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HEALTH RISKS OF BEING A CHEF
AND ITS EFFECTS ON CHEFS AND THE
RESTAURANT BUSINESS

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ABSTRACT

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The aim of the research was to find out the prevalence of stress and musculoskeletal diseases namely back pain, neck pain and leg pain of cooks in restaurant kitchens. The reasons for the health problems, their manifestation and their effects on cooks as well as restaurant business were also examined in the study.

The study was conducted in a la carte restaurants that are located in Vaasa city centre. Quantitative method was chosen with the distribution of two sets of questionnaires; one for cooks and the other for restaurant owners/ managers. There are total 27 respondents for the survey for cooks and four respondents for the survey for restaurant owners/ managers.

With regard to the survey for cooks, stress and multiple site pains occur often among the group of respondents. The health problems, however, are not severe in general and do not affect their work and daily activities too much. Abundant amount of work is considered as the biggest cause of stress while the laborious and physically demanding work in the kitchen is the main reason for musculoskeletal pains for the respondents.

With regard to the survey for restaurant owners, cooks' health problems are of little or no effect on their business profit. Cooks' sick leaves and leaves due to stress or physical pains are not the norm. No restaurants in the study have a separate budget for cooks' leaves and sick leaves.

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1 INTRODUCTION

The Introduction presents the overall picture of the thesis. Background of the thesis or where and how the topic comes to be studied is explained. The purpose of the study, the target group of customers and limitations are explained as well. The structure of the thesis is also included.

1.1 Background of the thesis

Chefs' lives in the kitchen seems to be becoming more revealed and are getting closer to the eye of public in recent years more than ever before thanks to world-wide broadcast cooking competitions where home cooks participate.

The audience, even though most of them do not work in the food and restaurant industry or have not been inside a professional kitchen once in life, seems no longer be astonished by a scene showing up a head chef scolding at a cook's face and bursting out in anger because a fillet of salmon is burnt. The drama is often pushed to the further extent when other members in the team start to argue and blame on one another.

All that drama, however, are settled down and turn out to be precious lessons at the end of the day. The audience finds such kinds of ups- and- downs in kitchen shows fascinating to watch but at the same time they are starting to be curious about the story in real professional kitchens, whether life of a professional chef is that interesting and full of unexpected stories happen.

Having been to half a dozen kitchens practicing, working and experiencing the working pace in professional kitchens for the past two years, I can assure that all of the usually-seen dramas on cooking shows, though often being emotionally exaggerated, are not just all scripted and acting. Reality cooking and kitchen shows have done quite well in reflecting the real image of the hustle and bustle of life in a kitchen under the pressures of time and the demand for good kitchen service and food quality from customers and supervising chefs or kitchen/ restaurant managers.

What professional cooks and chefs in kitchen in the real life experience, however, is not simply one day dramas or come- and- go stories like in a 60 minute TV show. Professional cooks do not experience such ups- and- downs or emotional dramas all the time when they work in the kitchen like in TV shows, especially when they are trained, experienced and get accustomed to characteristics of their job.

The toughest part of the cooking job for cooks and chefs is to assure the consistency of the quality of the performance in kitchen every day in long term. It consequences in another problem- health risks; which is complaints and worries that are most heard from chefs and cooks.

Hot-and- cold sides, eight hours of standing shifts, 20 kilogram of meat, hundreds of customers, short breaks, concentration and time pressure in real kitchens are sometimes familiar daily tasks for chefs. As much as chefs get used to their work, standing near hot stoves five days a week or more; or carrying dozens of kilograms of food leave long term pains on their physical and mental health, which will come to many chefs in real life but hardly any TV shows show.

Motivated by the real experience of working in the kitchen, I decided to study the topic of potential health risks of being a chef, more specifically the problems being limited to mental strain and musculoskeletal disorders.

1.2 Purpose of the study

The study is going to search and study the answers for following questions:

1. How high a percentage of chefs have experienced work related stress or any of these musculoskeletal disorders such as low back pain, neck/ shoulder pain or hip pain?
2. What are the symptoms?
3. What are the causes?
4. The link between chefs' well- being and restaurant business in terms of the profit and service quality?
5. Possible ways to reduce the health problems chefs are facing.

1.3 Target groups of readers

The first client group of the thesis is people who have an interest in the topic.

In other words, a more exact image about the health risks of professional chefs have is brought to anyone who can be have interest in the topic even though they might not work in the field.

The second group that finds the thesis useful is people who work in the kitchens and who plan to become cooks/ chefs in the future.

I would like to give a better idea about one downside of the cooking job for people who plan to pursuit this career in the future a so they are able to be prepared mentally and physically beforehand.

I decided to study the topic as I would like to have an insight about the potential risks of the job I plan to work in and I want to get to know what I need to train myself to survive as a cook in addition to cooking knowledge and skills.

Restaurant and kitchen owners/ managers are the third target group of readers. Costs such as health insurance, sick leave pays and other factors such as high staff turnover increase if kitchen employees are on sick leaves often. The study looks at causes, symptoms, consequences of chefs' health problems and some further suggestions and discussions on the topic; therefore, it might be useful for restaurateurs in figuring out the problems in their own business and for getting ideas on how to maintain and/or improve employees' wellbeing.

1.4 Limitations

First, the restaurant industry is immense with an uncountable number of kitchens in many types, size and methods of production. The research is limited to a la carte restaurants in the Vaasa region.

Second, occupational health problems for chefs and employees in the kitchen are quite a vast topic to study everything in detail for any researcher. The study is limited to some of the most popular health problems that chefs complain about. They

are stress and disorders related to musculoskeletal system. The musculoskeletal pains that are focused on in this research paper are neck/ shoulder pains and low back pains.

1.5 Structure of the thesis

The thesis is comprised of 7 chapters. It starts with the introduction the content of which has been explained in the beginning of the chapter. The next chapter concerns the stress problems of chefs. The sources of the stress and the manifestation of stress within chefs are explained. The chapter also gives out a number of suggestions that might help neutralize the level of stress in the kitchen.

The third chapter continues with musculoskeletal diseases- another health problem that chefs might be diagnosed with. Typical and popular disorders of musculoskeletal system such as neck, shoulder, back are mentioned and explained. The documented frequency and popularity of those diseases among chefs are also included. The chapter explains the sources and impacts of the pains on people's health as well. Chapter 4 presents theoretical framework regarding how the well-being of chefs can affect restaurant business and profit.

The empirical section of the research starts with chapter 5. In this chapter the research process, reliability and validity of the study are discussed at length. Chapter 6 analyses the data collected from two sets of questionnaires, one for chefs and the other for restaurant owners/ managers. Chapter 7 presents conclusions and suggestions.

2 OCCUPATIONAL STRESS OF WORKING AS A CHEF

Unfavourable psychological working conditions has caused occupational stress to the workers in the hotels, restaurants and catering (HORECA) sector for the last ten years (Managing Psychological Risks in HORECA). In a comparison with other groups of employees working in HORECA industry, chefs are considered to experience noticeable levels of stress; which has been proved by many studies during the last 15-20 years (Murray-Gibbons& Gibbons, 2007).

2.1 The sources of stress at chef's position.

Previous studies and researches on this topic have claimed different sources for stress experienced by people working as chefs in restaurant kitchens. Long working hours is considered as one of the main causes for kitchen employees' stress (Murrays Gibbons& Gibbons, 2006). Long and substandard working hours are considered normal for employees in HORECA industry. 47,5% of workers in hotels, restaurants and catering service in Europe have to work more than ten hours per day at least once a month while 63,5% of people with other occupations in Europe never have a more than ten hour working day (Managing Psychological Risks in HORECA).

Working in the evening shift (6-10pm) for at least two hours is also common for more than 71 percent of employees in HORECA workers (Managing Psychological Risks in HORECA), including chefs in restaurant kitchens. Similarly, 45 percent of the staff in hotels, restaurants and catering premises has to work for at least 2 hours in the night shift (Managing Psychological Risks in HORECA). 83 and 69 percent of employees in the hospitality industry also have to work on Saturdays and Sundays, respectively while the figures for all workers in Europe are just 51% and 29%.(Managing Psychological Risks in HORECA).

In their study titled " Occupational stress in the chef profession" by Murray Gibbons and Gibbons (2007), 39.5 percent of 40 replies to the questionnaires answered that the chefs worked over 40 hours per week while Lo and Lamm (2005) in their survey about work- related stress in hotel industry stated that 66.66% of

the hotels supervisors and junior managers (n=6) worked 40 hours per week plus overtime, 23% hotel employees (n=13) work overtime occasionally and about 69% (n=13) of executive and line managers worked at least 50 hours per week.

The imbalance between the time for work and for social and/or personal life then becomes a source of strain for employees in HORECA industry (Managing Psychological Risks in HORECA). Chefs who work long hours in the kitchen with very often a non-standard schedule suffer stress from this time imbalance, too.

This is in conformity with the result in report "Protecting workers in hotels, restaurants and catering" by the European Agency for Health and Safety at Work (2008). Part-time working, overtime working and working under a non-standard schedule are also listed as causes for work-life imbalance, stress and other unhealthy psychological problems.

In addition to long working hours and non-standard work schedules, the demand for completing huge amount of work in a limited period of time also stresses out many chefs. Just the amount of work only is considered as a major stress for many employees (O'Driscoll & Cooper).

According to the report "Protecting workers in hotels, restaurants and catering" (2008), the increased amount of work in peak hours, staff shortage which increases workload for the available staff and complex of tasks demanding high level of focusing cause headaches, stress and scare to employees in hotels, restaurants and catering premises.

Murray-Gibbons and Gibbons' research (2008) discussed the problems in more details. In their study titled "Occupational Stress in the Chef Profession" (n=40), 100 percent of the respondents said that their workload had been increased during the past year while 50 percent of them thought that the workload was "excessive some or most of the time." Workload abundance and lack of staff were among top three factors that were perceived as the most stressful among chefs, and the two problems appear to have a relationship: a lack in the staff results in the repetition

of the work rota, causing more work time and workloads and vice versa (Murray gibbons & Gibbons, 2008).

Conclusions from these previous studies are in accordance with a research by Lo and Lamm (2005) about work- related stress in hospitality industry. Long hours, work load and lack of staff are causes for chefs' strain (Lo& Lamm, 2005, p19).

