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Title: The Impact of Work Travel Balance on Mental Health

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MSc. In Business Administration

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PhD, Henrique José da Rocha O'Neill, Associate Professor with Habilitation
Iscte – Instituto Universitário de Lisboa

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BUSINESS
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Department of Marketing, Operations and General Management

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DEDICATIONS

This thesis is dedicated with deep love and gratitude to my parents, family and friends, whose unwavering support has carried me through every stage of this journey. Special dedications to my parents, for your endless encouragement, sacrifices, and belief in me. Your values, strength, and love have been the cornerstone of my perseverance. Your trust gave me all the tools and values necessary to be where I am to date and gave me the courage to follow my academic path with confidence and integrity. To my extended family and friends, thank you for being my constant companions during both the highs and lows. Your words of encouragement, shared laughter, and moments of understanding brought light during the most stressful times. Each of you, in your own way, has shaped my growth and given me the strength to pursue this goal with heart and determination. Your emotional support has been just as important as any academic resource. I am truly blessed to have such a strong and compassionate support system. This work is as much yours as it is mine. I dedicate it to all of you, with my deepest appreciation.

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Resumo

Este estudo investiga o impacto do equilíbrio entre trabalho e viagens na saúde mental ；【 ‘ 。 individual, utilizando escalas padronizadas de saúde mental, modelos teóricos de equilíbrio entre vida profissional e pessoal e variáveis independentes relevantes. O objetivo é abordar uma questão social relevante e oferecer novas perspetivas teóricas e práticas para melhorar o bem-estar mental.

A pesquisa baseia-se num modelo de regressão linear múltipla, considerando como variáveis independentes o horário de trabalho, o stresse laboral, o tempo de lazer e viagens, a satisfação 、 profissional, o apoio social e a situação económica, tendo como variável dependente a saúde mental.

Os principais resultados indicam que a organização do tempo de trabalho influencia significativamente a saúde mental. Mais horas trabalhadas por semana estão associadas negativamente ao bem-estar mental, enquanto horários flexíveis apresentam uma associação positiva. O stresse no trabalho também está fortemente relacionado com a diminuição da saúde mental, evidenciando a importância de estratégias para a sua redução.

Além disso, mais tempo de lazer e de viagem está associado a melhores níveis de saúde mental, assim como maior satisfação profissional e apoio social. A situação económica influencia a saúde mental, embora de forma mais moderada: indivíduos em melhores condições financeiras tendem a apresentar melhor saúde mental.

O estudo oferece recomendações práticas para indivíduos e organizações, promovendo o equilíbrio entre vida pessoal e profissional, com o objetivo de melhorar a saúde mental e a qualidade de vida.

Palavras-chave: equilíbrio entre trabalho e viagens; saúde mental; horário de trabalho; estresse no trabalho; tempo de lazer e viagens; satisfação profissional; apoio social; situação econômica; regressão linear múltipla

Classificação JEL: M10, M12, M15

ABSTRACT

This study investigates how work-travel balance influences individual mental health by analyzing standardized mental health data, work-life balance theories, and various influencing factors. Using a multiple linear regression model, the research examined work schedule, work stress, leisure and travel time, career satisfaction, social support, and financial status as independent variables, with mental health status as the outcome.

Key findings reveal that longer work hours negatively affect mental health, while flexible schedules are beneficial. Work stress significantly correlates with mental health decline, highlighting the need to reduce stress in professional settings. Increased leisure and travel time showed a strong positive impact on mental well-being, emphasizing the value of rest and recreation.

Career satisfaction and social support were also positively associated with improved mental health, suggesting the importance of a supportive and fulfilling work environment. Although economic status had a relatively smaller effect, individuals with better financial standing generally experienced better mental health.

The study offers both theoretical insights into the work-life balance–mental health connection and practical strategies for improvement. Recommendations include managing work hours, reducing stress, enhancing opportunities for leisure and travel, increasing job satisfaction, strengthening social support, and addressing economic concerns. These measures aim to improve mental health, promote work-life balance, and enhance overall quality of life.

Keywords: Work and travel balance; mental health; work schedule; work stress; leisure and travel time; career satisfaction; social support; economic status; multiple linear regression

JEL Codes: M10, M12, M15

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CHAPTER 1: INTRODUCTION

1.1 Research Background

1.1.1 Current situation analysis of work and life balance

The concept of work-life balance (WLB) is increasingly evident in contemporary society, especially in the context of rapidly changing work environments and a growing awareness of mental health. This paper aims to analyze the current state of work-life balance and to explore its impact on individual mental health.

Adamson, Muhr and Beauregard (2023) studies on work-life balance have highlighted the role of gender in achieving balance. They noted that despite the trend of equal expectations for men and women in modern societies, there are still significant differences in reaching work-life balance. This difference is reflected not only in work hours and family responsibilities, but also in the perception of the line between work and private life (Adamson et al., 2023).

The study from Lee and Lee (2023) focused on the work-life balance of mental health professionals. They found that emotional labor, anger, and work engagement were key factors affecting the work-life balance of this group. Work stress interacts with stressors in the private life (Lee & Lee, 2023).

During the COVID- 19 pandemic, the problem of work-life balance became particularly prominent. A resonance analysis of the literature by Majumder and Biswas (2023) showed that the focus of work-life balance-related research has shifted to the conflict between remote work and family responsibility during the pandemic. Remote work provides employees with flexibility, but it also blurs the line between work and private life, which increases the stress and burning sensation (Majumder & Biswas, 2023).

Sheikh (2023) explored the impact of organizational support on employees' perception of work-life balance. The study found that perceived organizational support significantly increased employee work-life balance, thereby enhancing organizational commitment. This suggests that organizational culture and policies play a key role in shaping the perception of employee balance between work and life (Sheikh, 2023).

The study by Aloulou et al. (2023) focused on remote workers in Saudi Arabia. Their study suggests that there is a complex relationship between work life balance and satisfaction in which self-management and time management ability are key factors. These findings

highlight the importance of personal strategies in achieving work-life balance (Aloulou et al., 2023).

Balance between work and life has long been an important topic in academia and practice. The fast-paced lifestyle of modern society and the increasing demand in the workplace make keeping a healthy work-life balance a focus. Studies consistently suggest that imbalances may lead to a variety of negative outcomes, including stress, burnout, and decreased productivity.

In addition to work-life balance, research in recent years has begun to emphasize the importance of work travel balance. As work travel becomes more common, understanding its impact on employee mental health becomes critical. Although traveling is often necessary, if poorly managed, travel may disrupt the pace of individual life, increase stress and cause mental health problems.

The importance of this study lies in exploring the complex relationship between work travel balance and mental health. This relationship is critical for developing policies and practices that support employee well-being. The findings will enrich the existing body of knowledge by providing insights into how work travel needs affect mental health and strategies to mitigate negative effects.

1.1.2 Potential impact of work-life balance and health

Exploring the potential impact of work-life balance (WLB) on mental health is the complex link between this balance and personal well-being, job satisfaction, and organizational performance. Recent studies show that WLB not only affects individual mental health but also has significant overall social and economic impacts.

The study by Adamson, Muhr, and Beauregard (2023) highlighted the role of gender in work-life balance. They noted that the work-life balance challenges facing female executives are not only individual efforts, but also a reflection of gender roles and social expectations (Adamson et al., 2023). This finding suggests that gender inequality may contribute to mental health problems, especially when attempting to balance occupational and family responsibilities.

Lee and Lee (2023) examined the effects of emotional labor, anger, and work engagement on WLB among mental health professionals. They found that these factors not only affect work-life balance, but also exacerbate job burnout and psychological stress (Lee & Lee, 2023). This finding reveals the importance of maintaining a WLB for preventing burnout and maintaining mental well-being.

Majumder and Biswas (2023) focused on changes in WLB during the COVID- 19 pandemic. Studies have shown that the spread of remote work during the pandemic has led to a blurring of the line between work and family life, which in turn affects people's mental health and well-being (Majumder & Biswas, 2023). This suggests that maintenance of WLB is particularly critical for protecting mental health in special circumstances.

The Sheikh (2023) study explored the impact of organizational support on the organizational commitment and WLB of bank employees. The perceived organizational support was found to improve employee job satisfaction and mental health and reduce burnout (Sheikh, 2023). This finding highlights the important role of organizational policy in maintaining employee mental health.

The study by Aloulou et al. (2023) focused on WLB for Saudi teleworkers. Studies have shown that a good work-life balance is critical to improving job satisfaction and quality of life (Aloulou et al., 2023). This result highlights the role of the WLB in improving the overall well-being of its employees.

In conclusion, the effects of WLB on mental health are multifaceted, involving all levels of individuals, organization and society. Good WLB helps to improve job satisfaction, reduce burnout, and promote personal well-being. To this end, organizations and society should take measures to support employees in achieving a better work-life balance, thus promoting the overall health and well-being of individuals and society.

1.2 Research Questions

The thesis is guided by the following research questions

a. How does work-related travel influence mental health outcomes?
b. What are the mediating effects of career satisfaction, work stress, and social support on work-travel balance?
c. How can organizations support employees in managing work-travel balance for better mental health?

1.3 Research Contributions

This study explores the impact of work-travel balance on mental health and has important theoretical and practical implications. In the rapidly developing modern society, people are faced with increasing work pressure and life challenges, which directly affect their mental health status. Therefore, studying work-life balance is of great significance for improving individual quality of life and mental health.

From a theoretical perspective, this study makes an important contribution to the development of the work-life balance theory. By systematically analyzing the mental health effects of work schedule, work stress, leisure and travel time, career satisfaction, social support, and economic status, this study will enrich the existing work-life balance theory and provide a new theoretical framework and research perspective for subsequent research.

This study is also important for the practice field. By identifying key factors that influence mental health, this study is able to help individuals and organizations to identify and to improve those factors that are detrimental to mental health. For example, for enterprises, the findings of this study can be used to optimize employees 'work schedule, reduce work stress, enhance career satisfaction, and provide better social support, thus improving employees' mental health and work efficiency.

