

User satisfaction in home office environments: A comparative analysis of environmental factors by gender and age

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Abstract

This study examines how physical environmental characteristics shape user satisfaction in home office settings and whether these evaluations differ according to gender and age variables. The research was conducted within a quantitative research design framework, based on data obtained from 231 participants with active remote working experience. Satisfaction levels were evaluated using descriptive statistics and comparative analyses (One-Way Analysis of Variance-ANOVA). The findings indicate that home office satisfaction does not exhibit a homogeneous structure; rather, it demonstrates significant differences particularly in the dimensions of ergonomic adequacy, spatial organization, technical equipment sufficiency, and perceived work flexibility. Gender-based differences were primarily observed in perceptions of ergonomic and technical adequacy, whereas the age variable exerted a broader and more comprehensive effect, emerging as a determining factor especially in the dimensions of concentration, work management, and equipment adequacy. These results suggest that age may be a more distinctive factor than gender in shaping home office satisfaction. Overall, the study emphasizes that home office design should be evaluated not only in terms of physical comfort and functionality but also within the context of users' demographic characteristics. The findings provide important implications for interior design strategies, ergonomic support policies, and sustainable remote working practices.

Keywords: age, ergonomics, gender, home office, physical environment, user satisfaction

1. Introduction

The acceleration of digitalization, the widespread diffusion of communication technologies, and structural transformations in the labor market have led to profound changes in working patterns. This transformation became particularly evident on a global scale with the COVID-19 pandemic, during which remote working evolved into a permanent component of hybrid and flexible work arrangements across many sectors. Reports by the OECD (2021) and the International Labour Office (ILO, 2020) indicate that the pandemic transformed remote working from a temporary crisis response into a sustainable work practice. Ahrendt et al. (2022) report that working-from-home rates in European Union countries reached historically unprecedented levels, while Allen et al. (2015) note that although the concept of telework has long existed in the literature, contemporary digital infrastructures have significantly expanded its scope and effectiveness. Evaluated within the context of postmodern work culture by Baş and Kayan (2023), this transformation has redefined the functional boundaries of residential spaces by increasing the demand for spatial and temporal flexibility.

Within this context, spatial organization within the home has undergone substantial change, and the concept of the “home office” has evolved beyond being a temporary workspace into a multidimensional environmental system influencing user performance, psychological well-being, and work productivity. Home office environments require the holistic evaluation of numerous

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physical components, including ergonomic furniture, spatial layout, lighting quality, acoustic control, thermal comfort, storage solutions, and digital technical infrastructure. The environmental psychology literature demonstrates that physical environmental characteristics exert significant effects on user perception, behavioral performance, and stress levels (Vischer, 2007). Kim et al. (2016) reveal that workspace ownership and desk organization directly influence user satisfaction and perceived productivity, while Candido et al. (2019) emphasize the relationship between workplace design, user satisfaction, and levels of physical activity. These findings indicate that home office environments should be evaluated not merely as functional settings but as environmental systems that shape cognitive and behavioral performance.

Numerous studies in the interior design literature similarly demonstrate that spatial quality and ergonomic arrangements affect users' perceptual and behavioral performance. Yıldırım et al. (2005) identified the effects of residential interior elements on user satisfaction, while Yıldırım and Uzun (2010) examined the relationship between perceived spatial quality and functional performance. Yıldırım et al. (2007), Yıldırım et al. (2008), and Yıldırım et al. (2014) analyzed the perceptual and behavioral outcomes of interior design across different space types. Yıldırım and Akalın (2009) addressed the effects of spatial dimensioning problems on user evaluations, whereas Yıldırım et al. (2019; 2020) demonstrated the contributions of workspace partition heights and vegetative elements to user perception. Özkan and Yıldırım (2016) evaluated the effects of design methods on quality and performance. Studies conducted in educational environments (Müezzinoğlu et al., 2020; 2021) further revealed the effects of wall color and correlated color temperature on user perception, highlighting the relationship between environmental factors and cognitive performance. Taken together, this comprehensive body of literature demonstrates that physical environmental characteristics are strong determinants of user satisfaction. Collectively, these studies indicate that physical environmental decisions systematically influence user satisfaction, perceptual evaluations, and performance outcomes.