Abundant workload and lack of employees in kitchen seem to be involved with each other. Employee shortage unavoidably causes more significant amount of work (Murrays- Gibbons and Gibbons, 2008). The lack of employees also results in the fact that they have to be in charge of several work performances at a time and the tasks vary depending on the shift. Employees as a result feel worn out from responding to the demands from both supervisors and customers (Protecting Workers in Hotels, Restaurants and Catering, 2008).

O'Driscoll ad Cooper (2002) mentioned this problem as "organizational roles" in their research. The conflict in individual roles is one aspect. It happens when an employees has to respond to several inharmonious demands from customers, supervisors or colleagues. It leads to the perception of inefficiency at work and fatigue. The outcome can be occupational stress and feelings of exhaustive emotion (O'Driscoll & Cooper, 2002). The researchers also mentioned another aspect of one's role in an organization that is related to stress at work- the role obscurity. Role obscurity happens when a person does not know to what extent of work s/he is in charge of and has influences on her/ his work, along with uncertainty about work result. The problem is linked with work- related stress and poor communication between managers and kitchen staff; which is going to be discussed in more details later.

Feeling out of control is another source for chefs' stress; which has been mentioned in many researches and studies (Ross, 1997; Driscoll and Cooper 2002; Murray-Gibbons and Gibbons, 2007).

Control at work refers to the ability a person can make decisions about changes and take control in their work by himself. Being responsible for a work but pos-

sessing no control over the work causes stress (Murrays Gibbons and Gibbons, 2007).

Ross (1997) in his study about hospitality staff's strain considered job autonomy as a work stress. Employees who thought of personal independence at work as an essential part of their job believed that a less ambiguous work role and better communication with supervisors about their ability to manage might be the solution for the problem (Ross, 1997, p9).

The report "Protecting Workers in Hotels, Restaurants and Catering" written by European Agency for Safety and Health at Work (2008) also mentioned lack of work independence and control as a work hazard for HORECA employees' psychological health. According to the report, the hazard includes matters involving low control and influence over their own work, supervisors' check, no certainty about the end of the workday, obscurity about how work should be done due to poor communication between employees and managers and repetitive work. Repetitive work or work autonomy means that a person has to do the same work daily without room for challenging and creativity (O'Driscoll and Cooper, 2002).

Many previous studies about work- related stress when discussed about work obscurity mentioned inefficient communication between managers and kitchen staff as a source for the problem. Work autonomy and obscure work role imply that managers fail in their attempt to communicate with the staff. It is suggested that managers should take the importance of communicating and interpersonal skills into consideration (Ross, 2007, page 9).

Murrays- Gibbons and Gibbons (2007) also pointed out that some stressors were deprived from how chefs and supervisors in kitchen naturally communicate. For example, there is a shortage of feedbacks about work results, undervaluation or lack of support from supervisors (Murrays- Gibbons & Gibbons, 2007, page 6). The researchers suggested that more feedbacks about the results of their works should be given to chefs and that communication between staff should be increased also.

O'Driscoll and Cooper (2002, p11) on the other hand doubted the importance of people's support as an alleviator for stress at work. The researchers nevertheless believed that bad social relations and lack of encouragements from co-workers and managers could be a major cause of stress.

For summarizing, work-related stress is evident in the hospitality, restaurants and catering industry and in the chef occupation. The sources of strain can be named as long working hours, heavy workload, lack of staff, lack of control and poor communication between staff and supervisors in kitchen (Murrays Gibbons & Gibbons, 2007).

2.2 The effects of stress on chefs.

One negative effect of stress on chefs is burnout (Murrays- Gibbons and Gibbons, 2007, page 3). According to O' Driscoll and Cooper (2002), burnout can be considered as the exhaustive state of human psychological condition, resulting from a situation when a person has to cope with continuous demands and pressures. Burnout was first mentioned as an obscure terms, nowadays it is popularly considered as a mental symptom responding to occupational stress (De Silva et. al, 2009).

A person with burnout can be reported to feel exhausted in emotion, have depersonalization disorder, or often evaluate people's achievements negatively, feel incompetent or do not feel accomplished (O'Driscol & Cooper, 2002). Burnout was also mentioned in Murrays Gibbons and Gibbons' study about strain at chef profession (2007, p3), evidenced with many documented evidence from previous studies and researches.

Other mental problems as consequences of stress that have been named in previous studies, besides burnout, are depression, absenteeism, headaches, depression, anxiety and nervousness (Protecting Workers in Hotels, Restaurants and Catering).

Absenteeism can be explained as a way HORECA employees do to cope with stress. The manifestation can be taking long holidays, sick leave, unpaid leaves, quit jobs when individuals cannot tolerate stress any more (Lo and Lamm, 2009, p19.)

In addition to mental problems, stress also consequences in physical health problem, especially ‘‘ cardiovascular, morbidity and mortality’’ (E-fact 25). According to a study on by Haukka et. al. (2011), mental stress is a prediction for multiple-site pains (page 6). Workers who receive poor support from supervisors had the probability of having multiple- site pains twice as much as others that do not have the problem (Haukka et. al, 2011).

Physical violence can also be considered as a manifestation of stress. Kicking, pushing, burning employees with hot equipment or food and throwing objects are mentioned as the outcomes in the report Protecting Workers in Hotels, Restaurants and Catering. The highly- demanding and fast- paced kitchen environment is considered as the contribution of chefs’ anger, which is also mentioned in Einarsen’ study (2003). Other negative effects of stress on chefs are overeating, alcohol consumption, smoking and avoiding exercising (Murrays- Gibbons and Gibbons, 2007). .

In summary, the negative effects that stress has on chefs include mental problems such as burnout, headaches, depression, getting away from work on purpose and physical problems such as physical violence, excessive eating, drinking alcohols, smoking, laziness of exercising (Murrays-Gibbons and Gibbons, 2007).

2.3 Reducing stress

There have been quite a number of suggestions for relieving the level of stress or reducing the negative effects of stress for chefs in the kitchen. Murrays Gibbons and Gibbons (2007) believed that the stress could be reduced by gestures of helping in the kitchen and more communication between chefs and managers or kitchen staff and supervisors. For example, chefs can be evaluated not only by the cooking skills but the willingness to support and encourage others also. The sup-

port can be helping others to complete a task when they have time, or inform colleagues/ junior employees in the kitchen about some criteria for a good performance or how a work should be done (Murray- Gibbons and Gibbons, 2007, p14).

Lo and Lamm (2009, p18) also considered supports and better communication between staff in hotels and restaurants as a good way to relieve work- related stress. A team of employees should be able to deliver the homey feeling where everyone is sociable, welcoming, supportive and comfortable (Lo& Lamm, 2009).

Less ambiguous work role, more conversations from employees' point of view, more attention to employees' needs from managers are also suggested to avoid and reduce the level of stress in hotels and restaurant employees (Ross, 1997, page 8). It is recommended that management team should think of "the acquisition of more effective social and interpersonal skills".

O'Driscoll and Cooper (2002, p15) stated that work environment could be less stressful if employees are enabled to have certain influence on their own work. Their study in addition suggested supports and harmonious relationship among workers and with supervisors reduce and save employees from negative effects of stress.

In addition to improved communication in kitchen and social supports as a frequently mentioned way to relieve chefs' stress, less working hours, less repetition in work rota and kitchen tasks with more variety and creativity and challenges are also believed to be effective in decreasing the amount of stress that chefs might have (Murrays- Gibbons and Gibbons, 2007).

In short, improvement in staff communication leading to clearer work roles and more harmonious work environment, reduced workload and work routines and more challenges requiring creativity are considered as effective alleviators of stressors in the kitchen (Murrays- Gibbons and gibbons, 2007).

3 MUSCULOSKELETAL DISEASES

Hotels and restaurants are working places where many dangerous tasks and jobs are done. The labour force in the sector has to cope with many physical health problems in addition to psychological risks (Protecting Workers in Hotels, Restaurants and Catering, 2008).

For example; kitchen employees are at risk of losing the ability to hear clearly due to noise of the kitchen equipment, pots/ pans/dishes clashing, noise from customers or staff's loud voices. In the kitchen, the temperature is much higher plus draughts due to open windows, and unhealthy poisonous substances in the air; which might be a potential hazard for respiratory systems (Protecting Workers in Hotels, Restaurants and Catering, 2008).

3.1 The prevalence of musculoskeletal diseases among chefs

Of all the health problems that chefs have to confront with, musculoskeletal diseases, especially low back, neck and shoulder pain as a popular physical health problems (Haukka et. al, 2005; Waddell& Burton, 2001; Pehkonen et. al, 2009; Chang et. al, 2012). In the publication "Musculoskeletal Disorders and Workplace Factors" (1997, p3); which examined the topic in great detail, musculoskeletal disorders is referred as problems that occur in many supporting parts of the body such as nerves, tendons, back. It was identified as a work- related matter as soon as in 18th century but still being a topic of discussion and studies in the modern time.

The prevalence of neck, shoulder and low back pains as common health problems among chefs and kitchen workers has been well- documented in previous studies (Haukka et. al, 2005; Waddell& Burton, 2001; Pehkonen et. al, 2009; Chang et. al, 2012). According to report Protecting Workers in Hotels, Restaurants and Catering (2008), pains in neck and back are pointed out as one of the negative consequences on the body when working in HORECA sector. This is in accordance with a report about working conditions in hotels and restaurants in Netherlands by

Bossche et. al (2003). The study claimed that musculoskeletal system diseases such as neck, shoulder or back pains were complained most frequently.

Chang et. al. (2012) studied the difference in working conditions and safety between dry and wet kitchens. In both type of kitchens, heat and muscular pains are said as the most annoying matters. Workers in wet kitchen considered musculoskeletal pains as the problem they confronted with most often (72.2%) in a month while psychological stress ranked second (47.7%). Dry kitchen workers, at the same time, considered muscular problems as one of the main confrontation against them enjoying the work. In the later part of the report about the kinds and the prevalence of occupational diseases occurring in the kitchen, workers in both dry and wet kitchens listed musculoskeletal diseases as the most frequent ones (47,8 % and 33%, respectively).

In a research about the concomitant of musculoskeletal disorders experienced by women working in 122 kitchens in four cities in Finland (Haukka et. al, 2006), it is concluded that women as kitchen employees experienced the co- occurrence of musculoskeletal problems often. The re-occurrence of the pains was 87 percent in three months for the target investigated group (female kitchen employees); in which low back disorders ranked second with 50 percent (Haukka et. al, 2006).

