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ORIGINAL RESEARCH ORİJİNAL ARAŞTIRMA

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# The Effect of Mental Well-Being and Perceived Social Support on Happiness at Work in Nurses Working in the Pandemic Clinic: Structural Equation Model Analysis of a Multicenter Cross-Sectional Study

## Pandemi Kliniğinde Çalışan Hemşirelerde Mental İyi Oluş ve Algılanan Sosyal Desteğin İşte Mutluluğa Etkisi: Çok Merkezli Kesitsel Bir Çalışmanın Yapısal Eşitlik Modeli Analizi

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**ABSTRACT Objective:** The aim of this study is to propose and test a conceptual model that explains the relationships between the happiness at work (HAW), mental well-being (MWB) and perceived social support levels of nurses working in pandemic clinics in Türkiye. **Material and Methods:** The data for this cross-sectional study were collected from 276 nurses between March 2021 and March 2022 using the Happiness at Work Scale, the Warwick-Edinburgh Mental Well-Being Scale, and the Multidimensional Scale of Perceived Social Support. **Results:** MWB and perceived social support from friends, family and significant others have a direct and significant effect on intrinsic motivation for HAW (respectively β=0.428; β=0.238; β=-0.202; β=0.207; p<0.001). In addition, perceived friend support has a direct and significant effect on the supportive organizational experience of HAW (β=0.242; p<0.001). MWB mediates the relationship between perceived social support from friends and significant others and intrinsic motivation for HAW (respectively β=0.085; β=0.077; p<0.05). **Conclusion:** Nurses' MWB and perceived social support levels affect their HAW. Nurses' happiness levels at work are positively related to their MWB and perceived social support. Nurse managers should plan remedial strategies taking into account the proposed model. Interventions are needed at the team, unit, and system levels to enhance nurses' HAW.

**Keywords:** COVID-19 pandemic; happiness at work; mental well-being; nursing; social support

**ÖZET Amaç:** Bu çalışmanın amacı, Türkiye'de pandemi kliniklerinde çalışan hemşirelerin işte mutlulukları ile mental iyi oluş ve algıladıkları sosyal destek düzeyleri arasındaki ilişkileri açıklayan kavramsal bir model önermek ve test etmektir. **Gereç ve Yöntemler:** Bu kesitsel çalışmanın verileri Mart 2021-Mart 2022 tarihleri arasında 276 hemşireden İşte Mutluluk Ölçeği, Warwick-Edinburgh Mental İyi Oluş Ölçeği ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği kullanılarak toplanmıştır. **Bulgular:** Mental iyi oluş ile arkadaş, aile ve diğer önemli kişilerden algılanan sosyal desteğin işte mutluluğa ait içsel motivasyon üzerinde doğrudan anlamlı bir etkisi vardır (sırasıyla β=0,428; β=0,238; β=-0,202; β=0,207; p<0,001). Ayrıca algılanan arkadaş desteğinin işte mutluluğa ait destekleyici örgütsel deneyim üzerinde doğrudan anlamlı bir etkisi bulunmaktadır (β=0,242; p<0,001). Mental iyi oluş, hem arkadaş hem de diğer önemli kişilerden algılanan sosyal destek ile işte mutluluğa ait içsel motivasyon arasındaki ilişkide aracılık etmektedir (sırasıyla β=0,085; β=0,077; p<0,05). **Sonuç:** Hemşirelerin mental iyi oluş ve algıladıkları sosyal destek düzeyleri işte mutluluklarını etkilemektedir. Hemşire yöneticileri, önerilen modeli dikkate alarak iyileştirici stratejiler planlamalıdır. Hemşirelerin işteki mutluluklarını artırmak için ekip, birim ve sistem düzeyinde müdahalelere ihtiyaç vardır.

**Anahtar Kelimeler:** COVID-19 pandemisi; iş yerinde mutluluk; mental iyi oluş; hemşirelik; sosyal destek

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The severe acute respiratory syndrome-coronavirus-2 [coronavirus disease-2019 (COVID-19)] pandemic has been cited as the biggest international challenge since World War II due to the health crisis it caused.[1] Since the outbreak of the pandemic, frontline nurses have faced unique challenges as they respond to a large number of cases in life-threatening work environments, and they have experienced a higher rate of psychological burden than the general population.[2-4] American Psychiatric Nurses Association pointed out that the constant stress and trauma experienced by nurses throughout the COVID-19 pandemic affects not only their mental health but also their ability to provide safe, high-quality nursing care.[5] In addition, the COVID-19 pandemic has increased the demand and workload for nurses.[6,7] All these problems play an important role in the increase of burnout and problems with intent to leave among nurses that existed even before the pandemic.[8-10]

