PERSPECTIVES OF PSYCHOLOGISTS TOWARDS THE FIELD OF ERGONOMICS: A QUALITATIVE STUDY

Merve MAMACI[1*]

[1] Fenerbahçe University, Faculty of Economics, Administrative and Social Sciences, Psychology
ORCID No: http://orcid.org/0000-0001-7882-3670

Keywords	Abstract
Ergonomics *Psychology* *Industrial psychology* *Organizational psychology* *Work psychology*	*Employees need a healthy working environment in their workplaces. This need is a legal obligation to be provided by employers. Ergonomics is an effort to improve human adaptation to the environment. Considering that human being is a psychosocial being, it can be considered as a limitation to consider ergonomic studies independent from the field of psychology. The aim of this study is to examine the perspectives of psychologists working in various sectors, with different expertises and with different titles on ergonomics. Fifteen psychologists working in various provinces of Turkey participated in the study. The research is a qualitative study and the perspectives of the experts were obtained through semi-structured interviews. Thematic analysis was chosen as the method and the findings showed that three different themes emerged on psychologists' perspectives on the field of ergonomics. These themes are (i) known branches of ergonomics, (ii) reasons behind knowledge limitations, and (iii)) tasks of psychologists in the workplace. The results of the study showed that psychologists' knowledge about ergonomics is limited to physical ergonomics and this limitation is due to lack of education, limited access to experience, not considering ergonomic studies within the field of psychology and lack of interest in the subject. In addition, it was seen that psychologists' areas of duty in their workplaces consisted of training and counseling. The findings were discussed, suggestions for the development of the field and limitations of the research were presented and recommendations for future research were proposed.*

PSİKOLOGLARIN ERGONOMİ ALANINA İLİŞKİN PERSPEKTİFLERİ: NİTEL BİR ÇALIŞMA

Anahtar Kelimeler	Öz
Ergonomi *Psikoloji* *Endüstri psikolojisi* *Örgüt psikolojisi* *İş psikolojisi*	*Çalışanlar, iş yerlerinde sağlıklı bir çalışma ortamına ihtiyaç duyarlar. Bu ihtiyaç, işverenler tarafından sağlanması gereken hukuki bir zorunluluktur. Ergonomi, insanın çevreye olan uyumunu iyileştirme çabası içerisindedir. İnsanın psikososyal bir varlık olduğu düşünüldüğünde ergonomik çalışmaların psikoloji alanından bağımsız ele alınması bir sınırlılık olarak değerlendirilebilir. Bu araştırmanın amacı çeşitli sektörlerde, farklı uzmanlık dallarında ve farklı ünvanlarla çalışan psikologların ergonomi alanına ilişkin perspektiflerinin incelenmesidir. Araştırmaya Türkiye'nin çeşitli illerinde görev alan on beş psikolog katılmıştır. Araştırma nitel bir çalışmadır ve uzmanların perspektifleri yarı yapılandırılmış görüşmeler gerçekleştirilerek elde edilmiştir. Yöntem olarak tematik analiz seçilmiştir ve bulgular psikologların ergonomi alanına yönelik perspektifleri üzerine üç farklı temanın ortaya çıktığını göstermiştir. Bu temalar; (i) bilinen ergonomi dalları (ii) kısıtlı bilginin nedenleri ve (iii) psikologların iş yerlerindeki görevleri olarak sıralanmaktadır. Araştırma sonuçları; psikologların ergonomi hakkındaki bilgilerinin fiziksel ergonomi ile sınırlı olduğunu, bu sınırlılığın arkasında eğitim eksikliği, deneyime ulaşmada sınırlılık, ergonomik çalışmaları psikoloji alanının içinde değerlendirmeme ve konuya ilgisizlik olduğunu göstermiştir. Ayrıca, psikologların çalışma yerlerindeki görev alanlarının eğitimden ve danışmanlıktan oluştuğu tespit edilmiştir. Bulgular tartışılmış, alanın gelişimine katkı sağlayacak öneriler ve araştırma sınırlılıkları sunulmuş ve gelecekteki araştırmalar için tavsiyelerde bulunulmuştur.*

* Sorumlu yazar e-posta: mervemamaci@gmail.com

1. Introduction

It is well known that people spend a significant portion of their time in the workplace, and at times, work life can become challenging and hazardous for employees. The International Labour Organization (ILO) reports that worldwide approximately three million workers lose their lives each year due to occupational accidents and diseases, noting a 5% increase in these deaths since 2015. It states that 2.6 million of these deaths are caused by occupational diseases, while 330,000 result from work-related accidents (ILO, 2023). When Turkey is examined, according to the Health and Safety Labor Watch (İSİG), at least 2,000 people lost their lives due to work-related accidents and 4,000 due to occupational diseases in 2023 (İSİG, 2024a). In addition, in the first nine months of 2024, 1,371 worker deaths have been recorded (İSİG, 2024b).

Although workplace accidents and fatalities are often detected through quantitative data, it can be challenging to identify deaths, accidents, and psychological disorders stemming from psychosocial risk factors and psychosocial hazards. Therefore, it is important to examine not only the physical conditions in the workplace but also those that may impact employees' psychological states. In this way, both the physical and mental health of employees can be protected, contributing to a healthier work environment. From this perspective, one way to achieve this improvement in workplaces might be through the employment of psychologists.

As is known, both the field of ergonomics and psychology are instruments in supporting work life from this perspective. Ergonomics and psychology are closely related research fields that share a common goal of improving employee overall well-being in workplaces. Ergonomics focuses on the relationship between workers and their work environment, using scientific research and interventions to design products, existing systems, and environments that help employees achieve a safe, efficient, and comfortable work life. Besides, ergonomics considers not only physical but also cognitive and social aspects of work to initiate sustainable environment (Sohrabi, 2021).

Also, the field of psychology is just as important in the workplace as ergonomics. From this perspective, both clinical psychology and organizational psychology hold significant essential in improving work life and should be addressed. Since, industrial and organizational Psychology (I-O Psychology) is a scientific branch that studies human behavior in workplaces and it focuses on individual and organizational behaviors to understand the relationship between them. This scientific discipline also helps to understand how people behave in the workplaces, how they react, and how they can be motivated by implementing psychological interventions (Donaldson, Lee & Donaldson, 2019; Petery, Parker & Zoszak, 2021). In addition, it has been reported to be effective in various processes related to workplace productivity, training and assessment, and human resources (APA, 2014). On the other hand, clinical psychology in workplaces provides support to employees in overcoming challenges they face in their work life or in their personal life. For example, experts who are specialized in clinical psychology can employee assistance and clinical assessment services (Lowman, 1982). Hence, efforts to improve the work environment for employees are crucial. Both ergonomics and human factors play a critical role in establishing workplace safety by ensuring that work environments are safe, efficient, and satisfying, taking into account both physical and psychological aspects (Bridger, 2017).