Low back pain as an occupational health problem is not an uncommon topic of studies about work- related diseases. More than 40 articles proved the link between low back pain and five physical factors at work, namely: heavy work, lifting and strenuous activities at work, awkward positions such as bending, vibration of the whole body and immobility at the same work station (“Musculoskeletal Disorders and Workplace Factors” ,1997, p 373). The factors as sources for low back pains and all musculoskeletal pains in general will be discussed in length in the next part.

Shoulder/ neck pain is also another musculoskeletal- related problem for chefs and kitchen workers that have been studied in a number of researches. According to Haukka et. al. (2006, p3) in a about the prevalence musculoskeletal pains with

n=495, pains in neck occurred most often with 71 percent while the figure for shoulder pain was 34%.

Also, kitchen workers in a study about shoulder pains reported to experience the high prevalence of shoulder pains, which rose from 31 percent to 41 percent in 1 year follow up of the study. Shoulder pain was difficult to eliminate. Three fourth of kitchen workers with shoulder problems at baseline had pains re- occur one year later (Pehkonen et. al, 2009).

The article “Prospective study on shoulder symptoms among kitchen workers in relation to self- perceived and observed workload” claimed that employees in kitchen were performing a number of tasks that were seen unhealthy for their shoulders.

For example, in an analysis of observations from 69 kitchens with 183 employees, in three fourth of the observations, kitchen workers were seen to perform lifting movement when doing manual tasks such as handling and storing raw food, washing dishes, packaging (Pehkonen et. al, 2009, p4).

3.2 Negative effects of musculoskeletal diseases on chefs’ health.

The disorders relating to musculoskeletal system might have a serious influence on human body and be the main cause for permanent pains and physical impairment which consequence in body performance and psychological well- being of the patient. The utmost negative of musculoskeletal diseases is that they degrade people’s life quality (Woolf& Pflieger, 2003). The health outcome of low back pain, for example, is mentioned a lot. They can be physical impairment or the disability of a part of the body to function properly such as “lumbago” (Musculoskeletal disorders and workplace factors, 1997, p374).

This is in accordance with the argument about the consequences of musculoskeletal disorders on human body in the book “Musculoskeletal Disorders and Workplace Factors” (1997). The publication also pointed out the cost for musculoskeletal pains as occupational diseases. The expenses could be, for example, loss in production, cost in recruiting and training new staff, expenses for recovery of

workers. The expenses for chefs' health problems will be discussed in detail in next chapter.

3.3 Causes of chefs' musculoskeletal disorders.

According to the report *Protecting Workers in Hotels, Restaurants and Catering* (2008), having to standing for a long time is the first source of muscular pains. This is in accordance with Bossche's study (2003, p.25). The researcher claimed long time standing in the kitchen and poor designed kitchens as the reason for kitchen employees' muscular problems.

Long working hours and standing working are both characteristic of kitchen work. Chefs and kitchen employees perform works mostly when standing or walking (Haukka et. al, 2006). Standing in the same position for many hours, sometimes over 10 hours regularly very possibly results in back pains or shoulder or limb injuries. Long shift working is an attribute of HORECA sector also (E-fact 25). In a report by European Agency for Safety and Health at Work, 47.5 percent of HORECA employees were reported to work more than 10 hours per day more than once a month, while for other sectors, 63.5 percent of the workers never have a work day like that.

Strenuous tasks and task repetition in kitchen cause pains in musculoskeletal system, too (*Protecting Workers in Hotels, Restaurants and Catering*). The link between work repetitious movements and neck or neck/ shoulder disorders is marked in previous studies. The same goes with the association between LBP and awkward postures at workplace (*Musculoskeletal Disorders and Work-related Factors*, 1997, p. 32&373).

Woolf & Pfledger (2003, p7) seemed to agree with that argument when they listed heavy work and forceful movements such as lifting, pushing and some other awkward postures as a work characteristics which might cause pains for musculoskeletal system.

A number of studies claimed that kitchen employees are exposed to physical demanding works (Bossche, 2003, E-fact25; Pehkonen, 2009; Chang et. al., 2012). For example, continuous and repetitive actions like chopping, cutting, peeling, stirring; taking, bringing and storing packages of raw food materials or carrying bulk loads of food items (Protecting Workers in Hotels, Restaurants and Catering).

Workers in kitchen have to perform lifting activities that require shoulder and arm movements most often when completing the tasks (Pehkonen et. al., 2009). The tasks could be receiving and putting raw food materials in storage, which were perceived as the most forceful tasks by kitchen employees, followed by washing dishes, cleaning and maintaining equipment. (Pehkonen et. al, 2009).

Mayhew and Quinlan (2002) in an analysis about health care for non-permanent young workers in fast food kitchens also stated that most of the physical damages came from tasks such as cleaning in kitchen or receiving mass of food items. Out of 304 employees in the survey, 12,8 percent said that they had back pains, stress- or sprain.

Another cause is psychological stress. With other words, psychological problems such as burnout, stress also result in musculoskeletal diseases. Lack of control in the kitchen, lack of support from managers, psychological problems are seen as the anticipation of musculoskeletal diseases (Haukka et. al, 2011).

In a study in two years among women working in the kitchen in four cities in Finland, about the link between work- related stress and musculoskeletal pains, kitchen employees, lack of satisfaction with encouragements from co- workers and supervisors was reported as a factor that raised musculoskeletal pain prevalence. Lack of control over work was also considered as a predictor for pains in low back, neck or limb positions (Haukka et. al, 2011). The study also showed that poor supports and job control could raise the risk of pains two times. It is implied that the significance of positive relationships at workplace should be valued more (Haukka et. al, 2011, p6).

Woolf & Pfleger (2003, p7) also claimed that work-related psychological problems such as work discontent contribute to low back pains.

In conclusion, the causes for musculoskeletal disorders among chefs can be any of these followings: characteristic of kitchen works such as long hour shifts, strenuous tasks and heavy workload that require difficult postures or arm movements or put pressure on supporting parts of the body like back. Psychological stress interestingly can be a potential cause for physical pains as well (Haukka et. al, 2011, Pehkonen et. al, 2009; Bossche, 2003).

4 EFFECTS OF STRESS AND MUSCULOSKELETAL PROBLEMS ON HOSPITALITY AND RESTAURANT BUSINESS.

Stress is a matter of significance in HORECA industry; which imposes a high cost on employers in addition to individual employees (O'Neill and Davis, 2011).

Work- related stress is a financial problem for business due to the fact that it increases the cost for health care of HORECA employers (O'Neill and Davis, 2011, p.2). In Europe, almost 4% of GNP is for occupational mental health problems (ODriscoll and Cooper, 2002). while in the US, according to Kalia (2002) in her report titled "Assessing the Economic Impact of Stress- the Modern Day Hidden Epidemic", stress- related diseases cost the US economy \$42 billion one year, half of which is spent on using health care service repeatedly. Patients who are diagnosed with stress- related diseases seem to go to doctor 3 to 5 times and to stay in hospital 6 times more than people without the diagnosis. Approximately 43 percent of the people even have depression or overuse of alcohol (Kalia, 2002).

Health care is not the only cost occupational stress causes for employers, other costs of stress on business has been documented (Kalia, 2002). Previous studies have pointed out the negative effect of work stress on the quality of customer service. The studies indicates that staff with lower level of stress performs better quality of customer service while those with high level of stress showed very poor job quality (O'Neill and Davis, 2011). Other negative consequences of stress relating to work performance includes accidents, mistakes in judgment and action, lack of intellection, poor decision- making (Kalia, 2002). The productivity for HORECA employers, therefore, might be reduced (O'Neill and Davis, 2011).

Absenteeism is one of the outcome of work- related stress (Kalia, 2002). A study about sick leave conducted by the Confederation of British industry found that wok- related stress ranked 2nd in the chart of factors causing sick leave; which cost around £4 billion per year (O' Driscoll and Cooper, 2002). Hotel staffs that have to be in contact with customers are not only less happy with their job but have in-

tention of quitting job more frequently. HORECA employers should take this matter into consideration because the operating fee goes up if the employees leave, especially employees at the manager level- those are much more costly to employ, orient and train (O'Neill and Davis, 2002).

In summary, stress can have serious negative effects on hospitality business such as low productivity, poor work performance and customer service and high expense for turnover and health care (O'Neil and Davis, 2002).

Musculoskeletal pains do not have bad outcomes on wellbeing of people working as chefs only but on the restaurant business also. According to the original article "The Economic Cost of Musculoskeletal disorders in Canada", the "indirect cost" for musculoskeletal system problems was much more significant than the direct one. The "indirect cost" includes the loss of productivity because of impairment and "premature mortality" (Coyte et. al, 1997). The loss of productivity can happen not only when employees are on sick leaves but even when they show up at work also. For example, employees lose concentration while working, work at lower speed than normal, perform tasks repetitively unconsciously or do nothing at work (Stewart et. al, 2002).

Costs for musculoskeletal pains contribute a lot to the cost for occupational health problems in the US. Back pain was claimed as the most frequent musculoskeletal problems. Besides the cost for health care, other costs like the loss of wages, loss of production, cost for rehabilitation, recruitment and training cost together made the total expense much more significant (Musculoskeletal Disorders and workplace Factors, 1997).

In general, besides stress, musculoskeletal disorder also imposes high expense on employers. Employers aware of the potential risks of staff low well-being might begin to consider the importance of employees' health and use money more effectively for pain pre-treatment at workplace (Stewart et. al, 2002).

5 THE RESEARCH METHODOLOGY

Quantitative and qualitative methods are two main popular research methods (Muijis D., 2004). This study uses quantitative method. This type of research method collects and analyses numeric data and use the analysis to explain a particular problem or a particular question (Muijis D., 2004). The primary data that of this research is the number of chefs that have stress and musculoskeletal problems precisely answered. Also, the research needs to be conducted in a large scale. That is why the quantitative method is chosen.