The advantages of remote working for individuals have also been widely discussed in the literature. Tuna and Türkmendağ (2020) and Akça and Küçükoğlu (2020) emphasize the positive effects of working from home on time management and motivation, while Wheatley (2012) examines the relationship between home-based telework, time use, and life satisfaction. However, Naktiyok and İşcan (2003) indicate that individual characteristics and job-related drivers influence attitudes toward working from home. Krautzel (2016) suggests that remote working may provide productivity and cost advantages for organizations, whereas Tutar (2007) cautions that virtualized work structures may increase employee loneliness. Graham et al. (2021), Oakman et al. (2020), and Xiao et al. (2021) investigate the physical and mental health impacts of working from home, demonstrating that ergonomic inadequacies may lead to health problems. Ipsen et al. (2021) systematically evaluate the advantages and disadvantages of working from home within the European context. Accordingly, the remote working experience should be considered not only as an organizational and psychosocial phenomenon but also as one directly associated with spatial and ergonomic conditions.

Research conducted within the framework of demographic variables reveals that the remote working experience does not represent a homogeneous structure. In terms of gender, studies indicate that women's working experiences during the pandemic may have differed due to increased domestic responsibilities (Del Boca et al., 2020; Shockley et al., 2021; Craig & Churchill, 2021). Chung and Van der Horst (2018) examine the effects of flexible working and telework on female employment. Conversely, some studies argue that spatial satisfaction is more strongly associated with physical environmental characteristics (Vischer, 2007; Kim et al., 2016). Age emerges as a determining factor in terms of technological competence, ergonomic requirements, and spatial adaptation capacity (Oakman et al., 2020; Ipsen et al., 2021; Ivasciuc et al., 2022). Candido et al. (2019) draw attention to generational differences in spatial expectations. These

findings demonstrate that home office satisfaction cannot be evaluated independently of demographic variables.

Within this literature framework, although numerous studies have examined remote working satisfaction, comprehensive quantitative and comparative research addressing the physical environmental characteristics of home offices in conjunction with demographic variables remains limited. A significant portion of existing studies focuses primarily on the psychosocial dimensions of remote work, whereas research jointly evaluating ergonomic furnishings, spatial organization, and technical infrastructure adequacy within the context of age and gender variables remains relatively scarce. Quantitative studies analyzing physical environmental characteristics alongside demographic variables through statistical comparisons are limited in the literature. This study aims to address this gap by examining user satisfaction with home office environments in relation to physical environmental factors and by identifying the effects of demographic differences on satisfaction levels. In this respect, the study seeks to contribute interdisciplinarity to the remote working literature by integrating the physical environment dimension with demographic differences. Accordingly, the following hypotheses were tested in this study:

H1: There are significant differences between female and male users' satisfaction evaluations regarding home office environments.

H2: There are significant differences among users from different age groups in their satisfaction evaluations regarding home office environments.

2. Method

In this study, a quantitative research design was adopted to determine the level of user satisfaction regarding the physical environmental characteristics of home office spaces and to examine whether this satisfaction differs according to gender and age variables. The research process consisted of three main stages: participant characteristics, data collection instrument, and statistical analysis.

2.1. Participant Characteristics

The study sample comprised a total of 231 home office users with active remote working experience. A purposive sampling method was employed, with prior experience of working from home established as the primary inclusion criterion. This approach ensured that the study was grounded directly in the evaluations of individuals with actual home office experience. Participation was voluntary, and respondents took part in the study of their own accord.

