information that identifies you unless you give your permission, or unless we are legally required to do so.

Your Participation in this Study is Voluntary. It is totally up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer. The researcher can decide not to follow the research under some circumstances, such as pandemic unexpected evolution. The researcher may dismiss you from the study at any time for the following reasons: (1) it is in your best interests (e.g. you're sick or uncomfortable), (2) **you have failed to comply with the study interview before the closing of the data collection phase** (3) the DAEM Talcahuano decides to end the study].

If you choose not to be in this study, it will not affect your current or future relations with the University or DAEM Talcahuano.

If you have questions about this research, you may contact Alejandra Pallamar (researcher) pallamar@bc.edu; email, phone: ███████████. Dr. Eduardo Abarzua Cruz, (faculty advisor), email: eabarzua@uahurtado.cl phone: ███████████. Or Dr. Shanta Pandey, (faculty advisor), email. pandeysh@bc.edu phone: ███████████ (U.S.A).

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the following:

Boston College
Office for Research Protections
Phone: (617) 552-4778
Email: irb@bc.edu

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. We will give you a copy of this document for your records. We will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

Please send back this consent before the interview.

I understand what the study is about and my questions so far have been answered. I agree to take part in this study.

_____
Printed Subject Name

_____
Signature   Date

Consent to be Audio/video Recorded
I agree to be audio/video recorded.

*YES*_____   *NO*_____

_____
Signature   Date

Participants have a copy of the informed consent document.
I have received a copy of this document

*YES*_____   *NO*_____

_____
Signature   Date

APPENDIX G

INTERVIEW PROTOCOL

Project: The effect of Leadership on Work Stressors (Psychosocial Risk Factors) among Principals of a School district in Chile

Opening and introductions

Read consent form, ask if participant has any questions and comments

Discussion Items below:

Thank you for consenting to participate in this study. I would like to record the

interview so my understanding can be as accurate as possible. You may request that the

audio recorder be turned off at any point of the interview.

I would like to further explore some topics.

Research Questions that guide the interview.

1.-What is the general approach of the managers over the role of leadership on the stress of workers?

2.-What are the principal's beliefs, feelings and self-expectation regarding the managing of psychosocial risk?

3.-What leadership practices and competencies for psychosocial risk management are considered the most appropriate for educational leaders in their context?

4.-What decision capacities do leaders have to propose changes for the reduction of the risk factors?

5.- What organizational obstacles have you encountered to work toward reducing employee stress?

6.-What organizational support do you need to reduce/prevent employees stress?

Interview Questions

1.-General questions to start the interview
1.-Tell me a few things about your job
-How long have you been working in this organization?
-How long have you been in the current manager position?
-Have you ever been in other manager position in this organization?

2.-Research Question 1: What is the general approach of the managers over the role of leadership on the stress of workers?

Interview questions

-Can I start by asking, how do you understand what stress at work is?

-Do you find your job stressful? How?

-What work stress issues do employees and managers face on a day-to-day basis in this organization?

-How do you identify and support workers with stress and wellbeing issues?

-In general, how do you /deal with other people's stress at work? What are the challenges?

3.- Research Question 2: What are the principal's beliefs, feelings and self-expectation regarding the managing of psychosocial risk?

Interview questions

- How well do you feel that you can handle stress issues that affect your team members?

- Have you ever felt that something you have done, or even haven't done, has been the cause of stress in your team? Can you give any examples? What were the barriers to you acting differently in this situation?

- What personal qualities you identify help you to deal with stress on workers and teams?

- What personal qualities you identify as barrier to deal with stress on workers and teams?

- In your view, what is your role in dealing with people stress at work?

Feedback question: Up to now, how do you feel about our conversation? Do you prefer to stop here or continue?

4.- Research Question 3: What leadership practices and competencies for psychosocial risk management are considered the most appropriate for educational leaders in their context?

Interview questions

Thinking in your own experience:

-Can you describe actions; practices or strategies you feel were effective at a time when an employee (or employees) were under pressure or stress? Can you give any examples?

-Can you describe actions; practices or strategies you feel were less or not effective at a time when an employee (or employees) were under pressure or stress? Can you give any examples? Were there any barriers to you taking more effective action in this situation?