In light of this information, the importance of creating both a healthy physical environment and a healthy psychological climate becomes evident for implementing ergonomic improvements and providing a suitable workplace for employees. Therefore, as a professional group, psychologists are valuable and important for improving workplace ergonomics by developing a better workplace in term of employee well-being, productivity and effectiveness of workplaces. Thus, examining the perspectives of psychologists throught ergonomics, who are experts in workplaces is important in terms of both building a psychologically healthy environment and protect employees from occupational deaths, work-related deaths, workplace accidents, work related suicides - homicides, occupational diseases, occupational injuries, workplace injuries, psychosocial risk factors and in general workplace hazards.

When the literature is reviewed, no studies are found that examine the perspectives of psychologists in Turkey regarding the field of ergonomics. Therefore, it is hoped that this study will generate new questions for future researchers, providing an opportunity to involve social scientists and to expand the scope of research in this area. In this context one of the aims of this study is to understand psychologists' perspectives on ergonomics in Turkey, which can also be valuable for assessing how closely they feel connected to this field. This study also hopes to draw attention to the importance of hiring psychologists in the workplaces in Turkey, creating more job opportunities for experts, involving recent graduates. Additionally, it is expected to highlight the need for psychologists to enhance their knowledge in the field of ergonomics. Furthermore, various recommendations will be provided on how psychologists, with different areas of expertise, can assist workplaces in diverse

matters. The roles of these psychologists will be highlighted to show how they can contribute to improving mental health, enhancing work performance, and fostering a positive and healthy workplace environment. Moreover, this research is expected to shed light on the importance of clarified job roles and job titles for different specialties within psychology can contribute significantly to ergonomic initiatives in the workplace.

2. Literature Review

2.1. WorkPlace Related Psychosocial Factors

According to the ILO (1986) psychosocial factors and psychosocial hazards can arise from various organizational conditions, including the nature of the work, job design, organizational structure, employees' competencies related to their work, or management issues. Those can lead to even extreme adverse situations not only in terms of physical but also mental well-being such as suicideal ideation, suicideal behavior (Niedhammer, Pineau & Rosankis, 2024).

The Occupational Health and Safety Law No. 6331 in Turkey emphasizes both the physical and psychological well-being of employees and holds employers accountable for ensuring these aspects of workplace safety. The law states that employers take comprehensive measures to protect their employees from risks that can affect their physical health and safety, as well as their psychological well-being (Turkish Occupational Health and Safety Law, 2012). For example, The Social Insurance and General Health Insurance Law No. 5510, enacted in Turkey, highlights the importance of workplace accidents-occupational diseases and emphasizes that employees who suffer from workplace accidents have the right to safeguard their safety and social security. According to this law, workplace accidents are undesirable events that occur due to specific conditions at work or in the workplace (The Social Insurance and General Health Insurance, 2022).

Kocatepe and Parlak (2022) states that workplace accidents are generally evaluated based on dimensions such as environmental factors or errors made by employees, without focusing on why employees make these errors or why employee misbehaviors occur. The authors also emphasize that psychosocial support, in particular, can be beneficial in preventing and reducing workplace accidents.

From this perspective, workplaces are obligated to protect the mental and social health of employees, just as much as their physical health. This situation makes it necessary to employ clinical psychologists in workplaces. However, protecting the physical, mental, and social health of employees in the workplace is a complex issue that cannot be addressed solely at the individual level. Focusing only on the personal characteristics or experiences of employees would be limiting. In this regard, it is also vital to examine the systems and structures within organizations. In this regard, it is crucial for industrial and organizational psychologists to be involved in such initiatives. In addition, it is important to ensure that the specialties and duties of the psychologists they employ are appropriately designated.

2.2. Ergonomic Risk Factors Related with Industrial and Organizational Psychology

Other workplace risk factors include lack of job variety, assigning tasks that are below or above the employee's skill level, excessive workload, irregular working hours, shift work, the employee's lack of a sense of control while performing their duties, and physical environmental factors such as the tools and equipment used, lighting, and noise in the workplace (International Labour Organization, 2022) However, creating a psychologically safe environment is just as important as creating a physically safe environment in terms of ergonomics and occupational health and safety.

Factors that are vital for ensuring psychological safety and workplace ergonomics are related with industrial and organizational psychology topics such as healthy communication, safe organizational climate that prevents violence, discrimination, and harassment, and an environment that offers positive interpersonal relationships, preventing social or physical isolation of employees. Additionally, it is important to have effective leadership skills, create an environment free from micromanagement and other faulty management practices, clearly and transparently share organizational roles with employees, provide opportunities for career development, and maintain a healthy work-life balance (International Labour Organization, 2022). It can be said that all these organizational factors influence the quality and sustainability of ergonomic efforts. Thus, the potential contributions of industrial and organizational psychologists to ergonomic initiatives should not be underestimated. Furthermore, for all these topics to function effectively in a workplace, human resources processes such as job analysis, recruitment and placement, performance evaluation, training, and compensation must also be conducted efficiently. It is important to note that industrial and organizational psychologists are responsible for those processes (American Psychological Association, n.d.).

2.3. Empirical and Review Studies on Workplace Psychology

According to the APA (n.d.), psychologists can take on various roles within Employee Assistance Programs (EAPs), including assessment, counseling, program development, administration, and providing psychological support. In the assessment role, specialists can utilize their expertise in diagnosis and treatment planning to evaluate employees' psychological health. Those specializing in counseling can offer support in areas such as conflict resolution, stress management, substance abuse prevention, and grief through brief therapy models. Thus, through the counseling process, people can become more functional in terms of their emotions, cognitions and behaviors, and this state of well-being can help productivity and efficiency in business life.

For example, in a study conducted by Bouzikos, Afsharian, Dollard, and Brecht (2022) with a total of 25 participants from Australia and New Zealand, the aim was to examine how Employee Assistance Programs (EAPs) predict employees' psychological health and to assess their effectiveness. The study results showed significant differences before and after the EAP intervention, indicating that psychological distress significantly decreased with the service provided, especially in cases where the psychosocial safety climate levels were high.

