

# **Mental readiness of high voltage electricity transmission system workers: The relationship with job insecurity**

**H.Tezcan Uysal and Nihat Pamuk\***

**Abstract:** The aim of this study is to investigate the potential correlation between job insecurity (JIS) and mental readiness (MR) among high voltage electricity transmission system workers. Additionally, the study aims to determine the extent and level of MR influenced by JIS, and to examine the statistical differences in MR based on various demographic factors. Various analyses, including validity, reliability, normality, correlation, multiple regression, Independent Sample T Test, and One-Way ANOVA tests, were conducted on the collected data. The results of the analyses revealed a significant negative relationship between quantitative and qualitative JIS and MR, with quantitative JIS having the most prominent impact on reducing MR among employees. Furthermore, when examining the demographic factors, it was observed that MR among high voltage electricity transmission system workers significantly varied based on employment status (public/private sector), use of depression medication, occupational accident history, employee age, education level, monthly income level, and work experience.

**Keywords:** mental health, high voltage electricity transmission, job insecurity, mental readiness

## **Introduction**

Due to the economic crises that have been continuing rapidly since the 1980s and increasing their impact in the global sense, and the neo-liberal policies put into practice, the needs of the employees in business life are constantly changing. Because of the economic crises in the world, the employment opportunities of the employees in many countries, especially in European countries and the USA, are decreasing and there are big increases in temporary employment

---

\* H.Tezcan Uysal (✉)

Department of Health Management, Bilecik Şeyh Edebali University, Türkiye

Nihat Pamuk

Department of Electrical and Electronics, Zonguldak Bülent Ecevit University, Türkiye

e-mail: h.tezcanuysal@hotmail.com (corresponding author)

contracts. Downsizing and restructuring patterns in working organizations, flexibility practices in business life, and rapid changes cause significant concern in terms of job security in employees. The reflection of these forms of change and transformation in business life on employees is realized in the form of increasing unemployment rates and fear of losing their jobs. This causes the non-standard employment of the employees, the risk related to their jobs and the perception of JIS in the employees. The concept of JIS, situated between unemployment and employment, and the perception of increasing workload bring along some negativities such as burnout on employees in business life.

The purposes of the research carried out in this context are to examine whether there is a significant relationship between JIS and MR in employees in the high-voltage electricity transmission system, and if there is a significant relationship, to determine in what direction and at what level JIS affects MR, and to reveal the statistical difference of MR according to demographic factors. For this purpose; a study has been carried out for employees of high-voltage electrical transmission system, which is an area of operation where psychological pressure and at the same time the probability of work accidents are high. Individuals working in this type of job must have a certain readiness mentally before and during the work period. The main reason for this need is the work accidents that can cause injury and even death that can occur in case of lack of MR. Therefore, it is necessary to examine the factors that may reduce or prevent MR in high-voltage electricity transmission system workers. For this purpose, this research has been carried out considering that the current job security in the sector may affect MR. The research is important in terms of increasing the focus on work in employees of high voltage electricity transmission systems and optimizing the energy management process by minimizing work accidents.

## **Literature review and hypothesis development**

### *Job insecurity*

Developing technology with changing management styles has caused transformations in every aspect of business life. On the one hand, increasing sectoral competition and cost increases due to global crises have led employers to take more careful steps, even to apply stricter rules as well as new techniques in human resources. Naturally, as a result of these practices, various psychological pressures and fears have developed on the working personnel, one of which being JIS. The

basis of this concept is based on job security, which has emerged with the concentration of employees in a perception opposite to job security. According to the literature, job security is described as a condition where an organization ensures a stable workplace and guarantees employment along with associated advantages such as seniority privileges, financial stability, retirement benefits, consistent income, and opportunities for personal growth and fulfillment (Herzberg 1968; Obrenovic et al. 2021). Greenhalgh and Rosenblatt (1984) were the first to examine and define the concept of JIS in a broad context and defined JIS as “perceived powerlessness to maintain desired continuity in a threatened job situation”. Other definitions have also been included in the literature. Heaney et al. (1994, 1431) define it as “an employee’s perception of a potential threat to continuity in his or her current job”, Davy et al. as (1997, 323) “one’s expectations about continuity in a job situation”, Witte (1999, 156) as “an overall concern about the continued existence of the job in the future”, Cuyper et al. (2008, 492) as “Employees’ perceptions about potential involuntary job loss”, and Chirkowska-Smolak and Chumak (2021, 647) as “a subjectively experienced anticipation of an important, undesirable event related to the work performed”. According to Hellgren et al. (1999), there are two dimensions of JIS. These are quantitative JIS and qualitative JIS. Quantitative JIS includes concerns about whether the employee will exist in the future in the job in which s/he is currently employed. Qualitative JIS, on the other hand, includes concerns about the deteriorating quality of labour relations, such as deteriorating working conditions and the disappearance of career opportunities. Mohr (2000) has stated that there are four basic types of JIS. These are “JIS as a state of public awareness, JIS at the company level, acute JIS and anticipation of job loss”.