-Thinking on in this specific risk: *Psychological Demand*; *Meaningful Work*; *Job Insecurity*; *Work-Home Interference*: What would you say are the best actions; practices or strategies to help employees deal with them. Can you give any examples?

5.- Research Question 4: What decision capacities do leaders have to propose changes for the reduction of the risk factors?

Interview questions

-How empowered you would feel with respect to manage the work environment to prevent stress?

- How do you assess your power to influence the aspects of the work environment that can produce stress?

-To what extent do you feel you have the autonomy to make changes in the work environment to prevent stress?

6.- Research Question 5 and 6: What organizational obstacles have you encountered to work toward reducing employee stress? What organizational support do you need to reduce/prevent employees stress?

Interview questions

-What are the strong and weak points of this organization helping you to manage stress/wellbeing? Or in other words: What organizational characteristic/practices you identify help you to deal with stress on co-workers and teams? What organizational characteristic/practices you identify as barrier to deal with stress on co-workers and teams?

-How do you think that the organization can help you to improve your management of the pressures and stress risk on your team?

- What else do you find useful from the organization to manage the pressure and stress? What do you think would be useful in the future?

Thank you very much for taking the time to participate in this study for your answer and examples they have been very helpful.

Feedback question: Do you have any questions at this point? How do you feel about this conversation? Do you think it would be necessary to have another conversation to close pending issues? If any other questions come to mind at a later date and you want to talk about your contribution or the research project in general, then please do contact me.

PROTOCOLO DE ENTREVISTA

Para cada una de las preguntas sintetice lo que dicen los entrevistado identificando su número. Ponga las respuestas a cada preguntas una debajo de la otra

Pregunta de investigación 1

¿Cuál es el enfoque/aproximación general de los directivos sobre el papel del liderazgo en el estrés de los trabajadores?

Preguntas de entrevista:
- ¿Cómo entiende usted lo que es el estrés en el trabajo?
- ¿Considera que su trabajo es estresante? ¿Cómo?
- ¿Qué problemas de estrés laboral afrontan los empleados y directivos en el día a día de esta - organización?
- ¿Cómo identifica y apoya a los trabajadores con problemas de estrés y bienestar?
- En general, ¿cómo se enfrenta al estrés de los demás en el trabajo? ¿Cuáles son los desafíos?

Pregunta de investigación 2

¿Cuáles son las creencias, los sentimientos y las auto expectativas de los directivos respecto a la gestión del riesgo psicosocial?

Preguntas de entrevista:

- ¿En qué medida crees que puedes manejar los problemas de estrés que afectan a los miembros de tu equipo?
- ¿Has sentido alguna vez que algo que has hecho, o incluso que no has hecho, ha sido la causa del estrés en tu equipo? ¿Puede dar algún ejemplo? ¿Cuáles fueron los obstáculos que te impidieron actuar de forma diferente en esa situación?
- ¿Qué cualidades personales identificas que te ayudan a lidiar con el estrés en los trabajadores y equipos?
- ¿Qué cualidades personales identificas como barrera para lidiar con el estrés en los trabajadores y equipos?
- En tu opinión, ¿cuál es tu papel o el de los lideres a la hora de tratar el estrés de las personas en el trabajo?

Pregunta de investigación 3

- ¿Qué prácticas y competencias de liderazgo para gestionar/manejar el riesgo psicosocial se consideran las más adecuados por los líderes educativos en su contexto?

Preguntas de la entrevista:
- ¿Puede describir acciones; prácticas o estrategias que considere fueron eficaces en un momento en que un empleado (o empleados) estaba bajo presión o estrés? ¿Puede dar algún ejemplo?
- ¿Puede describir acciones; prácticas o estrategias que considere que fueron menos o no tan efectivas en un momento en que un empleado (o empleados) estaba bajo presión o estrés? ¿Puede dar algún ejemplo?
-Pensar en este riesgo específico: Exigencia (Demanda psicológica); Trabajo con sentido; Calidad del liderazgo; Inseguridad laboral; Interferencia trabajo-casa:
- ¿Cuáles percibe usted son las que mas afectan a su institución/Escuela?
- ¿Cuáles diría usted que son las mejores acciones; prácticas o estrategias para ayudar a los empleados a enfrentarse a ellos? ¿Puede dar algún ejemplo?

