Naima Akhtar Malik

Occupational Stress and Burnout among University Teachers in Pakistan and Finland

Occupational stress in universities is alarmingly widespread and, globally, university teachers are under stress due to a growing competitive environment. Therefore, there is a need to identify job stressors and to help universities to improve their work environment. This study investigates psychosocial concomitants of occupational stress and burnout among university teachers in Pakistan and Finland. Female teachers in both countries experienced more stress than male teachers. The percentage of sick leave due to burnout was significantly higher in Pakistan. In Pakistan, young university teachers were especially at risk of burnout. Workplace bullying was significantly more frequent in Pakistan. In both countries, good family relationships had a reducing effect on the link between workplace bullying and stress symptoms. The research findings may hopefully be useful for universities in both developed and developing countries which aim at improving their work practices.
Occupational Stress and Burnout among University Teachers in Pakistan and Finland

Naima Akhtar Malik

Department of Developmental Psychology
Faculty of Education and Welfare Studies
Åbo Akademi University
Vasa, Finland, 2018
Abstract

Objective: The overall aim of the thesis is to investigate occupational stress and burnout among university teachers in a developing country (Pakistan) and a developed country (Finland). Secondary aims are to explore perceived reasons and psychosocial concomitants of occupational stress, mental and musculoskeletal health issues, burnout, and the potentially mediating effect of the relationships with family and colleagues on the link between workplace bullying and occupational stress.

Method: Quantitative data were collected from permanent/ fulltime university teachers in Pakistan and Finland by use of a web-based questionnaire. A link to the questionnaire was sent to e-mail addresses of university teachers available at the homepages of universities in the two countries. The questionnaire included seven different scales.

Results: Female teachers in both countries experienced more stress than male teachers. The percentages of sick leave due to burnout was significantly higher in Pakistan. In Pakistan, the youngest age group, i.e., 26–35-year-olds, were especially at risk of burnout. Universities in Finland were rated to have better working conditions, better social support at work, and better promotion opportunities. Workplace bullying was significantly more frequent in Pakistan. Family relationships had a mediating effect on the link between workplace bullying and stress symptoms, whereas relationships with colleagues had not. The effect was discernible within both sexes, in both countries. Overall, responding teachers from Pakistan were experiencing more stress and health problems than Finnish university teachers.

Conclusion: Occupational stress is common among university teachers, and female teachers were in this sample facing more health-related issues than male teachers. Overall, the work environment in Finnish universities was reported to be better than in Pakistani universities.

Keywords: Occupational stress, burnout, university teachers, Pakistan, Finland
Acknowledgments

First and foremost, I am grateful to “GOD Almighty” for all the blessings He bestowed upon me and gave me the strength to overcome every difficulty to complete my doctoral research.

I express my sincere gratitude to my supervisor Professor Kaj Björkqvist for being kind, supportive, and was always available to address the concerns and guide me during the doctoral journey. I would also like to thank my co-supervisor Karin Österman for the kindness and support she provided despite all her commitments.

I want to thank Åbo Akademi University for providing the opportunity to pursue my dream. A special thanks to Högskolestiftelsen i Österbotten for their financial support during my studies. I want to thank my dear friends and colleagues Farida Anwar and Nazia Nazar who are like sisters to me, it was a pleasure to be in their company. I would sincerely like to thank all my departmental colleagues for being supportive.

My gratitude for my parents who taught me the values of life, prayed for my success and bestowed confidence in me which helped me reach this far. I want to thank my sisters and brothers in Pakistan for their prayers, keeping faith in my ability to achieve this goal and always being concerned for my wellbeing.

Last but not least, a special thanks to my family. Words cannot express how grateful I am to my beloved husband who has always motivated and stood by me. I am thankful to my sweet sons Ibrahim and Usman for being so loving, caring and understanding at such a young age and support during these years. This accomplishment would not have been possible without them. I dedicate this work to the loving memory of my beloved parents (May their souls always rest in eternal peace…Ameen) who taught me how to live life.

Vasa, Finland, April 2019

Naima Akhtar Malik
List of original publications

Study I

Study II

Study III

Study IV

Author contribution
Naima Akhtar Malik is the first author of all four studies that are included in this doctoral thesis and has written most of the text. Malik is responsible for the data collection of Studies I–IV. Statistical analyses have been conducted jointly within the research group.
Table of contents

1. Introduction ............................................................................................................. 1
   1.1 The Concept of Stress ......................................................................................... 2
       1.1.1 Occupational Stress .................................................................................. 2
       1.1.2 Theories of Work-related Stress ............................................................... 4
       1.1.3 Stressors at the Workplace ....................................................................... 6
   1.2 Burnout................................................................................................................ 8
   1.3 Workplace Bullying .......................................................................................... 10
       1.4.1 Relationships with Colleagues ................................................................. 11
       1.4.2 Family Relationships ............................................................................... 13
   1.5 Mental Health .................................................................................................... 14
   1.6 Musculoskeletal Health ..................................................................................... 15
   1.7 The Significance of the Study ......................................................................... 18
   1.8 Aims .................................................................................................................. 19

2. Method .................................................................................................................... 20
   2.1 Participants ......................................................................................................... 20
   2.2 Measures ............................................................................................................ 21
       2.2.1 Psychosocial Stressors Scale (Article I-II) ................................................... 21
       2.2.2 Work Stress Symptoms Scale (Articles I, II, III, IV) ................................... 21
       2.2.3 Workplace Bullying Scale (Article III)....................................................... 22
       2.2.4 Colleagues Relationships Scale (Article III) ............................................. 22
       2.2.5 Family Relationships Scale (Article III).................................................... 22
       2.2.6 Mental Health Scale (Article IV) ............................................................... 22
       2.2.7 Nordic Musculoskeletal Questionnaire (Article IV) ................................. 23
   2.3 Statistical Analysis ............................................................................................. 23
   2.4 Ethical Considerations ....................................................................................... 23

3. Overview of the Studies ....................................................................................... 24
   3.1 Study I: Sick-leave due to burnout among university teachers in Pakistan and Finland and its psychosocial concomitants........................................... 24
   3.2 Study II: Factors associated with occupational stress among university teachers in Pakistan and Finland................................................................. 25
   3.3 Study III: Workplace bullying and occupational stress among university teachers: Mediating and moderating factors............................................. 26
3.4 Study IV: Occupational stress and mental and musculoskeletal health among university teachers ................................................................. 27

4. Discussion .................................................................................................................. 29
  4.1 Summary of the Findings......................................................................................... 29
  4.2 Limitations of the Studies ..................................................................................... 32
  4.3 Implications of the Studies ................................................................................... 32

References...................................................................................................................... 34

Original Publications I–IV ........................................................................................... 51
1. Introduction

Today’s workplaces are challenging environments, both psychologically and economically. Job demands along with family demands easily bring down enthusiasm and energy. A decrease in commitment and dedication towards one’s job has been claimed to be going on (Maslach & Leiter, 1997). Due to the changing nature of work and the rapid globalisation, work-related stress is possibly becoming more of an issue than before.

Occupational stress has negative consequences on health, safety, productivity, and the cost-effectiveness of the workforce. This is becoming a growing problem, especially in developing countries. The fast changes in economic and social conditions require flexibility and, at the same time, there is a risk for traditional societal values to be overridden. A major problem is the relative lack of research on occupational stress in developing countries, a fact which inhibits the growth of awareness about the issue (Kortum, Leka, & Cox, 2010).

Work-related stress is a matter of growing concern in so called developed countries as well. The Fourth European Working Conditions Survey (Parent-Thirion, Fernández Macías Hurley, & Vermeylen, 2007) found, by use of questionnaires administered to a total of 21,000 employees, that 28-29% of them reported that their health was negatively affected because of work-related stress. Mental health and stress-related disorders are the most significant overall cause of death and health concerns in Europe (European Commission, 2004).