Ongoing employment in organizations is an important assurance to employees about their future career prospects, income and non-monetary benefits, as well as the satisfaction of basic physiological needs (Obrenovic et al. 2021). In the face of strategies such as downsizing, mergers and acquisitions applied in modern enterprises today, the positions of the employees change significantly and the insecurity towards employment increases (Aybaş et al. 2015). However, individuals working in insecure types of work or in an unreliable institution are more likely to perceive JIS than those who work in a reliable type of employment or in an institution that is reliable in employment (Sverke et al. 2006). Negative emotions such

as anxiety that arise as a result of JIS cause individuals to focus more on uncertainties about the job. Factors such as performance, which will cause JIS to decrease, cause reduced focus. Thus, JIS increases neuroticism by self-reinforcement over time (Wu et al. 2020). The emotional increase towards JIS also leads to an increase in psychological problems and, in turn, to a deterioration of an individual's mental health and a decrease in well-being (Watson & Osberg 2018). When employees feel JIS, low and limited motivation can be mentioned due to decreased job satisfaction and organizational commitment (Zheng et al. 2014). The common psychological characteristics of employees with high feelings of JIS are lack of optimism and sense of control, low self-confidence, and negative self-evaluation (Knežević & Krstić 2019).

JIS is a completely different concept from job loss (Aybaş et al. 2015). Even when their employment situation is stable, employees may worry about this stability and not easily cope with the fear of losing a job (Kim et al. 2021). The level of anxiety that employees harbour is directly influenced by their belief that they have the necessary skills to find a new job if necessary as a result of a miserable employment process (Chirkowska-Smolak & Chumak 2021). There is no certainty that individuals who experience a sense of JIS will lose their jobs. This feeling is the result of a stressful event, such as the individual's perception that the structure of the work and the continuity of the work is at risk, rather than the loss of a job (Sverke & Hellgren 2002). In work psychology, JIS is cited as a strong factor that can lead to intense emotional disorders such as depression, anxiety, and stress (Cosma et al. 2021). The stress caused by the risk of unemployment in employees is partly due to JIS and partly due to the previous experience of job loss (Watson & Osberg 2018). Both quantitative and qualitative JIS are significant stressors in organizations. Because, even if the existence of a person's job is not directly threatened, stress is inevitable for the employee whose career opportunity is restricted in the event of an organizational change towards career opportunities (van Dam et al. 2020). The erosion of high-intensity and long-lasting stress on the physical and mental health of the employee is inevitable (Green, 2020; Chirkowska-Smolak & Chumak 2021). Because it is difficult to predict in advance and at the same time to control (Mahmoud et al. 2021). Therefore, employees take on less sympathetic and cooperative roles in the workplace, may receive less support from their co-workers, and the severity of JIS may increase with the deterioration of social interaction

(Wu et al. 2020). Experiencing chronic stress at work can negatively affect physical and mental health (Godin et al. 2005). The link between employees' experiences of unemployment and poor mental health has been repeatedly documented (Watson & Osberg 2018). Mental health is commonly defined as the absence of psychological distress, characterized by negative perceptions of oneself, others, and the surrounding environment. This construct can be assessed through self-reported emotions, reflecting feelings of nervousness, anxiety, worthlessness, and frustration experienced by individuals (Watson & Osberg 2018). Prior research has indicated that quantitative JIS, which involves the tangible risk of job loss, is likely to have a stronger impact on health-related outcomes and various health complaints. On the other hand, qualitative JIS, considered a less severe stressor, is expected to primarily influence job attitudes (Richter et al. 2013).

While employees strive for wages, recognition, and other outcomes of work, JIS leads to a decrease in these expectations, leading to a worsening of attitudes and behaviours (Mahmoud et al. 2021). JIS can become a very severe stressor, making it difficult to ignore threats to factors directly linked to individuals' employment, such as financial security (Richter et al. 2013). However, employees who lose motivation due to JIS also lose the opportunity and resources to perform at a high level (Wu et al. 2020). The anxieties triggered by JIS lead to lower performance outcomes in employees and, in turn, a sense of burnout that will lead to a decline in the overall success of the organization (Khan & Khan 2021). This is because employees without job security are more affected by internal practices as they are more vulnerable than others (Bazzoli et al. 2020). JIS, which causes chronic burnout, is a major source of job dissatisfaction and emerging health problems due to its long-term impact on employees (Green 2003). The feeling of JIS, which intensifies with the deterioration in mental health, can turn into harmful consequences for the working environment and co-workers (Angelis et al. 2021). In this regard, Witte (1999) states that the mental health levels of people with high levels of JIS are as low as those observed in unemployed people, and therefore JIS can be as harmful to individuals as being unemployed. It is stated that due to the emotional impact of JIS, it triggers unethical organizational behaviours that will help employees perceive themselves as more valuable to the organization and/or maintain their employment (Elshaer & Azazz 2022). Lack of communication for the organization,

perceived role ambiguities, role conflicts are important factors that drive employees to these behaviours (Richter et al. 2018).

### *Mental readiness*

Employees who are under the influence of many individual and environmental factors in the work environment try to focus on work by passing all these factors through a mental filter. Especially in professions with a high risk of work accidents, the process of focusing on the work and the time of focusing on the work of the employees becomes quite stressful and requires individual performance. The most important factor necessary for the realization of the work demanded by the employer is the creation of MR. This concept is defined as being psyched, totally ready, or totally prepared (Orlick & Partington 1988; McDonald & Hale 2022). In the process of MR, pedagogical, psychological and physiological fundamentals need to be studied (Labeschenkov et al. 2020). In this context, in order for employees to work and perform for a long time under stress, the meaning they attach to their work should be high and they should be confident in their equipment and abilities (Sanden et al. 2014). Therefore, MR is not the ability of an individual alone, but an output that can be developed within the chain of individuals, organizations and colleagues. This output, which is very important in high-risk professions, is important not only in terms of completing tasks but also in terms of minimizing the work accident of employees due to mental health problems. In this regard, it is necessary to be at the desired level in mental health for MR. Factors such as long working hours, financial risks, critical decision-making and dilemmas need to be assessed and dealt with for mental health (McDonald & Paganelli 2021). Failure to protect mental health in employees also causes significant consequences for organizations, one of which being the economic burden. This burden is largely due to costs associated with reduced productivity due to absenteeism and absenteeism (Fikretoglu et al. 2019).