In order to provide safe and effective nursing care during pandemics, it is necessary for nurse managers to prioritize and protect clinical nurses' mental well-being (MWB) in institutions.[11] It is important for professional nurses to be strong in order to protect their individual health when coping with the effects of stressors in crisis situations such as pandemics.[12] Nursing is a profession that serves people 24 hours a day with shifts and long working hours.[8] Therefore, considering the amount of time spent in the institution, a nurse's mental and physical well-being largely depend on their happiness at work (HAW).[13] HAW is often considered synonymous with "well-being." It is defined as a state characterized by the high level of life satisfaction, the high level of positive emotions, and fewer negative emotions.[13] The concept of HAW has become increasingly important, especially in human resource management research.[14] HAW can be expressed as an important concept that affects an employee's overall emotional health, productivity, and various individual and organizational positive outcomes.[15] It can be said that this productivity for the nursing profession is patient satisfaction and the quality of the nursing care provided.[12,16] The level of happiness of nurses at work is important and necessary for the continuity of quality nursing care provision during a pandemic. It is critical to understand how nurses perceive their HAW, especially during pandemics, since their working hours are also quite long.[17]

The COVID-19 pandemic has brought many physico-social restrictions, such as social distance and isolation, and vital changes, along with various difficulties related to the workload of nurses.[6,18] Researchers report that vital changes caused by the COVID-19 pandemic may be exacerbated by low social support.[18] Because social support is necessary for the ability to cope more easily with stressful life events or crises in various life periods. Social support is an internal and external motivation source that buffers the individual's MWB in the face of stress.[3] Moreover, researchers examining the impact of the COVID-19 pandemic on healthcare professionals, nurses' fear of being infected, fear of carrying the disease to their relatives, doubt that their institutions will support them (perceived lack of organizational support), anxiety of not being able to find a place/institution to care for their children, anxiety of being assigned to an unfamiliar clinic, patients' pain they may be adversely affected mentally due to their exposure to traumatic events such as suffering and death and the increasing workload.[6,19] In a study conducted among healthcare professionals during the COVID-19 process, it was reported that nurses experienced the highest level of anxiety (ranging from 15% to 92%) and the highest prevalence of anxiety.[6] In order to protect and develop the health of the individual, family and society, and to take responsibility for care and treatment, nurses must first be healthy in terms of bio-psycho-social aspects.[20] Previous studies report that nurses whose mental health is adversely affected are at risk for potential declines in job performance.[3,19] In a recent study, it was reported that the adequacy of the perceived social support level positively affects the mental health and long-term work performance of the individual.[18] Therefore, it is reasonable to assume that higher levels of MWB and social support may affect the level of HAW of nurses working in the pandemic service actively combating the COVID-19 pandemic.

In the studies, the effect of the COVID-19 pandemic on the perceived social support and MWB of

people in various parts of the society has been defined.[3,18,19] However, it has not yet been defined how the MWB and perceived social support level of nurses working in pandemic clinics in Türkiye and around the world affect their happiness levels at work. Accordingly, the main purpose of this study is to propose and test a conceptual model that explains the relationships between the HAW, MWB and perceived social support levels of nurses working in pandemic clinics.

## MATERIAL AND METHODS

### STUDY DESIGN

This study was designed as a cross-sectional study. The study was guided by the STROBE checklist for reporting (Appendix 1).

### PARTICIPANTS AND SETTING

Nurses working in pandemic units at public hospitals affiliated with the Ministry of Health in the Republic of Türkiye were included in this study. As a country, Türkiye covers a wide geographical area consisting of 7 regions. For this reason, the study was conducted online, and 2 hospitals from each region were included in the study. Multistage cluster sampling, which is one of the simple random sampling methods, was used to determine the 14 hospitals where the research was conducted, and possible biases were avoided. Nurses were informed about the inclusion and exclusion criteria of the study both in the invitation letter and in the first part of the online questionnaire. Inclusion criteria were at least one month of work experience in a pandemic unit, at least one year working as a nurse, and willingness to participate in the study. Nurses with a history of psychiatric illness (such as depression, anxiety disorder) were not included in the study.