This study is also instructive for policy makers. Understanding the impact of work-travel balance on mental health can help policy makers devise more effective mental health promotion policies and programs. For example, policies could encourage businesses to provide more flexible work arrangements, promote leisure and travel activities, provide financial support and mental health services, and thus improve the mental health status of the whole society.

The results of this study also have practical application value for individual daily life. By understanding the various factors affecting mental health, individuals can better manage their life and work and seek balance, thus improving their quality of life and mental health.

In summary, this study is significant at both the theoretical and practical levels. It not only enriches the work-life balance theory, but also provides practical guidance and advice for improving the mental health level of the individuals and the society. Through an in-depth analysis, this study will help to better understand the relationship between work and travel balance and mental health, and to contribute to promoting a healthier social environment.

1.4 Study Purpose and Theoretical Significance

This study explores the impact of work-travel balance on mental health at the theoretical level and provides new perspectives for understanding work-life balance theory. Previous studies, such as the work of Adamson, Muhr, and Beauregard (2023), have focused on the gendered work-life balance of senior managers. This study extends the application of the theory by introducing leisure and travel time as independent variables. Lee & Lee (2023) emphasized the impact of emotional labor on work-life balance among mental health experts,

and this study further explored the combined effects of multiple factors such as work schedule, work stress, career satisfaction, social support and economic status.

This study draws on the Sheikh (2023) study on the work-life balance of employees, and extends its theoretical framework to a wider occupational group. Through the application of multiple linear regression models, this study quantifies the relationship between the above factors and mental health, providing empirical support for understanding the dynamic relationship between work-life balance and mental health.

1.5 Research Approach

1.5.1 Study design

This study used quantitative research to explore the impact of work-travel balance on mental health. The study design was based on the analysis of variables including work schedule, work stress, leisure and travel time, career satisfaction, social support and financial status, aiming to understand how these variables affect mental health. This study set a multiple linear regression model to quantify the relationship between the respective variables and mental health, thus providing in-depth understanding and empirical support for work-life balance theory.

To ensure the comprehensiveness of the study, this study used a cross-industry sample, including individuals of different age, gender, occupation, and socioeconomic backgrounds. Such a sample selection helps to improve the generalizability and applicability of the study. During the course of the study, the study followed strict ethical guidelines ensuring information confidentiality and voluntary participation of all participants.

1.5.2 Data Collection and Analysis Method

This study employs a mixed-method approach to collect and analyze data, ensuring reliability and validity in measuring the impact of work-travel balance on mental health (Creswell & Creswell, 2018). The research utilizes standardized mental health scales alongside surveys to evaluate the variables influencing work-related well-being (Smith & Johnson, 2022).

The primary data collection methods include standardized mental health scales, such as the Hamilton Anxiety Scale (Hamilton, 1959) and the Beck Depression Inventory (Beck et al., 1961), which are used to evaluate participants' mental health status. These tools are recognized for their validity in clinical and occupational mental health research (Kessler et al., 2002). In addition to mental health assessments, structured self-reported surveys capture data

on work schedules, stress levels, leisure and travel time, career satisfaction, social support, and financial status (Saunders et al., 2019). Self-reported methods are commonly used in work-life balance studies (Greenhaus & Allen, 2011). To ensure representativeness, the study employs a cross-industry sampling approach, incorporating participants from various occupational backgrounds, age groups, and socioeconomic statuses. This stratified sampling method enhances the generalizability of the findings (Bryman, 2016).

The study applies a two-step analytical process to examine the collected data. First, descriptive statistical analysis provides an overview of sample characteristics and distribution patterns (Field, 2018). Statistical measures such as means, standard deviations, and frequency distributions summarize data trends (Hair et al., 2010). Second, multiple linear regression analysis is utilized to assess the relationship between independent variables, including work schedule, work stress, leisure time, career satisfaction, financial status, and social support, and the dependent variable of mental health status. Multiple regression models are widely recognized for identifying significant predictors of work-life balance and psychological well-being (Judge et al., 2001).

To ensure methodological rigor, several reliability and validity considerations are implemented. Pilot testing is conducted to refine questionnaire wording and enhance clarity (Babbie, 2020). Ethical considerations, including confidentiality and voluntary participation, are strictly followed in accordance with established research guidelines (Resnik, 2022). Furthermore, model diagnostics such as hypothesis testing and variance inflation factor (VIF) assessments confirm model assumptions and minimize biases (Tabachnick & Fidell, 2019).

This approach ensures robust data collection and analysis, integrating established research methodologies to enhance validity. By applying mental health scales, questionnaire surveys, and regression models, this study contributes to empirical discussions on work-travel balance and mental well-being.

1.6 Paper Structure

This master thesis aims to explore the impact of work-travel balance on mental health, using a quantitative research approach that covers many aspects from theoretical construction to empirical analysis. The paper structure is arranged as follows:

Introduction, introduce the research background, research questions, research purpose and significance, and an overview of the research methods. This section sets the tone for the whole study, lining the importance of the study and the relevant theoretical framework.

Chapter 2, literature review, in-depth analysis of theories and existing studies related to the research topic. The chapter includes theories about mental health and work-life balance and the effects of different factors such as work schedule, work stress, leisure and travel time. The purpose of the literature review is to provide a solid theoretical basis for studying the hypotheses and the theoretical framework.

Chapter 3, the theoretical framework and hypothesis, clearly expounds the theoretical basis and research hypothesis of this study. Details on the selection of dependent variables (mental health status) and independent variables (multiple aspects of work-life balance), and ways to construct the study model.

Chapter 4, research methods, describes the study design, data collection and analysis methods. This included the selection of participants, the scale used and the design of the questionnaire, and specific steps for data processing and analysis.

Chapter 5, data analysis and discussion, presents the empirical results of the study, and discusses the results. Results were included from descriptive statistical analysis of each variable, correlation analysis and multiple linear regression analysis, and validation of the study hypothesis.

Chapter 6, conclusion and outlook, summarizes the main findings of the research, and discusses its theoretical and practical significance. At the same time, the research limitations and future research directions are pointed out, and relevant policy suggestions are put forward.

The whole paper structure aims to systematically elaborate the research process of the impact of work and travel balance on mental health, from theory to practice, providing comprehensive and in-depth analysis and discussion. Through this structural arrangement, the paper aims to provide valuable insights and guidance to researchers and practitioners in related fields.

CHAPTER 2: LITERATURE REVIEW

2.1 Mental Health and Work and Life Balance

2.1.1 Definition and scale of mental health

Mental health is one of the core concepts of this study, which affects the overall well-being and quality of life of individuals. Mental health is not only a lack of mental illness, but also a positive emotional and functional state, including individual emotional stability, adaptability, and social functioning. Multiple scales and tools have been developed in academia when assessing mental health.

MerinoSoto, CubaCanales, and RojasAquino (2023) Preliminary validation of the Mental Health Scale (MHI-5) used in Peruvian adolescents demonstrated the applicability in different cultural settings. Kuharic, Monteiro, & Pickard (2022) explored the use of the EQ Health and Wellbeing Scale (EQ-HWB) and its shortened version (EQ-HWB-S) in assessing mental health and well-being, compared with the EQ-5D-5L, EQ-5D-3L and the short Warwick-Edinburgh mental health scale.

Hauch, Fjorback, & Juul (2022) examined the psychometric properties of the Warwick-Edinburgh Short Mental Health Scale (SWEMWBS) in a sample of Danish schoolchildren, which underscores the importance of applying the mental health scale at different ages. Wang (2022) proposed the Yin-Yang definition model of mental health, demonstrating the differences in the definition of mental health in different cultures. Ahmed, Griffiths, & Hossain (2022) conducted psychometric assessments of the 18-item Bangladesh Mental Health Scale (Bangla MHI- 18), further highlighting the impact of cultural differences on the applicability of the scale.

Marmara, Zarate, Vassallo, Patten, & Stavropoulos (2022) tested gender measurement invariance and item response theory on the Warwick Edinburgh Mental Health Scale (WEMWBS). This study shows that the scale has good applicability across different sexes. Velten, Brailovskaia, & Margraf (2021) verified the applicability and measurement invariance of the forward mental health scale in eight countries, different gender and age groups.

Kondou, Haku, & Yasui (2021) developed the mental health scale for parenting fathers and performed psychometric tests. Carrozzino, Christensen, Mansueto, Brailovskaia, Margraf, & Cosci (2021) performed a clinical measurement analysis of the Joy, resilience and

forward mental health scales. Gascuena et al. (2021) showed that the SF- 12 physical and mental health scale predicted cardiovascular events after hospitalization.

Naghavi, Teismann, Asgari, Eizadifard, & Brailovskaia (2021) verified the Persian version of the Positive mental health scale. Charles et al. (2021) provided a clinical validation of the Brief Mental Health Scale in Occupational Health Care in South Africa. Moffa, Wagle, Dowdy, Palikara, Castro, Dougherty, & Furlong (2021) examined the validity of the Me and My School questionnaire in different cultures, a child self-reported mental health measurement instrument.

Chang, Ye, He, & Shen (2021) conducted a study on the physical and mental health scales of university teachers, focusing on mental health issues in higher education settings. Mavali, Mahmoodi, Sarbakhsh, & Shaghaghi (2020) studied the psychometric properties of the Warwick-Edinburgh Mental Health Scale (WEMWBS) in an elderly Iranian elderly population. Cilar, Pajnkihar, & Stiglic (2020) validated the Warwick-Edinburgh Mental Health Scale among Slovenian nursing students.

A comprehensive analysis of these literature reveals the diversity and applicability of mental health scales in different cultures, age and professional backgrounds. The application of these scales in this study will provide important tools for assessing the impact of work-life balance on mental health. By using these validated scales, this study will be able to accurately quantify mental health status, providing an empirical basis for research on the impact of work-travel balance on mental health.

2.1.2 Theory and model of work and life balance

Work-life balance (WLB) is a multidimensional concept of how an individual finds a balance between professional responsibility and personal life. In recent years, different studies have proposed various theories and models to illustrate different aspects of this concept.

Adamson, Muhr, & Beauregard (2023) identified work-life balance as a gendered self-project, especially when exploring work-life balance in Denmark. This perspective underscores the key role of gender in work-life balance. Lee and KyoungSook (2023) studied the effects of emotional labor, anger and work input on the work-life balance of mental health professionals, revealing the complexity of work-life balance affected by the emotional state.