When assessing mental health, the motivation of employees is also a prominent issue. Intrinsically motivated individuals orient themselves to achieve success, make plans to achieve the desired goal, and try to implement the plan. In extrinsic motivation, the individual is motivated to compete with performance-dependent rewards and positive reinforcements (Yalçın et al. 2021). Employees' concerns about their families and family problems directly affect motivation (Sanden et al. 2014). Therefore, in the face of these external factors

that reduce motivation in employees, resilience as a factor that will support intrinsic motivation emerges. Resilience, which is expressed as the ability to recover after stressful events, is very important as it is both protective of the individual and therapeutic of stress (van Baarle & Molendijk 2021). Although mental resilience means increasing acceptance, reducing exposure to stress and mental health issues, it can also be more easily stated as “sucking it up” (Eidelson et al. 2011; van Baarle & Molendijk 2021). Therefore, psychological resilience is an important factor that positively supports the process of focusing on work by filtering toxic environmental effects in employees.

MR is achieved through learned mental practices that need to be continuously improved (McDonald & Hale 2021). Being mentally ready to compete requires at least two types of skills. The first of these skills consists of preparation, positive attitude and perception that will enable the individual to achieve long-term goals. The other skill consists of centring, concentration, and control that will ensure performance output in the short term (Mack 2002). If we evaluate MR within a team, it is necessary to examine other colleagues in addition to the individual perspective. Although the individual is mentally ready for the task personally, other colleagues should also be ready in this sense, so that the risk is minimized (Sanden et al. 2014). It should be noted that the balance between physical, technical and MR is crucial to achieving performance excellence (McDonald & Hale 2021). However, as with any other skill, good training and practice are required to become proficient in MR (Mack 2002).

MR skills are an important factor for ensuring high performance in employees (McDonald & Paganelli 2021). Seven elements of MR for high performance have been identified in the literature. These are (Marquardt et al. 2018; Filby et al. 1999; Crocker & Graham 1995; Hackfort & Munzert 2005; Valey 2001; Bandura 1986; Weinberg 2008): *Attentional control* is the ability to focus one’s attention on the relevant task and combat distraction. Attentional control is an important MR strategy for the employee to direct to the right stimuli. *Goal setting* is a technique in which goals are set to guide the employee and increase his motivation. In the process of MR for high performance, concrete and realistic goals are of high importance. *Relaxation and activation* is a strategy for successfully coping with stressful events. *Activation* involves a state of planned response. *Self-efficacy* refers to the belief that an individual can do a job. *Self-confidence* is based on self-control. Inner talk is an important strategy

that both increases self-confidence and improves performance. *Imagery* is defined as “using all the senses to create or re-create an experience in the mind”.

MR is generally the construction of an event as it is desired to be. Repeated practices in the right ways in the mind before starting to apply ensure success. With MR, self-confidence increases and success is focused. Thanks to MR, coordination skills are improved, concentration skills are enhanced, anxiety and stress are reduced, and team spirit and communication are improved. It is thought that the factor of JIS will affect this situation, which is important in terms of individual and organizational aspects. Based on this approach,  $H_{1a}$ ,  $H_{1b}$  and  $H_{1c}$  have been created.

$H_{1a}$ : There is a significant relationship between MR and JIS.

$H_{1b}$ : As quantitative JIS increases, MR decreases.

$H_{1c}$ : As qualitative JIS increases, MR decreases.

It is thought that the MR of the employees in the high-voltage electrical transmission system varies according to their gender due to the fact that men are more courageous and skilled than women in dangerous jobs and that the MR of men is higher than women in terms of the danger of the working area. Based on this approach,  $H_{1d1}$  has been created.

$H_{1d1}$ : MR varies significantly according to gender.

In the demonstration of MR, there may also be differences between age groups. Older workers are thought to be more successful in MR than younger people. It is thought that the fact that employees in the older age group have more life experience and work-related knowledge will have a positive effect on MR. Accordingly,  $H_{1d2}$  has been created with the view that MR would increase as the age increased.

$H_{1d2}$ : MR varies significantly according to age.

It is thought that it will be easier for employees to be mentally ready thanks to the fact that they are trained and equipped in the high voltage electricity transmission system. Based on this approach,  $H_{1d3}$  has been created.

$H_{1d3}$ : MR varies significantly according to educational status.

Considering that financial gain is an important motivating tool, it is thought that the high-income level will be important for the employees working in a dangerous area such as high voltage electricity transmission system and accordingly the level of MR will be higher at the high-income level. Based on this,  $H_{1d4}$  has been created.

$H_{1d4}$ : MR varies significantly according to monthly income level.

Mental readiness of high voltage electricity transmission system workers:  
The relationship with job insecurity

Work experience gained from the past is important in exhibiting MR behaviours. Those who have been working in organizations for a long time are considered to be more successful in demonstrating their MR. Based on this approach,  $H_{1d5}$  has been created.