Occupational stress is widespread within several sectors; for example, academics all over the globe experience a considerable degree of continuous occupational stress (Kinman, 2001). Jobs such as teaching, which include exhaustive contact with others, may have a negative influence on employees’ health (Figley, 1995). Stress among teachers can damage their professional and personal capability, and decrease their efficiency (Watts & Robertson, 2011). It is a matter of concern that job stress among teachers in the higher education sector may have injurious effects
also on students’ understanding and accomplishment, and the achievement of the whole learning organisation, the university (Gillespie, Walsh, Winefield, Dua, & Stough, 2001).

1.1 The Concept of Stress
Whenever some positive or negative changes occur in life, people experience stress. Some amount of stress is bearable, but extreme and unbearable stress causes mental and physical changes in individuals (Canadian Centre for Occupational Health and Safety, 2000). Stress is defined as changes that occur in the mental and physical condition of an individual as a result of a challenging or threatening environment (Krantz, Grunberg, & Baum, 1985; Zimbardo, Weber, & Johnson, 2003). According to Derogatis (1987) and Baum (1990), stress is a distasteful emotional experience or a feeling of pressure deployed by the environment on an individual’s personality, giving rise to negative emotional reactions. Usually, stress is experienced as a feeling of pressure and discomfort, though stress is highly subjective and at times inconsistent (Lazarus & Folkman, 1984). Stress is defined by the Health and Safety Executive (2007) as the adverse reaction people have to excessive pressures or other types of demand placed on them. Lazarus and Folkman (1984) defined stress as a real or perceived imbalance between environmental demands required for survival, and an individual’s capacity to adapt to these demands.

1.1.1 Occupational Stress
A brief definition of occupational stress is that it is a feeling of psychological strain due to work stressors (Gershon, Barocas, Canton, Li, & Vlahov, 2009). The psychological strain consists of the experience of unpleasant emotions, such as anger, tension, anxiety, frustration, and depression, due to work-related factors (Kyriacou & Sutcliffe, 1977). According to Borg and Riding (1991), any feature of the job setting which causes risk for a person, either extreme demands or inadequate facilities to meet his/her needs, should be considered as occupational stress.
Karasek and Theorell (1990) defined occupational stress as a sense of psychological pressure due to experiencing different stressors at work.

Studies within various fields of research, such as higher education, psychology, and medicine, have shown that occupational stress is a major source of health problems (Takahashi, 2016). A meta-analysis of longitudinal and cross-sectional studies by Nixon, Mazzola, Bauer, Krueger, and Spector (2011) supported the fact that there are significant relationships between occupational stress and physical symptoms of stress. A chronic stressful situation at the workplace may lead to anxiety, depression, aggression, burnout, sleeping problems (Gershon et al., 2009; Williams & Cooper, 1998), psychological strain and job dissatisfaction (Winefield, Gillespie, Stough, Dua, Hapuarachchi, & Boyd, 2003), physiological and psychological disorders (Colligan & Higgins, 2005), hypertension, mental disorders (Wang, Lesage, Schmitz, & Drapeau, 2008), suicidal tendencies (Olkinuora, Asp, Juntunen, Kauttu, Strid, & Äärimaa, 1990), fatigue, headaches, neck and back pain, muscle pain, gastrointestinal problems (Nixon, Mazzola, Bauer, Krueger, & Spector, 2011), heart problems (Brotman, Golden, & Wittstein, 2007; Dimsdale, 2008), and diabetes (Wellen, & Hotamisligil, 2005).

In addition to these symptoms, teachers exposed to stress run a higher risk than other occupations of having a low level of job satisfaction (Brewer & McMahan-Landers, 2003; Collie, Shapka, & Perry, 2012; Jepson & Forrest, 2006), a lower level of self-efficacy (Skaalvik & Skaalvik, 2017), a higher level of burnout (Martinussen, Richardsen, & Burke, 2007; Yu, Wang, Zhai, Dai, & Yang, 2015), and poor job commitment (Jepson & Forrest, 2006).

Ross (2005) found that in higher education institutions, stress is not only adding cost and producing undesirable results, but also affecting performance. Moreover, he emphasised that due to stress, university employees show unacceptable behaviour and emotions, inadequate mental health, and poor physical health. Kinman (2001) claims that psychological health among teachers is comparatively weak. A study
conducted by Kelly, Charlton, and Jenkins (1995) indicated that teachers at the university level run a 50% higher risk of stress than employees at an average.

Kinman and Wray (2013) pointed out that a certain level of stress is expected in any professional responsibility, but the stress in adult education is a cause for concern. Bubb and Earley (2004) reported that in the UK, 30% of teachers felt they had no social life due to the extreme workload; 85% said excessive workloads were negatively affecting their personal lives, and 35% reported that their workloads left them fatigued and stressed out daily. Research by the Teacher Support Network in 2007 found that in Scotland, 71% of teachers felt their job was spoiling their health, with stress, mood swings, exhaustion, and poor sleep patterns (Hill, 2008). One in three teachers had turned to smoking, drugs, alcohol, and binge-eating, because of demands at work. Some have had suicidal thoughts (Hill, 2008). In general female workers are more prone to face emotional exhaustion male workers (Purvanova & Muros, 2010) and female university teachers specifically reported more stress than male university teachers (Slišković, & Seršić, 2011).

1.1.2 Theories of Work-related Stress
Several current theories have been proposed in order to explain sources and mechanisms that enhance work-related stress. Three prominent theories will be mentioned in this context.

Person-Environment Fit Theory: The P-E Fit theory claims that stress can evolve due to a scarcity of fit between the job demands and an individual’s skills, abilities, and resources. It suggests that the work environment should meet the knowledge, needs, and skills of the employees (Hassard & Cox, 2011). It also emphasises the significance of employees’ perception of the environment, and the interaction between the individual and the environment. Lack of fit can initiate difficulties; the more significant the gap between the individual and the work environment, the more significant the stress, as demands go beyond the abilities, and needs go
above the resources. This stress can correlate with various job problems, health issues, and a decrease in productivity (Hassard & Cox, 2011).

Job Demand-Control (Support) Model: For more than two decades, the Job Demand-Control (JDC) model (Karasek, 1979) and its revised version, the Job Demand-Control-Support model (JDCS; Johnson & Hall, 1998; Karasek & Theorell, 1990) have been extensively mentioned in the field of occupational stress research. The demand-control model emphasises the balance between job demands and autonomy. The JDC theory proposes that employees facing high job demands combined with low control are expected to go through psychological strain, occupational stress, and, in the long term, deteriorating mental and physical health. The basic rationale behind the JDC model is that having a feeling of control over the situation decreases the negative effect of job demands on stress and increases the level of job satisfaction among individuals (Kain & Jex, 2010). The Job Demand-Control-Support (JDCS) model proposes that excessive job demand paired with low support may develop serious health issues (Mark & Smith 2012). The JDCS model suggests that the adverse effect of job stress on employees mental and physical health can be mediated by the provision of social support (Van der Doef & Maes, 1999).

Effort-Reward Imbalance Model: The Effort-Reward Imbalance (ERI) model (Siegrist, 1996; Siegrist, Siegrist, & Weber, 1986) suggests that strain results from a perceived imbalance between efforts put into work by the employees and the rewards they receive, in terms of respect, money, job security, or career opportunities (Van Vegchel, De Jonge, Bosma, & Schaufeli, 2005). The non-reciprocal relationship between the effort consumed and rewards obtained may produce emotional distress combined with a physical stress response, and an increased risk of ill-health. The experience of an effort-reward imbalance is considered to be more frequent in employees who are over-committed to their work (Kinman & Jones, 2008).
None of the studies included in the current thesis was designed to test any particular of the aforementioned models. The author considers the models as complementary to each other, not as mutually exclusive.

1.1.3 Stressors at the Workplace

According to Kyriacou (1987), teacher stress may be defined as the experience by a teacher of unpleasant emotions, such as tension, frustration, anxiety, anger, and depression, resulting from aspects of his/her work as a teacher. Research has shown that teaching is a stressful profession, and this is true not only in Western societies; teacher stress is a global phenomenon (Kokkinos, 2007; Liu & Onwuegbuzie, 2012; Stoeber & Rennert, 2008; Travers & Cooper, 1996; Wilhelm, Dewhurst-Savellis, & Parker, 2000). In general, teachers are experiencing a medium to a high level of stress at their workplace (Safaria, 2013). Teacher stress affects not only the teachers themselves but also the quality of the teaching-learning process and the output of the students (Safaria, 2013).