The minimum sample size to be reached in the study was determined using an online sample size calculation program (https://www.questionpro.com/sample-size-calculator/). Between the dates of the research, approximately 900 nurses worked in the 14 selected hospitals' pandemic units. For the study, the power value was 95% and the Type 1 error rate was 0.05, and the number of samples was calculated as 270. It was thought that there might be missing data in the study, and an invitation to participate in the study was sent to all nurses (n=624 nurses), who gave their consent to the sharing of their email addresses. The study was concluded by collecting data from 276 nurses who volunteered to participate in the study.

### DATA COLLECTION

The study data were collected between March 2021 and March 2022 via an online questionnaire. The nurses responsible for the pandemic units at the selected hospitals were contacted by phone. An invitation letter was sent via e-mail to the nurses who gave their consent to the sharing of their e-mail addresses. The online survey consisted of 50 questions in total. After the nurses entered the questionnaire, they were able to see the questions in a total of 5 sections. The first section was inclusion and exclusion criteria, the informed consent form and the electronic consent question, and after each section, participants clicked the "next" button to proceed to the next section. Since participants could not proceed without answering all the questions, no missing data occurred.

### INSTRUMENTS

In the study, a personal information form, the Happiness at Work Scale (HAWS), the Warwick-Edinburgh Mental Well-Being Scale-(WEMWBS), and the Multidimensional Scale of Perceived Social Support (MSPSS) were used to collect data.

The personal information form was created by the researchers in line with the literature. The form consists of 12 questions to elicit the participating nurses' demographic characteristics (gender, age, marital status, education level, income perception, number of children, COVID-19 history, working time, role at work, etc.). The HAWS was developed by Singh and Aggarwal. Its 7-point Likert scale consists of 12 items and four subdimensions.[21] The Turkish adaptation of the scale was carried out by Özdemir et al. the Turkish adaptation of the scale's Cronbach's alpha values were found to be 0.80 for intrinsic motivation, 0.75 for work-related repulsive feelings, 0.81 for supportive organizational experiences, and 0.82 for unsupportive organizational experiences.[22] In this study, the scale's Cronbach's

**APPENDIX 1:** STROBE Statement-Checklist of items that should be included in reports of ***cross-sectional studies.***

| | Item no | Recommendation | Page no |
|---|---|---|---|
| Title and abstract | 1 | (a) Indicate the study's design with a commonly used term in the title or the abstract | 1 |
| | | (b) Provide in the abstract an informative and balanced summary of what was done and what was found | 1 |
| Introduction | | | |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported | 2,3 |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | 3 |
| Methods | | | |
| Study design | 4 | Present key elements of study design early in the paper | 3 |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection | 3,4 |
| Participants | 6 | (a) Give the eligibility criteria, and the sources and methods of selection of participants | 3,4 |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable | 3,4 |
| Data sources/measurement | 8* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group | 5,6 |
| Bias | 9 | Describe any efforts to address potential sources of bias | 3,4 |
| Study size | 10 | Explain how the study size was arrived at | 3,4 |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why | 5 |
| Statistical methods | 12 | (a) Describe all statistical methods, including those used to control for confounding | 6 |
| | | (b) Describe any methods used to examine subgroups and interactions | 6 |
| | | (c) Explain how missing data were addressed | 3,6 |
| | | (d) If applicable, describe analytical methods taking account of sampling strategy | - |
| | | (e) Describe any sensitivity analyses | - |
| Results | | | |
| Participants | 13* | (a) Report numbers of individuals at each stage of study-eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed | 7 |
| | | (b) Give reasons for non-participation at each stage | 7-9 |
| | | (c) Consider use of a flow diagram | - |
| Descriptive data | 14* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders | 7-9 |
| | | (b) Indicate number of participants with missing data for each variable of interest | 3,6 |
| Outcome data | 15* | Report numbers of outcome events or summary measures | 7-9 |
| Main results | 16 | (a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included | 7-9 |
| | | (b) Report category boundaries when continuous variables were categorized | 7-9 |
| | | (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period | - |
| Other analyses | 17 | Report other analyses done-eg analyses of subgroups and interactions, and sensitivity analyses | - |
| Discussion | | | |
| Key results | 18 | Summarise key results with reference to study objectives | 9-11 |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias | 12 |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | 9-12 |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results | 12 |
| Other information | | | |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based | 13 |

Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

alpha values were 0.85 for intrinsic motivation, 0.68 for work-related repulsive feelings, 0.80 for supportive organizational experiences, and 0.71 for unsupportive organizational experiences. The WEMWBS was developed by Tennant et al. in 2007. The 14-item scale includes both psychological and subjective well-being. The scale is a 5-point Likert-type scale. The lowest 14 and the highest 70 points are taken from the scale.[23] The Turkish adaptation of the scale was carried out by Keldal, and the Cronbach's alpha value was found to be 0.92.[24] In this study, the scale's Cronbach's alpha value was 0.91. The MSPSS was developed by Zimet et al. in 1988. The scale is a three-dimensional, easy-to-use 12-item scale that subjectively evaluates the adequacy of social support from 3 different sources: "family," "a special person," and "friend." Each item is rated using a 7-point scale. The participant gives a minimum of 1 point to statements they disagree with and a maximum of 7 points to statements they agree with. As the score given to each item increases, the perceived social support also increases.[25] Eker et al. performed the validity and reliability study of the scale. The Cronbach's alpha values of the scale are 0.85 for the family dimension, 0.88 for the friend dimension, and 0.92 for a special person dimension.[26] In this study, the scale's Cronbach's alpha values were 0.90 for the family dimension, 0.93 for the friend dimension, and 0.94 for a special person dimension.

### DATA ANALYSIS

The study data were was analyzed using SPSS 23.0 (IBM Corporation, Armonk, NY, USA). While evaluating the data, frequency distributions for categorical variables and descriptive statistics (mean±standard deviation; mean rank) for numerical variables were given. Structural Equation Modeling (SEM) is a statistical method that analyzes the relationships between variables. In this study, SEM was used to test the conceptual model that explains the relationship between the happiness of nurses working in pandemic clinics and their perceived social support and MWB levels. A p value <0.05 was considered statistically significant by taking the Type I error rate of 5% throughout the study.

### ETHICAL CONSIDERATIONS

This study received ethics committee approval from the Isparta University of Applied Sciences University Clinical Trials Ethics Committee (date of approval: February 17, 2021; approval number: 43/03). Permission was obtained from the Turkish Ministry of Health, General Directorate of Health Services, to conduct the study (approval number: 2021-02-22T14-12-03). An informed consent form was added to the first part of the online questionnaire and sent to the nurses who voluntarily participated in the study. Additionally, the first question on the online questionnaire was "do you voluntarily agree to participate in the study?". The participants' consent was obtained. This study was performed according to the Helsinki Declaration.

## RESULTS

The participating nurses' characteristics are presented in Table 1. The HAWS and MSPSS subdimensions scores and the WEMWBS total score of the nurses participating in the study are presented in Table 2. The participating nurses determined that the HAWS's intrinsic motivation subdimension score was 13.83±4.52, the work-related repulsive feelings subdimension score was 9.90±4.46, the supportive organizational experiences subdimension score was 9.61±4.46, and the unsupportive organizational experiences subdimension score was 9.38±4.54. The WEMWBS total score was 46.19±9.77. The MSPSS had a family subdimension score of 22.90±5.83, a friend subdimension score of 20.60±6.37, and a special person subdimension score of 18.10±8.22 (Table 2).

### SEM RESULTS OF THE STUDY

The SEM results showing the relationship between the HAW and the perceived social support and MWB levels of the nurses working in the pandemic services are shown in Figure 1. MWB had significant direct effects on HAW intrinsic motivation sub-dimension (β=0.428; p<0.001). Perceived social support from friends, and significant other had a significant direct effect on MWB (β=0.198; β=0.181, p<0.05; respectively). Perceived social support from friends, fam-