$H_{1d5}$ : MR varies significantly according to work experience.

Considering that the working hours in the public sector, where the public service is the basis, are more specific than in the private sector and that the anxiety of dismissal is less, it is thought that the MR of the employees in the public sector will be higher than those working in the private sector. Based on this,  $H_{1d6}$  has been created.

$H_{1d6}$ : MR varies significantly by sector.

It is thought that among the personnel working under stress, employees who use depression medication will feel better mentally, their motivation will increase and they can control their emotions and in this way, MR will be higher. Based on this argument,  $H_{1d7}$  has been created.

$H_{1d7}$ : MR varies significantly from the depression medication use.

In industrializing societies, the frequency of occupational accidents in business life is also increasing. Since employees who have had a work accident before are aware of the physical, social and psychological situation they have encountered, it is thought that their MR for work will be higher in order not to have a work accident again. Based on this,  $H_{1d8}$  has been created.

$H_{1d8}$ : MR varies significantly according to the situation of having a work accident.

## **Methodology**

### *The population and sample of the research*

The population of the research consists of employees working in the high-voltage electricity transmission system in Turkey. The sample of the study consists of public and private sector employees working in high voltage electricity transmission system in Ankara, Istanbul, Izmir, Sakarya, Samsun, Şanlıurfa, Diyarbakır, Düzce, Zonguldak, Kocaeli, Bursa, Manisa, Malatya, Van, Mardin and Konya. Purposeful sampling and snowball sampling methods have been used in the study, survey feedback has been obtained from 555 employees within different enterprises, and these questionnaires have not been taken into consideration because there has been no integrity of the data in the survey of 37 respondents.

### *The data collection method of the research*

The data for this research was collected through face-to-face surveys. The questionnaire used to gather data includes two scales, namely MR and JIS, both structured on a 5-point Likert scale. The MR scale employed in this study consists of 35 items, developed by Zekioğlu et al. (2017). On the other hand, the JIS scale, comprising 9 items, was originally developed by Hellgren et al. (1999) and adapted to Turkish by Şeker (2011).

### *The research model*

In the research utilizing the screening model, the dependent variable was MR, while the independent variable was JIS. Furthermore, the sub-independent variables were quantitative JIS and qualitative JIS.

### *Data analysis of the research*

The collected data in the research were subjected to analysis using the SPSS 20.0 and AMOS 24.0 software packages. Confirmatory Factor Analysis (CFA) was employed to determine the structural validity of the utilized scales. Reliability analysis was conducted to assess internal consistency. Correlation analysis was performed to identify the direction and strength of relationships between variables. Multiple regression analysis was employed to examine the relationships between variables. Independent Sample T-Test and One-Way ANOVA Test were utilized to detect variations.

## **Findings**

According to the descriptive statistics results, the male employees constitute the majority with a percentage of 94.2%, while the female employees make up 5.8% of the sample. Analyzing the age distribution of the employees reveals that the largest portion, accounting for 79.8%, falls within the age range of 21-40. Regarding educational attainment, it was found that 52.8% of the employees hold university degrees, while 45.8% have completed high school. Looking at the monthly income level, it can be observed that 58.3% of the employees earn at the minimum wage level. According to the descriptive statistic, when the duration of work experience is taken into consideration, it is determined that 74.1% of the sample has more than a year of work experience and the majority of 43.6% have 7 years or more of work experience. In terms of the sector, it has been found that 81.5% of the respondents worked in the private sector. As a result of other questions directed to the sampling; it has been determined that 2.9% of the

employees used depression medication and 8.9% had a previous work accident.

Confirmatory Factor Analysis (CFA) was conducted to assess the structural validity of the scales utilized in the research. The fit indices resulting from the factor analysis carried out for the JIS scale, which consists of 2 dimensions and 9 items. Upon reviewing the fit values, it was found that the chi-square value is 152.009, the p-value is 17.091, the RMSEA value is 0.051, the GFI value is 0.990, the chi-square/degree of freedom is 2.442, the SRMR value is 0.034, the CFI value is 0.993, and the NFI value is 0.988.

During the CFA, 4 items have been removed from the scale and the reliability analysis results for the dimensions of the revised scale. As a result of the analyses performed; Cronbach's Alpha coefficient has been determined as 0.782 for the quantitative JIS dimension, 0.850 for the qualitative JIS dimension and 0.730 for the whole scale, and according to these values, the scale has been determined to have internal consistency. The fit values obtained from the application of CFA to the MR scale, which comprises 3 dimensions and 35 items, as used in the research.

Upon reviewing the fit values, it has been found that the chi-square value is 152.009, the p-value is 400.017, the RMSEA value is 0.054, the GFI value is 0.930, the chi-square/degree of freedom is 2.614, the SRMR value is 0.049, the CFI value is 0.940, and the NFI value is 0.907.

During the process of CFA, a total of 15 items, including the entire focus dimension, were eliminated from the scale. The results of the analyses reveal that the Cronbach's Alpha coefficient for the MR dimension is 0.771, for the keeping composure dimension is 0.816, for the fear dimension is 0.789, for the motivation dimension is 0.616, and for the interest dimension is 0.531. Upon examination of these numerical findings, it was determined that all dimensions, except for motivation and interest, demonstrated acceptable internal consistency. The motivation and interest dimensions were excluded from the study due to their Cronbach's Alpha coefficients being below 0.700. The revised 16-item scale yielded a Cronbach's Alpha coefficient of 0.859.