A wide variety of workplace stressors have been identified in empirical studies, such as negative work relations (Spector, & Jex, 1998), lack of administrative support (Lambert, Minor, Wells, & Hogan, 2016), poor communication, heavy workload (Popov, Popov, & Damjanović, 2015), time pressure (Premi, Ohly, Kubiceki, & Korunka, 2017; Skaalvik & Skaalvik, 2011), job insecurity (Tytherleigh, Webb, Cooper, & Ricketts, 2005), lack of resources, salary, and benefits (Malik, Björkqvist, & Österman, 2017b), an effort-reward imbalance (Siegrist, 1996), lack of control, student misbehaviour, and lack of motivation among students (Kinman & Wray 2013).

Tytherleigh et al. (2005) analysed 14 UK universities and colleges and provided evidence that universities not any longer offer the low stress working conditions they once possibly did. The study highlighted that work-life balance, job security, work relations, control, workload, overall job nature, communication and resources, salary and benefits are possible sources of stress. Blix, Cruise, Mitchell, and Blix (1994) conducted
questionnaire-based research with 400 randomly selected university teachers in the US as respondents and concluded that excessive workload was the main reason for considering a job change. In the US, occupational stress is considered to be one of the top five work-related health problems. They corroborated the findings of previous studies suggesting adverse effects of academic stress on the psychological well-being of the university employees (Blix et al., 1994).

Locke, Cummings, and Fisher (2011) found that teachers in Canada, Finland, Japan, Korea, and the Netherlands are extremely stressed but at the same time satisfied, because these countries are economically stable. They are not only providing well-organised working conditions, but due to the global competition, they also emphasise performance-based management systems. According to Perkiö-Mäkelä (2010), in the Finnish education sector of the year 2009, 46% perceived their work as mentally straining. Moreover, experiences of stress symptoms and mental abuse were more common in the education sector than in any other one.

A study from Pakistan (Ramzan & Riaz, 2013) found that about 49% of teachers reported high blood pressure, 26% reported low blood pressure because of stress, 82% of teachers faced stomach problems, and 37% experienced physical weakness due to strains and pressure. Another 43% of teachers reported that when they are stressed, they sleep more than usual (Ramzan & Riaz, 2013). Some other studies on occupational stress conducted in Pakistan suggest that role ambiguity and performance pressure (Bhatti, Hashmi, Raza, Shaikh, & Shafiq, 2011), job insecurity (Khalid, Irshad, & Mahmood, 2012), leadership style, organisational politics (Saleem, 2015), workplace bullying (Malik, Björkqvist, & Österman, 2017b), time management (Ramzan & Riaz, 2013), role conflict, and workload (Akbar & Akhter, 2011) are some of the major stressors in higher education institutions in Pakistan.
1.2 Burnout

Burnout is an extensively explored area within occupational health psychology, as the syndrome has devastating effects on health (Bakker & Costa, 2014). Burnout is strongly correlated with occupational stress (Doyle & Hind, 1998; Guglielmi & Tatrow, 1998; Kyriacou, 1987; Wu, Zhu, Li, Wang, & Wang, 2008; Yu et al., 2015). Burnout has been described as a stress syndrome that includes a reduction of physical and emotional energy (Schaufeli & Buunk, 2003). Furthermore, the burnout syndrome may well be considered as the logical outcome when constant stressful demands go beyond the individual’s resources (Malik, Björkqvist, & Österman, 2017).

Maslach and Jackson (1986, p. 1) defined burnout as “a syndrome of emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment, which can occur among individuals who work with people in some capacity.” Emotional exhaustion is the depletion of emotional resources; employees feel that they are not able to deliver at a psychological level. Early signs of depersonalisation may be recognised in the form of an undesirable sarcastic approach to one’s clients or colleagues. Finally, the reduced sense of personal accomplishment mentioned in the definition refers to the growing feeling of dissatisfaction towards one’s performance (Maslach & Jackson, 1981). The outcomes of burnout are detrimental not only for the employees themselves but for clients and the organisation as a whole as well. Maslach and Leiter (1997) suggested that it is not enough to focus only on the individuals, but research should also address the interaction between employees and their work environment, as it plays a crucial role in the development of burnout among employees. The authors emphasised that an increase in work tempo will lead to an increased workload, which in turn hurts quality, disrupts collegial relationships, kills innovation, and instigates burnout. In turn, burnout may seriously affect life quality and hurt both work and family life. Burnout is a disorder of reduced professional efficacy,
cynicism, and, above all, mental exhaustion (Maslach, Schaufeli, & Leiter, 2001).

Maslach and Jackson (1981) suggested burnout to be a central cause of absenteeism, job turnover, and low morale. Moreover, burnout appears to be associated with personal suffering, including insomnia, memory loss, neck and back pain (Peterson, Demerouti, Bergström, Samuelsson, Åsberg, & Nygren, 2008), physical exhaustion, excessive use of alcohol (Seidman, & Zager, 1991), and family and marital problems (Stout, & Williams, 1983). A higher level of burnout among employees may result in physical and psychological health issues like depression, anxiety, emotional exhaustion, and sleep disorders (Grossi, Perski, Evengård, Blomkvist, & Orth-Gomér, 2003), decreased self-efficacy, increased health problems, and decreased performance (Maslach et al., 2001).

Occupations which are considered to provide more risks of burnout than others are those in which a direct relationship with the clients is required and cannot be avoided, and research indicates that the teaching profession is one such occupation (Guglielmi & Tatrow, 1998; Lackritz, 2004; Merril, 2001; Rothmann & Barkhuizen. 2008; Watts & Robertson, 2011; Xu, 2017). University teachers are especially at risk to suffer from burnout (Navarro, Mas, & Jimenez, 2010; Otero-Lopez, Marino, & Bolano, 2008; Watts & Robertson, 2011). The constant pressures faced by teachers in higher education institutions are likely to have a negative impact on the quality of work life and cause burnout (Johnsrud, 2002). Though individual and organisational factors both are important, the latter has frequently been found to predispose burnout among teachers (Bilge, 2006; Easthope & Easthope. 2000; Friedman, 1995; Grayson & Alvarez, 2008). Major organisational factors causing burnout are disruptive student behaviour (Brouwers & Tomic, 2000), lack of social support at work, lack of resources, poor working conditions, workplace bullying (Kinman, Wray, & Strange, 2011; Malik, Björkqvist, & Österman, 2017) work overload (Beer, Pienaar, & Rothmann, 2016), negative interpersonal relationships (Van Droogenbroeck, Spruyt, & Vanroelen, 2014) and low
self-efficacy (Shoji, Cieslak, Smoktunowicz, Rogala, Benight, & Luszczynska, 2016).

1.3 Workplace Bullying

Workplace bullying is a situation in which one or more than one individual constantly, and over a period, perceive that s/he is experiencing negative behaviours from the seniors and the colleagues, and the individual feels powerless to defend him or herself against those negative actions (Einarsen & Skogstad, 1996).

Einarsen, Hoel, Zapf, and Cooper (2011, p. 22) defined workplace bullying as harassing, offending, socially excluding someone or negatively affecting someone’s work tasks. For the label bullying to be applied to a particular activity, interaction or process, it has to occur repeatedly and regularly (e.g., weekly) and over a period (e.g., about six months). Bullying is an escalating process in the course of which the person confronted ends up in an inferior position and becomes the target of systematic negative social acts. A conflict cannot be called bullying if the incident is an isolated event or if two parties of approximately equal ‘strength’ are in conflict.