Pregunta de investigación 4:

¿Qué capacidad de decisión tienen los líderes para proponer cambios para la reducción de los factores de riesgo?

Preguntas de la entrevista:

- ¿Cómo te sientes con respecto a tu capacidad de gestión del entorno de trabajo para prevenir el estrés?
- ¿Hasta qué punto sientes que tienes autonomía para hacer cambios en el entorno de trabajo para prevenir el estrés?

Pensando en estos agentes específicos: - Consejo Municipal; - Dirección del DAEM; -Sindicato de Profesores y -Sindicato de Asistentes de la Educación:
-¿En qué medida siente que tiene autonomía de ellos para hacer cambios en el ambiente de trabajo?

Pregunta de investigación 5 y 6:

¿Qué obstáculos desde la organización ha encontrado para trabajar en la reducción del estrés de los empleados? ¿Qué apoyo organizativo necesita para reducir/prevenir el estrés de los empleados?

Preguntas de la entrevista:

- ¿Cuáles son los puntos fuertes y débiles de esta organización que te ayudan a gestionar el estrés/bienestar? En otras palabras: ¿Qué prácticas organizativas identificas que te ayudan a gestionar el estrés de tus colaboradores y equipos? ¿Qué prácticas organizativas identificas como una barrera para gestionar el estrés de los compañeros y equipos?

- Pensando en estos agentes específicos: - Consejo Municipal; -Dirección del DAEM; - Sindicato de Profesores y -Sindicato de Asistentes de la Educación: ¿En qué medida siente que tiene apoyo de ellos para realizar cambios en el ambiente de trabajo para evitar el estrés? ¿Puede dar algún ejemplo?

- ¿Cómo cree que la organización puede ayudarle a mejorar su gestión de las presiones y el riesgo de estrés en su equipo?

- ¿Qué más le parece útil que la organización puede realizar para gestionar la presión y el estrés? ¿Qué crees que sería útil en el futuro?

APPENDIX H

Multilevel Regression Tables for Each Outcome Variable

Table H1. Multilevel Regression Predicting *Psychological Demands*

Variable	Model 1					Model 2				
	B	*SE*	95% CI for *B*		β	*B*	*SE*	95% CI for *B*		β
			LL	UL				LL	UL	
School Vulnerability	0.05***	0.01	0.02	0.08	0.12	0.05***	0.01	0.03	0.08	0.13
Psychosocial Risk										
Medium Risk	0.46*	0.20	0.07	0.85	0.09	0.39*	0.19	0.02	0.76	0.07
High Risk	0.62*	0.25	0.14	1.10	0.09	0.39	0.23	-0.07	0.85	0.06
Leader Experience										
Senior	-0.60*	0.25	-1.10	-0.11	-0.08	-0.45	0.25	-0.94	0.04	-0.06
Leader Gender										
Male	0.52**	0.17	0.19	0.85	0.09	0.39*	0.16	0.08	0.70	0.07
Leader Education										
Master/Doctoral	0.15	0.17	-0.19	0.49	0.03	0.18	0.16	-0.13	0.50	0.03
Leadership Quality						-0.24***	0.02	-0.29	-0.20	-0.28
Constant	2.47*	1.24	0.04	4.91		3.94**	1.19	1.60	6.28	
Observations	1194					1194				
F-test	10.01***					23.97***				
Adj. R^2	0.043					0.119				
AIC	5705.93					5608.84				

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit; β = standardized B coefficient.
*p < .05. **p < .01. ***p < .001.

Table H2. Multilevel Regression Predicting *Meaningful Work.*

Variable	Model 1					Model 2				
	B	*SE*	95% CI for *B*		β	*B*	*SE*	95% CI for *B*		β
			LL	*UL*				*LL*	*UL*	
School Vulnerability										
Psychosocial Risk										
Medium Risk	-0.25	0.17	-0.58	0.07	-0.06	-0.15	0.14	-0.43	0.12	-0.04
High Risk	-0.83***	0.21	-1.25	-0.42	-0.16	-0.53**	0.19	-0.90	-0.15	-0.10
Leader Experience										
Senior	0.13	0.20	-0.26	0.52	0.02	-0.05	0.18	-0.40	0.30	-0.01
Leader Gender										
Male	-0.05	0.14	-0.32	0.23	-0.01	0.15	0.12	-0.09	0.39	0.03
Leader Education										
Master/Doctoral	0.21	0.15	-0.09	0.51	0.05	0.15	0.13	-0.10	0.41	0.03
Leadership Quality						0.34***	0.02	0.30	0.38	0.48
Constant	10.00***	0.26	9.48	10.51		7.47***	0.30	6.88	8.07	
Observations	1194					1194				
F-test	6.52***					67.02***				
Adj. R^2	0.023					0.249				
AIC	5217.30					4903.26				

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit; β = standardized B coefficient.