The adaptation values of the JIS scale and the adaptation values of the MR scale were found to be consistent with the well-fit statistics reported by Schermelleh-Engel et al. (2003). These results indicate that the structural validity of both scales has reached an acceptable level. Kolmogorov-Smirnov and Shapiro-Wilk values have been obtained

from the normality test applied to the data collected in the research. When considering the Shapiro-Wilk values in light of the sample size, it is observed that the data sets used in the initial stage of the research do not exhibit a normal distribution. Consequently, in the second stage, the skewness and kurtosis values of the data sets were examined. It can be observed that the skewness and kurtosis values of the data sets, which do not exhibit a normal distribution based on the Shapiro-Wilk test, fall within the range of -2 to +2. According to the classification by George and Mallery (2003), these data sets can be considered to have a normal distribution.

According to the results of Pearson correlation analysis; a statistically significant negative relationship has been determined between independent variables quantitative JIS ( $r=-0.367$ ,  $p=0.000$ ) and qualitative JIS ( $r=-0.212$ ,  $p=0.000$ ) and dependent variable MR.

According to the ANOVA results of multiple regression analysis for JIS dimensions and MR. Based on the results of the analysis performance, the  $p$  value of the model is than 0.05; therefore, it has been determined that the regression model is statistically significant.

According to the regression analysis are that 15.4% of the variance in MR ( $R^2=0.154$ ) can be explained by the changes in quantitative and qualitative JIS. Based on these findings, the possible values that MR can take are formulated as follows: “ $MR=45,146-(1,012 \times \text{Quantitative JIS})-(0.406 \times \text{Qualitative JIS})$ ”. According to the regression equation; it has been found that a 1-unit increase in quantitative JIS caused a decrease of 1,012 units on MR, while a 1-unit increase in qualitative JIS ( $\beta=-1.012$ ) caused a decrease of 0.406 units on MR ( $\beta=-0.406$ ).

When the relationship between MR and various factors such as gender, sector of employment, depression medication use, and history of occupational accidents among the study participants, it has been determined that the significance value obtained from the gender-related test is greater than 0.05, while the significance values obtained from the tests for other factors are less than 0.05. This indicates that MR exhibits a statistically significant difference based on the sector of employment, depression medication use, and history of occupational accidents. Specifically, it was found that MR is lower among employees in the private sector compared to those in the public sector. However, MR is higher among employees who use depression medication and among employees who have experienced previous work accidents.

When the relationship between MR and the age of employees, it has been determined that the significance value is less than 0.05, indicating a statistically significant difference in MR based on the age of employees. To further explore the specific age groups where the difference exists, post-hoc analysis was conducted. The results of the post-hoc analysis will provide insights into the specific age groups that show significant differences in MR. When the results of the homogeneity test conducted to determine the appropriate technique for the post-hoc analysis, it is observed that the variances are homogeneous. However, considering that the distributions in the groups are not equal, the Scheffe test has been chosen for the post-hoc analysis. When investigating the statistical difference of MR based on age in detail, it has been determined that there is a significant difference between employees in the 21-30 age range and employees in the 41-50 age range. Consequently, it has been found that employees in the 41-50 age range exhibit higher levels of MR compared to employees in the 21-30 age range.

When the relationship between MR and the educational status of employees, it has been determined that the significance value is less than 0.05, indicating a statistically significant difference in MR based on educational status. To further identify the specific educational situations that exhibit a difference, post-hoc analysis was conducted. The results of the post-hoc analysis will provide insights into the specific educational categories that show significant differences in MR. When the results of the homogeneity test, which was conducted to decide on the suitable technique for the post-hoc analysis, it is evident that the variances are not homogeneous. However, considering the unequal distributions among the groups, Tamhane's T2 test has been chosen as the preferred technique for the post-hoc analysis. When investigating the statistical difference of MR based on education status with a 5% error margin, it has been found that the significant difference exists only between undergraduate and high school/associate degree groups. Consequently, it has been determined that the level of MR among undergraduate employees is higher compared to employees with associate degrees and high school graduates.

When the relationship between monthly income level and MR, it has been found that the significance value is less than 0.05, indicating a statistically significant difference in MR based on the monthly income level. To determine the specific monthly income levels that

differ significantly, post-hoc analysis was conducted. The results of the post-hoc analysis will provide insights into the specific income levels that show significant differences in MR. When the results of the homogeneity test, it is evident that the variances are not homogeneous. Consequently, Tamhane's T2 test has been chosen as the preferred technique for the post-hoc analysis, considering the unequal distributions among the groups. When examining the difference in MR based on monthly income level, a statistically significant difference has been found only between employees with a monthly income between TRY 9001 - 15000 and employees with a monthly income between TRY 15001 - 21000. Therefore, it can be concluded that the MR level of employees with a monthly income between TRY 15001 - 21000 is higher compared to employees with a monthly income between TRY 9001 - 15000.

When the examines the relationship between MR and employees' work experience, it has been determined that the significance value is less than 0.05, indicating a statistically significant difference in the level of MR based on employees' work experience. To identify the specific periods of work experience that exhibit significant differences, a post-hoc analysis has been conducted. The results of the post-hoc analysis will provide insights into the specific work experience periods that show significant differences in the level of MR. When the homogeneity test results, it is observed that the variances are homogeneous. However, due to unequal distributions among the groups, the Scheffe test has been selected for the post-hoc analysis. The significance value for MR is found to be less than 0.05 for employees with less than 1 year of work experience and employees with 7 years or more of work experience. This indicates a statistically significant difference in the level of MR between these two groups. Specifically, employees with 7 years or more of work experience exhibit higher levels of MR compared to those with less than 1 year of work experience.