Majumder & Biswas (2023) conducted a measurement and co-occurrence analysis of the literature on work-life balance before and after the COVID- 19 pandemic. Their study shows that the impact of the pandemic on work-life balance is an important research topic.

Sheikh Aarif Mohd (2023) studied the impact of perceived organizational support on the organizational commitment of bank employees, in which work-life balance plays an important role.

Aloulou et al. (2023), tested a sequential mediation model exploring determinants of work-life balance and satisfaction. Haar & Harris (2023) found that the relationship between high-performance work systems and insomnia was mediated by work burnout, and that work-life balance played a moderating role.

Matsuo, Takayama, Kinouchi & Suzuki (2023) emphasized the intermediary role of the sense of meaning and the pursuit of work-life balance in the nurse burnout and turnover intention. Esquivel, Marincean & Benore (2023) explored the impact of the COVID- 19 pandemic on the productivity and work-life balance of STEM teachers.

Meenal Kedar Oak (2023) focuses on the work-life balance of female library professionals in metropolitan areas of India, and this study provides insight into the work-life balance of specific occupational groups. Avadhani & Menon (2022) developed and standardized the work-life Balance scale for insurance industry employees.

Through these studies, it is seen that work-life balance is seen as a dynamic process influenced by multiple factors. These include the individual's emotional state, perceived organizational support, the environment of working remotely, and the socio-cultural context. These studies not only provide theoretical support for understanding work-life balance, but also provide valuable insights for improving employee work- life balance in practice.

In conclusion, the theories and models of work-life balance reflect a multi-level, multi-dimensional construction involving multiple levels of individuals, organization and society. This study uses these theories and models as a basis to gain a deeper understanding of how work-travel balance affects mental health and to explore potential ways to improve work-life balance.

2.2 Work Time Arrangement and Mental Health

Work schedule, including the length of work, shift type and balance between work and rest, have a significant impact on the mental health of employees. Multiple studies have explored this topic and provided deep insights.

Che Hongwei, Wu Huiying, Qiao Yu, Luan Bonan, Zhao Qingyun & Wang Hongyan (2023) in their study found a significant association between time to work and mental health problems during the COVID- 19 pandemic. This finding suggests that increased working hours may negatively affect mental health in stressful settings.

The results of Griep Rosane Harter et al. (2022) showed a relationship between work and work time control from home and mental health in the Longitudinal Study of Brazilian Adult Health (ELSA-Brasil). This study highlights the potential value of work-scheduling flexibility for improving mental health.

Liu Bei, Chen Hong & Wang Yujie (2020) explored the regulation of psychological distance between employees and organizations. Their study shows that the increased working hours may have a positive impact on mental health when the psychological distance between employees and the organization is large.

Riyana Miranti & Jinjing Li (2020) investigated the relationship between working time mismatch, job stress and mental health among workers of mature age in Australia. Their findings indicate that a mismatch in working hours may lead to mental health problems.

Sato Kaori, Kuroda Sachiko & Owan Hideo (2020) studied the effects of long work, night shift and weekend work, and short breaks on mental health. Their findings support the notion that work schedules have a significant impact on mental health.

Zan Li, Junming Dai, Ning Wu, Yingnan Jia, Junling Gao & Hua Fu (2019) studied the effects of long work on depression and psychological well-being of Shanghai employees, and considered the role of having a leisure hobby. Their study suggests that leisure activities may alleviate the adverse effects of prolonged work hours on mental health.

Akihito et al., (2016) explored the relationship between off-working hours psychological disengagement and mental health and work engagement. Their study provides insight into the well-being of work schedules.

Milner Allison, Smith Peter & LaMontagne A D. (2015) noted a correlation between working hours and mental health in Australia. This study highlights the complex relationship between working hours and mental health.

In conclusion, there is a complex association between work schedules and mental health. Long hours, unmatched hours and inflexibility in work schedules may have negatively impacted on employee mental health. However, work-life balance, psychological disengagement, and engagement in leisure activities may help to mitigate these negative effects. These studies provide important theoretical and empirical support for understanding the impact of work schedule on mental health and are crucial for the work schedule variables of this study.

2.3 The Psychological Impact of Work Stress

Work stress is a common phenomenon in the modern workplace and has a profound impact on individual mental health. Recent studies have further revealed the complex relationship between work stress and mental health.

Lee Yu min (2022) studied the relationship between performance stress and mental health among financial office workers. This study suggests that individuals working under performance stress may face higher mental health risk.

Ahorsu Daniel Kwasi, Lin ChungYing, Marznaki Zohreh Hosseini & H Pakpour Amir (2021) explored the impact of COVID- 19 on the mental health of emergency caregivers, especially the mediating role of burnout and work stress.This study highlights the important impact of work stress on mental health in an extremely stressful environment.

Ishikawa, Kohara & Nushimoto (2021) examined the relationship between work stress and mental health among social workers through a field experiment conducted at a public employment support agency in Japan. Their study shows that work stress is a key factor affecting the mental health of social workers.

The study of Liu Xiaomin, LaMontagne Anthony, Bowe Steven, Li Lin & Too Lay San (2021) compared the differences in work stress and mental health relationship between migrant and non-migrant workers. Their results showed that this relationship may differ among different groups.

Mensah Aziz (2021) examined the relationship between work stress and mental health status, and the regulation of social support in Europe. This study highlights the importance of social support in mitigating the effects of work stress.

Jiang Yu, Wu Chuancheng, Hu Tianqi, Chen Meilong, Liu Wei, Zhou Yabing et al. (2020) revealed the combined impact of work stress and shift work on the mental health of Chinese railway workers. Their study highlights the important impact of the work environment and work schedules on mental health.

Nick Boettcher, Jennifer Mitchell, Bonnie Lashewicz, Erin Jones, JianLi Wang, Sarika Gundu, Ray Lam (2019) explored the relationship between male work-related stress and mental health, and the role of male role norms. This study reveals how gender influences the impact of work stress on mental health.

Lee Jinhae, Kim Heejung & Lim Sarah (2019) conducted a comprehensive evaluation of work stress and mental health intervention programs conducted by experienced nurses. Their study has provided important intervention strategies for nursing professionals.

Shen Lianxiang & MAO Wenjuan (2018) studied the impact of psychological Assistance Program (EAP) on the mental health status, stressors and coping styles of

employees in basic general hospitals. This study provides evidence on the effects of workplace mental health interventions.

Choi Suk Kyong (2017) studied the relationship between work stress and mental health after the installation of barrier doors. This study highlights the potential impact of a changing work environment on employee mental health.

In conclusion, the effects of work stress on mental health is multifaceted, involving the work environment, working conditions, individual coping strategies, and social support systems. These studies provide important theoretical and empirical support for understanding and coping with work stress, and are crucial to the topics of work schedules and mental health explored in this study.

2.4 Importance of Leisure and Travel Time

Leisure and travel time are essential for individual mental health and well-being. In the fast and highly stressful modern life, leisure and travel offer important opportunities to recover and relax.

The study by Stock, Bu, Fancourt & Mak (2022) noted a significant longitudinal association between outdoor activity and mental health and well-being during the COVID- 19 lockdown in the UK. This study highlights the importance of leisure activities in a stressful environment for the maintenance of mental health.

Villani & Barry (2021) explored the perception of mental health in the Irish homeless community through a qualitative study. This study demonstrates that cultural context has important effects on leisure and travel time utilization and the understanding of its impact on mental health.

McKey, Quirke, Fitzpatrick, Kelleher, Malone, Alexander, Roch et al. (2020) conducted a rapid review of mental health and suicide in Ireland. This study suggests that leisure and travel time are critical for the mental health of a given group.

Clements (2020) explores how the reproducibility crisis in science exacerbates the mental health problems of scientists. This study highlights the restorative role of leisure and travel in a highly stressful work environment.

Keogh, Brady, Downes, Doyle, Higgins & McCann (2020) evaluated the effects of traveler mental health liaison nurses, especially from the perspective of service users. This study highlights the importance of leisure and travel to promote mental health in specific groups.

Pauline van Roijen (2018) discussed the impact of leisure travel on mental health. This study provides empirical support for leisure travel for improving mental health.

Rundle, Revenson & Friedman (2018) explored the relationship between business travel and behavioral and mental health. Their study suggests that frequent business travel may negatively affect individual mental health.

Flaherty & Chua Chen Wei (2018) examined the effects of high-altitude travel on mental health. This study highlights the potential impact of the travel environment on mental health.

Watts Vabren (2016) discussed the link between climate change and mental health. This study provides insight into how travel and environmental factors affect mental health.

Maria Therese Jensen & Knud Knudsen (2016) conducted a cross-wave study exploring the relationship between business travel, work-family conflict, emotional exhaustion, and mental health complaints. Their findings suggest that business travel may increase work-family conflicts and mental health problems.

In conclusion, leisure and travel time are important for individual mental health and well-being. These studies suggest that leisure activities and travel can provide opportunities for relaxation and recovery, thus fighting stress in work and daily life. At the same time, they also reveal that travel may have negative effects on mental health in specific situations, such as business travel or specific environmental conditions. Therefore, understanding and optimizing the use of leisure and travel time is essential to improve individual mental health.

2.5 Career Satisfaction and Mental Health

The relationship between career satisfaction and mental health is a key theme in modern workplace research. Multiple studies have explored different aspects of this relationship, revealing the importance of career satisfaction on individual psychological well-being.

Street, Lewin, Woodall, CruzCano, Thoma & Stander (2022) examined the relationship between gender differences in military career satisfaction and marriage and military factors. Their study showed that career satisfaction is influenced by multiple factors, including marital status and occupational environment, which have important effects on mental health.

Zu Xiaoqian, Zhang Zhenduo, Wu Yongxiang & Zheng Junwei (2020) explored the spillover effects of supportive neighbourhood behaviors on mental health and career

satisfaction among low-income Chinese workers. This study revealed the positive effects of social support on career satisfaction and mental health.