Another study aimed to evaluate the mental health of healthcare workers before and after psychological intervention provided by the Employee Assistance Program (EAP) during the pandemic. Conducted in China, the study included 1,198 participants, assessing their psychological health levels before and after receiving EAP services. The findings indicated a significant improvement in the mental health of healthcare workers following the psychological intervention (Xu et al., 2021). Therefore, based on the results of previous EAP activity studies, it can be stated that hiring experts to serve as clinical psychologists, similar to occupational physicians, in organizations is also crucial. However, providing only preventive mental health practices and counseling services to employees can be considered a limited approach in order to provide a healthy environment in business life.

Workplaces can only be created with a healthy environment and a structure where people are not exposed to psychosocial risks. When evaluated from this perspective, factors such as excessive workload, inappropriate job design, role confusion-ambiguity, conflicting demands, problematic decision-making processes, job insecurity, ineffective communication models, organizational culture and climate, ineffective human resources processes that are not appropriately designed, and organizational change that are not managed well can affect the employee individually in terms of mentally and performance. For example, organizational change, as one of the psychosocial risk factors, is noted to be associated with positive outcomes for workplaces, such as efficiency, performance, and profitability, yet it may negatively impact employee health (Backhaus et al., 2024).

Related with this topic, a study conducted in 2022 examined the role of industrial psychologists in maintaining and enhancing employees' psychological well-being during the COVID-19 pandemic. During this period, workplaces adopted different working systems, with remote work being integrated into the business environment. The study focused on the effectiveness of industrial psychologists in managing levels of depression, loneliness, and fatigue among employees within the remote work model. Using a qualitative approach, the study involved 22 participants and applied interview techniques. It was found through participant interviews that industrial psychologists made significant contributions to helping employees adapt to these new working conditions (Moralo & Graupner, 2022).

With advancing technology, the work environment and the ways employees perform their jobs are also changing. While this situation has various advantages, it is also reported to bring several disadvantages for employees. According to the European Agency for Safety and Health at Work (2024), digital technologies can lead to work-related psychosocial risks and mental health issues. Advanced robotics and artificial intelligence, smart digital systems, and digital platform work, in particular, are reported to create risks for employees, such as excessive cognitive load, fear of job loss, isolation, data security concerns, time pressure, reduced worker autonomy, and weakened social relationships. Technologies like remote working systems and artificial intelligence for worker management are also indicated to contribute to issues with work-life balance, the blurring of boundaries between work and personal life, isolation, the need for constant connectivity, increased workload, stress due to continuous surveillance, and weakening of social relationships. Therefore, it is vital for industrial and organizational psychologists to be involved in technological advancements and to stay informed on these issues to contribute to their improvement.

Ulfert et al. (2024) state that in the evolving and changing work environments, the field of work and organizational psychology should not only focus on technology itself but also actively involve experts in integrating these technologies into the workplace.

They suggest that designs that consider employees' psychosocial needs can help establish a harmonious and functional human-technology interaction in work settings. The authors, in addition to potential contributions, note a lack of knowledge and interaction between the field of work and organizational psychology and other disciplines, especially highlighting that experts in work and organizational psychology do not sufficiently benefit from advancements in technology. They state that one reason for this is that each discipline tends to focus largely on its own field and often disregards the work of other disciplines.

When examining studies in Turkey, a review study conducted by Ercan and Çelik (2021) stands out. This study highlights various research on Occupational Health and Safety (OHS) within the Turkish literature. This study examined OHS research in Turkish through both quantitative and qualitative methods and compared the most-cited Turkish and English articles. The findings indicate that Turkish literature on OHS is limited, with minimal contributions from social and behavioral sciences, particularly regarding variables such as safety climate and safety culture. When comparing Turkish and English articles, it was noted that Turkish studies were predominantly conducted by researchers in engineering, while English studies were mainly conducted by researchers in psychology. Based on these findings, the authors recommend that researchers from the field of psychology, in particular, contribute to the Turkish literature on Occupational Health and Safety.

3. Method

In this research phenomenological design from the qualitative research methods, in-depth interview was used in the data collection stage. The aim of in-depth interview method is to gather detailed information which enables insight into a perspective, experiences, feelings, and the meaning from a specific topic or issue (Rutledge, & Hogg, 2020). In this framework, the semi-structured interview method was preferred in the research to understand their personal experiences in a private and confidential way (Yeo et al., 2013). The interview questions posed to the participants in the research framework were created within a certain topic unity which is basically about the field of ergonomics in workplaces and their perspectives, experiences, feelings and the meaning which they hold towards the field.

3.1. Participants

The sample of the study consists of 15 participants who voluntarily participated in the study with active work life in an organization as a psychologist with different expertises in Turkey. As well, convenience

sampling method was employed. The ages of the participants of the study ranged from 24 to 41.

Table 1. Demographic Information of Participants

Participant (Expertise Degrees)	Gender	Job Title
1 Clinical Psychologist	F	Industrial Psychologist
2 Clinical Psychologist	F	Clinical Psychologist
3 Clinical Psychologist	F	Clinical Psychologist
4 Clinical Psychologist	F	Clinical Psychologist
5 Clinical Psychologist	F	Workplace Psychologist
6 Clinical Psychologist	M	Workplace Psychologist
7 Clinical Psychologist	F	Clinical Psychologist
8 Clinical Psychologist	F	Workplace Psychologist
9 I-O Psychologist	F	I-O Psychologist
10 I-O Psychologist	M	Industrial Psychologist
11 I-O Psychologist	M	I-O Psychologist
12 Psychologist	M	Workplace Psychologist
13 Psychologist	F	Workplace Psychologist
14 Psychologist	F	Industrial Psychologist
15 Psychologist	M	Industrial Psychologist

A total of 15 interviews were conducted through face-to-face with each participant once between April and June 2023. The average age of the participants was 31.73, with an age range of 24 to 41. The participants held various expertise degrees: master's in clinical psychology (n = 8), master's in industrial and organizational psychology (n = 3), and bachelor's in psychology without master's degree or PhD degree. (n = 4). The experience of the experts participating in the research at their respective

institutions ranged from 6 months to 6 years. Their job titles at their workplaces were identified as clinical psychologist (n=4), industrial and organizational psychologist (n = 2), industrial psychologist (n = 4), workplace psychologist (n = 5). Participants both work as a full time (n = 7) and part-time (n = 8). The participants were from various sectors including telecommunications (n = 4), automotive (n = 4), industrial (n = 4), and service sector (n = 3). It was noted that, none of the participant have written job description. (Table 1).