### **Conclusions and recommendations**

This study examines the effect of the perception of JIS on MR in workers working in high-voltage electricity transmission system. As a result of the research carried out; both quantitative and qualitative JIS have been found to adversely affect MR. It has been found that the factor affecting MR the most has been quantitative JIS. Witte (1999) stated as a result of the research that quantitative JIS in employees is

more of a stressor than qualitative JIS. According to other results obtained from the research; employees in the 41-50 age range have higher MR compared to employees in the 21-30 age range, MR is lower in employees in the private sector compared to those working in the public sector, and the level of MR is higher in employees with monthly income between TRY 15001 and 21000 compared to employees with monthly income between TRY 9001 and 15000. It has also been determined that MR is greater in employees with 7 years and more of work experience compared to employees with less than 1 year of work experience. When examined in terms of demographic factors, it is observed that age, income level, sector and work experience are also factors that statistically differentiate the MR of employees in high-voltage electricity transmission system. However, it is understood that MR is significantly higher in employees who use depression medication and in employees who have previously been involved in work accidents.

It is thought that this research, which is based on the idea that the perception of JIS in workers working in high-voltage electricity transmission system affects MR because it increases constant anxiety, has an important place. Since the job performance of a high-voltage employee whose MR is reduced will also be adversely affected, public institutions or private electricity distribution companies need to intervene in the perception of JIS in their employees. Organization managers should pay more attention to the issue of justice by listening to employees, especially in times of organizational change and in times of crisis, ensuring that they participate in change processes, clearly explaining the objectives of change, thus reducing the concern of JIS (Wang et al. 2015); because employees who experience JIS intensely may turn to non-work social networks due to the decrease in socialization in the work environment (Sjöberg 2018). However, reducing JIS, increasing the level of employee engagement and demonstrating higher performance are important factors expected in the organization (Khan & Khan 2021).

In this context, the proposed intervention can also be carried out through regulations (reduction of working hours, increase of financial possibilities, etc.). First of all, it is necessary to work with death, injury and health concerns, which are the most important risk factors that can lead to the perception of JIS in employees working in high-voltage electricity transmission systems. It is possible that an employee who is at risk of death or injury may not be able to work in the same job again

or lose his job. Therefore, in this research, health anxiety that may occur as a result of accident risk is considered as a risk factor for losing a job. If companies are given opportunities to offer new options in the face of negative situations in order to control the risk factors that create stress such as the worry of making mistakes in high-voltage employees and lead to the perception of JIS, it can be ensured that employees minimize their perception of JIS and constant anxiety and increase their MR levels even more. This can have a positive impact on the private life of high-voltage employees personally and can also benefit companies as a result of positively affecting their work performance. It is thought that this study will be useful in terms of the positive effect of the findings obtained from the study on the individual and the suggestions that can be presented to high voltage electricity transmission and distribution companies.

## References:

- Aybaş, Mustafa, Sedef Elmas, and Gamze Dünder. 2015. Job Insecurity and Burnout: The Moderating Role of Employability. *European Journal of Business and Management*, 7 (9): 195-203.
- Bandura, Albert. 1986. The Explanatory and Predictive Scope of Self-Efficacy Theory. *Journal of Social and Clinical Psychology*, 4 (3): 359-373.
- Bazzoli, Andrea, Michele Brondino, Hugo De Witte, and Marco Pasini. 2020. Development and Psychometric Properties of the Job Insecurity Appraisals Scale (JIAS-6). *European Journal of Psychological Assessment*, 37 (4): 313-324.
- Carleton, R. Nicholas, Stephanie Korol, Jennifer E. Mason, Kimberly Hozempa, Gregory S. Anderson, Natalie A. Jones, et al. 2018. A Longitudinal Assessment of the Road to Mental Readiness Training among Municipal Police. *Cognitive Behaviour Therapy*, 47 (6): 508-528.
- Chirkowska-Smolak, Teresa, and Mykola Chumak. 2021. Job Insecurity and Emotional Disturbance of Polish Employees during Pandemic COVID-19. *Medycyna Pracy*, 72 (6): 645-652.
- Cosma, Gheorghe A., Alina Chiracu, Alexandru R. Stepan, Daniela Barbu, Mihaela L. Brabiescu-Călinescu, Florina Voinea, et al. 2021. Job Insecurity and Work Meaning among Romanian Sports Coaches. *Applied Sciences*, 11 (24): 11862.
- Crocker, Peter R., and Timothy R. Graham. 1995. Coping by Competitive Athletes with Performance Stress: Gender Differences and Relationships with Affect. *The Sport Psychologist*, 9 (3): 325-338.
- De Cuyper, Nele, Claudia Bernhard-Oettel, Eva Berntson, Hugo De Witte, and Bérengère Alarco. 2008. Employability and Employees' Well-Being: Mediation by Job Insecurity. *Applied Psychology*, 57 (3): 488-509.
- Davy, Jeffrey A., Angelo J. Kinicki, and Christopher L. Scheck. 1997. A Test of Job Security's Direct and Mediated Effects on Withdrawal Cognitions. *Journal of Organizational Behavior*, 18 (4): 323-349.