**TABLE 1:** Nurses' characteristics (n=276).

| Variables | | n (%) |
|---|---|---|
| Gender | Female | 238 (86.2) |
| | Male | 38 (13.8) |
| Marital status | Married | 138 (50.0) |
| | Single | 138 (50.0) |
| Educational level | High school | 17 (6.2) |
| | Associate degree | 38 (13.8) |
| | Undergraduate | 187 (67.8) |
| | Master's/PhD | 34 (12.3) |
| Monthly income of family | Income more than expenses | 30 (10.9) |
| | Income equal to expenses | 107 (38.8) |
| | Income less than expenses | 139 (50.4) |
| Number of children | None | 146 (52.9) |
| | 1 children | 44 (15.9) |
| | 2 children | 69 (25.0) |
| | 3 or more children | 17 (6.2) |
| Area | Mediterranean | 76 (27.5) |
| | Aegean | 44 (15.9) |
| | Marmara | 58 (21.0) |
| | Central Anatolia | 42 (15.2) |
| | Eastern Anatolia | 27 (9.8) |
| | Southeast Anatolia | 12 (4.3) |
| | Black Sea | 17 (6.2) |
| COVID-19 status | Yes | 100 (36.2) |
| | No | 176 (63.8) |
| First-degree relative having COVID-19 | Yes | 136 (49.3) |
| | No | 251 (50.7) |
| Death of a first-degree relative from COVID 19 | Yes | 25 (9.1) |
| | No | 251 (90.9) |
| Position in the hospital | Clinic nurse | 252 (91.3) |
| | Responsible nurse | 24 (8.7) |
| | | **$\bar{X}$±SD (median; minimum-maximum)** |
| Age (year) | | 32.25±7.89 (28; 18-50) |
| Experience (year) | | 9.95±8.57 (7; 1-32) |
| Uptime in the pandemic unit (month) | | 3.67±4.46 (3; 1-24) |

SD: Standard deviation.

ily, and significant other had significant direct effects on HAW intrinsic motivation sub-dimension (β=0.238; β=-0.202; β=0.207; p<0.001, respectively).

Perceived social support from friends had significant direct effects on HAW supportive organizational experiences sub-dimension (β=0.242; p<0.001). As the participants' internal motivation sub-dimension scores on the HAWS increase, the scores on the HAWS supportive organizational experiences sub-dimension increase positively and moderately (r=0.248; p<0.001). In addition to, the SEM analysis showing MWB mediated the relationship between perceived friends support and HAW intrinsic motivation sub-dimension [friends support→MWB→HAW intrinsic motivation sub-dimension= β=0.085; 95% confidence interval (CI)=0.032-0.143; p=0.002] in Model 1. The SEM analysis showing MWB mediated the relationship between perceived significant other support and HAW intrinsic motivation sub-dimension (significant other support→MWB→HAW intrinsic motivation sub-dimension=β=0.077; 95% CI=0.027-0.135; p=0.004) in Model 1. The goodness-of-fit for Model 1 was found to be "good fit" (CMIN=2.840; degree of freedom (df)=2; CMIN/df=1.465; Comparative Fit Index=0.966; Normed Fit Index=0.998; Root Mean Square Error of Approximation=0.041; Akaike Information Criteration=52.394; p=0.222).

## DISCUSSION

This article presents the findings of a study in which a conceptual model was tested that explains the relationships between the HAW, MWB and perceived social support levels of nurses working in pandemic clinics. The participants were nurses working in COVID-19 pandemic units in hospitals in Türkiye. Being happy is the most important priority in an individual's life.[13] It can be said that the level of HAW is important in helping nurses overcome the difficulties they face while performing their roles in the ongoing pandemic. Happier employees being more productive is a win-win situation for individuals and organizations alike.[16] Based on this point of view; examining the happiness of nurses working in pandemic units and the related factors is necessary and important to ensure both nurses' work engagement and satisfaction, as well as patient satisfaction and quality care.[27] To the best of our knowledge, this study is unique in that it is the first study to test a conceptual model that explains the relationships between the HAW and perceived social support and MWB levels of nurses working in COVID-19 pandemic clinics. The results of this study determined that nurses working in COVID-19 pandemic units had low levels of

**TABLE 2:** Nurses' happiness at work, mental well-being, and perceived social support scores.

| Variables | | $\bar{X}$ | SD | Minimum | Maximum | α |
|---|---|---|---|---|---|---|
| Happiness at Work Scale | | | | | | |
| Sub-dimension | Intrinsic motivation | 13.83 | 4.52 | 3.00 | 21.00 | 0.858 |
| | Work repulsive feelings | 9.90 | 4.46 | 3.00 | 21.00 | 0.682 |
| | Supportive organizational experiences | 9.61 | 4.46 | 3.00 | 21.00 | 0.802 |
| | Unsupportive organizational experiences | 9.38 | 4.54 | 3.00 | 21.00 | 0.716 |
| Mental well being | | 46.19 | 9.77 | 14.00 | 70.00 | 0.908 |
| Perceived social support | | | | | | |
| Sub-dimension | Family | 22.90 | 5.83 | 4.00 | 28.00 | 0.903 |
| | Friends | 20.60 | 6.37 | 4.00 | 28.00 | 0.926 |
| | Significant other | 18.10 | 8.22 | 4.00 | 28.00 | 0.936 |

SD: Standard deviation.