3.2. Data Collection Procedure and Tools

Before starting the research, ethical approval was obtained from the Fenerbahçe University Social and Human Sciences Research Ethics Committee during the session held on 01.03.2023, with the decision number 2023/2. While obtaining data, demographic information form and semi-structured interview questions were used. Forms were prepared by the researcher and the participants were asked about their age, gender, the city where the workplace is located, the type of workplace (full time – part-time, etc.) and sector.

3.3. Interview procedures

An open-ended questionnaire has been prepared for use in the conducted interviews. The questions aim to understand the experts' perspectives on the topic. Interviews were conducted by the researcher who have background in psychology with dual degrees and expertise (both clinical psychology and I-O psychology). In qualitative research, it is recommended to conclude interviews when no new themes emerge and thematic saturation is reached. (Saunders et al., 2018). In addition, in this study, all participants were asked the same questions and the interviews were terminated once it was determined that thematic saturation had been reached, as no different answers were provided to the questions asked.

In Table 2 the interview guide and relevant prompts were presented.

Table 2. Interview Guide

Interview Questions

What is workplace ergonomics?

Have you received any training in the field of ergonomics? If so, what type of training was it?

Do you keep informed about the latest advancements and best practices in ergonomics? If so, how?

Do you measure the success and effectiveness of an ergonomic intervention in the workplace? If so, how?

Do you have any initiatives for measuring psychosocial risks in the workplace as a psychologist? If so, what methods do you use?

Have you been involved in a project incorporating ergonomic principles into workplace design? If so, would you please explain it?

Have you witnessed any ergonomic studies conducted by experts in your workplace?

Could you discuss your experience with providing ergonomic training to employees and its impact on reducing workplace injuries and enhancing employee well-being?

How do you think the fields of psychology and ergonomics could be related to each other?

In which way do you think psychologists can contribute to ergonomics?

Participants were allotted sufficient time to answer the questions. On average, the interviews lasted 25 minutes, ranging from 22 to 30 minutes. The interviews were audio-recorded and then transcribed by the researcher.

3.4. Data Analysis

The recorded interviews were analyzed and assessed using descriptive methods. The findings from the interviews were organized aligned with the main themes and presented accordingly. In this study, the findings and assessments for each topic were described in detail, including direct quotes from the experts' statements. The findings obtained in the research were evaluated by descriptively analyzing the interview data. Based on the findings, they were grouped under specific topics. This study employed thematic analysis as stated by Braun and Clarke (2006). The evaluations related to each subject were transferred descriptively by directly quoting the statements of the participants.

4. Results

Three main themes emerged from the obtained data: (a) *known branches of ergonomics* (b) *reasons behind knowledge limitations* and (c) *tasks of psychologists in the workplace.*

In this section, themes will be explained by sharing participants' narratives.

Theme 1: Known branches of ergonomics

The sub-theme forming the first theme has been identified as (i) *physical ergonomics*. It was observed that the majority of experts participating in the study had limited knowledge about what ergonomics is and its scope of work. From the statements expressed, it can be seen that the limited knowledge

of ergonomics is confined to physical ergonomics and references to cognitive and organizational ergonomics is limited.

*Ergonomics is the compatibility of the job with the worker, compatibility of equipment with the human body, harmony between humans and their environment. **P01***

*Ergonomics is a field that measures the suitability of machines or objects used to our bodies and helps to create appropriate items in this regard. **P02***

*Ergonomics is a subfield of engineering and also medical doctors. It doesn't seem very relevant to psychologists to me; since the topic is more physical, I'm not sure what we can contribute. I'm not very familiar with this area...**P03***

*When I think of ergonomics, the physical aspect comes to mind, and I'm finding it difficult to conceptualize ergonomics from a psychological perspective. It seems that ergonomics is mostly related to physical factors, so I'm not entirely sure what role we, as psychologists, would play in this. **P04***

*The suitability of the tools we use to our bodies is a topic of ergonomics. **P05***

*I can define ergonomics as the harmony between the human body and the objects used. For example, an ergonomic pillow or an ergonomic chair. I'm not sure. When the topic is physical, it feels like it's not really something we would be involved in. **P06***

*I know ergonomics as a field that seeks to improve the suitability of objects used, such as chairs or desks, for humans in terms of health. **P07***

*The suitability of things used in work life or daily life for humans. **P09***

Although experts have limited the field of ergonomics to physical ergonomics, it has been observed that some participants used expressions such as the following:

*Ergonomics and psychology are indeed intertwined fields. For example, workplace stress, whether entirely absent or excessively intense, is detrimental to both the well-being of the employee and the workplace itself. Optimal levels of stress, on the other hand, are motivating and productive, connecting individuals to life. In this context, I believe that burnout is linked to excessive workplace stress. An employee who experiences burnout after prolonged exposure to intense stress might find relief through certain ergonomic interventions. The source of intense stress could be related to the interaction with the tools they use, the discomfort of their office seating, or even the workload. For instance, someone working under extreme heat is affected both physically and mentally, which can lead to burnout. Reducing the temperature to a level that does not harm the individual, which is an ergonomic intervention, could alleviate stress and prevent burnout. In fact, employee well-being can also be considered within the scope of ergonomics. I believe it is important to see the impact of the intervention in the field or the applied unit. In this regard, I consider multiple parameters: the effect of the intervention on the well-being of the employee, the impact of the intervention on work efficiency, and how sustainable the intervention is within the system in the long term. **P01***

*Actually, these two fields can be integrated. It depends on the perspective we take on the subject. An employee's physical condition affects their psychological state, and similarly, their psychological state impacts their physical condition. In this case, it's unreasonable to expect the same performance from every individual. This situation necessitates a focus on individual differences. For example, how appropriate is it for someone with a tendency to become easily distracted to operate critical machinery? But who should make this decision? How ethical is it to make such a decision based solely on observation without proper measurement? In my opinion, psychologists can contribute to ergonomic efforts in the workplace by conducting measurements and assessments. **P10***

*Psychologists can investigate the characteristics of employees, the tasks they can perform, and their workload, and share these findings with the authorities within the system they are in. To ensure proper motivation in both individual and team work, they can provide support to employees. During this support, psychologists can explore the relationship between individuals' personality traits and the workload they can handle across different job areas, through both individual and observational studies, within the field of ergonomics. They can also develop coping strategies for issues related to workplace safety, working conditions, and potential conflicts with colleagues that may arise in the workplace. **P11***

Theme 2: Reasons behind knowledge limitations

The sub-themes forming the second theme has been identified as (i) *lack of training*, (ii) *limited access to experience*, (iii) *attributing responsibility to other professions*, and (iv) disinterest in knowledge.