Of the participants, 54.5% were male ($n = 126$) and 45.5% were female ($n = 105$). In terms of age distribution, 34.2% of the participants were between 18-35 years old ($n = 79$), 40.7% were between 36-45 years old ($n = 94$), and 25.1% were between 46-55 years old ($n = 58$). The basic demographic characteristics of the participants are presented in Table 1. This distribution provided a balanced sample structure that allowed for comparative analyses across different age groups.

Table 1 Gender and Age Distribution of Home Office Users Participating in the Study

General Characteristics of Employees		n	%
Gender	Male	126	54,5
	Female	105	45,5
Age	18-35	79	34,2
	36-45	94	40,7
	46-55	58	25,1

2.2. Survey Design and Data Collection Process

A structured questionnaire consisting of two sections was used as the data collection instrument. The first section included questions related to participants' demographic characteristics, while the second section comprised 20 statements measuring user satisfaction with home office environments. The satisfaction items were developed based on the relevant literature

to encompass the dimensions of interior space evaluation, environmental comfort, ergonomic suitability, spatial organization, and technical infrastructure adequacy (Yıldırım, 1999; Yıldırım et al., 2005; 2007; 2008; 2014; 2019; 2020; Yıldırım & Akalın, 2009; Yıldırım & Uzun, 2010; Akalın et al., 2010; Özkan & Yıldırım, 2016; Müezzinoğlu et al., 2020; 2021). The scale aimed to evaluate physical environmental factors in a multidimensional manner.

Participants evaluated each statement using a five-point Likert-type scale (1 = Strongly agree, 5 = Strongly disagree). Lower scores indicated more positive evaluations, whereas higher scores reflected more negative evaluations. Negatively worded items were reviewed and appropriately coded prior to analysis.

The survey was administered online via Google Forms in February 2024. Participants were informed about the purpose of the study, and voluntary participation was ensured. Incomplete or inconsistent responses were excluded from the analysis. Valid data were transferred to the SPSS statistical software package for further analysis.

2.3. Statistical Analysis

The research data were analyzed using both descriptive and inferential statistical techniques. To determine participants' demographic characteristics and general trends regarding satisfaction items, frequency, percentage, arithmetic mean, and standard deviation values were calculated.

The internal consistency of the scale was assessed using Cronbach's alpha coefficient, with values of 0.70 and above interpreted as indicating acceptable reliability. Item-total correlations were also examined to verify scale consistency.

To determine whether satisfaction items differed according to gender (female/male) and age groups (18-35, 36-45, 46-55), one-way analysis of variance (ANOVA) was conducted. Prior to analysis, the assumption of homogeneity of variances was tested using Levene's test. The level of statistical significance was set at $p < 0.05$, while findings at the $p < 0.10$ level were interpreted as indicating marginal significance. The results of these analyses formed the basis for testing the research hypotheses.

3. Findings

This section presents the findings obtained from the satisfaction evaluations of home office users. First, the reliability results of the measurement scale are reported, followed by the comparative analyses conducted according to gender and age variables.

3.1. Reliability Analysis Results

In order to determine the internal consistency of the 20-item scale used to measure home office satisfaction, Cronbach's alpha reliability analysis was conducted. The overall reliability coefficient of the scale was calculated as $\alpha = 0.78$. This value exceeds the commonly accepted threshold of 0.70 in the literature (Cronbach, 1951), indicating that the scale demonstrates acceptable internal consistency.

Item-level analysis revealed that the corrected item-total correlations were at satisfactory levels and that removing any individual item would not result in a meaningful increase in the overall reliability coefficient. Therefore, all items were retained for the subsequent analyses. The reliability values of the items and the overall scale are presented in detail in Table 2.