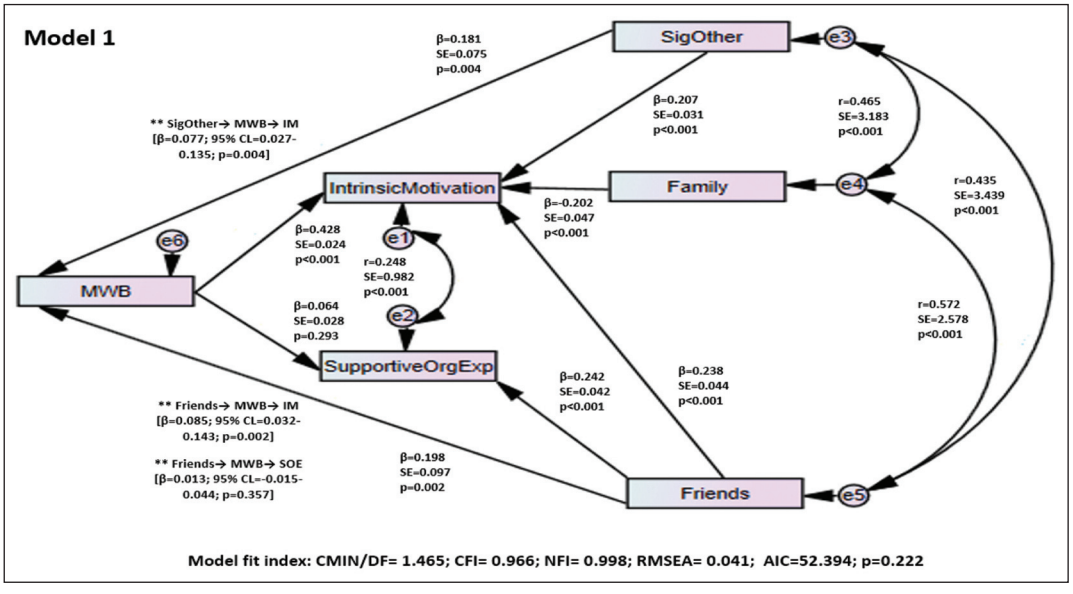


**FIGURE 1:** Structural Equation Modeling results of the study.

**Standardized indirect effect; r: Correlation coefficient; β: Standardized regression weights; Family: Perceived Family Support; Friends: Perceived Family Support; SigOther: Perceived Significant Other Support; SupportiveOrgExp (SOE): Happiness at Work Supportive Organizational Experiences Sub-Dimension; IntrinsicMotivation (IM): Happiness at Work Intrinsic Motivation Sub-Dimension; MWB: Mental well-being; SE: Standard error; df: Degree of freedom; CFI: Comparative Fit Index; NFI: Normed Fit Index; RMSEA: Root Mean Square Error of Approximation; AIC: Akaike Information Criteration.

HAW, moderate MWB, and high levels of perceived social support.

This study shows that nurses working in COVID-19 pandemic units had low levels of HAW. The pandemic negatively impacted healthcare professionals due to significant physical and psychological pressures, such as excessive workload and a dangerous working environment, exacerbated by the crisis.[2,6,7] These situations have caused health workers bio-psycho-social turbulence.[3,6,19] Moreover, pandemic units workers have also had fears of bringing COVID-19 home to family members and concerns about caring for family members if they get sick.[3] Thus, members of the nursing profession have also been adversely affected by the COVID-19 pandemic in bio-psycho-social terms.[3] This may be the reason why the happiness levels of nurses working in pandemic units are low. In order to cope with the problems in this sensitive period, it is important that hospital and nurse managers in institu-

tions find ways to support nurses and increase their resilience levels.

According to our findings, the participating nurses had moderate levels of MWB. High levels of well-being in nurses has a positive effect on care behaviors.[28] Recent studies have found that MWB is important in helping nurses overcome the adversities they face while performing their roles during the ongoing pandemic.[4,11] It is also known that nurses working during the pandemic experience moral distress and are prone to burnout.[29] Considering that the intention to leave work has increased during the pandemic, it is important to support nurses' MWB so that the existing nurse shortage is not exacerbated. Since the start of the pandemic, reports have shown an increasing percentage of frontline nurses leaving or planning to leave their workplace or profession.[10] In addition, remedial activities should be planned and implemented by nurse managers to increase nurses' MWB in order to prevent them from experiencing burnout and to ensure they provide quality nursing care.