Workplace bullying occurs at all organisational levels and in all work-life sectors (Zapf, Escartin, Einarsen, Hoel, & Vartia, 2011). In a Norwegian study (Einarsen & Skogstad, 1996), about 8.6% of employees reported that they experienced bullying at their workplace. However, the figure was lower in more recent investigations: in 2005, it was 4.6%, and in 2009 about 6.8% (Nielsen, Skogstad, Matthiesen, Glasø, Aasland, Notelaers, & Einarsen, 2009).

Findings from different studies in European countries suggest that the percentage of workplace bullying in the UK is 10.6% (Hoel, Cooper, & Faragher, 2001), in Lithuania 23% (Malinauskiene, Obelenis, & Dopagiene, 2005), and in Belgium 3-20% (Notelaers, De Witte, Vermunt, & Einarsen, 2006). In the US, the reported percentage is approximately 50% (Lutgen-Sandvik, Tracy, & Alberts, 2007), although this high percentage may be due to differences in operationalisations between studies. Workplace
bullying occurs distinctively less in Scandinavian countries. In developing countries, this phenomenon has not been studied extensively (Ahmer, Yousafzai, Siddiqi, Faruqui, Khan, & Zuberi, 2009).

As a field of research, workplace bullying is related to other research areas such as aggression (Sojo, Wood, & Genat, 2016), and occupational stress (Turner, 2013). In comparison with other stressors in organisational settings, its effects are considered to be more harmful. Being bullied in the workplace is likely to develop psychological exhaustion and lead to other health-damaging effects (Sojo, Wood, & Genat, 2016). Therefore, bullying is a serious workplace issue, and it needs to be managed and controlled (Hauge, Skogstad, & Einarsen, 2010).

Over the last decades, various studies have shown that victimisation from bullying at the workplace is associated with increased levels of stress symptoms among victims, typically depressive and psychosomatic symptoms (Bernotaite & Malinauskiene, 2017; Björkqvist, Österman, & Hjelt-Bäck, 1994; Matthiesen & Einarsen, 2004; Nielsen, Matthiesen, & Einarsen, 2008). The research findings also show that the experience of workplace bullying negatively influences family relationships (Pellegrini, Gonçalves, & Tolfo, 2018). There is a lack of research on workplace bullying in an Asian context as less is known about the possible mechanisms connecting workplace bullying and employee well-being (Yoo & Lee, 2018).

1.4 Interpersonal Relationships

1.4.1 Relationships with Colleagues
Interpersonal relationships between colleagues in an organisation make them form a unique social system with its own characteristics (Sparrowe & Liden, 1997; Sparrowe & Liden, 2005; Cole, Schaninger, & Harris, 2002). Good interpersonal relationships are crucial for useful teamwork, and they improve performance (Kostova & Roth, 2003).
Good interpersonal relationships will also enhance an environment of trust and positive emotions alongside the improved performance of the employees. Good interpersonal relationships are not enough to improve employees’ performance per se, but they can contribute significantly to it. Job commitment, job satisfaction, career success, and organisational outcome have all been shown to be directly related to the quality of workplace relationships (Cherniss, 1991; Morrison, 2004, 2009; Sias & Cahill, 1998; Markiewicz, Devine, & Kausilas, 1997). Employees spend 50 hours per week on average at their workplace (Stokes, Henley, & Herget, 2006); accordingly, it is inevitable that the quality of the relationships between colleagues will have a substantial effect on organisational outcomes. When positive, they will encourage participation, the formation of a supportive environment, increase productivity (Berman, West, & Richter, 2002), positive work attitude (Song & Olshfski, 2008), and job involvement, job satisfaction and reduce job turnover (Riordan & Griffeth, 1995).

Positive relationships with colleagues have been found to be positively related with personal achievement and negatively related with emotional exhaustion in teachers; also, the intensity of experienced episodes of burnout are directly related to the quality of interpersonal relationships between teachers (Anthony-McMann, Ellinger, Astakhova, & Halbesleben, 2017; Van Droogenbroeck, Spruyt, & Vanroelen, 2014).

Interpersonal relationships may affect not only an individual’s behaviour but also his/her cognitions (Frone, 2000). Poor relationships may have a more profound influence on individuals’ lives than good relationships (Berscheid & Reis, 1998).

Bruk-Lee and Spector (2006) found that the social settings of an organisation play a key role in determining the welfare of its employees. One of the main reasons for stress in the workplace is interpersonal conflict. It is the most common source of stress for college professors, and university staff in general described conflict to be the third leading reason
for stress out of nine possible sources (Narayanan, Menon, & Spector, 1999).

Keenan and Newton (1985) found that social interaction with bosses, colleagues or assistants is an underlying cause for 74% of distressing incidents at the workplace. Smith (1995) suggested on the basis of statements by professionals from different fields that interpersonal conflict is the potentially most upsetting stressor in the work environment. Frone (2000) assumed that conflict with colleagues would lead to individual level outcomes, such as depression and lowered self-esteem, whereas conflict with administrators would be seen in organisational outcomes, such as turnover and job dissatisfaction. Nervousness and frustration were also positively correlated with conflict, in a longitudinal study by Spector and O’Connell (1994). A meta-analysis by Spector and Jex (1998) indicated that a positive correlation exists between conflicts and negative emotions, such as depression, anxiety, and frustration.

1.4.2 Family Relationships
The domains of family and work cannot be fully separated from each other, they are mutually dependent and interconnected; whatever happens in one area affects the quality of the other (Allen, Herst, Bruck, & Sutton, 2000; Ilies, Huth, Ryan, & Dimotakis, 2015; Liu, Wang, Chang, Shi, Zhou, & Shao, 2015). Work-family conflict emerges when the work and family domains coincide with each other, and generate disputes (Kossek, Pichler, Bodner, & Hammer, 2011). In the past decades, the work-family conflict has been recognised as a major potential stressor. However, Wilczyński, Swamad, Subotic, Wizner, Mazgaj, and Wajda (2015) found that family relationships do not markedly influence job commitment and burnout. On the other hand, Repetti and Wang (2017) found that regular job stressors influence family relations by affecting an individual’s attitudes and emotional state, which in turn may have either a positive or a negative influence on family relationships. Whenever an individual experience a stressful situation, it affects his/her emotions, cognitions, and
psychophysiology, and the individual may carry over these effects into a new social situation as a spillover (Repetti & Wang, 2017). Negative mood spillover indicates manifestations of intolerance, frustration, and nuisance at home, although their reasons initially were generated at the workplace. Sometimes an individual prefers to adopt social withdrawal from his/her family to avoid tension; these are common patterns of short-term responses to everyday job stressors. The conduct at home is an attempt to manage and recover from the spillover effects of stress experienced at work (Repetti & Wang, 2017). Negative effects of working life on family life increase the risk of depression (Hämmig & Bauer, 2009).

1.5 Mental Health

The World Health Organization (2014) defines health as not only an absence of ailment or disability, but a condition of mental, physical, and social well-being. Mental health constitutes a subdomain of general health. According to the World Health Organization (2014), good mental health is a form of well-being in which individuals appreciate their potentials, are able to manage the usual life stresses, can work efficiently and successfully, and contribute to their society. The importance of mental health issues among employees is gaining attention also among directors and owners of organisations, because of the increase in compensation claims and medical costs caused by stress-related ailment (Smith, Karsh, Carayon, & Conway, 2003). It has become a severe societal and public health-care burden (Fu, Liu, Jiang, Zhao, Zhang, & Liu, 2017), not to mention the human suffering involved. The estimated annual health care cost in Japan is 232 billion dollars, in the US 200–350 billion dollars, and 65–66 billion dollars in the UK (Miree, 2007).