Mental readiness of high voltage electricity transmission system workers:  
The relationship with job insecurity

- De Angelis, Marco, Giovanni Mazzetti, and Daniele Guglielmi. 2021. Job Insecurity and Job Performance: A Serial Mediated Relationship and the Buffering Effect of Organizational Justice. *Frontiers in Psychology*, 3781.
- Eidelson, Robert, Michael Pilisuk, and Stephen Soldz. 2011. The Dark Side of Comprehensive Soldier Fitness. *American Psychologist*, 66 (7): 643-644.
- Elshaer, Ibrahim A., and Ashraf M. Azazz. 2021. Amid the COVID-19 Pandemic, Unethical Behavior in the Name of the Company: The Role of Job Insecurity, Job Embeddedness, and Turnover Intention. *International Journal of Environmental Research and Public Health*, 19 (1): 247.
- Fikretoglu, Derya, Alex Liu, Alex Nazarov, and Kimberly Blackler. 2019. A Group Randomized Control Trial to Test the Efficacy of the Road to Mental Readiness (R2MR) Program among Canadian Military Recruits. *BMC Psychiatry*, 19 (1): 1-14.
- Filby, William C., Ian W. Maynard, and James K. Graydon. 1999. The Effect of Multiple-Goal Strategies on Performance Outcomes in Training and Competition. *Journal of Applied Sport Psychology*, 11 (2): 230-246.
- George, David, and Philip Mallery. 2003. *SPSS for Windows Step by Step: A Simple Guide and Reference*. 4th edition. Boston, MA: Allyn & Bacon.
- Godin, Isabelle, Frank Kittel, Yves Coppieters, and Johannes Siegrist. 2005. A Prospective Study of Cumulative Job Stress in Relation to Mental Health. *BMC Public Health*, 5 (1): 1-10.
- Green, Francis. 2003. "The Rise and Decline of Job Insecurity." *Studies in Economics* 0305.
- Green, Francis. 2020. Health Effects of Job Insecurity. *IZA World of Labor*. doi:10.15185/izawol.212.v2.
- Greenhalgh, Linda, and Zahra Rosenblatt. 1984. Job Insecurity: Toward Conceptual Clarity. *Academy of Management Review*, 9: 438-448.
- Hackfort, Dieter, and Jörg Munzert. 2005. "Mental Simulation." In *Handbook of Research on Sport and Exercise Psychology*, pp. 3-16. Morgantown, WV: Fitness Information Technology.
- Heaney, Catherine A., Barbara A. Israel, and James S. House. 1994. Chronic Job Insecurity among Automobile Workers: Effects on Job Satisfaction and Health. *Social Science and Medicine*, 38: 1431-1437.
- Hellgren, Jon, Maria Sverke, and Kerstin Isaksson. 1999. A Two-Dimensional Approach to Job Insecurity: Consequences for Employee Attitudes and Well-Being. *European Journal of Work and Organizational Psychology*, 8 (2): 179-195.
- Herzberg, Frederick. 1968. One More Time: How Do You Motivate Employees? *Harvard Business Review*, 65.
- Khan, Tanveer M., and Ibrahim U. Khan. 2021. Exploring the Work Engagement as Mediator in Finding Impact of Job Insecurity on Job Performance. *Academic Journal of Social Sciences*, 5 (1): 109-124.
- Kim, Il-Hwan, Chul-Cheol Choi, K. Urbanoski, J. Park, and J. Kim. 2021. Is Job Insecurity Worse for Mental Health Than Having a Part-time Job in Canada? *Journal of Preventive Medicine and Public Health*, 54 (2): 110.
- Knezevic, Jovana, and Tanja Krstic. 2019. The Role of Basic Psychological Needs in the Perception of Job Insecurity. *Archives of Industrial Hygiene and Toxicology*, 70 (1): 54-60.