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

Table H3. Multilevel Regression Predicting *Job Insecurity.*

Variable	Model 1					Model 2				
	B	*SE*	95% CI for *B*		β	*B*	*SE*	95% CI for *B*		β
			LL	*UL*				*LL*	*UL*	
School Vulnerability	0.04**	0.01	0.02	0.07	0.11	0.04***	0.01	0.02	0.07	0.11
Psychosocial Risk										
Medium Risk	0.80***	0.18	0.45	1.16	0.16	0.77***	0.18	0.42	1.12	0.15
High Risk	0.88***	0.24	0.40	1.35	0.14	0.76***	0.24	0.29	1.23	0.13
Leader Experience										
Senior	-0.28	0.23	-0.74	0.18	-0.04	-0.20	0.24	-0.66	0.26	-0.03
Leader Gender										
Male	-0.22	0.16	-0.54	0.10	-0.04	-0.29	0.16	-0.60	0.03	-0.06
Leader Education										
Master/Doctoral	0.29	0.16	-0.03	0.60	0.06	0.31	0.16	0.00	0.61	0.06
Leadership Quality							-0.13***	0.03	-0.18	-0.08	-0.16
Constant	-0.53	1.17	-2.82	1.76		0.23	1.15	-2.04	2.49	
Observations	1194					1194				
F-test	8.51***					11.72***				
Adj. R^2	0.036					0.059				
AIC	5542.52					5514.97				

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit; β = standardized B coefficient.
*p < .05. **p < .01. ***p < .001.

Table H4. Multilevel Regression Predicting *Job Insecurity*.

Variable	Model 1					Model 2				
	B	*SE*	95% CI for *B*		β	*B*	*SE*	95% CI for *B*		β
			LL	*UL*				*LL*	*UL*	
School Vulnerability										
Psychosocial Risk										
Medium Risk	0.30	0.16	-0.02	0.62	0.07	0.29	0.16	-0.02	0.61	0.07
High Risk	0.80***	0.21	0.38	1.22	0.15	0.77***	0.22	0.35	1.19	0.14
Leader Experience										
Senior	-0.05	0.21	-0.46	0.35	-0.01	-0.04	0.21	-0.45	0.37	-0.01
Leader Gender										
Male	-0.18	0.14	-0.46	0.10	-0.04	-0.20	0.14	-0.48	0.08	-0.04
Leader Education										
Master/Doctoral	-0.17	0.14	-0.45	0.10	-0.04	-0.17	0.14	-0.44	0.10	-0.04
Leadership Quality							-0.03	0.02	-0.07	0.02	-0.04
Constant	3.52***	0.25	3.03	4.02		3.74***	0.31	3.14	4.34	
Observations	1194					1194				
F-test	4.29***					3.90***				
Adj. R^2	0.014					0.014				
AIC	5254.46					5254.54				

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit; β = standardized B coefficient.
*p < .05. **p < .01. ***p < .001.