Meenakshi Aggarwal-Gupta & Poonam Vatharkar (2017) examined the effects of stress and work-family conflict on physicians' mental health, as well as the mediating role of job and career satisfaction. Their study highlights the key role of job satisfaction in relieving job stress and promoting mental health.

Eklund, Backstrom & Eakman (2014) studied the psychometric properties and factor structure of 13 daily occupational satisfaction scales in a population with mental health problems. This study provides a valid tool to assess career satisfaction in a population with mental health problems.

Karanikola & Kaite (2013) studied the professional satisfaction and its association with mild mental symptoms. Their study suggests that career satisfaction is essential for maintaining mental health in highly stressful occupational settings.

In conclusion, there is a complex and close association between occupational satisfaction and mental health. Career satisfaction is influenced by multiple factors, including work environment, social support, and individual work-life balance. Career satisfaction not only affects individual mental health, but it also is strongly related to work performance and quality of life. Therefore, improving career satisfaction is an important way to promote employee mental health and overall well-being. These studies provided profound insights into the present study regarding the relationship between career satisfaction and mental health.

2.6 The Role of Social Support

Social support is an important component of individual mental health and wellbeing, especially in modern societies, where the use of social media becomes a part of everyday life. Studies show that social support is important for stress relief, improved quality of life, and prevention and treatment of mental health problems. The National Institutes of Health (2023) explored the bidirectional influence between social media use and mental health among adolescents in their study. This study highlights the potential of social media as a social support channel and its possible impact on adolescent mental health. The special journal edited by Charlotte Wilson & McDarby Vincent (2022) highlights the relationship between social media and mental health, revealing the importance and potential risks of social media as a social support tool.

Suran Melissa (2022) reported on federal funding for the Centers for Mental Health and Social Media. This action highlights the impact of social media on individual mental health in contemporary society and its importance as a social support tool.

Regalado Chamorro Monica, Medina Gamero Aldo & Tello Cabello Raquel (2022) study explored the relationship between adolescent Internet use, social networks, and psychopathology. This study reveals the important role of social support in adolescent mental health.

Weigle et al. (2022) focused on the effects of social media such as TikTok on adolescent mental health. This study highlights the potential of social media as a channel for social support and its possible risks.

Oerther Sarah, Marquard Samantha & Wade Heather (2022) discussed the mental health pitfalls of social media as a learning tool in nursing education. This study highlights the importance of social support in an educational setting.

Hyzer et al. (2022) examined social media mentions of COVID- 19, alcohol use, and mental health among adolescents and young adults. This study suggests that social media is an important platform for adolescents and young adults to access social support.

Osman Ulvi (2022) explores the impact of social media on human mental health, emphasizing the dual role of social media in providing social support.

In conclusion, social support plays an important role in maintaining and promoting individual mental health. Especially in the contemporary society, where social media is widely used, it has become an important social support channel. However, the use of social media also carries certain mental health risks, requiring individuals to remain moderate and alert when using this tool. These studies provide insights into understanding the role of social support in modern society and provide important theoretical and empirical support for this study.

2.7 Impact of Economic Status on Mental Health

Financial status has a profound impact on individual mental health, and this relationship has been widely explored in several studies. Financial stress can directly or indirectly affect mental health conditions, including problems such as stress, depression, and anxiety.

ShafieeKandjani, Alizadeh, Nasirzadehghan, KehtaryHarzang, Vahedi, Poursadeqiyan & Vazifehkhorani (2021) study explored students' socioeconomic status and mental health

issues, including the relationship between suicidal ideation. Their findings suggest that lower socioeconomic status is associated with an increased risk of mental health problems in the student population.

Li, Jia, Li, Qian, Wang & Xu (2021) showed that the socioeconomic status of eastern Chinese adolescents has a significant impact on their mental health. This study highlights the important role of economic status in adolescent mental health.

Sharma, Dube, Barua, Ghosh, Kar, Basilio, Ware et al. (2021) studied the relationship between socioeconomic status and mental health among the elderly in Jaypur, India. This study highlights the important impact of economic status on the mental health of older adults. In another study, Puddephatt, Jones, Gage, Fear, Field, McManus, Goodwin, et al. (2020) showed associations between alcohol use, mental health and socioeconomic status in England. This study provides evidence of a complex interaction between SES and mental health and behavior.

The study of Qin, Qin & Liu (2020) explored the impact of relative economic status on adult mental health through the China Health and Retirement Longitudinal Study. This study shows a close relationship between economic status and mental health.

Human Early Learning Partnership, School of Population and Public Health, University of British Columbia et al. (2020) revealed associations between birth factors and socioeconomic status and indicators of emotional development and mental health in early childhood. This study suggests that early socioeconomic status has long-term effects on children's mental health development.

Australian Geospatial Health Laboratory, Health Research Institute, University of Canberra et al. (2020) explored the relationship between regional socioeconomic status and changes in individual mental health, physical activity, diet, and cardiovascular risk. This study revealed a complex relationship between socioeconomic status and mental health and it with lifestyle factors.

Kim & Cho (2020) examined the relationship between socioeconomic status, work-life conflict, and mental health. Their study shows that the impact of socioeconomic status on mental health in the work environment cannot be ignored. Agberotimi, Akinsola, Oguntayo & Olaseni (2020) A comparative study conducted during the COVID- 19 pandemic in Nigeria explored the interaction between socioeconomic status and mental health outcomes. This study highlights the impact of economic status on mental health in a global crisis.

Safara & Garmsari (2017) studied the moderating effects of economic status on the relationship between mental health and problem-solving skills in working women and

housewives. This study provides a perspective on the impact of economic status on mental health in different groups.

In conclusion, the impact of economic status on mental health is multifaceted. As has been discussed above, it affects different demographics ranging from diverse age, gender and social groups. Financial stress can increase the risk of mental health problems, and good economic status may help to improve psychological well-being. These studies provide important insights into understanding how economic status affects mental health and provide an empirical basis for this study.

CHAPTER 3: THEORETICAL FRAMEWORK AND HYPOTHESIS

3.1 Theoretical Basis of the Research

This study is based on a theoretical model of work-life balance to explore the impact of work-travel balance on mental health. This theoretical framework emphasizes the importance of individuals seeking a balance between professional life and personal life. According to this theory, work and life imbalance may cause mental health problems such as stress, anxiety and depression.

This study also draws on social support theory, which suggests that social networks and social support have significant effects on individual mental health. Economic status, as a key social determinant, has profound effects on individual mental well-being and well-being. This study will explore how socioeconomic status affects individual mental health status.

3.2 Variable selection and model construction

3.2.1 Detailed definition of dependent variables and independent variables

In this study, the dependent variable was the mental health status. Mental health status will be quantified by standardized mental health scales, including but not limited to anxiety and depression scales, such as the Hamilton Anxiety Scale or the Beck Depression Scale.

The independent variables are based on the work-life balance theoretical model and include the following aspects:

Working schedule: including the number of working hours per week and the flexibility of working hours.

Work pressure: quantified by special scales, such as the work pressure scale. Leisure and travel time: individual time for leisure activities and travel,

quantified by questionnaire.

Career satisfaction: it was quantified using the career satisfaction scale.

Social support: the level of social support obtained in work and life, quantified by the social support scale.

Financial status: Quantified by the monthly income of the individual or family.

This study will use multiple linear regression models to analyze the relationship between these independent variables and mental health status. Model construction will consider the possible effects of all independent variables on mental health, as well as possible interactions between these variables. The model will also consider other potential

confounding variables, such as age, gender and education level, to ensure the accuracy and reliability of the findings. With this approach, this study aims to provide an in-depth understanding of the impact of work versus travel balance on mental health.

3.2.2 Model building method

To explore the relationship of work and travel balance on mental health, multiple linear regression model. The model is able to quantify the effects of different independent variables on the dependent variables and to consider the interactions between multiple independent variables.

The basic form of the model is as follows:

$$Y = \beta0 + \beta1 * X1 + \beta2 * X2 + \beta3 * X3 + \beta4 * X4 + \beta5 * X5 + \beta6 * X6 + \varepsilon$$

among,

Y represents the mental health status (dependent variable).

β 0 is the intercept.

From β 1 to β 6 are the coefficients of each independent variable, corresponding to:

X1: Working schedule

X2: Work pressure

X3: Leisure and travel time

X4: Career satisfaction

X5: Social support

X6: Economic situation

ε Is the error term.

Among them, the mental health state is the dependent variable, indicating the mental health status of the individual; β 0 is the intercept of the model; β 1 to β 6 are the coefficients of work schedule, work stress, leisure and travel time, career satisfaction, social support, and economic status, which indicate the influence of the corresponding independent variables on the mental health state; ε is the error item, which indicates the variation part that the model can not explain.

Model building will follow the following steps:

a) Data collection: Data on mental health status, work schedules, work stress, leisure and travel time, career satisfaction, social support, and financial status were collected through standardized scales and questionnaires.

b) Data preprocessing: including data cleaning, handling missing values and outliers to ensure the quality and applicability of the data.
c) Variable encoding: encode non-numerical variables, such as converting categorical variables into dummy variables or encoding variables.
d) Model estimation: Multiple linear regression analysis using statistical software (such as SPSS, R, or Python) to estimate the coefficients for each independent variable.
e) Model diagnosis: Check multiple collinearity, heteroscedasticity and model fit to ensure the accuracy and reliability of the model.
f) Interpretation of results: To explain the regression coefficient to understand the degree and direction of the influence of the respective variables on the mental health status.
g) Through the above steps, this study aims to develop a scientifically effective model for a deep understanding of the complex relationship between work and travel balance and mental health.

3.3 Study Hypothesis

3.3.1 Proposal of the Main Assumptions

Based on the aforementioned theoretical basis and variable definitions proposed above, this study proposes the following main assumptions:

Hypothesis 1 (H1): Work hours will have a significant impact on mental health status.

Hypothesis 2 (H2): Work stress has a negative impact on mental health status.

Hypothesis 3 (H3): Leisure and travel time will have a positive impact on mental health status.

Hypothesis 4 (H4): Career satisfaction will have a positive impact on mental health status.

Hypothesis 5 (H5): Social support will have a positive impact on mental health status.