One of the underlying reasons for lack of knowledge is seen as lack of training on the subject; the absence of any courses related to ergonomics during their professional life as well as during their undergraduate and graduate education.

I don't have any professional training on this subject. **P01**

I didn't get any education on this profession. **P02**

I have not received any training in this field. **P03**

I didn't get any course on this subject. **P04**

I don't have much idea about ergonomics, I don't have any training or certification in this field. **P05**

No I don't have any training for this. **P06**

I haven't seen such a subject in my undergraduate or graduate studies. I hear things about ergonomics from time to time, but I did not receive such training. **P09**

No, I don't have any training, any course or seminar. **P10**

I did not receive such training at work, and i did not receive such training from outside myself. **P11**

I don't have training about ergonomics. **P13**

I don't have any training on this subject. **P14**

No, i haven't seen a course or attended such a training. **P15**

When considering their roles in the workplace, participants largely shared that they had nearly limited experience with ergonomic studies in their work environment. One underlying reason for the lack of knowledge could be limited access to participate in ergonomic practices. In addition, experts who believe that ergonomics can only be measured through physical characteristics consider their experience with ergonomic assessments to be limited and indicate that this area is more likely to be evaluated by professionals such as occupational physicians and occupational health and safety specialists.

In my workplace, ergonomics-related tasks are handled by the human resources and occupational health and safety (OHS) departments mainly by engineers. I don't have much experience with these evaluations, and to my knowledge, psychologists in other companies don't typically work on these issues either. Since ergonomics typically deals with the physical structure of the workplace, I don't handle these tasks. As a result, I don't know how to measure its effectiveness. **P03**

From time to time, I hear about ergonomics-related studies, but I've never been involved in such work such as workplace design. **P05**

No, I've never been participated in a process for ergonomic design or workplace design. **P06**

Measuring the effectiveness of ergonomic interventions is not my responsibility; most probably it is being handled by the workplace

physician. I don't have any knowledge in this area. **P08**

As an industrial and organizational psychologist, I haven't conducted any work on such topics, nor have I participated in any measurements. I don't work in the field of ergonomics; those who likely work on this topic are occupational physicians or healthcare professionals. **P09**

I don't think detailed work on workplace design is being conducted where I work. I have not done any work on this topic, neither in this company nor elsewhere, and I have not received any such requests. **P10**

No, I have not participated in or witnessed any ergonomics study. **P11**

I don't know if anything is being done regarding workplace design in our company, but I have never been involved in such a project. **P12**

Participants mostly believe that the topic of ergonomic design in the workplace is not related to the field of psychology, and it is observed that they lack experience in both strategy development and participation in any projects related to this area. Since psychologists do not associate the field of ergonomics with their own profession, their interest in the subject appears to be limited, and they show little tendency to acquire specific knowledge or stay updated on recent developments in the field.

I time to time read from google or other scientific journals if i come across. **P01**

I don't follow because I don't consider it to be within my scope of responsibilities. **P02**

I don't specifically seek out or read about this topic, but if something that catches my interest comes up, I'll definitely read it. **P03**

I don't follow developments and practices in the field of ergonomics because it doesn't fall within my area of expertise. Although ergonomics-related topics occasionally come up at work, I haven't taken the time to look into them out of curiosity. As a result, I am not familiar with the latest innovations and practices in this field. **P06**

I don't specifically follow it... **P09**

No, I don't follow it ... **P10**

I don't have any interest on this subject. **P13**

No, i don't follow. Indeed, I'm not interested on that. **P14**

I don't follow. **P15**

Theme 3: Tasks of psychologists in the workplace

The sub-themes of the third theme are as follows: (i) identifying organizational and individual problems,

(ii) organizing training sessions. In the light of the data obtained from the participants, it has been revealed that the experts working as psychologists in the workplaces identify the situations that affect employees negatively throughout the organization and individually. It is understood that the trainings are not within the framework of Occupational Health and Safety, but rather personal development trainings.

Occasionally, during my visits to the factory, I notice that some employees are dissatisfied with their workplaces or roles. This dissatisfaction stems from various reasons such as tasks and interpersonal conficts, and in such cases, I report the situation to the occupational physician. Actually, organizing training sessions is also among my responsibilities at work. For example, I conduct training on psychological first aid for employees in the event of a workplace accident. Being exposed to a workplace accident or witnessing someone who has been can be equally traumatic experiences, so I conduct such training. I'm not entirely sure if these trainings are related to ergonomics. However, I'm not involved in efforts specifically aimed at preventing workplace accidents. Additionally, I also conduct training related to psychology in terms of employee health, and of course, I also carry out individual psychotherapy sessions. **P01**

Although I have not developed or implemented any strategy to guide ergonomic practices in the workplace. I am aware of the psychosocial risks that employees are exposed to in the workplace. In my studies, I present my findings regarding these risks in my reports, but I am not sure how much they are taken into consideration. **P02**

Stress factors in the workplace can originate from individuals or from the system itself, as I have gathered from my clients. Those factors lead to psychosocial problems. In sessions i try to address the individual-related stress factors in our sessions, but I do not have the power to change the system-related stress factors, which is quite frustrating for me as well. It can sometimes be challenging to make progress solely by focusing on individual cases without addressing the broader system. I provide motivation training, offer pratical solutions but not specifically related to ergonomics, workplace injuries or accidents. I offer training focused on general work life. **P04**

I work as a psychologist in an employee assistance program. Although I do not specifically evaluate psychosocial risks by scales, I occasionally identify instances of mobbing or similar adverse situations in some of my clients. My primary goal is not to conduct psychosocial risk assessment and measurement, but I do come across such data from

time to time. Occupational health and safety unit is probably responsible for this. **P 07**

I have not provided any training on ergonomics or workplace injuries and such related topics. **P14**

As a psychologist, the training I provide generally focuses on topics such as motivation and communication skills. I have not conducted any training related to workplace accidents; the occupational health and safety department handles these matters. **P13**

From the interviews conducted, it was understood that psychologists working in different roles and with various expertises in workplaces do not directly participate in measuring psychosocial risks which is highly related with ergonomic studies. However, it was expressed that some experts have the opportunity to identify psychosocial risks within the scope of their job responsibilities indirectly. Additionally, psychologists acknowledge that stress is a psychosocial risk and mention that they provide various training sessions related to it, but it has been noted that these trainings are not related to ergonomic processes within the scope of occupational health and safety. Besides, they attribute the objective measurement of psychosocial risk factors to the occupational health and safety unit.