Poor mental health is, therefore, a critical global issue (Conway & O’Connor, 2016). Growing research in the field of occupational stress has provided clear evidence that there is an association between work stress and poor health (Guglielmi & Tatrow, 1998). Poor psychosocial working conditions linked with particular occupational groups are associated with
multiple ailments, including mental health disorders (Cheng, & Cheng, 2016; Stansfeld & Candy, 2006). According to the World Health Organization (2017), there is an increase of 18.4% in the number of individuals suffering from depression between 2005 and 2015, and in 2015, the percentage of the total population of the world facing anxiety disorders is about 3.6%. Increasing figures may be attributed to better reporting and measurement, and accordingly, a factual decrease in mental health in recent years may not be unequivocally established. Depression and anxiety disorders are more common among females (4.6%) than males (2.6%), at the global level. Johnson, Cooper, Cartwright, Donald, Taylor, and Millet (2005) explored the psychological health of individuals in 26 different occupations and found that teaching is one of the six most stressful occupations. It has been suggested that knowledge workers are facing more mental health issues than manual workers because of the harsh psychosocial conditions in their occupations (Kutcher, Wei, Gilberds, Ubuguyu, Njau, Brown, Sabuni, Magimba, & Perkins, 2016; Lopes, Moraes, Junger, Werneck, & Ponce de Leon, 2015). Depression is the most common effect of stress among teachers, along with constant fatigue and burnout (Betoret, 2006; Friedman & Farber, 1995; Shirom, 1997). Some teachers are facing more psychological problems than others, ranging from slight irritation and anxiety to emotional exhaustion, and to more severe depressive and psychosomatic symptoms (Dunham, 1992; Kyriacou & Pratt, 1985; Schonfeld, 1992). Kovess-Masféty, Rios-Seidel, and Sevilla-Dedieu (2007) observed that female teachers are facing higher levels of psychological distress than male teachers.

1.6 Musculoskeletal Health

Stress is not healthy for the human body, when it does not decrease but continues for prolonged periods; employees do not have enough time to recover. This eventually causes mental and physical disorders, harming the immune system, and resulting in sicknesses and absence from work. The long-term risks of reduced health include high blood pressure, angina
complaints, burnout, depression, disturbed metabolism, alcohol addiction, and musculoskeletal disorders (World Health Organization, 2007).

The term musculoskeletal disorder (MSD) refers to the poor health of the locomotor apparatus. This apparatus consists of the muscles, tendons, the skeleton, cartilage, ligaments, nerves, and the vascular system. Work-related MSDs comprise all musculoskeletal health issues that are caused or aggravated as a result of the harmful effects of work and the work environment on the body (World Health Organization, 2003). According to the European Agency for Safety and Health at Work (2010), the central area that is affected are the upper limbs and back, although all the parts of the body may be affected in some way, as these painful disorders can affect all muscles, tendons, joints, and nerves within the human body.

MSDs are common in most countries, with considerable costs, and their negative effect on employees’ quality of life. They are at least the third most common of registered occupational diseases within the United States, Scandinavia, and Japan (Bernard, 1997; Panel on Musculoskeletal Disorders, 2001; Sjøgaard, Sejersted, Winkel, Smolander, Jørgensen, & Westgaard, 1993). Others suggest that MSDs are now the most common and expensive occupational health challenge in the work setting (Cho, Hwang, & Cheng, 2012; Bandpei, Ehsani, Behtash, & Ghanipour, 2014; Picavet & Schouten 2003). Undoubtedly, MSDs have a significant effect on health-related quality of life (Bandpei et al., 2014; Chiu, Lau, Ho, Ma, Yeung, & Cheung, 2006; Maguire & O’Connell 2007).

The European Agency for Safety and Health at Work (2010) stated that musculoskeletal diseases make up 39% of the total amount of the occupational diseases, and thus, they are one of the most common occupational diseases at the European level. They are not only a cause for concern because of the negative impact that they bring upon individual employees, but they also have a significant impact on the businesses and social costs of European countries. Recent statistics from the European Surveys on Working Conditions show that in the EU-15, backache is the
most common work-related health problem. In the newer Member States, backache takes the second spot on the health issues list after overall fatigue (European Agency for Safety and Health at Work, 2010).

Many surveys report that 20 to 30%, or even higher amounts of the working population, have registered upper extremity symptom prevalence (Punnett, & Wegman, 2004). MSDs cause more work absenteeism or ineffectiveness than any other disease in countries such as the United States (Punnett, & Wegman, 2004), Canada (Badley, Rasooly, & Webster 1994), Finland (Riihimäki, 1995), Sweden (Leijon, Hensing, & Alexanderson, 1998), and England (Feeney, North, Head, Canner, & Marmot, 1998).

It has been established that psychosocial stressors at work are among the risk factors for work-related MSDs (Lacey, Lewis, & Sim, 2007; Simon, Tackenberg, Nienhaus, Estryn-Behar, Conway, & Hasselhorn, 2008; Sobeih, Salem, Daraiseh, Genaidy, & Shell, 2006). The evidence is growing about the fact that psychosocial work factors influence the development of musculoskeletal problems, in the lower back and upper extremity complaints (Bongers, Kremer, & Lack, 2002). Likewise, the US National Institute for Occupational Safety and Health (1997) suggested that there is a relationship between psychosocial factors at a workplace and the presence of musculoskeletal problems. Poor mental health, lack of social support, low job satisfaction, high job stress, job dissatisfaction, low rewards (Erick & Smith, 2013), and excessive mental demands (Smith, Wei, Zhao, & Wang, 2004) are psychosocial factors which have been associated with work-related MSDs.

Jobs that involve standing for an extended period of time are often linked with an increased risk of low back pain (Nelson-Wong & Callaghan, 2010). Teaching is one of the occupations that demonstrate a high prevalence of low back pain (Yue, Liu, & Li, 2012). The development of MSD in the teaching profession has been correlated with numerous work-related factors, such as excessive workload, high job stress, use of inappropriate furniture, excessive job demands, lack of support from
colleagues and supervisors (Erick & Smith, 2011; 2013), prolonged sitting, prolonged standing, low job satisfaction, high job demands, frequent reading, static posture, preparing lessons, and work constantly while sitting in offices are all part of the problem and may increase musculoskeletal stress (Yue et al., 2012).

Furthermore, inappropriate sitting posture, high anxiety levels, poor mental health are common complaints in teaching that may lead to high risk of MSDs in this group (Durmus & Ilhanli 2012; Nurul, Haslinda, Saidi, Shamsul, & Zailina 2010). A study identified backache among university teachers to be related to prolonged standing (Kashif, Darain, Sharif, Jamil, & Majeed, 2016).

1.7 The Significance of the Study

University teachers are globally under stress due to the competitive environment. Continuous performance expectations affect teachers' behaviour, health, and relationships. There is a need to acquire positive ways to maintain feelings of happiness and to help teachers and organisations to cope with the issue of occupational stress effectively. Quite a number of studies have already focused on stress among students (Bayram, & Bilgel, 2008; Behere, Yadav, & Behere, 2011; Hemamalini, Ashok, & Sasikala, 2018; Ndahepele, Daniels, Nabasenja, & Damases-Kasi, 2018) but still, few studies have investigated the consequences of teachers' stress, and even fewer have specifically focused on university teachers (Watts & Robertson, 2011). There is a need to focus on teachers in higher education institutions. This study helps to fill this research gap (Ahsan, Abdullah, Gun Fie, & Alam, 2009; Marke & Smith, 2010; Mostert, Rothmann, Mostert, & Nell, 2008; Zabrodska & Kveton, 2013) by focusing on university teachers in two different cultural settings (cf. Barkhuizen & Rothmann, 2008) and by analysing the relation between work-related stress and health outcomes (cf. Hessels, Rietveld, & Van der Zwan, 2017).

One special feature of this research project is that it compares two completely different countries, a developing one (Pakistan), and a
developed one (Finland). The reason for comparing these two countries is that developing countries would do wise to try to benefit from the more effective practices of developed countries and improve their institutional practices. As the world is rapidly transforming into a global village, the disparity between developed and developing countries should be narrowed down; however, this can only be possible by understanding effective practices in various contexts. The research findings could hopefully be used globally by both developed and developing countries in order to improve their work practices.

1.8 Aims

The present thesis aims at expanding the existing literature by identifying and comparing psychosocial stressors related to occupational stress and sick-leave due to burnout among university teachers in Pakistan and Finland (Studies I and II).