APPENDIX I

Qualitative Tables Results

Table I1. Summary Causes of Worker's Stress

Sub-Domain	Themes and sub-categories	Example quote
Causes of stress		
	Workload and working hours. (10)	
	- Time and energy-consuming the last year	"…some teachers who are in face-to-face, apart from having to worry about the students in the classroom, the teachers have to continue preparing activities or guides for the students who have not yet returned in person" (P9).
	- Direct versus indirect hours proportion in Chile	"The classroom teacher works 65 of his time direct teaching and with the other time he has to talk to children, and parents and of course review tests, evaluations, and, planning "(P4)
	-Teachers work at home	"We never finish working, this goes on and on and he does it outside of his schedule, not knowing how to set the limits" (P8)
	-Intense work with vulnerable student	"When they have difficult girls with absent guardians, the teacher finds himself in a situation of helplessness, with the feeling of helplessness, because this little girl has problems, she interrupts, she doesn't let me word…and parents do not respond." (P2)
	Pandemic consequences. (6)	
	-Uncertainty	"Several new instructions have generated uncertainty because students ask the management team; the management team asks at the regional or national level... and the answers do not arrive" (P9)
	-Technology handling	"These two years were stressful because they had to work remotely. I think it was much more stressful for people who have spent more years in education... adjusting to all this pace, to the use of technology."(P4)
	-No boundaries between work and home	"For example, in my school, I have generations of teachers who are young mothers and that affects them, they have no one to look after their children after daycare center …so they start to work after all family are sleeping"(P7)

-Online teaching handling and strategies

"..the entire school from fifth to eighth grade is still online and they have been using this system for two and a half years and I feel that this team of teachers is under a level of stress" (P6)

Return to face-to-face attendance. (10)
-Daily situations

You have to meet goals, but you can't, because other things come up and you have to solve them..(P7)

-Work-life balance

"Work-life balance is more difficult now than before the pandemic" (P8)

- Increase in medical leave of teachers

"There are several medical leaves at the school…" (P12)

Supporting Vulnerable Students (8)
-Handling people in vulnerable contexts

"Our children come from difficult family situations and contexts, so the way they have to solve their conflicts is through physical, verbal violence" (P11)

-More vulnerability post-pandemic

"In the return to face-to-face classes, it has been difficult to recover them…and vulnerability also played a role at home… this also undermines and in a certain way affects human relations within the school"(P10)

-Violent behavior

. "Here we experience physical violence directly with the students, inside the establishment…"(P11)

Challenging Behavior of students and parents (8)
- Aggressiveness and intolerance

"Today we work under the pressure of aggressiveness and intolerance from parents and guardians, and also from students… (P5).

- Difficulties in managing emotions

"Young people also suffered all this problem of the pandemic; the confinement, the lack of sociability. The truth is that it has been difficult to work in these times"(P4)

- Students' ability to engage in learning

"The children indeed arrived with destructured behavior" (P3)

Student learning gap and absenteeism (8)

-Post-pandemic learning gap

"From the expected academic knowledge and skills that student is from a lower grade...... so it has been super complex for teachers." (P11)

-Background of vulnerable children

"Students live in places where risky situations occur, situations that are

outlawed, things that are not normal, that nobody told them not to do" (p12)

- Increase in absenteeism

"One of the most serious problems we have now is absenteeism… I would say that there is an attendance rate of 65%, not 85% (expected)… "(P9).

Infrastructure, equipment, resources (10)
- Infrastructure losses

"In 2019 we were affected by a tornado that blew some roofs"(P6)

- Deficits of equipment and everyday resources

"…now what we are asking for are sheets, pencils, things for the children... but that request has not yet arrived in complete..."(P7)

- Very slow procedures

"…in January the schools requested through the SEP law the purchase of supplies that are necessary to start in March, which has to do mainly with uniforms and school supplies, that is the majority, and also computer supplies... not all of them have arrived yet (July)..." (P12)

Table I2. Personal Qualities as Strength and Barriers in Dealing with the Workers' Stress.

Participant	Gender	Strength	Barrier
P1	Female	Structured /Organized Flexible Listening	Insecurity Slow decision making
P2	Male	Listening Conversation skills Communication (give and ask for information) Holding Flexibility	Informality Lack of direction
P3	Female	Welcoming others Listening Flexibility	
P4	Male	Tolerance Flexibility Ability to set limits to work	Demanding
P5	Female	Empathy Listening Mediating Capacity Involved	Demanding No limits to work
P6	Female	Empathy Involved	Delegating No limits to work
P7	Female	Empathy Solving problems skills	Eager Losing your calm
P8	Female	Empathy Concern for others Conversation skills	Insufficient organization skills Reluctance to confront higher authority
P9	Male	Listening Support Conversation skills	Reluctant to critics/ Dominance Problems in delegating
P10	Male	Communicate Conversation skills	Intolerance/Dominance
P11	Female	Respectful of others Diligent Guiding	Emotional No limits to work
P12	Female	Listening Guiding Keeping calm Open to feedback	Not showing emotions Complacent with others (not direct in giving feedback)

Table I3. Practices and Strategies that Leaders Find Effective in Dealing with Stress.