5.1 Research Implementation Process

The survey was conducted in August 2015 in Vaasa. The distribution of questionnaires started from 10th August to 31st August 2015. Approximately 50 questionnaires for chefs were distributed to six kitchens in town and five questionnaires for managers were handed to five restaurant owners/ managers. Most of the questionnaires were left at the restaurants and then were collected them after several days to a week later. Some of them were filled in right away if the participant, either a manager or a chef was not so busy with work at the time and able to answer the questions at the moment. The participants are given time for the questionnaires so that they can think carefully before giving an exact description about their health condition. Totally there are 27 respondents in the survey for chefs and four-respondents in the survey for managers.

All of the participants in the survey for chefs work at a la carte restaurants in the city centre. The choice of the location is derived from the fact that as a researcher I have to visit every kitchen to hand in questionnaire since I do not have other ways of contacting with every chef in the survey such as Facebook or emails to distribute the questionnaire on the Internet. Most of the restaurants are located in the city centre and it does not require a means of to travel so the location is convenient.

The reason why only a specific type of restaurants but not just any restaurant such as fast food restaurants or school restaurants are chosen is that each type of restau-

rants has its specific features, resulting in many different well-being problems for cooks as well as the causes for the health issues. It is too diverse and complicating to design a survey that can list every health problem that might occur when a person works as a cook, for example. Second, I have had experienced working in only a la carte restaurants. The topic of the thesis is derived from what I as a researcher have seen in my workplace. Health problems of chefs in a la carte restaurants therefore is the topic that I have a certain amount of knowledge background and experience. Third, a la carte restaurants are the most popular type of restaurants in town.

The survey for restaurant owners/ managers aims to examine the status quo of sick leaves of cooks and whether or not every restaurant owner/ manager in town spends a budget for their kitchen employees' sick leaves. The survey also examines how many chefs quit the work place every year. The questionnaire is comprised of 11 questions. The first two questions ask about background information of the restaurant such as the number of chefs and the number of years the restaurant has been open. The questions from 3 to 7 are concerned with the situation of chefs' sick leaves while questions from 9 to 11 collect information about why and how many chefs quit the workplace.

5.2 Questionnaire

There are two sets of questionnaires. One set is designed for chefs and cooks, concerning the reasons and status quo of their stress and multiple-site pains. The other one is designed for restaurant owners and managers, concerning the number of chefs who take sick leaves and quit the workplace. Their reasons for their sick leaves and quitting job and how they affect the profit the restaurant is making are also questioned.

There are ten questions in the survey for chefs. The two first questions of the survey aims to collect basic background information of the participants. The first question asks about the gender of participants while the second question seeks answer to the question of how many years of experience a respondent has been working as a chef.

Question 3 to 6 are concerned with the topic of stress. The third question aims to find whether a chef experiences stress or not and if yes, how often s/he feels stress while working. The question is in multiple choice forms. Question 4 seeks answers for the questions when a chef feels stress in the kitchen. Question 5 aims to find out how chefs behave when they feel stressed at work while question 6 asks participants if they have any multiple- site pains at the time they experience stressed.

Question 7 to 9 are concerned with the topic of musculoskeletal pains. Question 7 aims to find out the number of chefs that have had musculoskeletal pains and the frequency of the pains. Question 9 seeks for information about the sources of the multiple site pains, whether the musculoskeletal pains are the result of strenuous tasks and physically- required characteristics of the work or of stress. Question 8 lists a number of negative effects of multiple- site pains on their daily life and at work and asks the respondents to choose the frequency of the problems.

Question 10 is concerned with the effects of both stress and multiple site pains on chefs' career decisions.

For the survey for restaurant owners/ managers, the set is comprised of 11 questions. Since there are only four respondents for the study, the content of each question and the answers of the respondents will be presented in details in the analysis section.

5.3 Reliability and Validity

According to writing.colostate.edu- the website for open writing guide of Colorado State University, reliability of a survey depends on how the survey is able to yield the same result if it is conducted on repeated trials.

Reliability of the survey is high. Firstly, participants of the survey are given proper time to think about their situations and choose the answers that reflect their situation most exactly. There is no rush in time that can affect the answering process. Secondly, the survey is carried out totally independently and anonymously. A respondent answers the questionnaire on his own, without consulting or being

affected by the researcher or restaurant owners/ managers or any other respondents. These two factors ensure that the answers are reliable and accurate to each respondent's personal experience and opinions. Given the same questionnaire, a participant of the survey would highly give the same answer.

Validity of a survey tells whether the researcher is successful at measuring what s/he sets out to measure.

The validity of the study is relatively high. Questions in the survey are derived from the theoretical framework. The content of the questionnaires cling to the key points of the theory, which is about the prevalence of stress and multiple- site pains, their sources, manifestation and negative influence of the health problems on chefs' work and daily life. The same philosophy applies for restaurant owners/ managers' questionnaires, whose main content is the frequency of sick leaves and leaves and how restaurant business and profit. In other words, the questionnaire as the tool of the research is designed so that the researcher can measure precisely what she sets out to measure.

The variety in participants' years of experience can also be considered beneficial for an unbiased result. A chef with more than 20 years at work very possibly obtains changing attitude about the career, the experiences and tolerance for stress might be added up through the years while his physical health might be more deteriorated than a 2 year chef. The fact can be vice versa. The number of customers and the quality of restaurants in the survey of course should be taken into account when studying chefs' stress. It is however to point out that various numbers of years of work experience of this group ensures that the answers are not biased by any dominant sub- groups sharing the same time working in the industry.

Also, the difference in the number of male and female chefs is not significant. Insignificant gap in the number of male and female participants ensures the analysis to be unbiased. On the other hands, answers for the survey might be shaped by sexual characteristics such as physical strength or endurance to stress if most of the participants are males or female.

6 RESULT OF THE SURVEY

The results of both surveys will be explained in this section of the thesis. The answers about frequency, causes and effects of stress as well as multiple site pains of the group of respondents are examined and analysed thoroughly. For the survey for restaurant owners/ managers, since there are only four respondents, the answer will be presented in details.

6.1 The Survey for Chefs

The set of questions for chefs is comprised of ten questions, in which the first six questions are concerned with stress and the rest of the questions ask for information about multiple site pains. The analysis, therefore, is structured following the structure of the questionnaire. Demographics is the first element to be looked at, following is analysis about participants' experiences of stress. Answers about multiple site pains of the chefs are examined afterward.

6.1.1 Demographics

Gender and years of experience both can have a significant influence on a cook's physical and mental well-being and his/ her behaviour and attitude under stressful circumstances. For instance, a chef with many years at work can probably endure stress better than a chef who just starts his career because the first has been experiencing many situations and become calmer under stress while the later might be easily panic in a hectic kitchen.

There are totally 27 chefs participating in the survey, 16 are men and 11 are women.

The second question about the participants' years of work experience also received a noticeable discrepancy (Table 1). The number of years a participant in the survey who has been working as a chef varies from 1 year to 27 years. For the small population of the survey, the range of the number of working years can be considered quite dramatic.

It is interesting to see that there are in total 13 out of 27 respondents who have less than three years of experience in the field. The number of respondents with less than ten years and more than four years of experience is seven while the number of chefs that have been working from 11 to 27 years is seven, also. Table 1 shows the information collected from question 2 in detail:

Years of experience	Numbers of chefs
1	2
2	5
2,5	1
3	5
4	2
5	1
8	1
9	2
10	1
11	2
15	2
17	1
21	1
27	1

Table 1. Chefs' Years of Experience

6.1.2 The Frequency of Stress

Out of 27 chefs in the study, there is only one person who has never felt stress at work (Figure 1). Two participants gave no answer for the question but they still answered the next two questions which are about the reasons for stress and the effects of stress on chefs.

Out of 26 participants who have experienced stress at work, as can be seen from Figure 1, more than half of the chefs (15/26) have felt stress occasionally, nine of them frequently experience stress but no one always feels stressed while working (Figure 1). The result suggests that stress is very common for this group of participants but not severe in frequency.

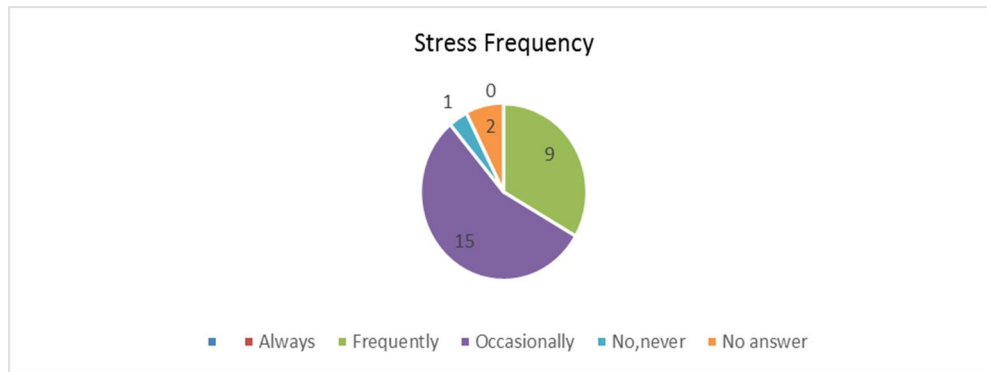


Figure 1. Frequency of Stress on Chefs

6.1.3 Sources of Stress

The fourth question is to find out the sources of stress in a chef's position. There are 12 reasons for stress. They are divided into five categories in this analysis:

- Sources of stress that are related to work hour and schedules problems.
- Sources of stress that are related to work amount problems.
- Sources of stress that are related to work authority.
- Sources of stress that are related to work repetition.
- Sources of stress that are related to communication at work.

a. Hours and Schedules

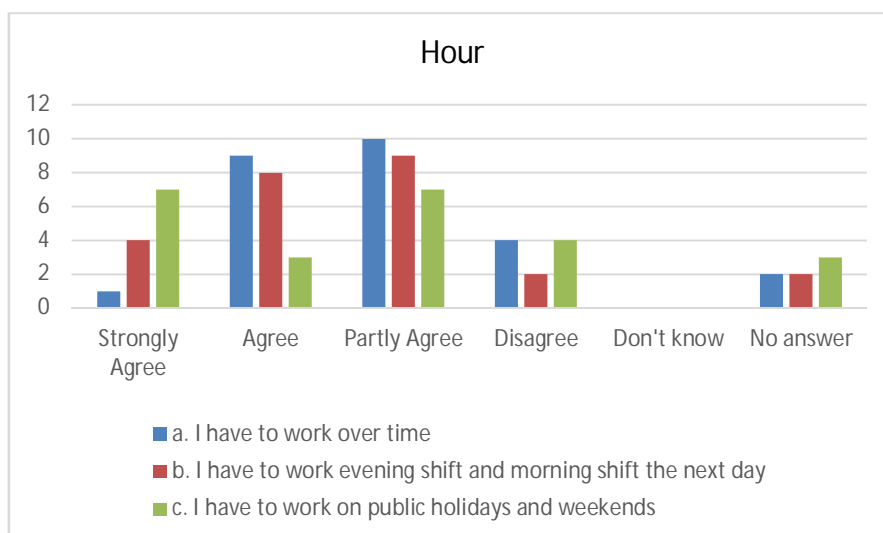


Figure 2. Work Hour Problem

Out of 27 people, 20 at least partly agree that “I have to work overtime” resulted in stress (Figure 2). 21 respondents at least partly agree on the next work hour

problem “I have to work evening shift and morning shift the next day” as a cause of stress while working on holidays and weekends is considered as the reason for stress by 17 respondents. It can be inferred that every listed work hour and schedule problem more or less causes stress to most of the participants of the survey. The severity of these causes, however, might be not significant since the number of respondents who partly agreed with the statements was much more noticeable than the number of respondents who at least agree.