5. Discussion

In this study, information was obtained about the perspectives of psychologists towards the field of ergonomics working in various sectors working under the titles of industrial psychologist, clinical psychologist, workplace psychologist, industrial and organizational psychologist with various expertises. In the process of understanding psychologists' perspectives on the field of ergonomics, findings showed that patterns organized around three distinct themes: known branches of ergonomics, reasons behind knowledge limitations, and tasks of psychologists.

When examining the first theme, it was observed that psychologists largely reduce the field of ergonomics to physical ergonomics and have limited knowledge regarding other areas of ergonomics. When the reasons for this limited knowledge were investigated as a separate theme, underlying causes were identified as lack of training, limited access to ergonomic practice experience, attributing responsibility for the field to other professions, and a general lack of interest in the subject. Another finding showed that although some participants do not conduct psychosocial risk assessments, they are indeed involved in designing and conducting training sessions and providing counseling services. However, their awareness of these activities being

part of the broader field of ergonomics appears to be limited.

Additionally, it has been observed that psychologists with different expertises in workplaces have limited experience in topics such as objective psychosocial risk assessment and measurement, which are expected to fall within the interest of psychologists. It has been observed that specialists working in the employee assistance program indirectly share information about psychosocial risk factors based on the feedback they receive from clients in the organization. However, it is seen that they do not use any specific measures or tools aimed at identifying psychosocial risk factors in their workplaces.

Interestingly, according to data obtained from the personal information form, it has been observed that specialists do not have written job descriptions. As is known, just like in other professions, having clear role definitions for psychologists will help protect them from psychosocial risks. According to Rizzo et al. (1970), role conflict arises when an individual face competing demands while trying to fulfill multiple roles or expectations in their job. This conflict occurs when the demands are not compatible with the individual's skills or abilities. In addition, role ambiguity reflects the degree of clarity regarding one's job description and duties, as well as the understanding of organizational rules, authority, empowerment, time schedules, and the predictability of consequences, both positive and negative, for specific behaviors and attitudes. Role conflict and role ambiguity in various professions have been found to be related to variables such as job stress (Alblihed et al., 2022), burnout (Mwakyusa & Mcharo, 2024; Kim & Stoner, 2008), mental health problems (Schmidt, Roesler, Kusserow & Rau, 2012), decreased job satisfaction, reduced job performance (Wu, Hu & Zheng, 2019), and higher turnover rates (Li, Shi, Qian & Mo, 2023). When studies on psychologists are examined, it has been found that they are exposed to various stressors while performing their duties (Berjot, Altintas, Grebot, & Lesage, 2017) and, as a result of these stressors, they can experience burnout (Rupert, Miller, & Dorociak, 2015). Specifically, the outcomes of burnout among psychologists include decreased professional competence, interpersonal problems, and negative work outcomes (Morse et al., 2012). Therefore, it is highly essential to ensure that psychologists' working conditions are healthy.

Findings also showed that psychologists often hold titles within their workplaces that do not fully align with their areas of expertise. Additionally, terms such as "workplace psychologist," translated from English into Turkish as "İş yeri psikoloğu" or "Kurum psikoloğu" lacks clearly defined role, and can be stated as ambiguous titles with unclear responsibilities. This may lead to confusion among employers and employees regarding what to expect from the specialist, and could also result in role conflict or role ambiguity for the psychologist. Furthermore, this can lead to various issues from a professional standpoint and for workplaces, such as creating expectations that do not align with the individual's competencies and skills, resulting in poor job performance and hindering the proper representation and functionality of the field. Consequently, this situation may result in other employees within the organization not receiving appropriate services. Thus, based on the key findings of the study, it is recommended that psychologists be employed in roles that align with their specific areas of expertise, and that their titles be assigned accordingly. From this perspective, it can be suggested that the subfields of psychology need to be better promoted and clearly identified.

When the literature is reviewed Aycan (1998) states that industrial and organizational psychologists should not take on tasks and responsibilities outside their areas of expertise. For example, it is not appropriate for industrial and organizational psychologists to undertake duties defined for clinical psychologists within workplaces or vice versa. In this context, the research emphasizes the importance of gaining a closer understanding of the psychology field and its sub-branches within the sectors and business life in Turkey. The second point is that industrial and organizational psychologists can assume an educator role when needed. For instance, an industrial and organizational should provide accurate information to the workplace about the usage of scientifically valid and reliable tests in HRM, particularly when unscientific tests are being used. At this point, it can be said that for ergonomic initiatives to advance in workplaces, it is important for I-O psychologists to take on a practitioner role by developing and implementing assessment tools for identifying psychosocial risk factors. This role could extend beyond just providing services within the framework of employee assistance programs, allowing psychologists to contribute more directly to ergonomics-related efforts.

As is known the increase in psychology undergraduate programs in Turkey seems particularly remarkable. Various authors have noted a significant increase in the number of psychology programs at universities in Turkey over the past two decades (Arık, 2015; Yökatlas, 2022, as cited in Arıkan, 2022). While there were only 13 undergraduate psychology programs in 2000 (Arık, 2015), the current number has risen to 147, including those in universities in Northern Cyprus (Yökatlas, 2024). These statistics are concerning in terms of the risk of unemployment for new psychology graduates, given the increase in psychology programs in Turkey. As a developing

country, Turkey's possible loss of skilled workforce is of critical importance for the country's economic development. For this reason, it would be beneficial for recent psychology graduates to focus on ergonomic studies for broader understanding of workplaces. In addition, incorporating courses on ergonomics into the curriculum, especially at the master's and doctoral levels, and training specialists in the field of ergonomics will provide benefits through a multidisciplinary approach.