A second aim of the thesis is to investigate whether exposure to workplace bullying predicts symptoms of occupational stress and whether interpersonal relationships mediate this association, and further, whether this link is moderated by sex and nationality. Relationships with colleagues and family serve as potential mediating variables between workplace bullying and occupational stress (in Study III).

A third aim of the thesis is to empirically identify the effects of occupational stress on mental and musculoskeletal health among teachers of higher education institutions in Pakistan and Finland (IV).

A fourth aim of the study is to find sex difference among male versus female university teachers in Pakistan and Finland (Studies I – IV).
2. Method

2.1 Participants

In all four articles, the data were collected with the help of web-based questionnaires. This method is not only economical, but it is also a relatively fast way to collect data. The samples consisted of permanent/fulltime university teachers in Pakistan and Finland. The official lists of e-mail addresses of teachers were obtained from the websites of public universities in Pakistan and Finland. E-mails were sent out including the link to the web-based questionnaire, with the purpose of the study explained in instruction; the questionnaires were presented in English, in both countries. Full confidentiality was guaranteed. The procedure for selecting universities depended on the availability of e-mail addresses: not all universities had e-mail addresses available on their websites. An exact response rate is impossible to estimate, since there is no way to certify how many of the e-mail addresses were, in fact, active and valid. There were reasons to believe that a substantial number of the addresses were no longer active since some emails were bounced back to the sender. The scales used in articles III and IV were sent in the same questionnaire at the same time, so the number of respondents for both papers are the same. The numbers of female and male respondents from Finland and Pakistan in all four studies are presented in Table 1.

Table 1 Number of Participants in the Four Papers

<table>
<thead>
<tr>
<th></th>
<th>Pakistan</th>
<th></th>
<th>Finland</th>
<th></th>
<th>Total Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Article 1</td>
<td>138</td>
<td>63</td>
<td>139</td>
<td>136</td>
<td>476</td>
</tr>
<tr>
<td>Article 2</td>
<td>166</td>
<td>92</td>
<td>139</td>
<td>136</td>
<td>531</td>
</tr>
<tr>
<td>Article 3</td>
<td>196</td>
<td>133</td>
<td>152</td>
<td>129</td>
<td>610</td>
</tr>
<tr>
<td>Article 4</td>
<td>196</td>
<td>133</td>
<td>152</td>
<td>129</td>
<td>610</td>
</tr>
</tbody>
</table>
2.2 Measures

Seven instruments were used to collect data for these studies. They were the following:

2.2.1 Psychosocial Stressors Scale (Article I-II)

A questionnaire used to determine potential causes for work stress was adapted from previous research on this topic (Dua, 1994; Kinman, 1998). It comprised five subscales: Good Working Conditions, Social Support at Work, Promotion and Development Opportunities, Workplace Bullying (Einarsen, Hoel, & Notelaers, 2009) and the Work Stress Symptoms Scale (Björkqvist & Östeman, 1992) was used. The responses for all scales were given on a five-point scale ranging from 0 (never) to 4 (very often) or 0 (strongly disagree) to 4 (strongly agree). The reliability of the scales was measured with Cronbach’s alpha. The reliability scores of the scales were between .73 and .92, depending on the sample in question. For the measurement of sick leave due to burnout, the following question was asked: “Have you been on sick leave due to burnout?” The participants could then respond on a dichotomous scale, either “yes” or “no”. This method has previously been employed by Varhama and Björkqvist (2004b) who investigated municipal employees in Finland, industrial workers in both Poland and Finland (Varhama & Björkqvist, 2004a), and municipal employees in Spain (Varhama et al., 2010).

2.2.2 Work Stress Symptoms Scale (Articles I, II, III, IV)

To measure symptoms of work stress, the Work Stress Symptoms Scale (Björkqvist & Östeman, 1992) was used. This scale was used in all articles of the present study. The responses for the scale were given on a five-point scale, ranging from 0 (never) to 4 (very often). The reliability of the scale, assessed with Cronbach’s alpha, was $\alpha = .92$. 
2.2.3 Workplace Bullying Scale (Article III)
Workplace bullying was measured with subscales from DIAS-Adult (Österman & Björkqvist, 2009). This questionnaire contains 24 items assessing the frequency of experiences of bullying behaviour at the workplace (e.g., unnecessary criticism, unpleasant remarks about one’s personal life, ridicule in the presence of others, etc.) in the past six months. There were five response alternatives for each item: 0 = never, 1 = seldom, 2 = occasionally, 3 = often, and 4 = very often. The reliability of the scale was assessed with Cronbach’s alpha, which was $\alpha = .97$.

2.2.4 Colleagues Relationships Scale (Article III)
Relationships with colleagues were measured with an instrument designed particularly for this study. Some of the items were adapted from the Relationship Structures (ECR-RS) Questionnaire by Fraley, Heffernan, Vicary and Brumbaugh (2011). The response alternatives for all scales were on a five-point scale ranging from 0 = strongly disagree to 4 = strongly agree. The Cronbach’s alpha of the scale was $\alpha = .95$.

2.2.5 Family Relationships Scale (Article III)
Family relationships were assessed with a questionnaire developed specifically for this study; items from Jackson and Maslach (1982) were also adapted. The response options were on a five-point scale ranging from 0 = strongly disagree to 4 = strongly agree. The Cronbach’s alpha of the scale was $\alpha = .90$.

2.2.6 Mental Health Scale (Article IV)
The General Health Questionnaire GHQ 12 (Goldberg, 1978) was used to measure mental health among university teachers. GHQ-12 is a relatively concise, yet comprehensive measure commonly used in population-based research. There were 60-items in the first version of the questionnaire, but now a variety of edited versions of this instrument (GHQ-30, GHQ-28, GHQ-20, and the GHQ-12) are available. The scale inquiries about recent
particular symptoms and behaviours of the respondents. Each question is assessed on a four-point scale (less than usual, no more than usual, somewhat more than usual, or much more than usual). In this study, the reliability of the scale, measured by Cronbach’s alpha, was $\alpha = .90$.

2.2.7 Nordic Musculoskeletal Questionnaire (Article IV)
To assess musculoskeletal disorders, the Musculoskeletal Nordic questionnaire was used (Kuorinka, Jonsson, Kilbom, Vinterberg, Biering-Sørensen, Andersson, & Jørgensen, 1987). The Nordic Musculoskeletal Questionnaire (NMQ) is a standardized tool for the evaluation of musculoskeletal problems, e.g. low back, neck, shoulder and general complaints for use in epidemiological studies. The tool was not developed for clinical diagnosis (Crawford, 2007). The Cronbach’s alpha score of the scale was $\alpha = .92$ in this study. Response alternatives were on a five-point scale, ranging from 0 (never) to 4 (very often).

2.3 Statistical Analysis
The SPSS software was used for the analysis of the data, and the macro PROCESS (Hayes, 2013) adapted to SPSS was used for conducting mediation and moderation analyses (Article III). For articles I, II, and IV, multivariate analyses of variance (MANOVA) were conducted in order to identify group differences.

2.4 Ethical Considerations
Participation was entirely voluntary, participants were all adults, and full confidentiality was guaranteed. The study adhered to the principles concerning human research ethics of the Declaration of Helsinki (World Medical Association, 2013), as well as the guidelines for the responsible conduct of research of the Finnish Advisory Board on Research Integrity (2012).
3. Overview of the Studies

This section presents the key findings from the four studies. Comprehensive results are available in the original papers.

3.1 Study I: Sick-leave due to burnout among university teachers in Pakistan and Finland and its psychosocial concomitants

Sick leave due to burnout among university teachers in Pakistan and Finland, and psychosocial factors related to having been on sick leave were examined. A total of 476 respondents completed the web-based questionnaire. The results showed that there was a significant difference between the countries regarding sick leave due to burnout, and the percentage was significantly higher in Pakistan. However, this discrepancy was primarily due to differences among the female teachers in both countries. Pakistani female teachers had more frequently been on sick leave due to burnout than Finnish female teachers (25.4% vs 8.8%), while the difference between male teachers of both countries was not significant (Pakistan: 15.2%, Finland: 10.1%). Results show that the overall percentage of Pakistani teachers in the sample who had occasionally been on sick leave due to burnout was 8.3% in comparison with 9.4% among the Finnish teachers.