Noticeably, seven chefs strongly agree that working on public holidays and weekends is stressful for them, much more than the number for overtime working (one strongly agree) and successive working schedules (four strongly agree).

b. The amount of work

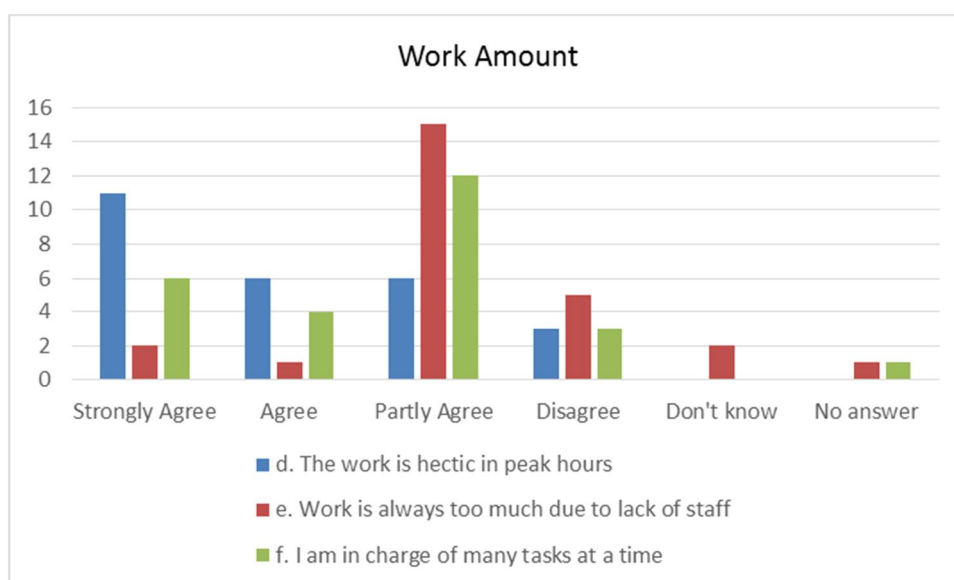


Figure 3. Work Amount Problem

23 out of 27 chefs at least partly agreed that they are stressed with hectic kitchen in peak hours (Figure 3). The number for the statement “Work is always too much due to lack of staff is 18 and for the statement “I am in charge of many tasks at a time” is 22 out of 27. It can be summarized that for this group of participants, the large amount of work, regardless of the cause, in general, is a very significant stress factor.

Noticeably, 11 chefs strongly agreed that they are stressed when the work is hectic in peak hours (Figure 3). The number of respondents who strongly agreed with this statement outdoes the same figure of any other sources of stress in the question. The result implies that a hectic kitchen is the most stressful factor for the majority of this group of participants.

c. **Work Authority**

There are two authority- related issues that are listed as sources of stress in the question; namely: “I do not have influence on what I want to do in the kitchen and must follow others’ instruction” and “I don’t get any feedback on my work”.

The number of disagreement however is the most noticeable in Figure 4 with 29 votes of disagreement totally. 13 people disagreed with the statement “I am stressed when I do not have influence on what I want to do and must follow others’ instruction” and 16 participants did not agree that they were stressed when they did not get any feedback on their work. When compared with other sources of stress, this category received the most responses of disagreement. In summary, work authority does not appear as significant as a cause of stress for this group of participants.



Figure 4. Authority

d. **Work Repetition**

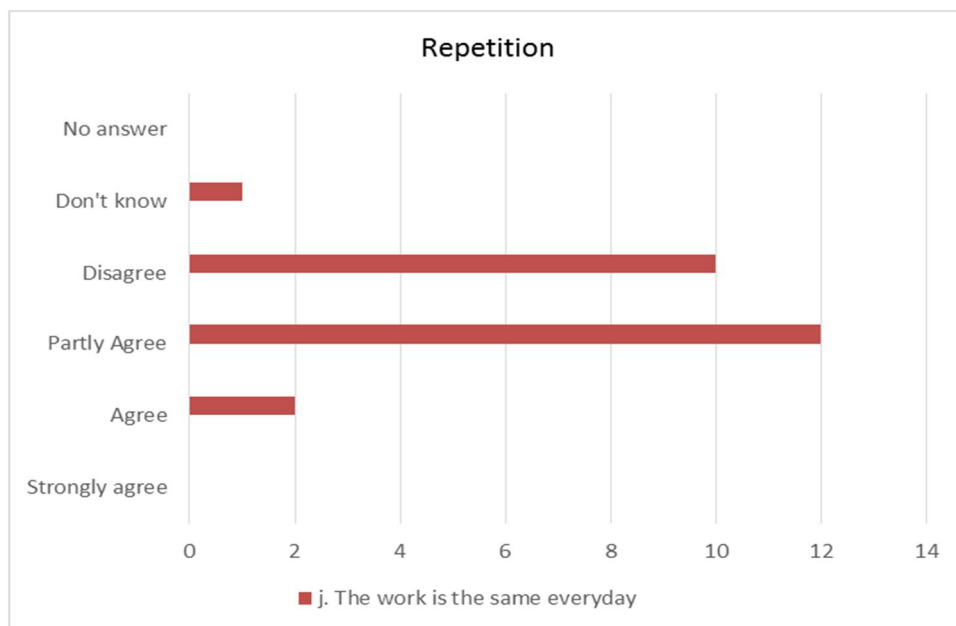


Figure 5. Work Repetition

14 respondents at least partly agree that work repetition- related factors caused them stressed, 10 chefs are in disagreement with the statement and one person chose "Don't know" (Figure 5). The discrepancy between the number of answers that are in agreement and disagreement with the statement is rather insignificant. Whether work repetition is stressful, therefore, varies from person to person in this group of chefs. Some might see it as a source of stress though not significant but some might not think that the same daily work routine matters at all. The result is not well- grounded enough to draw a conclusion in this case. Repetitive work appears as an obscure cause of stress for this group of respondents.

e. **Communication at Work**

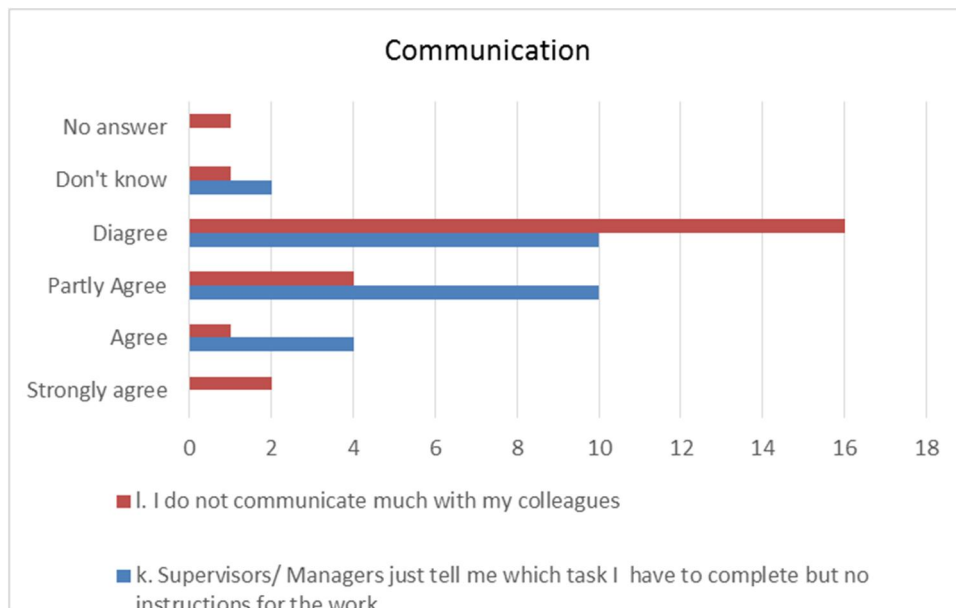


Figure 6. Communication

There are two sources of stress in the question that are related to communication at work. The first one is “Supervisors/ Managers just tell me which task I have to complete but no instructions for the work” and “I do not communicate much with my colleagues.”

Only seven chefs at least partly agreed with the statement that lack of communication with co-workers is stressful while 16 out of 27 chefs chose “Disagree” (Figure 6). It can be drawn that for this group of chefs, lack of communication is not considered as a typical reason for stress.

It is difficult to say whether the second communication problem is a stress factor or not since four chefs agreed and ten chefs partly agreed with the statement while ten chefs were against the idea and two people did not know. The insignificant gap in the number of for and against responses makes it difficult to conclude that no instruction from supervisors causes stress for the survey participants.

f. **Other sources of Stress**

Other sources of stress that participants listed down by themselves are:

- “Customers are rude”
- “I have to listen and follow supervisors who are not as good at working as I”

- “ Stupid people do stupid stuff.”

6.1.4 Manifestation of Stress

Manifestation	Always	Frequently	Sometimes	Seldom	Never	No answer
a. I feel nervous	0	1	10	9	1	5
b. I do not want to show up at work	0	1	4	7	9	5
c. I swear	6	5	9	3	2	2
d. I throw/ kick/ smash things	1	0	3	4	11	7

Table 2. Manifestation of Stress

As can be seen from Table 2, swearing seems to be the most popular manifestation of stress in this group of participants. In total 11 out of 27 always or frequently swear while experiencing stress. 12 of them swear sometimes or seldom. Only two people never swear.