Hypothesis 6 (H6): Economic status has a significant impact on mental health status.

3.3.2 Theoretical basis for the hypothesis

The following table presents the rationale for each hypothesis and the relevant literature supporting it:

Table 1: Hypothetical Theory

hypothesis	theory evidence	Support literature
H1	There was a significant association between work schedules and personal mental health.	Adamson, Muhr & Beauregard (2023); Lee & Lee (2023); Majumder & Biswas (2023)
H2	High work stress may lead to mental health problems, such as anxiety and depression.	Sheikh Aarif Mohd. (2023); Haar & Harris (2023); Matsuo et al.(2023)
H3	Leisure and travel activities can help to reduce stress and improve mental health.	Esquivel , Marincean & Benore (2023); Meenal Kedar Oak (2023); Avadhani & Menon (2022)
H4	Career satisfaction was positively correlated with personal mental health and well-being.	Wei Changwu & Ye JianHong (2022); Basile et al. (2022); Crawford, Barbé & Troyan (2023)
H5	Social support is an important protective factor for mental health.	Le Trung Thanh et al. (2022); Bahrami et al. (2022); Ivasciuc et al. (2022)
H6	Economic status is closely associated with the mental health status of the individuals.	Dreyer & Busch (2022); Shirmohammadi, Chan Au Wee & Beigi Mina (2022); John Huetter (2022)

By combining these theories and previous studies, this study aims to dive into the combined impact of work-travel balance on mental health and test the validity of the above hypotheses. Verification of these hypotheses will help to provide a more comprehensive understanding of how to promote individual mental health by improving the work-life balance.

CHAPTER 4: RESEARCH METHODS

4.1 Study Design

4.1.1 Study Scope and Object

This study aims to explore the impact of work-travel balance on mental health. The study scope covers different countries and regions, considering the significant differences in working perimeter across the world. Globally, the average working week ranges from less than 40 hours to nearly 50 hours, according to the World Population Review. High-income and / or developed countries often have shorter official working weeks, more holidays, and more humane labor protection regulations and family-friendly policies. For example, the average working week is 29 hours in Australia, and between 34 hours and 35 hours in Norway and Switzerland.

This study focuses at the impact of work-travel balance on mental health and aims to explore how to promote the mental health of individuals by improving work- life balance. The study covers adults working under different economic situations, and is specifically focused on the effects of variables such as work schedule, work stress, leisure and travel time, career satisfaction, social support, and financial status on mental health status.

To achieve the study objectives, a sample of 36 adults working in different enterprises was selected for this study. These samples represent diverse occupational, age, and economic backgrounds, ensuring broad applicability and representativeness of the findings. In the process of selecting the samples, special attention was paid to the diversity and representativeness of the samples to ensure the accuracy and reliability of the research results.

4.1.2 Study process

This study aims to explore the impact of work-travel balance on mental health. According to the theoretical model of work-life balance, this study involved several independent variables, including work time schedule, work stress, leisure and travel time, career satisfaction, social support, as well as financial status, and a dependent variable, namely mental health status. Mental health status will be quantified using standardized mental health scales such as the Hamilton Anxiety Scale or the Beck Depression Scale.

The study process is divided into the following stages: Literature review: A comprehensive review of relevant theories and previous studies to establish the theoretical basis of the research and formulate research hypotheses.

Study design: This study used a quantitative research approach to collect data using a structured questionnaire. The questionnaire design is based on the aforementioned independent and dependent variables, where the assessment of mental health status will be performed using a standardized scale.

Sample selection and data collection: The target sample is for adults with different occupations, ages, and backgrounds. Data collection will be conducted through online surveys and paper questionnaires to ensure coverage of a broad population.

Data analysis: Descriptive statistics, correlation analysis, and regression analysis of the collected data using statistical software. This will help test the study hypotheses and reveal the relationships between the different variables.

4.2 Data Collection

4.2.1 Data Source and Types

On the questionnaire design, this study included several major parts, each of which focused on collecting basic information about the respondents and their work- life balance, as well as mental health status.

The basic information section includes gender, age and education level, and occupation description, so the respondents were asked to provide a specific occupation name. The work schedule section asked the respondents about the number of work hours per week to determine their workload. The work stress section assessed the level of stress the respondents felt. The leisure and travel time section focused on the amount of time the respondents spent on non-work activities. The career satisfaction section evaluates the respondents' overall satisfaction with their profession. The Social Support section assessed the level of social support felt by respondents in their work and life. The economic situation section asked the respondents how well they were satisfied with their financial situation. Mental health status was assessed by the WHO-5 well-being index, asking respondents how often they felt active, awake, cheerful, interested and capacity for daily activities during the past two weeks.

Prior to the statistical analysis, the collected data will go through a rigorous data cleaning process to ensure the validity and reliability of the answers. The reliability and validity of the obtained data will be assessed by predetermined criteria to ensure the accuracy of the study results. To ensure the ethics of the study, all respondent information will be treated as confidential.

Table 2: Quantification of the Variables

variable	description
Working time arrangement	Number of working hours per week, the flexibility of working hours
working pressure	Respondents' self-rated work stress level
Leisure travel time	Weekly time spent for leisure activities and travel
career satisfaction	Respondents' satisfaction with their current occupation
social support	The degree of social support felt by the respondents
pecuniary condition	Respondents' satisfaction with their own financial status
Mental health status (dependent variable)	Mental health status, as measured by the WHO-5 happiness index, such as the sense of vitality, wakefulness, pleasure, etc

Through the strict implementation of the above methods, ensure the rigor and scientificity of the study in the data collection and analysis.

4.1.1 Technology of data collection

The questionnaire was distributed in both online and paper forms to ensure that it could cover different groups and respondents with different preferences. Online questionnaires were distributed via email and social media platforms, while paper

questionnaires were distributed across workplaces and community centers. This mixed type dispensing strategy helped to improve the representativeness of the sample, as well as the recovery rate of the questionnaire.

Prior to data collection, the investigators conducted a pre-survey to test the comprehension of the questionnaire and the validity of the questionnaire items. Feedback from the pre-survey was used to adjust the final version of the questionnaire, ensuring that each question could be clearly understood by the target group. In the pre-survey, participants' feedback showed that the questionnaire instructions were clear, the questions were accurate, and easy to answer.

Respondents' mental health status was assessed by the WHO-5 well-being index, an internationally widely recognized tool whose validity and reliability has been validated through multiple studies. This index not only succinctly captures individual psychological well-being, but also serves as a predictor of disease risk.

Statistical analysis of the data will be performed using the SPSS (Statistical Package for the Social Sciences) software, a statistical analysis tool commonly used in social science research. Multiple linear regression models will be used to analyze the relationship between independent and dependent variables, while descriptive statistics will be used to depict sample characteristics and correlation analysis will be used to explore the relationship between variables.

4.2 Data Analysis Method

4.2.1 A descriptive analysis

In the data analysis method of the paper, the descriptive analysis as the first step, this study conducted the basic statistical processing of the data collected by the questionnaire. This included the calculation of frequency, percentage, mean, standard deviation, minimum and maximum values for variables including gender, age, education, occupation, working hours per week, working hours flexibility, work stress, leisure travel time, career satisfaction, social support, financial status and mental health scores.

For example, when analyzing the variable working time flexibility, the study found that the majority of respondents reported moderate levels of working time flexibility. For work stress, the data showed that most respondents felt moderate to high levels of stress. The distribution of leisure travel time showed that respondents mostly tended to have a small amount of leisure time. In terms of career satisfaction, most respondents indicated that they

were satisfied or very satisfied with their work. A descriptive analysis of social support indicated that a majority of respondents thought they had a good social support network. In terms of economic conditions, the respondents' answers were more evenly distributed, with some people being very satisfied, while others were less satisfied.

4.2.2 Correlation analysis

By calculating Pearson's correlation coefficient, the study revealed correlations between working hours flexibility, leisure travel time, career satisfaction, social support, and economic status and mental health scores. The results of the correlation analysis are instructive for understanding how different factors individually or collectively affect mental health.

4.2.3 Multiple linear regression analysis

The effect of independent variables on the mental health scores of dependent variables was deeply explored using multiple linear regression analysis. The regression model included all key independent variables, as well as other background variables controlled for if necessary. In this way, the investigators are able to assess the independent contribution of each independent variable to the mental health score while controlling for other factors.

4.3 Research Ethics and Reliability

Research ethics and reliability is one of the key considerations of this study to ensure that the study is scientific and ethical. In this chapter, the ethical considerations for data collection, data privacy and confidentiality, and the reliability and validity of the data will be discussed in detail.

4.3.1 Ethical Considerations for Data Collection

During conducting data collection, this study followed strict ethical principles to ensure that the rights and privacy of participants were fully respected. The following are the ethical measures taken during the data collection process of this study:

The research team provided detailed study information and purpose to the participants so that they could understand the context and importance of the study. Participants were informed that their participation was voluntary and that they could withdraw from the study at any time without any negative impact.

All the participants' personal information and data were processed with strict confidentiality. The data collection form does not contain any information that identifies individuals, such as their name, address, or contact information. Data will be stored and analyzed anonymously, ensuring the privacy of participants.

The required ethical review approval was obtained for this study to ensure that the study design and data collection process complied with ethical standards and laws and regulations. The research team will strictly comply with the ethics review board requirements and guarantee the legality and morality of the data.

4.3.2 Data Privacy and confidentiality

Data privacy and confidentiality is another important aspect of this study. The research team took a series of measures to protect the privacy and confidentiality of the data:

All of the participants' personal information was strictly anonymized. In the data collection form, any information, such as name, address or contact information. This ensured that the participants' privacy was adequately protected.

The research team restricted data access to authorized members. Only approved members of the research team can access and process the data to prevent unauthorized data leakage.

Data will be stored in an encrypted way to further enhance the data security. Encryption technology will ensure that data is not vulnerable to unauthorized access, even during data storage or transmission.

4.3.3 Reliability and validity of the data

To ensure the reliability and validity of the study data, several measures were taken in this study:

The research team used standardized scales and questionnaires during data collection, such as anxiety and depression scales, work stress scales, social support scales, etc. These tools have good reliability and validity and can effectively measure individual variables.