Table 2 Cronbach's Alpha Reliability Levels of Satisfaction Evaluation Items

Dependent Variables	Item Reliability	Scale Reliability
H1 I consider my home office to be an adequate overall working environment.	0,764	0,78
H2 During work, household tasks and/or other concentration difficulties negatively affect me.	0,792	

H3	I experience difficulties in communicating with my colleagues and supervisors.	0,793
H4	I have difficulty coping with work-related technical problems.	0,788
H5	I experience difficulties in teamwork and collaboration related to my job.	0,756
H6	Working from home has a positive effect on my physical and mental health.	0,758
H7	I am able to allocate more time to family members.	0,760
H8	My work productivity and performance are at a higher level.	0,759
H9	I am able to take regular breaks at certain intervals.	0,787
H10	I experience difficulty in maintaining work-life balance.	0,761
H11	I can comfortably participate in video conferences and similar meetings.	0,798
H12	The interior layout of my home office makes it difficult for me to concentrate on work.	0,769
H13	My employer does not provide sufficient support during the work-from-home process.	0,795
H14	I can manage work projects and tasks more effectively from my home office.	0,794
H15	I prefer working from home rather than working at the workplace.	0,758
H16	The flexibility of my working hours in my home office boosts my morale.	0,753
H17	I find the equipment/furniture I use in my home office ergonomically adequate.	0,755
H18	I find the equipment/furniture I use in my home office adequate in terms of storage.	0,755
H19	I find the number of equipment/furniture I use in my home office sufficient.	0,752
H20	I find the number of devices such as computer, printer, scanner, photocopier, etc., in my home office sufficient.	0,763

In this study, participants' satisfaction levels regarding their home office environments were measured through a questionnaire. The findings obtained from the survey are examined separately below according to the gender and age characteristics of home office users.

3.2. Gender-Based Findings

The survey data obtained regarding home office satisfaction evaluations according to participants' gender were analyzed using statistical methods. The mean and standard deviation values, along with the ANOVA test results, are presented in Table 3.

Table 3 Satisfaction Evaluation Results According to Gender of Home Office Users

Dependent Variables	Gender						ANOVA Results		
	Female		Male		Total		F	df	Sig.
	M ^a	SD	M	SD	M	SD			
H1	2,14	1,01	2,27	1,02	2,21	1,01	0,897	1	0,344 ^{is}
H2	3,15	1,12	3,06	1,10	3,10	1,10	0,439	1	0,508 ^{is}
H3	3,46	1,19	3,21	1,25	3,32	1,22	2,267	1	0,134 ^{is}
H4	3,33	1,13	3,16	1,27	3,24	1,21	1,189	1	0,277 ^{is}
H5	3,38	1,19	3,08	1,24	3,22	1,23	3,509	1	0,062**
H6	2,10	1,04	2,12	1,04	2,11	1,04	0,011	1	0,917 ^{is}
H7	2,07	1,03	2,25	1,07	2,17	1,05	1,823	1	0,178 ^{is}
H8	2,07	0,92	2,27	1,08	2,18	1,01	2,320	1	0,129 ^{is}
H9	1,95	0,86	2,17	1,11	2,07	1,01	2,615	1	0,105**
H10	3,14	1,16	3,13	1,15	3,14	1,15	0,003	1	0,959 ^{is}
H11	2,29	0,94	2,37	1,18	2,33	1,08	0,375	1	0,541 ^{is}
H12	3,26	1,15	3,19	1,15	3,22	1,15	0,192	1	0,662 ^{is}
H13	3,38	1,25	3,36	1,21	3,37	1,23	0,022	1	0,884 ^{is}
H14	2,10	0,90	2,47	1,06	2,30	1,00	7,763	1	0,006*
H15	2,04	0,91	2,46	1,18	2,27	1,08	9,022	1	0,003*
H16	1,90	0,81	2,20	1,15	2,06	1,02	5,199	1	0,024*
H17	2,06	0,91	2,33	1,09	2,21	1,02	4,282	1	0,040*
H18	2,10	0,98	2,35	1,06	2,24	1,03	3,259	1	0,072**
H19	2,10	1,01	2,40	1,10	2,27	1,07	4,607	1	0,033*
H20	2,32	1,08	2,57	1,14	2,46	1,12	2,833	1	0,094**