On the other hand, physical manifestation of stress; in this question- throwing/ kicking/ smashing kitchen tools, does not seem very dominant among the participants. 11 chefs reported that they have never had that kind of behaviour, seven sometimes or seldom show violent actions while 1 chose always.

Absenteeism does not appear as a favourable way to express stress among the participants, either. Nine people never have the idea of no show, 11 seldom or sometimes do not want to appear at work and only one said frequently. Only one feels nervous frequently when he is stressed while ten people are seldom or never.

It can be drawn that for 27 chefs of the survey, -using foul words is the most popular way to express stress. Other ways to manifest stress appear much less dominant in their frequency.

One respondent listed her manifestation of stress, which is “I hate the whole world”. Another respondent added a different manifestation of stress, which is “I took small breaks when I’m stressed and then come back to work as normal.”

6.1.5 Stress and Headache and Physical Pains

Question number six asked whether a chef has shown symptoms of multiple site pains and headache when they experienced stress. The aim of the question is to find the correlation between stress and headache and musculoskeletal problems, since a number of researches in the theoretical framework claimed that stress could result in multiple site pains for workers in kitchen.

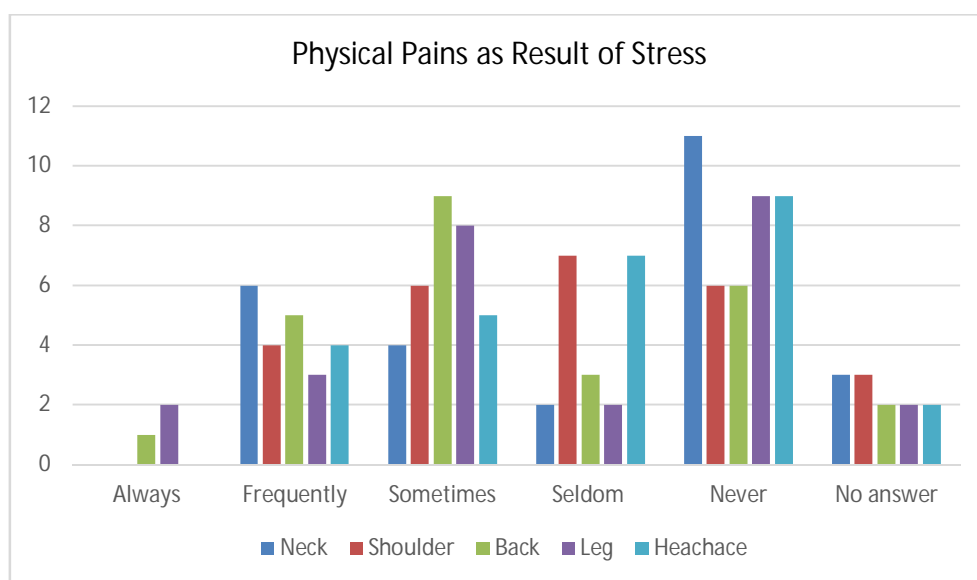


Figure 7. Physical Pains as Result of Stress and Frequency

It is noticeable that 13 out of 27 participants of the survey have never or seldom had neck pain, four sometimes and six frequently have felt the pain when they are stressed (Figure 7). Neck pain, therefore, might not be a noticeable consequence of stress among the participants, considering the gap between the numbers of chefs that frequently and seldom/ never experience the pain. The conclusion can also be drawn in the relation between leg pain and stress: 11 people never or seldom show the symptoms and eight sometimes while only five respondents at least frequently feel the pain as a result of stress.

Back pain, similarly, is not so clear as a result of stress for chefs. In Figure 7, nine respondents seldom or never have back pain, nine sometimes have the pain while only six frequently or always experience the pain.

Interestingly, headache is not relating much to stress, either. 16 chefs never or seldom have headache while stressed. The number of chefs having frequently or always a headache along with stress is only four.

It, therefore, can be said that headache and musculoskeletal pains are of little relation to stress in this group of respondents.

6.1.6 Stress and Career Decision

Question number 10 looked into effects of stress on the chefs' career decision. 'Has the person thought of retiring, changing the occupation and other decisions concerning changing career' is the core idea of question 10.

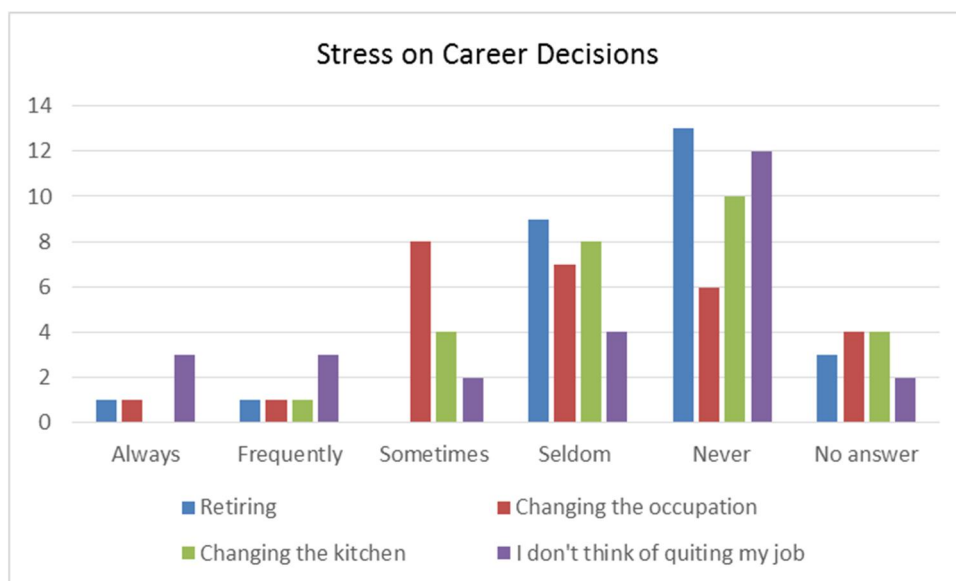


Figure 8. Effects of Stress on Career Decision

Figure 8 shows that in general, stress has little impact on chefs' choice of whether to continue or put an end to the career or leave a work place: 13 chefs never thought of retiring, six never thought changing the occupation and eight never thought of changing the kitchen when they experience stress.

It should be noted that among the choices of discontinuing work, changing the occupation appears to be more popular when ten people said they at least some-

times thought of changing to a different job when they felt stress. The figure for changing the kitchen is five and for option of retiring is two.

6.1.7 Physical Pains and Frequency

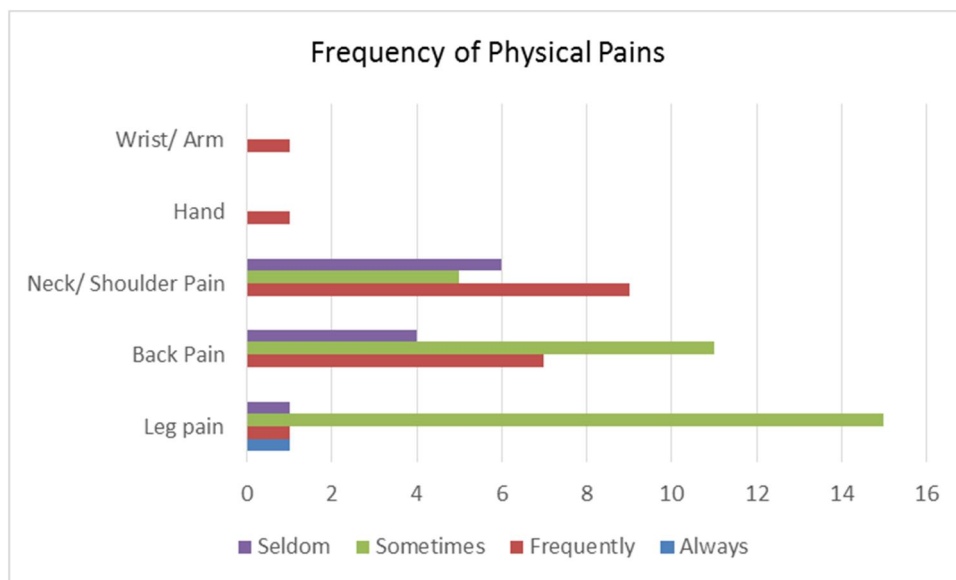


Figure 9. Physical Pains and Frequency

As can be seen from Figure 9, musculoskeletal pains are quite prevalent among the group of participants. Neck/ shoulder, leg and back pains all happen to participants of the survey in a general level.

Neck/ shoulder pain is the most frequent with a number of nine out of 27 chefs. The number of people who sometimes have neck pain is five. Six chefs seldom experience the pain while working.

Back pain is also quite prevalent when seven chefs chose frequently. The pain occurs sometimes to 11 people while four people never have back pain.

Leg pain, on the other hand, happens at least frequently to only two respondents while 15 people just sometimes have leg pain.

6.1.8 Sources of Physical Pains

Reasons for the pains	Always	Frequently	Sometimes	Seldom	Never	No answer
I work too long hours and stand all the time	3	5	11	1	5	2
I do kitchen jobs with awkward postures	0	6	9	3	7	2
When I'm stressed, the pain occurs	0	2	8	9	6	1
I carry and lift heavy stuff	1	6	10	4	4	2

Table 3. Sources of Physical Pains

Table 3 shows that physical characteristics of a kitchen job cause physical pains for the majority of the respondents. Eight chefs have the pains at least frequently because of working and standing all the time, six is the figure for doing kitchen jobs with awkward postures and seven is the number for carrying and lifting heavy items.

The severity of these reasons, however, is not too significant because the number of respondents who chose the frequency “Sometimes” for every reason is much higher than that of other frequency.

Stress does not seem to be a very possible source of musculoskeletal pains compared with the physical characteristics of the work when only two chef chose “Frequently” and two chose “Sometimes”. The total number of cases that are against the reason is 15 (nine seldom and six never), which is much more significant. The result is in accordance with the result of question six, which asks whether the respondents have multiple site pains when they felt stress. It can be concluded that among the participants of the survey, stress and musculoskeletal pains are barely related.