Participant	Practice
P1	Create spaces for Coexistence, with families Support teachers with children with specific difficulties, articulate the support networks that exist The coexistence team supports the direct teacher in the classroom, with difficult situations Generate collaborative workspaces, interdisciplinary and where best practices are shared and where reflection can be made Flexible schedule Self-care workshops Life Skills Workshop Support the administrative work of teachers Participatory meetings for logistical decision-making that affect everyone Simplify processes, and projects with realistic goals Maintain homologated and continuous communication channels.
P2	Simplify processes, and projects with realistic goals Have integrated procedures in the follow-up of special cases, (For example, Unified drive) Close processes and communicate it Support and accompany teachers in managing parents Maintain homologated and continuous communication channels. Generate individual sessions to contain teacher problems Generate individualized sessions of pedagogical accompaniment Establish a common vision, clear north respond quickly to coexistence situations Generate instances of playful and recreational general coexistence. Generate collaborative group workspaces with a pedagogical focus Flexibility in working with teachers (planning or other pedagogical tasks, helping them).
P3	Show presence, greet everyone in the morning, walk around, talk Flexibility in the face of teacher difficulties (for example planning, home-work problems) Give recognition Faced with situations of coexistence, resolve quickly and act as a team. Control the yard Call parents regularly Generate instances of coexistence: breakfasts Generate instances of self-care: For example music therapy/life skills Generate collaborative workspaces with a focus on pedagogy Take care of the cleanliness of the establishment Doors open and welcome everyone.
P5	Give recognition Generate individualized sessions where to give constructive feedback Generate a space for everyone to live together: Self-care once a month Instances of collaborative pedagogical participation between different levels Standardize procedures and integrate the information with that of students with special situations
P7	Show permanent presence, be on the ground solving situations Generate spaces for recreation and camaraderie among workers Individual attention and support spaces
P8	Generate individualized conversation spaces Generate clear protocols and communicate them to deal with coexistence problems Have clear guidelines and procedures
P9	Generate school coexistence spaces for everyone: sports, games, art Celebrations of international national events (Student's Day, Sports Day, etc.) Prioritize policies. Adapt policies to the reality of the school. Focus

P10	Flexible schedule Generation of sports and coexistence activities for the entire community Generation of collaborative workspaces with a focus on pedagogy Prioritize the policies and requirements that come from higher spheres Targeting Measures: Improvement Project
P11	Generate a space for coexistence with all students and teachers, and assistants. Generate individualized sessions for pedagogical feedback Give clear guidelines and dates regarding work Support the teacher in planning Flexibility to facilitate the work-home balance
P12	Act and solve problems of coexistence: for example, safe classroom policy. Reduce or support the administrative work of teachers Generate spaces for coexistence: School coexistence workshops Apply regulations and coexistence protocols Generate individualized conversation spaces

Table I4. Support, Barriers, and Expectations with Respect to Higher Organizational Levels

Level	Support / Strength Relevant issues	Barrier / Weakness Relevant issues	Improvement proposal Relevant issues
Ministry of Education	Postpandemic flexibilization of the workday and time of the classroom - Technical-pedagogical guidelines -Coexistence policies and programs: Plan "Let's be Community" "School Coexistence" Teams "Psychosocial Duo" Team "Socio-emotional" Plan in Pandemic	-Non-teaching hours of teachers -Few attributions of managers in teaching management time -Some policies are not adjusted to reality -Over-Regulations	- Increase non-teaching hours of teachers -Increase hours assigned to headteacher -Greater autonomy of managers in financial resource management that comes from the Ministry -Greater autonomy for the management of activities and working hours (direct school-ministry relationship). -Greater autonomy of managers in the implementation of guidelines, regulations, and reforms. -Strengthen coexistence teams and psychosocial team
Municipality (Mayor and Council)	-Management of the "Life Skills" Program -Specific responses to certain infrastructure problems by the mayor	-Lack of response to demands -Lack of proactivity - Supervisory attitude of the Council -Political decisions that affect the school -Insufficient attendance at school -Municipal approach to community mental health - Municipal approach to psychosocial vulnerability	-Resolve infrastructure financing -Strengthen the security of schools -Greater institutionalization of work with families from the Municipality and its community networks -Greater accompaniment to schools -Strengthening and Recognition of role of teachers
DAEM	-Listening capacity of the current management team -Some supporting officials -Current network meeting of directors of all schools	-Infrastructure Management -Management of replacements -Projects management -Bureaucracy in acquisitions -Inequity between schools -Enrollment requirement	- Improve infrastructure management -Speed up the time of hiring replacements -Improve acquisition management