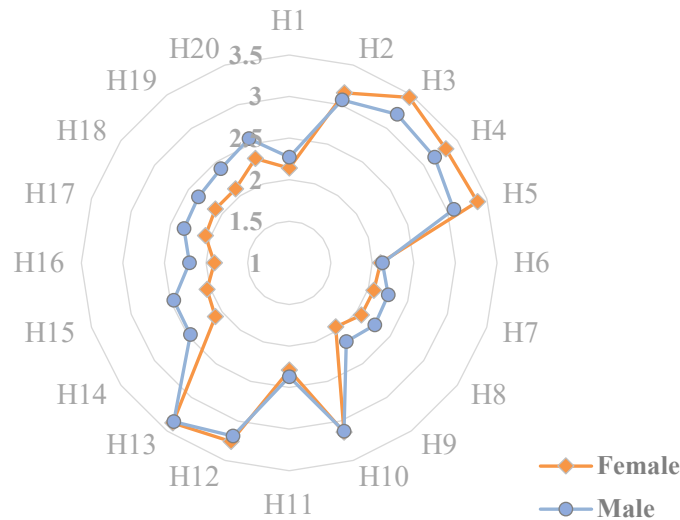
Note: ** $p < 0,10$ ve * $p < 0,05$ indicate statistical significance. ns: not significant at the $p < 0.05$ level.

M: Mean value; SD: Standard deviation; F: F value; df: Degrees of freedom.

a: Variable means range from 1 to 5 (1 = Strongly agree, 5 = Strongly disagree).

The findings presented in Table 3 indicate that the satisfaction evaluations of female and male users regarding home office environments differ statistically significantly not across all items, but

across certain satisfaction dimensions. According to the results of the ANOVA test, statistically significant differences were identified between female and male users for nine items at the $p < 0.05$ and $p < 0.10$ levels. The graphical representation of these findings is provided in Figure 1.



The variable means range from 1 to 5 (1 = Strongly agree, 5 = Strongly disagree).

Figure 1 The effect of gender on home office users' satisfaction evaluations

In the graph presented in Figure 1, it is observed that female and male users generally selected the response "disagree" for the following items in their satisfaction evaluations of home office environments: H2 (Household tasks and/or other concentration difficulties negatively affect me during work), H3 (I experience difficulty communicating with my colleagues and supervisors), H4 (I have difficulty coping with work-related technical problems), H5 (I experience difficulty in teamwork and collaboration), H10 (I experience difficulty maintaining work-life balance), H12 (The interior layout of my home office makes it difficult for me to concentrate on work), and H13 (My employer does not provide sufficient support during the work-from-home process). Therefore, it can be stated that users demonstrate a more positive attitude toward these seven aspects of working from home. When these findings are examined by gender, it is observed that female users exhibit a more positive attitude than male users for items H3, H4, and H5; however, a statistically significant difference is identified only for H5 (see Table 3). For the remaining significant items, male users, compared to female users, demonstrate a more positive attitude toward H14 (I can manage work projects and tasks more effectively from my home office), H15 (I prefer working from home rather than at the workplace), H16 (The flexibility of my working hours in my home office boosts my morale), H17 (I find the furniture/equipment I use in my home office ergonomically adequate), H18 (I find the furniture/equipment I use in my home office adequate in terms of storage), H19 (I find the number of furniture/equipment items in my home office sufficient), and H20 (I find the number of devices such as computer, printer, scanner, photocopier, etc., in my home office sufficient), and statistically significant differences are observed for these seven items (see Table 3). In addition, the evaluations of both genders appear to be very close to each other for items H2, H6, H10, H11, H12, and H13. These findings indicate that the hypothesis proposed in H1 - "There are differences between female and male users' satisfaction evaluations regarding home office environments." - is supported not at the level of all items, but rather in specific satisfaction dimensions.

3.3. Age-Based Findings

The survey data obtained regarding home office satisfaction evaluations according to participants' age were analyzed using statistical methods, and the mean and standard deviation values together with the ANOVA test results are presented in Table 4.