6.1.9 Negative Effects of Musculoskeletal Problems.

This section examines how the multiple site pains affect a chef's work performance and daily life activities such as playing sports.

On the later part of the section, the influence of the pains on respondents' career decisions is examined.

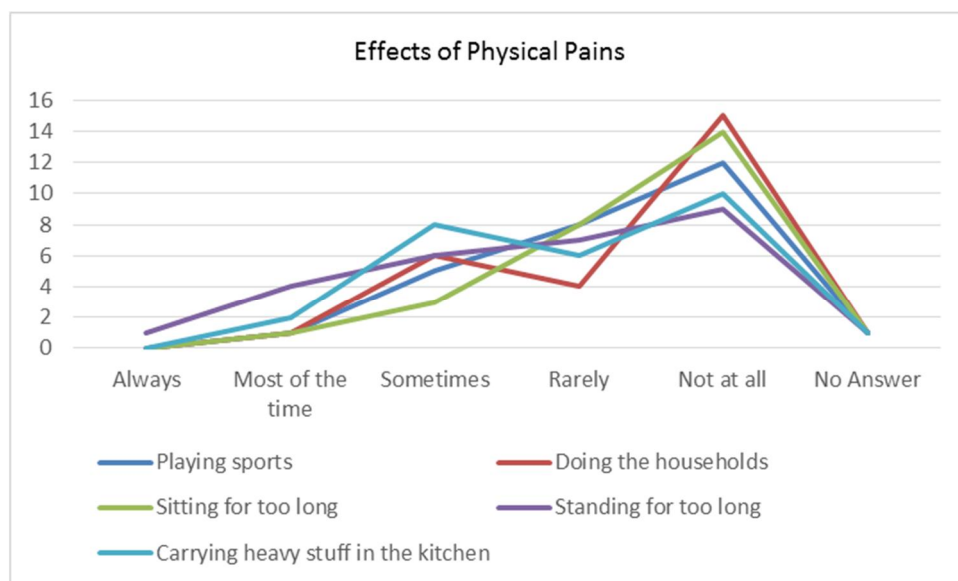


Figure 10. Negative Effects of Physical Pains

With regard to the effects of physical pains on work and daily performances, Figure 10 shows that physical pains do not restrain the majority of participants from performing work or daily life activities in general.

More specifically, more than half of the chefs (15/27) answered that the musculoskeletal pains do not prevent them from doing household chores or sitting for too long while 11 out of 27 people have never had to stop playing sports because of the pains. Even with more strenuous tasks at work, such as carrying heavy item in the kitchen, ten people ticked the "Not at all" box.

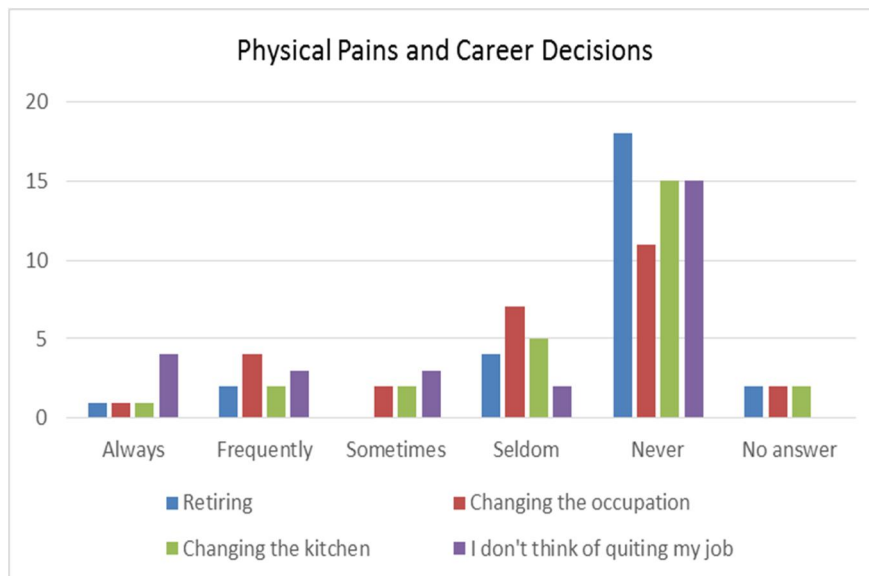


Figure 11. Effects of Physical Pains on Career Decision

Similarly the effect of physical pains on performing work and daily life activities, the group of participants seem does not have physical pains influence significantly on their career decision either.

It is apparent that ‘‘Never’’ is dominant chosen frequency in Figure 11. 22 people respondents never or seldom thought of retiring, 18 never or seldom thought of changing the occupation, 20 never or seldom thought of changing the kitchen. The number of respondents choosing always or frequently as the frequency is too insignificant to note.

It can be concluded that for this group of participants, similarly to stress and its effects on career decisions, physical pains have little negative impact on their decision of whether to continue working as a chef or continue to work in a kitchen or not.

6.2 Survey for Restaurant Owners/ Managers.

There are four respondents of the survey for restaurant owners. Two of the restaurants have been opened more than three years but less than five years and two of them have been opened more than five years. It should be noted that almost all of the kitchen employees in the four restaurants participated in the survey for chefs.

The restaurant that has the biggest number of chefs at the moment has been opened more than five years. The number of chefs is ten. The other restaurant that is also more than five years old has four chefs at the moment. For the other two restaurants which have been opened more than three years and less than five years, the number of chefs in each is two and five.

When being asked about the number of sick leaves of cooks at their restaurants, two of the respondents described the situation as "Every year there are cooks on sick leaves but it is just too insignificant to notice, one restaurant owner said that there had never been any sick leave cases for a cook in her company and did not give answer to the other questions relating to the issue due to the fact that the restaurant owner has never had the experience before. The last respondent chose the same answer but added "More or less" to the description. It is to say that for this group of respondents, the number of sick leaves in the kitchen is very insignificant or almost 0.

Question four asks the respondent to choose the typical length of a short sick leave (three days, ten days and 1-3 weeks) and the frequency and question five seeks for the same information of longer sick leaves (one month, 1-3 months, 5-6 months, more than a year and half a year). Two out of four respondents chose three days as the most typical time for a short sick leaves in most cases and one restaurant owner chose three days' time as typical length of sick leaves in every case. Three out of four restaurateurs agreed that ten days is seldom the length for short sick leaves. One person said that there has never been a short sick leave of one to three week while two respondents answered 1-3 weeks seldom is the length for cooks' sick leaves in the kitchen.

In case of a longer sick leave, three respondents agreed that there have never been a sick leave that lasts for more than one month. One person chose one month as the typical length for sick leave in every case, one respondent chose one month as the typical length of longer sick leaves in most cases while one restaurant owner said that there has been no sick leaves that have lasted for one month or more.

In short, for the four restaurants, three days are a typical time for a short sick leave. On the other hand, one month is the typical length for a longer sick leave, but not for every respondent restaurant in the survey.

Question six is concerned with the reasons for cooks' sick leaves. Among four listed reasons, stress and leg pain are never considered as reasons in any cases in this group of restaurants. One respondent said that sometimes there are sick leaves because of back pain, neck pain and accidents at work such as falls, cuts, and strips while other restaurant managers in the survey chose never as the frequency for those reasons. Interestingly, when being asked if there are any other reasons for cooks' sick leaves, one respondent named sport as the factor always, one restaurant manager named cold as always the reason while one person said sometimes flu and infections is why cooks are on sick leaves.

For question seven, which is concerned with whether a business sets aside an amount of money for chefs' sick leaves, three out of four restaurateurs said that they never have a separate budget while one said sometimes. Similarly, when being asked how cooks' sick leaves affect profit of the business in question eight, "All the time too insignificant to notice" or "Most of the time too insignificant to notice" are the most dominant choices among participants.

The last three questions address the matter of a cook leaving the workplace. Question nine seeks information for the number of cooks quitting the kitchen every year on average. "1 person" is the answer chosen by three managers. The frequency, however, is a little bit different when one restaurant manager said frequently one person leaves the kitchen every year while two respondents chose sometimes as the frequency. One restaurant manager said that there has never been anyone leaving her kitchen. Noticeably, this is also the restaurant that has never had any cases of sick leaves.

Question ten is concerned with the reasons a chef uses to leave a kitchen. There are seven reasons given in the question and the respondents can add any other reasons that have been used by kitchen employees when they intend to quite the workplace as well. Since there are only three respondents for the question and

each respondent chose different frequency for almost all of the reasons (the respondent who stated that there has never been anyone leaving her kitchen gave no answer for the question), it is rather difficult to conclude the general trend of the answer.

Table 4 summarizes the number of responses for each reason and the frequency:

	In most cases	Often	Sometimes	Seldom	Never
The person moves the place of living	1	1	1	0	0
The person wants to change to another kitchen in town	0	0	0	1	2
The person changes his occupation to a different field	0	1	1	1	0
The person goes to the age of retirement	0	0	0	0	3
The person is not satisfied with the treatment s/ he gets	0	0	1	1	1
The person think s/he should be given more authority	0	0	0	1	2
The person has health problem and cannot continue working	0	1	0	1	1

Table 4. Chefs' Reasons for Leaving

All three respondents agreed that there is no case of leaving a kitchen as a place of work due to the age of retirement. Other than that, there are no dominant or popular reasons for a chef leaving the kitchen. It should be noted that the number of chefs quitting the workplace is not significant, as stated in the previous question, mostly one person every year. In addition, almost all of the respondent restaurants in the survey are not opened very long ago. Restaurant owners therefore might not have experienced so many cases of chefs' leaves during the time they run the business.

The last question asks about the relation between cooks' leaves and restaurant profit, "Too insignificant to notice" is chosen by all of the respondents. Two said the frequency is most of the time while two chose the frequency "All the time." It is to say that similarly to the situation of sick leaves, a cook leaving the

workplace has little effect on restaurant businesses of the four participating restaurant owners.

7 CONCLUSION AND DISCUSSIONS

With regard to the survey for the chefs, stress is prevailing among the participants. Musculoskeletal pains are also prevalent. It can be concluded that the two health problems are prevailing among participants of the survey.

The severity of the health problems, however, is not alarming because their negative effects do not always show or degrade the quality of chefs' work performances and daily life. In detail, stress affects career decisions very little and multiple site pains have insignificant influence on the respondents' work performance and daily life activities such as doing household chores or standing for too long.