As is well known, industrial and organizational psychologists deeply examine human behavior within organizations using methods such as surveys, focus groups, interviews, and analysis of external factors. They utilize this information to implement changes at the individual, group, and entire organizational levels. In this context, their job descriptions can be formulated based on these roles. These roles include; participating in job analysis processes, being involved in recruitment and placement processes, determining appropriate interview techniques for hiring, creating objective assessments and measurements, evaluating employee performance based on job analysis criteria, designing and implementing training programs as needed, observing employees' work environments and collecting data on both the physical and psychosocial aspects of ergonomics, measuring these data, facilitating and monitoring organizational change and development during ergonomic modifications, and providing management coaching to executives and leaders by studying organizational leadership (O*NET Online, n.d.).

Moreover, clinical psychologists can also contribute to ergonomic processes in workplaces in various ways based on their work tasks. Clinical psychologists who provide this contribution are required to adhere to professional ethical standards while giving services to employees and business owners. Therefore, it is crucial that professional rules, company expectations, and professional roles are fully aligned. The contributions of clinical psychologists to workplace ergonomics can be expressed as follows; conducting individual and group sessions with employees to identify psychosocial risk factors using their psychotherapeutic skills, helping employees gain insight into their emotional and mental states; implementing interventions to maintain and enhance overall well-being; assessing the risk of employees causing harm to themselves or others within or outside the organization in case of potential threats, identifying individuals at psychological, emotional, or behavioral risks, and collaborating with occupational physicians and occupational health and safety units to provide

psychosocial support to these individuals (O*NET Online, n.d.).

In conclusion, this study is significant in understanding the perspectives of psychologists with the field of ergonomics, especially as it addresses a previously unexplored topic. From this point, the study highlights that psychologists could be considered a necessary professional group for implementing ergonomic activities in workplaces and that psychologists' competence levels could be enhanced through education in ergonomics. Furthermore, including social scientists in future studies will provide valuable contributions to the field and conducting longitudinal studies at regular intervals will be beneficial in understanding psychologists' roles in the field, as well as in assessing their development and identifying areas for improvement within the profession.

As with any research, this study also has its limitations. Firstly, the study was conducted by a single researcher, which raises the issue of researcher bias. Thus, for further studies it would be beneficial to involve multiple researchers to enhance the reliability of the findings. Another limitation is the small sample size of the participants in the dataset, which may have reduced the generalizability of the findings. Hence, future research in this area would benefit from increasing the number of participants to achieve more comprehensive results. Finally, the use of mixed methods, combining both qualitative and quantitative approaches, in future studies could enhance the reliability of the findings.

Acknowledgment

Conflict of Interest

No conflict of interest has been declared by the authors.

References

Alblihed Åberg, M., Staats, E., Robertson, J., Schiöler, L., Torén, K., LaMontagne, A. D., Söderberg, M., Waern, M., & Nyberg, J. (2022). Psychosocial Job Stressors and Risk of Suicidal Behavior: An Observational Study Among Swedish Men. *Scandinavian Journal of Work, Environment & Health, 48*(6), 435–445. https://doi.org/10.5271/sjweh.4039

American Psychological Association. (n.d.). *Industrial and organizational psychology.* American Psychological Association. Retrieved 2024, November 1, from https://www.apa.org/ed/graduate/specialize/industrial

American Psychological Association. (n.d.). *Employee Assistance Programs (EAPs): An opportunity to diversify your practice*. APA Services. Retrieved November 4, 2024, from https://www.apaservices.org/practice/business /marketing/building/employee-assistance

American Psychological Association. (2014). *Education and training in industrial and organizational psychology*. https://www.apa.org/education-career/guide/subfields/organizational/education-training.pdf

Arık, E. (2015, November 23–25). The impact of 2023 targets on psychology departments [Oral presentation]. *14th National Social Sciences Congress*, Ankara, Turkey.

Arıkan, S. (2022). The career adaptability of psychology students: The roles of demographic variables, personality, and positive psychological capital. *Studies in Psychology, 42*(2), 427-471. https://doi.org/10.26650/SP2022-997542

Aycan, Z. (1998). Endüstri ve Örgüt Psikolojisi Alanında Etik Uygulamalar. *Türk Psikolojisi Dergisi, 13*(42), 47-50.

Backhaus, I., Lohmann-Haislah, A., Burr, H., & et al. (2024). Organizational change: Challenges for workplace psychosocial risks and employee mental health. *BMC Public Health, 24*, 2477. https://doi.org/10.1186/s12889-024-19815-w

Berjot, S., Altintas, E., Grebot, E., & Lesage, F.-X. (2017). Burnout risk profiles among French psychologists. *Burnout Research, 7,* 10–20. https://doi.org/10.1016/j.burn.2017.10.001

Bouzikos, S., Afsharian, A., Dollard, M., & Brecht, O. (2022). Contextualizing the Effectiveness of an Employee Assistance Program Intervention on Psychological Health: The Role of Corporate Climate. *International journal of environmental research and public health*, *19*(9), 5067. https://doi.org/10.3390/ijerph19095067

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Bridger, R. S. (2017). *Introduction to human factors and ergonomics*. CRC Press.

Donaldson, S.I., Lee, J.Y. & Donaldson, S. I. (2019). Evaluating Positive Psychology Interventions at Work: A Systematic Review and Meta-Analysis. *International Journal of Applied Positive Psychology,* 4, 113–134. https://doi.org/10.1007/s41042-019-00021-8

Ercan, S., & Çelik, S. (2021). İşçi Sağlığı ve İş Güvenliği Araştırmalarında Psikolojinin Yeri: Türkçe Ve İngilizce Alan Yazın Arasında Betimsel Bir Karşılaştırma. *Psikoloji Çalışmaları, 41*(1). https://doi.org/10.26650/SP2020-0107

International Labour Organization [ILO] Psychosocial Factors at Work: Recognition and Control. International Labour Office; Geneva, Switzerland: 1986. (Occupational Safety and Health Series No. 56). https://webapps.ilo.org/public/libdoc/ilo/ 1986/86B09_301_engl.pdf

International Labour Organization. (2022). *Psychosocial risks and stress at work*. https://www.ilo.org/resource/psychosocial-risks-and-stress-work

International Labour Organization. (2023, November 26). *Nearly 3 million people die from work-related accidents and diseases each year*. https://www.ilo.org/resource/news/nearly-3-million-people-die-work-related-accidents-and-diseases

ISIG. (2024a). *2023 yılı SGK iş kazaları ve meslek hastalıkları istatistikleri değerlendirmesi panel haberi*. https://www.isigmeclisi.org/21109-2023-yili-sgk-is-kazalari-ve-meslek-hastaliklari-istatistikleri-degerle#:~:text=*%202023%20y%C4%B1l%C4%B1%20verilerine%20g%C3%B6re%20yakla%C5%9F%C4%B1k,4000%20civar%C4%B1nda%20oldu%C4%9Funu%20s%C3%B6ylemek%20m%C3%BCmk%C3%BCn.