	-Current network meeting of the technical-pedagogical area among all the schools -Implementation of regulations for the Assessment of Psychosocial Risks - Pedagogical autonomy for managers	-Insufficient attendance at school -Financial autonomy of directors	-Work of schools in a network: alignment and inter-school cooperation. -Institutional approach to mental health and psychosocial risks: induction, training, accompaniment, direct care. - DAEM wellness area unified for all schools. -Strengthen psychosocial and coexistence dyad in schools -Manage more students in practices

Table I5. Ranking of Psychosocial Risks in Each School According to Participants

School Name	Psychological Demands		Meaningful Work		Job Insecurity		Work-Home Interference		Quality of Leadership	
	rank		rank		rank		rank		rank	
A			1	"On the one hand, the meaning of the work…professors feel frustrated because not all of them see the impact that their work has, they expect more results…we need the work we are doing to be valued" (P1)					2	"…leadership is a risk in the sense that there is a lot of distrust of external leadership, of the supporter (DAEM) and that generates tension" (P1)
C	1	"There is a lot of vulnerability. They have difficult students with absent parents, the teacher feels powerless"	0	"It is a protective factor, the sense of work is the one that means the most, because that is where the famous vocation of the teacher comes in. If a teacher has a sense of work, he has more tools or more energy"(P2)					2	"…the issue of leadership, not because I believe that the leaders who are here are bad, but we are just beginning to function, so leadership is just being installed... because of this problem that the school was headless" (P2)
D							1	"…balancing the obligations of work with the family... is what complicates the most now(P3)		
F					2	"Another issue that has been around a lot among teachers is *Job*	1	"…I think it would be interference from the home, because if		

					Insecurity because many of the contracts are renewed every year and that creates insecurity"(P4)		we do an analysis, it has changed our lives in recent years" (P4)
H	2	Our work is emotionally demanding at times very thankless…(P5)	0	"Positively it is… a sense of work, I like my work, and that moves me and I think that the vast majority in my community feel the same, they like their work" (P5)		1	"…work-life balance is a critical issue…produces more *Psychological Demand*" (P5)
K	2	"…there is a feeling of living in situations that surpass you, that overwhelm you" (P6)				1	"…there is a lot of double presence that is being generated…many family situations that are difficult to reconcile, especially post-confinemen" (P6)
M	1	It is very demanding... children in general have changed and due to the inclusion law we also have children with different abilities" (P7)					
N	1	"…It is demanding, because we work with children who are also… extremely vulnerable, and that also affects, there are	-			2	"…that of not knowing the limits between home and life, that work, that baby, that son...

		Psychological Demands" (P8)						especially now" (P8)		
P					1	"We are with a drop in enrollment ... so this generates always being worried about losing students and hours" (P9)	2	"While at work, teachers have many problems at home here, and while at home they take many jobs from here…"(P9)	0	"I think there is a general idea in the establishment that new leadership is generally good" (P9)
R	1	"We have to understand that the deficiencies that the students we work with have are vulnerable (I don't like that word)… there is a lot of energy that teachers have to use" (P10)								
W*	2	"Clearly the issue of violence is a very complicated issue, it causes you fear, uncertainty, worry. Wear"(P11)	0	"I feel that my colleagues, at least the ones I work with directly, also have a protective sense of work, that they like to come to work"(P11)			1	"…The work-life balance, because sometimes... many colleagues have small children... and with all the violence that exists...they arrive at their homes more tired."(P11)		
Y*	1	"The *Psychological Demand* is the most important, due to situations that have occurred in the pandemic and post-pandemic" (P12)							0	In the school there is a good current perception of leadership (P12)

Note. 0= Is a protective factor or an aspect not at risk; 1= Is the first Risk in this School; 2 = Is the second Risk in this School