Another notable result of the study was that in the Pakistani sample, the teacher above 56 years had never been on sick leave due to burnout, while in Finland, 10% in this age group had been on sick leave due to burnout sometimes in their working life. It can be concluded that the responding Pakistani teachers above 56 years of age were not over-worked at present, and were not over-worked as young teachers, either. On the other hand, with growing job demands, young teachers are currently facing this problem. Perhaps the most startling result was that in the youngest age group, i.e., 26–35-year-olds, 19.2% of the teachers in Pakistan had been on sick leave due to burnout, whereas in Finland, the percentage
for this age group was zero. It is a serious issue. This result implies that young university teachers in Pakistan may be more at risk for burnout and stress. The multivariate analysis showed a significant effect for both country and sick leave due to burnout, and also for the interaction effect between country and burnout.

Analyses of country differences showed that working conditions, social support at work, and promotion opportunities all yielded substantially lower scores in Pakistan than in Finland. Workplace bullying was significantly higher in Pakistan.

Teachers who had been on sick leave, in both countries, scored higher on both work stress symptoms and workplace bullying, but lower on working conditions and social support at work.

University teachers in Pakistan who had been on sick leave due to burnout received the lowest scores on social support at work and the highest scores on work stress symptoms.

3.2 Study II: Factors associated with occupational stress among university teachers in Pakistan and Finland

This study aimed at identifying psychosocial factors related to occupational stress in university settings. A total of 531 university teachers in Pakistan and Finland completed a web-based questionnaire distributed to them via an email link. The data were analysed with MANOVA.

The multivariate analysis showed significant effects for country and sex; the univariate analyses revealed, as in Study I, that working conditions, promotion opportunities, and social support at work were rated to be considerably better in Finland than in Pakistan. There was only one significant but comparatively weak sex difference, namely regarding stress symptoms, with males scoring lower than females. Workplace bullying was reported to occur significantly more frequently in Pakistan. The interaction effect between country and sex indicated that Pakistani
males scored highest on the scale of workplace bullying, while Finnish males scored lowest.

The results suggest that there are more stressful conditions at Pakistani universities, whereas only a tendency for more work stress symptoms was found in Pakistan than in Finland. This apparent discrepancy may be due to personal factors, response trends, or perhaps a bias based on the nature of self-reported data. However, it could also be caused by a recent change in legislation about Finnish universities some years before the data collection took place, a revision causing restructuring and downsizing at Finnish universities. To explore it further, twenty interviews with Finnish university teachers were conducted (not reported in the article). All the interviewed teachers mentioned that they felt distressed because of the downsizing of teaching staff, and they felt pressure to publish to secure their jobs. This finding suggests that job insecurity is one of the major stressors in the work environment. Employees may have all the facilities they need in the work environment, but if their jobs are not secure, they cannot be satisfied. This is in line with findings from previous studies (Burgard & Seelye, 2017; De Witte, Pienaar, & De Cuyper, 2016; Tytherleigh, Webb, Cooper, & Ricketts, 2005; Vander Elst, Notelaers, & Skogstad, 2017).

3.3 Study III: Workplace bullying and occupational stress among university teachers: Mediating and moderating factors

The study aimed at exploring whether exposure to workplace bullying at the workplace can result in symptoms of occupational stress and whether interpersonal relationships mediate this connection, in the direction that good interpersonal relationships are associated with fewer symptoms and poor interpersonal relationships with more symptoms. It was further investigated whether the potential mediation effect was moderated by country and sex. A total of 610 university teachers in Pakistan and Finland completed a web-based questionnaire providing data for the analysis. A
conditional process model (Hayes, 2013) was employed to test the mediation and moderation hypotheses, with workplace bullying as the independent variable (the predictor), stress symptoms as the dependent (outcome, or predicted) variable, relationships with (a) family and (b) colleagues as mediators, and sex and country as moderators.

It was found that family relationships indeed had a mediating effect on the influence of workplace bullying on stress symptoms, but relationships with colleagues had no such mediating effect. The results highlight the significance of having good relations with one’s family. The findings suggest that if a person has good relationships with the family, it decreases the negative influence of workplace bullying, and stress symptoms are considerably reduced. Neither country nor sex moderated this effect. This result indicates that the mediating effect of family relationships is quite stable, since it was present in two relatively different cultures, and within both sexes, in both countries.

3.4 Study IV: Occupational stress and mental and musculoskeletal health among university teachers

In this study, the association between occupational stress and mental and musculoskeletal health among university teachers was investigated. Again, data were obtained by the use of a web-based questionnaire, completed by 610 university teachers in Pakistan and Finland. The correlations between the scales were highly significant, suggesting a clear association between occupational stress and poor mental and musculoskeletal health. A multivariate analysis of variance was conducted with country and sex as independent variables, and the scales of occupational stress, mental health, and musculoskeletal health as dependent variables, with age as a covariate due to age differences within the sample.

The MANOVA results were significant for both country and sex, and the interaction between country and sex. It was shown that female teachers faced more stress and health problems than male teachers.
Teachers in Pakistan were experiencing more stress and health problems than Finnish university teachers. The univariate analyses revealed that scores for occupational stress were higher in Pakistan than in Finland, while scores for mental health and musculoskeletal health were significantly lower. The multivariate analysis indicated the existence of interaction effects between sex and country, but the univariate analyses did not identify variable specific interaction effects.

Prior studies have found strong positive associations between stress and musculoskeletal disorders in various groups of working populations (Feyer, Herbison, Williamson, De Silva, Mandryk, Hendrie, & Hely, 2000), including teachers (Nurul, Haslinda, Saidi, Shamsul, & Zailina, 2010; Korkmaz, Cavlak, & Telci, 2011). The findings of the present study showed this to be the case also in the current samples of university teachers.
4. Discussion

4.1 Summary of the Findings

The findings of the present study are in line with previous research on occupational stress. The results exposed some important dissimilarities between the responses of Pakistani and Finnish university teachers. Finnish teachers gave higher scores than Pakistani teachers on the scales of working conditions, social support at work, and promotion and development opportunities. There was a substantial difference between the scores of Pakistani and Finnish university teachers on the scale of workplace bullying, with lower scores among Finnish university teachers.

An unexpected finding in both the first and second article of this thesis was that although the results suggested that working conditions were considerably better in Finnish than in Pakistani universities, still, in Studies I and II, only a tendency was found for work stress symptoms to be more frequent in Pakistan than in Finland. However, in the fourth article, the difference was significant. It was concluded that it might be due to individual factors, perhaps due to the subjectivity of self-reported data, or response tendencies. It was also assumed that the reported stress among Finnish university teachers could be the result of new legislation related to Finnish universities which changed the job scenario somewhat before the time of the data collection. These studies also found that irrespective of country, female teachers were showing more stress symptoms than male teachers. This finding is in line with earlier studies (Ahola, Hakanen, Perhoniemi, & Mutanen, 2014; Johnson et al., 2005; Skaalvik & Skaalvik, 2016; Stallman, 2010). Thus, there is evidence that women more easily become distressed by their working conditions than men.

The results also provided support for the notion that burnout is connected to increased risk of sick leave among university teachers. This was the case in both countries. The percentage of teachers who had been on sick leave due to burnout was considerably higher in Pakistan.
However, this variance was primarily due to differences between the female teachers of both countries. Female teachers in Pakistan had been more often on sick leave due to burnout than their Finnish female counterparts (25.4% vs 8.8%). The difference between Pakistani and Finnish male teachers regarding burnout was not significant.