ISIG. (2024b). *Yüksekten düşme, ezilme, patlama, yanma, elektrik çarpması, zehirlenme… Eylül ayında 152, yılın ilk dokuz ayında en az 1371 işçi hayatını kaybetti*. https://isigmeclisi.org/21105-yuksekten-dusme-ezilme-patlama-yanma-elektrik-carpmasi-zehirlenme-e

Kim, H., & Stoner, M. (2008). Burnout and turnover intention among social workers: Effects of role stress, job autonomy and social support. *Administration in Social Work*, *32*(3), 5–25. https://doi.org/10.1080/03643100801922357

Kocatepe, S., & Parlak, Z. (2022). The effects of psychosocial factors on occupational accidents: a cross-sectional study in the manufacturing industry in Turkey. *International Journal of Occupational Safety and Ergonomics: JOSE*, *28*(4), 2574–2581. https://doi.org/10.1080/10803548.2021.2010904

Li, H., Shi, W., Qian, Y., & Mo, J. (2023). Role conflict and turnover intention among Chinese social workers: The roles of emotional exhaustion and job autonomy. *Journal of Social Service Research*, *49*(5), 607–617.

https://doi.org/10.1080/01488376.2023.2254805

Lowman, R. L. (1982). Clinical psychology at work. *The Clinical Psychologist, 35*(3), 19-20.

Moralo, T. S., & Graupner, L. I. (2022). The role of the industrial psychologist in managing the psychological impact of COVID-19 in the workplace. *Frontiers in Psychology*, *13*, 920894. https://doi.org/10.3389/fpsyg.2022.920894

Morse, G., Salyers, M. P., Rollins, A. L., Monroe-DeVita, M., & Pfahler, C. (2012). Burnout in mental health services: A review of the problem and its remediation. *Administration and Policy in Mental Health and Mental Health Services Research*, 39, 341–352. https://doi.org/10.1007/s10488-011-0352-1

Mwakyusa, J. R. P., & Mcharo, E. W. (2024). Role ambiguity and role conflict effects on employees' emotional exhaustion in healthcare services in Tanzania. *Cogent Business & Management*, *11*(1). https://doi.org/10.1080/23311975.2024.2326237

Niedhammer, I., Pineau, E., & Rosankis, E. (2024). The associations of psychosocial work exposures with suicidal ideation in the national French SUMER study. *Journal of Affective Disorders, 356*, 699-706. https://doi.org/10.1016/j.jad.2024.04.042

O*NET Online. (n.d.). *Summary report for: 19-3032.00 - Industrial-organizational psychologists*. Retrieved August 5, 2024, from https://www.onetonline.org/link/summary/19-3032.00

O*NET Online. (n.d.). *Summary report for: 19-3033.00 – Clinical and counseling psychologists*. Retrieved August 5, 2024, from https://www.onetonline.org/link/summary/19-3033.00

Petery, G. A., Parker, S. K., & Zoszak, L. (2021). The importance of psychological contracts for safe work during pandemics. *Industrial and Organizational Psychology*, *14*(1–2), 290–295. doi:10.1017/iop.2021.52

Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly, 15*(2), 150–163. https://doi.org/10.2307/2391486

Rupert, P. A., Miller, A. O., & Dorociak, K. E. (2015). Preventing burnout: What does the research tell us? *Professional Psychology: Research and Practice, 46*(3), 168–174. https://doi.org/10.1037/a0039297

Rutledge, P. B., & Hogg, J. L. (2020). In-depth interviews. *In the International Encyclopedia of Media Psychology* (pp. 1-7). Wiley-Blackwell.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity, 52*(4), 1893–1907

Schmidt, S., Roesler, U., Kusserow, T., & Rau, R. (2012). Uncertainty in the workplace: Examining role ambiguity and role conflict, and their link to depression—a meta-analysis. *European Journal of Work and Organizational Psychology*, *23*(1), 91–106. https://doi.org/10.1080/1359432X.2012.711523

Sohrabi, M. S. (2021). Ergonomics Role in Sustainable Development: A Review Article for Updates the Recent Knowledge. In: Black, N.L., Neumann, W.P., Noy, I. (eds) *Proceedings of the 21st Congress of the International Ergonomics Association* (IEA 2021).

The Social Insurance and General Health Insurance Law. (2022). Law No. 5510. Retrieved from https://www.mevzuat.gov.tr/MevzuatMetin/1.5.5510.pdf

Turkish Occupational Health and Safety Law (2012). The Occupational Health and Safety Law No. 6331. https://www.mevzuat.gov.tr/MevzuatMetin/1.5.6331.pdf

Ulfert, A. S., Le Blanc, P., González-Romá, V., Grote, G., & Langer, M. (2024). Are we ahead of the trend or just following? The role of work and organizational psychology in shaping emerging technologies at work. *European Journal of Work and Organizational Psychology*, *33*(2), 120–129. https://doi.org/10.1080/1359432X.2024.2324934

Wu, G., Hu, Z., & Zheng, J. (2019). Role stress, job burnout, and job performance in construction project managers: The moderating role of career calling. *International Journal of Environmental Research and Public Health*, *16*(13), 2394. https://doi.org/10.3390/ijerph16132394

Xu, J., Liu, X., Xiao, Y., Fang, X., Cheng, Y., & Zhang, J. (2021). Effect of EAP psychological intervention on improving the mental health of medical workers under the novel coronavirus epidemic in China. *Frontiers in Public Health, 9*, 649157. https://doi.org/10.3389/fpubh.2021.649157

Yeo, A., Legard, R., Keegan, J., Ward, K., Nicholls McNaughton, C., & Lewis, J. (2013). In-depth interviews. In J. Ritchie, J. Lewis, C. M. Nicholls, & R. Ormston (Eds.), *Qualitative research practice: A*

guide for social science students and researchers. Sage.

Yökatlas. (2024). All universities with psychology programs. Retrieved May 31, 2024, from https://yokatlas.yok.gov.tr/lisans-bolum.php?b=10169