- Labeschenkov, Oleg, Zinaida Kuznetsova, Fyodor Zekrin, Svetlana Komarova, and Elena Kuznetsova. 2020. Aspects of the Cadets' Mental Readiness Forming During Airborne Training. *BIO Web of Conferences*, Vol. 26: 00089. EDP Sciences.
- Mack, Mark G. 2002. Mental Readiness: Minding Your Ps and 'Cues.' *Strategies*, 16 (1): 13-15.
- Mahmoud, Ahmed B., William D. Reisel, Leon Fuxman, and Ingrid Mohr. 2021. A Motivational Standpoint of Job Insecurity Effects on Organizational Citizenship Behaviors: A Generational Study. *Scandinavian Journal of Psychology*, 62 (2): 267-275.
- Marquardt, Nicolai, Christian Hannig, and S. Hannig. 2018. The Impact of Mental Readiness on Driving Performance and Traffic Safety. *International Journal of Safety and Security Engineering*, 8 (1): 10-19.
- McDonald, James M., and Christine Paganelli. 2021. Exploration of Mental Readiness for Enhancing Dentistry in an Inter-Professional Climate. *International Journal of Environmental Research and Public Health*, 18 (13): 7038.
- McDonald, James, and Karen Hale. 2022. Mental Readiness for Frontline Workers in Homelessness Services in Ottawa, Canada. *International Journal on Homelessness*: 1-25.
- Mohr, Georg B. 2000. The Changing Significance of Different Stressors After the Announcement of Bankruptcy: A Longitudinal Investigation with Special Emphasis on Job Insecurity. *Journal of Organizational Behavior*, 21 (3): 337-359.
- Obrenovic, Benjamin, Jie Du, Dalibor Godinic, Muhammad M. M. Baslom, and Dmitriy Tsoy. 2021. The Threat of COVID-19 and Job Insecurity Impact on Depression and Anxiety: An Empirical Study in the USA. *Frontiers in Psychology*: 3162.
- Orlick, Terry, and John Partington. 1999. Modeling Mental Links to Excellence: MTE-2 for Quality Performance. *Journal of Excellence*, 2: 65-83.
- Richter, Andrea, Kerstin Näswall, Nele De Cuyper, Maria Sverke, Hugo De Witte, and Jonatan Hellgren. 2013. Coping with Job Insecurity: Exploring Effects on Perceived Health and Organizational Attitudes. *Career Development International*, 18 (5): 484-502.
- Richter, Andrea, Sandra Tafvelin, and Maria Sverke. 2018. The Mediated Relationship of Leadership on Job Insecurity. *Scandinavian Journal of Work and Organizational Psychology*, 3 (1): 1-14.
- Sanden, Stian, Bente H. Johnsen, Jan Eid, Jon Sommerfelt-Pettersen, Vegard Koefoed, Reidar Størksen, et al. 2014. Mental Readiness for Maritime International Operation: Procedures Developed by Norwegian Navy. *International Maritime Health*, 65 (2): 93-97.
- Schermelleh-Engel, Karin, Helmut Moosbrugger, and Hans Müller. 2003. Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-Of-Fit Measures. *Methods of Psychological Research Online*, 8 (2): 52-74.
- Sjöberg, Olof. 2018. Why Some Employees Might Thrive on Job Insecurity: Human Values as a Moderating Factor in the Job Insecurity-Wellbeing Relationship. *International Journal of Wellbeing*, 8 (1): 34-49.

Mental readiness of high voltage electricity transmission system workers:  
The relationship with job insecurity

- Sverke, Maria, Jon Hellgren, and Kerstin Näswall. 2002. No Security: A Meta-Analysis and Review of Job Insecurity and Its Consequences. *Journal of Occupational Health Psychology*, 7 (3): 242.
- Sverke, Maria, Jon Hellgren, and Kerstin Näswall. 2006. *Job Insecurity: A Literature Review*. Stockholm: Arbetslivsinstitutet.
- Şeker, Süleyman. 2011. *Çalışanlarda İş Güvencesizliği ve Tükenmişlik İlişkisi: Tıbbi Tanıtım Sorumlularına Yönelik Bir Alan Araştırması / The Relationship between Job Insecurity and Burnout: A Field Study Among Medical Representatives*. Master's Thesis, Dokuz Eylül University, Social Sciences Institute, İzmir.
- van Baarle, Eric, and Teun Molendijk. 2021. Resilience as the Road to Mental Readiness? Reflections from an Ethics-of-Care Perspective. *Journal of Military Ethics*, 20 (2): 129-144.
- van Dam, Arja, Gerko Noordzij, and Maarten Born. 2020. Thriving under Uncertainty: The Effect of Achievement Goal Orientation on Job Insecurity and Flourishing. *Social Indicators Research*, 150 (2): 659-678.
- Van Valey, Thomas L. 2001. Recent Changes in Higher Education and Their Ethical Implications. *Teaching Sociology*: 1-8.
- Wang, Hsiu-Ju, Chia-Chun Lu, and Oi-Ling Siu. 2015. Job Insecurity and Job Performance: The Moderating Role of Organizational Justice and the Mediating Role of Work Engagement. *Journal of Applied Psychology*, 100 (4): 1249-1261.
- Watson, Bruce, and Lars Osberg. 2018. Job Insecurity and Mental Health in Canada. *Applied Economics*, 50 (38): 4137-4152.
- Weinberg, Robert. 2008. Does Imagery Work? Effects on Performance and Mental Skills. *Journal of Imagery Research in Sport and Physical Activity*, 3 (1).
- Witte, Hugo De. 1999. Job Insecurity and Psychological Well-Being: Review of the Literature and Exploration of Some Unresolved Issues. *European Journal of Work and Organizational Psychology*, 8 (2): 155-177.
- Wu, Chia-Hsiu, Yiming Wang, Sharon K. Parker, and Michael A. Griffin. 2020. Effects of Chronic Job Insecurity on Big Five Personality Change. *Journal of Applied Psychology*, 105 (11): 1308-1322.
- Yalcin, İbrahim, Gülsüm Y. Araz, and Luminita G. Talaghir. 2021. The Relationship between Mental Readiness and Difficulty in Emotion Regulation of Amateur Football Players. *Revista Românească pentru Educație Multidimensională / Romanian Review for Multidimensional Education*, 13 (1): 133-143.
- Zekioğlu, Ali, Ahmet Tatar, Emre Bahadır, and Enes Afacan. 2017. Zihinsel Hazır Oluşun Ölçülmesi: Ölçek Geliştirme Çalışması / Measurement of Mental Readiness: A Scale Development Study. *Spormetre. Beden Eğitimi ve Spor Bilimleri Dergisi / Spormetre Physical Education and Sport Sciences Journal*, 15 (2): 57-64.
- Zheng, Xuefeng, Ivana Diaz, Nian Tang, and Kiyong Tang. 2014. Job Insecurity and Job Satisfaction: The Interactively Moderating Effects of Optimism and Person-Supervisor Deep-Level Similarity. *Career Development International*, 19 (4): 426-446.