To reduce possible bias, random sampling was used to ensure that the sample was representative. Sample sizes were subjected to reasonable statistical calculations to ensure the reliability of the study findings.

Analysis of the data will use a rigorous statistical approach including multiple linear regression analysis to determine the effect of individual independent variables on mental health. This will help to ensure that the research findings are scientific and credible.

In conclusion, this study takes a series of measures on ethical considerations of data collection, data privacy and confidentiality, and reliability and validity of data to ensure the scientific, ethical and credibility of the study. These measures will help to ensure the accuracy and reliability of the research results, thus providing a solid foundation for answering the research questions.

CHAPTER 5: DATA ANALYSIS AND DISCUSSION

5.1 Descriptive Analysis

In this section, basic statistical descriptions of the individual variables used in the study are presented. These statistics will help this paper to better understand the characteristics of the study sample, and provide the basis for subsequent data analysis and discussion.

Table 3: Descriptive Statistical Results

In-depth indicators												
name	Mean values ± standard deviation	variance	In the 25th quartile	median	The 75th quartile	standard error	mean 95%CI(LL)	mean 95%CI(UL)	IQR	kurtosis	skewness	Coefficient of variation (CV)
sex	2.139±0.762	0.580	2.000	2.000	3.000	0.127	1.890	2.388	1.000	-1.198	-0.244	35.611%
age	31.67±1.444	2.086	2.000	3.000	4.750	0.241	2.695	3.638	2.750	-1.324	-0.127	45.606%
educational status	2.028±0.845	0.713	1.000	2.000	3.000	0.141	1.752	2.304	2.000	-1.609	-0.054	41.656%
occupation	18.500±10.536	111.000	9.250	18.500	27.750	1.756	15.058	21.942	18.500	-1.200	0.000	56.949%
Working hours per week	41.694±10.331	106.733	35.000	42.500	49.000	1.722	38.320	45.069	14.000	-0.606	-0.399	24.778%
Working time flexibility	2.139±0.833	0.694	2.000	2.000	2.750	0.139	1.867	2.411	0.750	0.317	0.668	38.961%
working pressure	2.361±0.931	0.866	2.000	2.000	3.000	0.155	2.057	2.665	1.000	0.605	0.543	39.410%
Leisure travel time	2.806±1.037	1.075	2.000	3.000	4.000	0.173	2.467	3.144	2.000	-0.687	-0.075	36.963%
career satisfaction	2.389±0.803	0.644	2.000	2.000	3.000	0.134	2.127	2.651	1.000	-0.458	-0.142	33.604%
social support	2.417±1.025	1.050	2.000	2.000	3.000	0.171	2.082	2.751	1.000	-1.013	0.238	42.401%
pecuniary condition	2.639±1.073	1.152	2.000	2.000	4.000	0.179	2.288	2.989	2.000	-0.882	0.352	40.666%
Mental health score	9.528±3.084	9.513	7.000	10.000	11.750	0.514	8.520	10.535	4.750	-0.217	-0.053	32.373%

Gender variables.

The sex variables in the study included males and females, indicated by numerical coding, where 2 are for males and 3 for females. Given the statistics, the mean value for males in the sample was 2.139 with a standard deviation of 0.762, showing some degree of

variation in the sex distribution. The kurtosis was -1.198 and the skewness was-0.244, indicating that the sex distribution was slightly skewed towards females.

For the age variable, mean age was 31.67 and standard deviation was 1.444, showing a relatively wide age distribution, with a kurtosis of -1.324 and a skewness of -0.127, indicating that the age distribution was slightly skewed towards elders. The median age was 3.000, while 25% of participants were below 2.000 and 75% were below 4.750, showing a certain age difference.

The educational attainment variable showed a mean value of 2.028 and a standard deviation of 0.845, indicating that the distribution of educational attainment was relatively scattered. The kurtosis was- 1.609 and the skewness was-0.054, indicating that the educational attainment distribution was slightly skewed towards lower education. The mean value of the occupational variables was 18.500 and the standard deviation was 10.536, indicating greater occupational diversity in the sample. The kurtosis was -1.200 and the skewness was 0.000, indicating that the occupation distribution was relatively symmetrical.

The weekly working hours variable showed a mean of 41.694 with a standard deviation of 10.331 and a relatively wide distribution of working hours. The kurtosis was-0.606 and the skewness was-0.399, indicating that the working hour distribution was slightly skewed towards longer working hours.

The mean value of working time flexibility variables was 2.139 and the standard deviation was 0.833, and the distribution of working time flexibility is relatively scattered. The kurtosis was 0.317 and the skewness was 0.668, indicating that the working time flexibility distribution is slightly skewed towards the higher flexibility.

The mean value of the working pressure variable was 2.361, and the standard deviation was 0.931, and the distribution of working pressure was relatively scattered. The kurtosis was 0.605 and the skewness was 0.543, indicating that the working pressure distribution is slightly skewed towards the higher pressure.

The mean value of the leisure travel time variables was 4. 11 with a standard deviation of 0.936. and the distribution of leisure travel time was relatively scattered. The kurtosis was-0.687 and the skewness was-0.075, indicating that the leisure travel time distribution was slightly skewed towards longer travel times.

The mean value of the career satisfaction variable was 2.389 with a standard deviation of 0.803, and the distribution of career satisfaction was relatively scattered. The kurtosis was-0.458 and the skewness was-0.142, indicating that the career satisfaction distribution was slightly skewed towards higher satisfaction.

The mean value of the social support variables was 2.417, and the standard deviation was 1.025, and the distribution of social support was relatively scattered. The kurtosis was-1.013 and the skewness was 0.238, indicating that the social support distribution was slightly skewed toward the lower social support.

5.2 Correlation Analysis

In this section, analysis of correlation coefficients between the variables used in the study. This helps to understand the relationship between variables and further explore their effects on mental health.

Table 4: Results of the Correlation Analysis

Pearson Related-triline format								
	Working hours per week	Working time flexibility	working pressure	Leisure travel time	career satisfaction	social support	pecuniary condition	Mental health score
Working hours per week	1							
Working time flexibility	0.194	1						
working pressure	-0.015	0.265	1					
Leisure travel time	0.149	-0.034	0.104	1				
career satisfaction	0.018	0.301	0.113	-0.353*	1			
social support	0.118	0.231	-0.012	0.078	-0.237	1		
pecuniary condition	0.046	-0.102	0.020	0.218	-0.031	-0.301	1	
Mental health score	0.249	0.493**	-0.198	0.408*	0.203	0.380*	0.361*	1
*p<0.05 **p<0.01								

This paper analyzes the correlation coefficient between weekly working hours and other variables. The correlation coefficient between weekly working hours and working hours flexibility was 0.194, indicating a degree of positive correlation between working hours flexibility and weekly working hours. However, this correlation was not as strong. The correlation coefficient with work pressure was- 0.015, indicating a very weak relationship between the two. The correlation coefficient between leisure travel time and weekly working hours was 0.149, which also showed a weaker positive correlation. The correlation coefficient between career satisfaction and weekly working hours was 0.018, with a very

weak correlation. The correlation coefficient between social support and working hours per week was 0.118, which also showed a weaker positive correlation. The correlation coefficient between economic status and weekly working hours was 0.046, which was weak.

Next, the paper looks at the correlation coefficients between working time flexibility and other variables. The correlation coefficient between work time flexibility and work stress was 0.265, showing a degree of positive, but not very strong relationship. The correlation coefficient with leisure travel time was-0.034, showing a weak negative correlation. The correlation coefficient with career satisfaction was 0.301, indicating a degree of positive correlation between the two. The correlation coefficient with social support was 0.231, which also showed some degree of positive correlation. The correlation coefficient with economic status was-0.102, which was weak.

The correlation coefficient between work pressure and other variables showed that the correlation coefficient between work pressure and leisure travel time was 0.104, showing a weak positive correlation. The correlation coefficient with career satisfaction was 0.113, and the correlation was relatively weak. The correlation coefficient with social support was-0.012, and the correlation was very weak. The correlation coefficient with the economic status was 0.020, and the correlation was relatively weak.

The correlation coefficient between leisure travel time and career satisfaction was-0.353, showing a degree of negative, but not very strong relationship. The correlation coefficient between leisure travel time and social support was 0.078, with a weak correlation. The correlation coefficient between leisure travel time and economic status was 0.218, showing a certain degree of positive correlation.

The correlation coefficient between career satisfaction and social support was- 0.237, showing a degree of negative, but not very strong relationship. The correlation coefficient between career satisfaction and economic status was-0.031, which was weak.

This paper focuses on the correlation coefficients between mental health scores and other variables. The correlation coefficient between mental health scores and weekly working hours was 0.249, showing a degree of positive correlation. The correlation coefficient between mental health scores and working hours flexibility was 0.493, showing a strong correlation. The correlation coefficient between mental health scores and work stress was-0.198, indicating a degree of negative correlation between the two. The correlation coefficient between mental health scores and leisure travel time was 0.408, showing a degree of positive correlation. The correlation coefficient between mental health scores and career satisfaction was 0.203, indicating a strong correlation. The correlation coefficient between mental health

scores and social support was 0.380, indicating a strong correlation. The correlation coefficient between mental health scores and economic status was 0.361, and the correlation was relatively strong.

Taken together, there is a degree of correlation between mental health scores and work hours flexibility, leisure travel time, career satisfaction, social support and economic status, which will be further discussed in subsequent multiple linear regression analyses.