As a result of this study, it was determined that the participating nurses working in pandemic units perceived a high level of social support. Social support is defined as support from social interactions between individuals, teams, and communities, which includes support from friends, family, and others.[30] There is evidence indicating the importance of adequate support from family, peers, colleagues, and friends in maintaining nurses' mental health amid the psychological burden of the coronavirus epidemic.[11,31] For this reason, it is reassuring that the participating nurses perceived their social support to be high. Nurse managers need to demonstrate that nurses can increase their resilience and social support and create a positive work environment to reduce transitional shock and turnover.[30] To protect the mental health of healthcare workers during the pandemic, hospital and nurse managers must take action to maintain worker resilience, demonstrate supportive leadership, develop coping skills, and implement creative ways to promote healthcare workers' social support.[11,32]

The MWB of nurses and the social support they receive from their friends, family and significant other people affect their intrinsic motivation for HAW. In addition, MWB mediated the relationship between both perceived friends support and perceived significant other support and HAW intrinsic motivation sub-dimension. No study has been found in the literature on the factors affecting the happiness levels of nurses at work. On the other hand, Moore et al. reported that the adequacy of the perceived social support level positively affects the mental health and long-term job performance of the individual.[18] Ebrahimi et al. reported that perceived social support has a moderator effect on the relationship between workload and quality of life.[33] Labrague and De Los Santos found that nurses who perceived higher organizational and social support reported lower anxiety about COVID-19.[3] Hou et al. found that social support levels of doctors and nurses were negatively associated with anxiety, depression and sleep disorders. The study of Hou et al. suggests that increasing social support during the COVID-19 pandemic may alleviate the psychological symptoms of healthcare workers.[31] Further, increased social support were associated with decreased psychological distress, and decreased levels of anxi-ety and stress among nurses.[34] Nurses working in COVID-19 pandemic clinics should be supported by nurse managers in the clinic with the necessary regulations implemented to increase the level of happiness in the workplace. With regular meetings, the aspects of nurses that need to be developed should be determined and remedial programs should be planned led by nurse managers in cooperation with hospital management.

## STRENGTHS AND LIMITATIONS

One of the strengths of the study is that the results were confirmed by SEM analysis, which is an advanced analysis method. Another strength was that no regional distinction was made in the collection of this study data in Türkiye, and participants from all regions were included. Therefore, this study results can be generalized.

However, the study has some limitations that should be considered. First of all, because the study was conducted online, not face-to-face, for practical reasons, it was not possible to give face-to-face information to all the nurses about the study and to ob-

tain their consent with a voluntary consent form. Another limitation of this study is that the majority of the participating nurses were women. Finally, the absence of studies in the national and international literature investigating the HAW of nurses working in COVID-19 pandemic units did not allow us to fully compare the findings.

## CONCLUSION

The results of this study show that the participating nurses had low levels of HAW, moderate MWB, and high perceived social support. Moreover, MWB and perceived social support affect HAW in nurses working in the pandemic clinic. MWB mediated the relationship between both perceived friends support and perceived significant other support and HAW intrinsic motivation sub-dimension. Nurses having a high level of happiness while working in COVID-19 pandemic units, which are highly concentrated and specialized units, is of critical importance to the provision of high-quality nursing care. This study obtained relevant data from nurses working in these units in the Turkish context, and its findings are an important information source for nurse managers in these units. In this context, it is important for nurse managers to carry out interventional and improvement studies that increase the MWB and social support of nurses. Considering that there are individual differences, the nurses' needs and expectations should be determined through regular unit meetings. Nurse managers should strive to increase nurses' levels of HAW by implementing theory-tested interventions or programs.

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### *Conflict of Interest*

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

### *Authorship Contributions*

***Design of the study:*** *Fahriye Pazarcıkcı, Ayla Kaya;* ***Acquisition of data:*** *Fahriye Pazarcıkcı;* ***Analysis and interpretation of data:*** *Fahriye Pazarcıkcı;* ***Study supervision:*** *Fahriye Pazarcıkcı, Ayla Kaya;* ***Manuscript writing:*** *Fahriye Pazarcıkcı, Ayla Kaya;* ***Critical revisions for important intellectual content:*** *Fahriye Pazarcıkcı, Ayla Kaya.*

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