Among Pakistani university teachers, there was not a single one aged over 56 years who had ever been on sick leave due to burnout; yet in Finland, 10% of this age group had been on sick leave due to burnout at least once during their working life. It seems that Pakistani teachers over 56 years of age were not over-worked at the time of the data collection, nor were they over-worked as young teachers either. However, with growing job demands, young teachers are now confronting this issue. In the youngest age group, the 26–35-year-olds, 19.2% of the Pakistani university teachers had been on sick leave due to burnout, but in Finland, the percentage for this age group was zero. This is an alarming situation and a matter which should be taken seriously. This result suggests that young university teachers in Pakistan possibly are more at risk of stress and burnout than previously.

Workplace bullying has been identified as an important occupational stressor, and the current study supports this notion, in line with previous research (Sheehan, McCabe, & Garavan, 2018; Yıldırım, 2009; Hauge et al., 2010; Nielsen & Einarsen, 2012; Nielsen, Hetland, Matthiesen, & Einarsen, 2012; Baillien, Bollen, Euwema, & De Witte, 2014). Workplace bullying harms their physical and mental health (O'Donnell & Maclntosh, 2016; Yamada, Duffy, & Berry, 2018; Duffy, 2018; Hurley, Hutchinson, Bradbury, & Browne, 2016; Schilpzand, De Pater, & Erez, 2016; Matthiesen & Einarsen, 2001). Workplace bullying can cause depression, decreased ability to concentrate, reduced work motivation, poor performance, lack of commitment towards the job, and poor social and working relationships (Yıldırım, 2009). Finne, Knardahl, and Lau (2011) found that bullying at the workplace was a key predictor of mental distress. Numerous studies (Balducci, Alfano, & Fraccaroli, 2009; Balducci, Fraccaroli, & Schaufeli,
2011; Matthiesen & Einarsen, 2004; Tehrani, 2004) have found that workplace bullying is even associated with post-traumatic stress among targeted victims (Baron, Franklin, & Hmieleski, 2016).

Although much attention has been given to the incidence, causes, and consequences of workplace bullying, no study has so far, to the knowledge of the present author, examined whether family relationships and/or relationships with colleagues mediate the link between workplace bullying and stress, and how it may vary depending on gender and country status. The results indicated that at least in this particular sample, family relationships mediated the link between workplace bullying and occupational stress, but relationships with colleagues did not. This finding is in line with the JDCS model (Karasek & Theorell, 1990), according to which social support alleviates stress symptoms. Neither country nor sex moderated the mediating effect of family relationships.

The present thesis also explored the effects of occupational stress on mental and musculoskeletal health among university teachers in Pakistan and Finland. The findings showed that, as expected, associations between the variables were found. There is a vast body of research suggesting that occupational stress is strongly negatively related to mental health (Tajvar, Saraji, Ghanbarnejad, Omidi, Hosseini, & Abadi, 2015; Oshio, Tsutsumi, & Inoue, 2015; Wang, Ramos, Wu, Liu, Yang, Wang, & Wang, 2015), and to musculoskeletal health (Barzideh, Choobineh, & Tabatabaei, 2014; Lee, Lee, Gillen, & Krause, 2014; Tabatabaei, Jazani, Dolanghar, Rostami, & Najafi, 2017). A large body of research shows that teachers face a great deal of stress which may have injurious effects on their physical (Lazuras, 2006; Zhong, You, Gan, Zhang, Lu, & Wang, 2009) and mental health (Guglielmi, & Tatrow, 1998; Lee, Tsang, & Kwok, 2007; Tang, Au, Schwarzer, & Schmitz, 2001; Vandenbergh & Huberman, 1999). Wieclaw, Agerbo, Mortensen, and Bonde (2005) found that female teachers, to a larger extent than male teachers, were at risk of hospitalisation for mental illness. Research in Finland (Kokkinen, Kouvon, Koskinen, Varje, & Väänänen, 2015) has shown that teachers, social workers, and health care
workers experience considerably high ratios of hospitalisation for acute mental health problems.

4.2 Limitations of the Studies

There are some limitations of the studies which need to be pointed out. The first limitation concerns the choice of using a cross-sectional design for the data collection. Due to that, issues of cause and effect cannot be ascertained, but only speculated upon. Longitudinal studies are required to draw better conclusions about both reasons for and consequences of occupational stress. However, budget concerns rendered the choice of a longitudinal design impossible.

A second limitation concerns representativity. Even though an effort was made to gather data from various parts of both countries, it is not possible to ascertain that the samples were fully representative. Moreover, an exact estimation of the response rate is not possible, as it is hard to evaluate the accurate number of valid e-mail addresses to which the electronic questionnaire was sent.

A third limitation concerns generalisability. Occupational stress may differ between occupations, and any conclusions drawn from these studies may not be generalised to other professions.

4.3 Implications of the Studies

Despite the limitations that the studies have, some conclusions may be drawn. In developing countries, occupational stress is an issue of growing concern, as it has adverse effects on the health and well-being of employees. Universities in a country like Pakistan would be wise to learn from the experiences of higher-level educational institutions in countries like Finland, in order to decrease the levels of occupational stress. Clearly, the studies showed that stress levels were considerably higher in Pakistan, and the young university teachers were especially at risk. Future studies could be addressing possible reasons for these circumstances.
Another undisputable finding was that female university teachers were more at risk of developing occupational stress than male teachers. This was the case for both countries, and it may well be a world-wide problem (Blix, Cruise, Mitchell, & Blix, 1994; Yang, Hu, Chi, & Wang, 2009).

The results of these studies indicate the need for higher education institutions to identify stressors in the work environment and take initiatives to eliminate them before they cause serious damage to the health of the teachers. There is a dire need to improve working conditions, provide social support at work, and offer equal opportunities for promotion and development, in both developed and developing countries. It is essential to ensure job security to every employee, as this study indicates that teachers may have all the required facilities and opportunities, but if their job is not secure, they are at risk of developing stress symptoms.

The findings underscore the significance of preventing workplace bullying, as it was identified as a highly significant stressor in the university work environment. Therefore, higher education institutions should pay attention to provide a bullying free work environment. Universities should design policies to ensure not only physical but also psychological safety for their teaching staff. The results of Study III showed that family relationships mediated the link between workplace bullying and occupational stress. Thus, families are important for alleviating the negative effects of exposure to bullying. An employee without a supporting family runs a greater risk of developing occupational stress.

This research further suggests that psychosocial stressors are the leading cause of occupational stress, which is related to both mental and musculoskeletal health. It is in the interest of higher education institutions to take this issue seriously. Governing bodies of the universities should design policies which focus on the welfare and wellbeing of university teachers and find long-term solutions to prevent work-related stress and burnout.
References


Baron, R. A., Franklin, R. J., & Hmielecki, K. M. (2016). Why entrepreneurs often experience low, not high, levels of stress:


Finnish Advisory Board on Research Integrity (2012). *Responsible conduct of research and procedures for handling allegations of misconduct in Finland*. Helsinki: Finnish Advisory Board on Research Integrity.


Nielsen, M. B., Matthiesen, S. B., & Einarsen, S. (2008). Sense of coherence as a protective mechanism among targets of


Schonfeld, I. S. (1992). Assessing stress in teachers: Depressive symptoms scales and neutral self-reports of the work environment. In J. C. Quick, L. R. Murphy, & J. J. Hurrell, Jr. (Eds.), *Stress and well-being at work: Assessment and


Archives of Industrial Hygiene and Toxicology, 62, 299–307.


Occupational Stress and Burnout among University Teachers in Pakistan and Finland

Occupational stress in universities is alarmingly widespread and, globally, university teachers are under stress due to a growing competitive environment. Therefore, there is a need to identify job stressors and to help universities to improve their work environment. This study investigates psychosocial concomitants of occupational stress and burnout among university teachers in Pakistan and Finland. Female teachers in both countries experienced more stress than male teachers. The percentage of sick leave due to burnout was significantly higher in Pakistan. In Pakistan, young university teachers were especially at risk of burnout. Workplace bullying was significantly more frequent in Pakistan. In both countries, good family relationships had a reducing effect on the link between workplace bullying and stress symptoms. The research findings may hopefully be useful for universities in both developed and developing countries which aim at improving their work practices.