For this group of respondents, the sources of stress are the amount of work and non-standard work schedules. Weekends and public holidays are considered as time for families and personal hobbies and relaxation. Work-life balance appears a factor that participants of this survey value more. It is said that chefs suffer strain and other psychological problems from the imbalance between the time for work and for social and/or personal life. The result is in conformity with researches by O'Driscoll & Cooper (2002) and Murray Gibbons & Gibbons (2008). Problems related to work authority, work repetition and communication at work, on the other hand, are not noticeable reasons for stress among the participants of the survey.

The main way that chefs use to show their stress is by swearing. Surprisingly, being nervous is also not as popular as a manifestation of stress in the group of participants. The finding is not in accordance with Lo & Lamm's study (2009) and the report "Protecting Workers in Hotels, Restaurants and Catering", which spoke of mental problems such as anxiety and absenteeism as manifestations of stress.

The main source of musculoskeletal pains in the study is the physically demanding characteristics of a kitchen job. Bossche (2003) proved in his research that standing in the kitchen for a long time and poorly designed kitchens are hazardous, which results in chefs' muscular pains and Woolf and Pflieger (2003) agreed

that physically demanding work and forceful movements such as lifting, pushing and awkward postures while working in the kitchen are causes for musculoskeletal problems.

Concerning the result of the survey for restaurant managers/ owners, the number of chefs' sick leaves and leaves at the four respondent restaurants is insignificant in general.

The average number of chefs' quitting the workplace is zero to one person per year, which as reported has little or no effect on the business or the restaurant's profit. The reasons that a chef quits the kitchen are various. Changing the place of living appears as the most prevailing in the four respondent restaurants. Health problems are surprisingly not popular as a reason for chefs leaving, despite the health problems such as stress and multiple- site pains are prevalent among the participants of the survey. It can be inferred that the respondents consider stress or musculoskeletal pains as a downside of the job which they take for granted. Authority- related issues are also not a prevalent reason for leaving a kitchen as a place of work.

With regard to chefs' sick leaves, the situation is not considered very serious in any of the respondent restaurants, either. Chefs take short sick leaves of 3 days' time most frequently. Long sick leaves are less common; if long sick leaves happen; the typical length is one month. Interestingly, stress is not a prevalent reason for sick leaves. Musculoskeletal pains are more prevailing than stress as a reason but not very common, either. Flu, colds or sports are common reasons when chefs need to have sick leaves in the four studied restaurants. None of the respondent restaurants have a separate budget or financial preparations for chefs' sick leaves or other leaves.

7.1 Suggestions

First, the chefs participating in the survey reported of stress and multiple site pains as prevalent health problems in the kitchen. Respondent restaurants in the survey, however, rarely have had sick leaves and leaves due to the two health issues. It

implies that the participants of the survey take stress and multiple site pains as given. In other words, chefs consider the health problems as a natural downside of the job, which should not be complained about. The neglecting of the health problems are even fostered due to the fact that chefs and restaurant managers in the survey have seen no serious and explicit consequences on chefs' work performances and daily life activities or other effects of them on the restaurants' profit.

Looking at the whole picture, however, the perception appears as untrue. In the four respondent restaurants, there has never been a case of chefs' leaves because of the age of retirement. At the same time, the number of chefs in those restaurants with less than three years of experience is 13 out of 27. The facts imply that: (1) the labour force of the kitchens is young and (2) chefs do not have a tendency to stay long in the industry. The restaurants have never had chefs coming to the age of retirement because the people stop working at a young age. That also might be the reason why stress and multiple site pains have not yet shown any significant effects on respondents' work performance and daily life.

It is to say that in long term, stress and multiple sites surely do have effects on chefs as well as the restaurants. Chefs' wellbeing, therefore, should be taken into better consideration by both chefs themselves and their employers. Restaurant owners/ managers in the survey therefore should encourage employees to report about the health problems, to be aware of the situation. On the other side, chefs should raise their voice themselves if stress or any other health problems happen because of work, rather than taking the degrading health quality as a characteristic of a kitchen job.

Second, it is suggested that the amount of work on each kitchen employee should be decreased. Abundant work amount is considered the most stressful among many characteristics of kitchen work by most of the respondents. An increasing the number of chefs and an equal distribution of the amount of work can possibly be one solution. More attention to chefs' work- life balance is recommended also, which can be improved by changing work schedules and reducing work hours. Chefs in the survey should be given more days off per week and short breaks be-

tween shifts. Non – successive working days are also desired, so employees can become properly recharged after every working day.

Third, one respondent in the survey for chef listed that s/he experience stressed when customers are rude. It might be too soon and not well grounded enough here to draw a conclusion that external factors, such as impolite customers cause stress for kitchen workers. The topic is not examined in this thesis, either. The hypothesis, however, can be noted for further examination.

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APPENDIX 1 Questionnaire on Stress and Musculoskeletal Problems at Chefs' Position

The thesis studies work-related stress and musculoskeletal disorders at the position of cooks and chefs. It also examines the cost that restaurant business has to pay for low well-being of kitchen employees and how the occupational health problems can be reduced. The survey, which is a part of the study, aims to find out the number of cooks and chefs in Vaasa city have experienced the health problems at work and what kinds of effects the issues have on their daily life. The result will be handled just for this study and anonymously.

Please tick in the boxes (X) if any of these sentences are true for you:

- 1. I am: male female
- 2. I have been a chef for ____ years.
- 3. I feel stressed while working:

Always Frequently Occasionally No, never. (skip question 4& 5 if you tick this box)

4. I am stressed when

	Strongly agree	Agree	Partly agree	Disagree	Don't know
a. I have to work overtime					
b. I have to work evening shift and morning shift the next day					
c. I have to work on public holidays and weekends .					
d. The work is hectic in peak hours					
e. Work is always too much due to lack of					

staff					
f. I am in charge of many tasks at a time					
g. I do not have influence on what I want to do in the kitchen and must follow others' instruction.					
h. I don't get any feedback on my work					
i. Unexpected overtime work occurs often					
j. The work is the same every day					
k. Supervisors/ Managers just tell me which task I have to complete but no instructions for the work					
l. I do not communicate much with my colleagues					
m. Other:					

5. When I'm stressed because of work,

	Always	Frequently	Sometimes	Seldom	Never
a. I feel nervous					
b. I do not want to show up at work					
c. I swear					
d. I throw/ kick/ smash things					

e. Other:					

6. When I'm stressed because of work I feel:

	Always	Frequently	Sometimes	Seldom	Never
a. Pains in my neck					
b. Pains in my shoulder					
c. Pains in my back					
d. Pains in my leg					
e. Headache					

7. Since I work as a chef, I have had:

	Always	Frequently	Sometimes	Seldom	Never
a. Leg pain					
b. Back pain					
c. Neck/ shoulder pain					
d. Other physical pain(s):					

8. The above pain(s) has/ have prevented me from

	Always	Most of the time	Sometimes	Rarely	Not at all
Playing sports					
Doing the households					
Sitting for too long					

the occu- pation										
Chan- ging the kit- chen										
I dont think of quiting my job										
Ot- hers:										

The end of questions.

Thank you for your participation!

APPENDIX 2 Questionnaire about the situation of cooks’ sick leave and leaves in kitchen in Vaasa.

The thesis studies work- related stress and musculoskeletal disorders at the position of cooks and chefs. It also examines the cost that restaurant business has to pay for low well-being of kitchen employees and how the occupational health problems can be reduced. The survey for restaurant managers, which is a part of the study, aims to find out the situation of cooks’ sick leaves in restaurants in Vaasa city. The result will be handled only for the purpose of the study and anonymously.

1 How long has your restaurant been open?

- a. less than one year
- b. 1-3 years
- c. 3-5 years
- d. more than 5 years

2 The number of chefs in your restaurant at the moment are: _____

3 Choose a sentence that best describes the situation of cooks’ sick leaves at your restaurant:

- a. The number of sick leaves in my company raised every year since I opened the restaurant
- b. The number of sick leaves decreases every year
- c. Every year there are cooks on sick leave but it is just too insignificant to notice.
- d. The number of cooks’ sick leave is always high since I opened the restaurant
- e. There have never been any cooks’ sick leave case in my company

4 The typical length of sick leaves has been:

	In every case	In most cases	Frequently	Sometimes	Seldom	Never
3 days						
10 days						
1-3						

week						
------	--	--	--	--	--	--

5 In case of a longer sick leave, the typical length is:

	In every case	In most cases	Frequently	Sometimes	Seldom	Never
1 month						
1-3 months						
5-6 months						
More than half a year						
A year						

6 The main reason(s) of cooks' sick leaves is/ are:

	In every case	In most cases	Frequently	Sometimes	Seldom	Never
Stress						
Leg pain						
Back pain						

Neck pain						
Accident at works like falls, cuts, strips,...						
Others:						

7 As a restaurant manager, do you have a separate budget for chefs' sick leaves?

- a. All the time
- b. Most of the time
- c. Frequently
- d. Sometimes.
- e. Never

8 How does cooks' sick leaves affect the profit of your business?

	All the time	Most of the time	Frequently	Sometimes	Never
Too insignificant to notice					
It is less than the budget I plan to spend on					
The money spent on cooks' sick leaves exceeds the budget					

Others:					
---------	--	--	--	--	--

9 The number of cooks quit your kitchen every year on average is/ are:

	Always	Frequently	Sometimes	Seldom	Never
0					
1 person					
Less than 3 persons					
More than 3 persons Please specify the number:_____					

10 When a cook quite the kitchen, his/ her reason(s) is/ are:

	In most cases	Often	Sometimes	Seldom	Never
The person moves the place of living					
The person wants to change to another kitchen in town					
The person changes his occupation to a different field					

The person goes to the age of retirement					
The person is not satisfied with the treatment s/he gets					
The person thinks s/he should be given more authority					
The person has health problem(s) and cannot continue working. The health problem(s) is/are: _____					
Others:					

11 How does cooks' quitting job affect the profit of your business?

	All the time	Most of the time	Frequently	Sometimes	Never
Too insignificant to notice					
It is less than the budget I plan to spend on					

The money spent on cooks' leaves exceeds the planned budget					
Others:					

The end of questions.

Thank you for your participation.