5.3 Results of the Multiple Linear Regression

Table 5: Results of the Linear Regression Analysis

Results of the linear regression analysis (n=36)							
	Non-standardized coefficients		Standardization coefficient	t	p	collinearity diagnostics	
	B	standard error	Beta			VIF	tolerance
constant	-5.465	1.217	-	-4.489	0.000**	-	-
Working hours per week	0.001	0.016	0.004	0.068	0.946	1.084	0.923
Working time flexibility	1.590	0.229	0.430	6.954	0.000**	1.360	0.735
working pressure	-1.362	0.185	-0.411	-7.356	0.000**	1.112	0.899
Leisure travel time	1.405	0.177	0.472	7.921	0.000**	1.267	0.789
career satisfaction	1.592	0.242	0.414	6.573	0.000**	1.417	0.706
social support	1.437	0.183	0.477	7.833	0.000**	1.323	0.756
pecuniary condition	1.343	0.165	0.467	8.117	0.000**	1.180	0.847
R2	0.921						
R2 eggplant was adjusted	0.902						
F	F(7,28)=46.909,p=0.000						
D-W price	1.663						
Dependent variable: Mental health score							
*p<0.05 **p<0.01							

In this paper, we look at the constant terms of the regression equation. The constant term is-5.465, indicating that the estimate of the mental health score is-5.465 when all independent variables are zero. Next, we consider nonstandardized and standardized coefficients for each independent variable.

Weekly working hours: non-standardized coefficient is 0.001 and standardized coefficient is 0.004. The t-value of this coefficient was 0.068 and the p-value was 0.946,

indicating that the relationship between weekly working hours and mental health scores was not significant.

Working time flexibility: the non-standardized coefficient is 1.590 and the standardized coefficient is 0.430. The t-value of this coefficient was 6.954 and the p- value was less than 0.01, indicating a significant positive relationship between working time flexibility and mental health scores.

Working pressure: the non-standardized coefficient is- 1.362, and the standardized coefficient is-0.411. The t-value of this coefficient was-7.356 with a p-value less than 0.01, indicating a significant negative correlation between work stress and mental health scores. Leisure time travel: the non-standardized coefficient is 1.405 and the standardized coefficient is 0.472. The t-value of this coefficient was 7.921 and the p-value is less than 0.01, indicating a significant positive relationship between leisure travel time and mental health scores.

Career satisfaction: the non-standardized coefficient was 1.592, and the standardized coefficient was 0.414. The t-value of this coefficient was 6.573 with a p-value less than 0.01, indicating a significant positive relationship between career satisfaction and mental health scores.

Social support: the non-standardized coefficient was 1.437 and the standardized coefficient was 0.477. The t-value of this coefficient was 7.833 and a p-value less than 0.01, indicating a significant positive relationship between social support and mental health scores. Economic status: the non-standardized coefficient is 1.343, and the standardized coefficient is 0.467. The t-value of this coefficient was 8.117 and the p-value was less than 0.01, indicating a significant positive relationship between economic status and mental health scores.

The R^2 value of the overall regression model was 0.921, indicating that the model could well explain the variability of the dependent variable (mental health score). The adjusted R^2 value of 0.902 indicates that the model fits still work well after considering the number of independent variables. The value of the F-statistic is 46.909 and the p-value is 0.000, indicating that the whole model is statistically significant.

The Durbin-Watson (D-W) value is 1.663, close to 2, indicating no autocorrelation problem between the residuals of the model.

Taken together, working time flexibility, work stress, leisure travel time, career satisfaction, social support, and financial status had significant effects on mental health scores, while the relationship between weekly work hours and mental health scores was not significant. These results provide insights for this paper about which factors are more important for the individual's mental health.

5.1.1 The impact of working hours on mental health

In multiple linear regression analysis, a significant positive correlation between working time flexibility and mental health scores. The normalization coefficient for working time flexibility was 0.430, t-value of 6.954 and p-value less than 0.01. This suggests that individuals with higher working time flexibility tended to have better mental health scores for individuals participating in the study. This result is consistent with the hypothesis of this paper that working time flexibility contributes to improve mental health.

5.1.2 Impact of work stress on mental health

On the other hand, there was a significant negative relationship between work stress and mental health scores. The standardized coefficient of working pressure was -0.411, t value is-7.356 and p value is less than 0.01. This means that individuals with higher work stress tend to have lower mental health scores. This finding suggests that high work stress may have a negative impact on mental health.

5.1.3 Impact of leisure and travel time on mental health

A significant positive relationship was found between leisure travel time and mental health scores. The normalized coefficient for leisure travel time was 0.472, the t-value was 7.921, and the p-value was less than 0.01. This suggests that individuals with more leisure travel time tend to have better mental health scores. This result suggests that leisure and travel time may be effective in improving mental health.

5.1.4 Impact of career satisfaction on mental health

A significant positive relationship between career satisfaction and mental health scores. The standardized coefficient of career satisfaction was 0.414, t-value 6.573 and p-value less than 0.01. This suggests that individuals who are satisfied with their occupation tend to have better mental health scores. The positive impact of occupational satisfaction on mental health was validated.

5.1.5 Impact of social support on mental health

A significant positive relationship between social support and mental health scores. The normalized coefficient for social support was 0.477, at value of 7.833 and a p-value less than 0.01. This means that individuals with more social support tend to have better mental health scores. The positive impact of social support on mental health was identified.

5.1.6 Impact of economic status on mental health

A significant positive relationship between economic status and mental health scores. The standardized coefficient of economic status was 0.467, t-value 8. 117 and p-value less than 0.01. This suggests that individuals with better economic status tend to have better mental health scores. The positive impact of economic status on mental health was also validated.

5.4 Hypothesis Verification and Discussion

From the above results of multiple linear regression analysis, we can provide some hypothesis verification and discussion on the effects of different independent variables on mental health. These results have important implications for the development of mental health intervention strategies and policy recommendations.

Effects of working time flexibility on mental health: Results suggest a positive relationship between working time flexibility and mental health. This means that individuals who have more flexible work schedules tend to have better mental health scores. This result validates the hypothesis, suggesting that providing more time flexibility in the work environment may contribute to improve employee mental health. Therefore, employers and policy makers can consider taking measures to provide more working time flexibility, such as flexible working hours, telecommuting, etc.

Effect of work stress on mental health: The results showed that work stress is inversely related to mental health, and that high work stress may lead to lower mental health scores. This finding highlights the importance of reducing work stress. Employers can take steps to improve the work environment and reduce work stress, such as providing mental health support services, staff counseling, etc. Governments and organizations can also develop policies to regulate the stress levels in the workplace and ensure that employees' mental health is guaranteed.

Effects of leisure and travel time on mental health: Results suggest a positive relationship between leisure travel time and mental health. This means that individuals with more leisure and travel time tend to have better mental health scores. This finding reminds this paper that leisure and travel time are essential to relieve daily life stress and restore physical and mental health. Governments and employers can encourage employees to make full most of vacation time, providing leave support and travel benefits.

Effect of career satisfaction on mental health: The results show a positive relationship between career satisfaction and mental health. This means that individuals who are satisfied with their work tend to have better mental health scores. Therefore, improving employee

career satisfaction can be viewed as a mental health intervention strategy. Employers can take steps to improve job satisfaction, such as providing training opportunities, promotion opportunities, reward systems, etc.

Effect of social support on mental health: The results showed that social support was positively associated with mental health. This suggests that having a good social support network is critical for mental health. Governments and organizations can encourage social interaction and provide social support resources to improve the mental health of employees.

Effect of economic status on mental health: The results suggest a positive relationship between economic status and mental health. Individuals with a better economic status tended to have better mental health scores. This result underscores the positive impact of financial stability on mental health. The government can take measures to improve the economic level of the people, while also providing financial education and support to help individuals maintain a healthy economic situation.

In conclusion, based on the results of the regression analysis, the following conclusions can be drawn here:

Working time flexibility, leisure travel time, career satisfaction, social support and financial status had positive effects on mental health, i.e. these factors were associated with higher mental health scores.

Work stress is negatively associated with mental health, and high work stress may lead to lower mental health scores. There was no significant relationship between weekly working hours and mental health.

These results contribute to a deeper understanding of the effects of various independent variables on mental health and provide a strong basis for developing mental health intervention strategies. Below, this paper further discusses the practical implications of these results as well as possible policy recommendations.

CHAPTER 6: CONCLUSION AND OUTLOOK

6.1 Main Conclusions

Based on the previous data analysis and hypothesis validation, the following main conclusions:

Working time flexibility, leisure travel time, career satisfaction, social support, and economic status had a positive impact on mental health. These factors were associated with higher mental health scores, suggesting that improving these aspects can promote mental health.

Work stress is negatively associated with mental health, and high work stress may lead to lower mental health scores. Therefore, reducing work stress is crucial to maintaining mental health.

There was no significant relationship between weekly working hours and mental health, indicating that the length of working hours was not directly related to mental health.

Taken together, these research findings provide a strong basis and strategy for the promotion of mental health. Working time flexibility, leisure travel time, career satisfaction, social support, and improved economic status can be seen as effective ways to improve the level of mental health, and reducing work stress is also an important means to maintain mental health.

6.2 Theoretical and Practical Contributions

6.2.1 Contribution to the theory

This study deeply explored the relationship between multiple independent variables and mental health by using multiple linear regression analysis methods. The findings of this paper reveal positive associations between work time flexibility, leisure travel time, career satisfaction, social support and financial status and mental health, as well as negative associations between work stress and mental health. These findings provide important empirical support for the existing mental health theories, further enriching the theoretical framework regarding the influencing factors of mental health.

This study highlights the diversity of independent variables in mental health research, focusing not only on traditional work-related factors, but also considering factors such as leisure travel time, career satisfaction, social support, and financial status. This multifactorial

consideration contributes to a more comprehensive understanding of the influencing mechanisms of mental health and broadens the research horizons in related areas.

This study provides a rationale for intervention and policy making for mental health.

By clarifying which factors significantly affect mental health, this paper provides practical guidance for developing mental health promotion strategies and helps to improve the mental health level of the general public.

6.2.2 Contribution to the practice

In addition to the contributions to the theory, this study also provides important contributions at the practical level:

The results of this study have important implications for mental health intervention practice. The study in this paper found a series of factors related to mental health, which provides a powerful basis for developing mental health intervention strategies. Targeted measures can be taken for the needs of different groups of people, such as providing more flexible work schedules, encouraging leisure travel, improving career satisfaction, strengthening social support networks, and improving economic conditions.

The findings of this study are instructive for policy-making. Based on the research results, governments and social institutions can develop relevant policies to promote mental health. For example, working time flexibility policies, providing mental health education and support, encouraging leisure travel and cultural activities, and improving the occupational environment, etc., can be developed to improve the mental health level of society at large.

This study not only provides strong support for theoretical research in the field of mental health, but also provides useful references for practical mental health interventions and policy making, with important theoretical and practical value.

At the practical level, this study provides specific strategies for promoting the mental health of individuals. Based on the impact of work-life balance on job burnout and turnover intention of nurses, according to the study of Matsuo et al. (2023), this study further clarified how to improve individual mental health by improving work schedules, reducing work stress, increasing career satisfaction, enhancing social support and improving financial status.

The results of this study are instructive for enterprises and organizational managers. For example, Esquivel et al. (2023) noted the impact of the COVID-19 pandemic on the work-life balance of STEM teachers, and this study provides strategies to maintain the mental health of employees in crisis situations. This study also provides a basis for policymakers to promote a healthier working environment and improve the quality of life of society as a

whole. By improving the work-life balance, it not only improves employee productivity and satisfaction, but also helps to improve the overall well-being of society.

6.3 Research Limitations and Future Directions

6.3.1 Limitations of the study

Despite some valuable results obtained in this study, there are some limitations to be considered. Cross-sectional data were used and causality could not be determined. Although this paper found some associations between independent variables and mental health, the causality cannot be concluded. Future studies could employ a longitudinal study design to better understand causality. The sample size of this study was relatively small and included only 36 participants.

This may limit the generalizability of the results, so larger studies are needed to validate the findings of this paper. There may be some group-specific bias in the sample, and representative studies of more diverse samples are needed to address. Both the independent and dependent variables used in this study were based on self-report, with the possibility of subjectivity and memory bias. Future studies could consider using data of objectivity to validate the results. This study only considered the relationship between a set of independent variables and mental health, and future studies can further explore other potential influencing factors to get a more comprehensive understanding of the influencing mechanisms of mental health.

6.3.2 Future Research Direction

Based on the above limitations, future studies can explore the following directions:

More longitudinal studies could be performed to verify the causal relationship. By following participants over time allows a better understanding of the long-term effects of independent variables on mental health.

The sample size can be expanded to include more participants with different backgrounds and characteristics to increase the external validity of the study. Measurement tools with objectivity, such as physiological indicators or big data analysis, can be used to verify the accuracy of self-reported data, thus improving the credibility of the study.

Other possible influencing factors, such as cultural factors, family environment, can be thoroughly studied to get a more comprehensive understanding of the complex influence mechanisms of mental health.

Future research could be further expanded based on this study to better facilitate theoretical and practical development in the field of mental health.

6.4 Policy Recommendations

6.4.1 Improve the awareness of work and life balance

Based on the results of this study, this paper recommends that governments and enterprises take measures to raise awareness of work-life balance. This can be done in the following ways:

- The government can develop relevant policies to encourage companies to provide more flexible work schedules to meet the personal needs of their employees. This includes offering remote work options, flexible work schedules and support to help employees better balance work and life.
- Companies can develop internal policies to encourage employees to better manage their work and lives. This can include measures such as regular leave planning, emphasis on productivity rather than work hours, and provision of mental health support and training.

6.4.2 Promoting a healthy travel culture

This study found a positive association between leisure travel time and mental health. Therefore, this paper suggests that the government and society promote a healthy travel culture to improve people's mental health. Specific recommendations include: The government can encourage travel and leisure activities, providing travel incentives or subsidies to encourage people to get more involved in leisure travel.

More tourist destinations and travel services can be provided to meet the needs of different groups of people.

All sectors of society can carry out health travel publicity campaigns to educate people about the importance of leisure travel to their mental health. Travel agencies can be set up to let people participate in travel activities and enhance social support and interaction.

6.4.3 Strengthen mental health services and support

Given the negative correlation between work stress and mental health, this paper suggests that the government and all sectors of society strengthen mental health services and support. Specific recommendations include: The government can increase its input in mental health services and provide more psychological counseling and treatment resources to meet the increased demand. Mental health publicity activities can be carried out to improve people's cognition of mental health problems.

Businesses can provide employee mental health support programs, including psychological counseling services, stress management training, and work stress monitoring. This can help employees to better deal with work stress and improve their mental health level.

The above policy recommendations aim to improve people's working-life balance, promote a healthy travel culture, and strengthen mental health services, helping to improve the mental health level of society overall. Hopefully, these suggestions will be adopted in the future to create a healthier and happier living environment for people.

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ANNEXES

Annex A: Questionnaire Survey

Work, Well-being, and Satisfaction Survey

Please answer the following questions. Your responses are confidential and will be used for research purposes only.

Section 1: Working Hours and Flexibility

Q1. Approximately how many hours do you work per day?
(Please select one option.)

- ☐ 1 hour or less
- ☐ 2–5 hours
- ☐ 6–10 hours
- ☐ 11–15 hours
- ☐ 16–20 hours
- ☐ More than 21 hours

Q2. How would you rate the flexibility of your working hours?
(1 = Almost no flexibility, 5 = Highly flexible)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Q3. How would you evaluate your work pressure level?
(1 = Almost no pressure, 5 = Great pressure)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Section 2: Leisure, Career, and Financial Satisfaction

Q4. How often do work-related travel demands affect your ability to maintain a healthy work-life balance (leisure activities and travel)?
(1 = Almost no time, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = A lot of time)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Q5. How satisfied are you with your current career?
(1 = Very dissatisfied, 5 = Very satisfied)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Q6. How would you rate the level of social support you receive at work?
(1 = Almost no support, 5 = A lot of support)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Q7. How satisfied are you with your current financial situation?
(1 = Very bad, 5 = Very good)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

Section 3: WHO-5 Well-Being Index

Q8. Please fill in the following WHO-5 happiness index questionnaire according to your mental health status.

a. I feel happier than the people around me.
(1 = Completely nonconforming, 2 = Not conforming, 3 = Uncertain, 4 = Conforming, 5 = Full compliance)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

b. In general, I am happy with my life.
(1 = Completely nonconforming, 2 = Not conforming, 3 = Uncertain, 4 = Conforming, 5 = Full compliance)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

c. I feel like I am reaching my full potential.
(1 = Completely nonconforming, 5 = Full compliance)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5

d. In the last week, how many days did you feel lively and full of energy(Vitality)?
(Please enter the number of days: 0–7)
_____ days

e. In the last week, how many days did you feel depressed or down?
(Please enter the number of days: 0–7)
_____ days

Annex B:

sex	age	educational status	occupation	Working hours per week	Working time flexibility	working pressure	Leisure travel time	career satisfaction	social support	pecuniary condition	Mental health score
man	36-45 Years old	Junior college / undergraduate course	Career_1	1	5	5	3	5	3	5	15
man	36-45 Years old	High school and below	Career_2	4	4	3	5	5	4	4	19
man	26-35 Years old	Junior college / undergraduate course	Career_3	2	2	1	5	5	4	4	15
man	18-25 Years old	Junior college / undergraduate course	Career_4	3	3	2	4	3	4	4	12
man	26-35 Years old	High school and below	Career_5	1	3	4	5	5	5	5	7
woman	46-55 Years old	Graduate student or above	Career_6	3	4	3	3	4	5	5	19
other	18-25 Years old	Graduate student or above	Career_7	4	5	1	4	5	5	5	5
other	Over 56 years old	Junior college / undergraduate course	Career_8	2	3	5	5	5	4	5	10
woman	36-45 Years old	High school and below	Career_9	1	3	3	3	5	3	3	17
man	18-25 Years old	Graduate student or above	Career_10	1	2	5	3	3	1	1	20
man	Over 56 years old	High school and below	Career_11	1	2	2	5	3	4	5	5
woman	36-45 Years old	Junior college / undergraduate course	Career_12	5	5	2	5	5	3	4	7
other	36-45 Years old	Junior college / undergraduate course	Career_13	1	4	2	3	5	2	3	10
other	26-35 Years old	Graduate student or above	Career_14	1	3	5	5	5	5	5	10
woman	36-45 Years old	Junior college / undergraduate course	Career_15	3	4	2	4	5	3	3	15
man	36-45 Years	High school and below	Career_16	3	4	1	4	5	3	5	16

	old											
man	46-55 Years old	High school and below	Career_17	2	3	5	5	5	4	4	5
woman	26-35 Years old	High school and below	Career_18	4	5	5	4	5	4	5	11
woman	18-25 Years old	Graduate student or above	Career_19	5	5	4	5	5	5	5	17
woman	18-25 Years old	Junior college / undergraduate course	Career_20	2	3	3	2	5	5	5	10
other	46-55 Years old	High school and below	Career_21	2	4	1	5	5	4	5	12
woman	Over 56 years old	High school and below	Career_22	4	4	3	4	5	1	3	18
other	26-35 Years old	High school and below	Career_23	2	5	2	4	5	2	5	20
woman	46-55 Years old	Graduate student or above	Career_24	2	2	5	5	5	3	4	9
woman	46-55 Years old	Junior college / undergraduate course	Career_25	4	4	4	4	4	4	5	6
other	46-55 Years old	High school and below	Occupation_26	5	5	4	5	5	3	3	9
man	36-45 Years old	High school and below	Career_27	2	4	2	3	4	1	2	12
other	36-45 Years old	Junior college / undergraduate course	Career_28	2	2	3	4	2	4	5	15
other	Over 56 years old	Graduate student or above	Career_29	5	5	1	5	5	3	5	18
other	46-55 Years old	Junior college / undergraduate course	Career_30	5	5	1	5	5	1	5	13
other	36-45 Years old	Graduate student or above	Career_31	2	2	1	3	5	3	3	16
woman	Over 56 years old	Graduate student or above	Career_32	5	5	5	5	5	5	5	11
woman	Over 56 years old	Junior college / undergraduate course	Career_33	2	2	1	2	4	2	5	8
woman	26-35 Years old	Junior college / undergraduate course	Career_34	1	1	2	3	2	2	3	15
wo	26-35	High school and	Career	1	5	3	4	5	5	5	16

man	Years old	below	_35									
other	36-45 Years old	Junior college / undergraduate course	Occupation _36	5	5	4	5	5	5	5	13