Table 4 Satisfaction Evaluation Results According to Age of Home Office Users

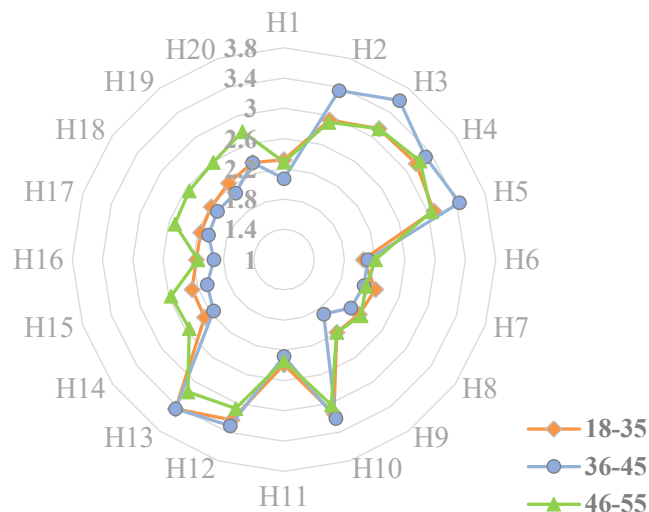
Dependent Variables	Age								ANOVA Results		
	18-35		36-45		46-55		Total		F	df	Sig.
	M ^a	SD	M	SD	M	SD					
H1	2,32	1,07	2,07	0,91	2,29	1,09	2,21	1,01	1,475	2	0,231 ^{is}
H2	2,94	1,14	3,35	0,99	2,91	1,17	3,10	1,10	4,230	2	0,016*
H3	3,14	1,26	3,60	1,02	3,14	1,41	3,32	1,22	3,987	2	0,020*
H4	3,16	1,20	3,31	1,08	3,22	1,43	3,24	1,21	0,306	2	0,737 ^{is}
H5	3,08	1,24	3,44	1,06	3,05	1,41	3,22	1,23	2,591	2	0,077**
H6	2,05	0,92	2,11	0,97	2,21	1,28	2,11	1,04	0,381	2	0,684 ^{is}
H7	2,27	1,09	2,11	0,86	2,14	1,26	2,17	1,05	0,524	2	0,593 ^{is}
H8	2,23	1,02	2,09	0,89	2,26	1,18	2,18	1,01	0,673	2	0,511 ^{is}
H9	2,19	1,12	1,89	0,73	2,19	1,19	2,07	1,01	2,445	2	0,089**
H10	3,14	1,24	3,21	1,01	3,02	1,25	3,14	1,15	0,514	2	0,599 ^{is}
H11	2,39	1,19	2,28	0,82	2,34	1,28	2,33	1,08	0,250	2	0,779 ^{is}
H12	3,23	1,18	3,31	1,03	3,07	1,30	3,22	1,15	0,780	2	0,460 ^{is}
H13	3,44	1,25	3,44	1,09	3,16	1,39	3,37	1,23	1,169	2	0,313 ^{is}
H14	2,30	1,10	2,15	0,83	2,55	1,08	2,30	1,00	2,949	2	0,054*
H15	2,28	1,13	2,07	0,92	2,57	1,20	2,27	1,08	3,843	2	0,023*
H16	2,16	1,14	1,93	0,79	2,14	1,15	2,06	1,02	1,419	2	0,244 ^{is}
H17	2,16	1,02	2,05	0,86	2,52	1,19	2,21	1,02	3,938	2	0,021*
H18	2,19	1,01	2,09	0,89	2,55	1,20	2,24	1,03	3,910	2	0,021*
H19	2,25	1,10	2,09	0,90	2,59	1,20	2,27	1,07	4,082	2	0,018*
H20	2,35	1,06	2,35	1,05	2,78	1,24	2,46	1,12	3,173	2	0,044*

Note: ** $p < 0,10$ ve * $p < 0,05$ indicate statistical significance. ns: not significant at the $p < 0.05$ level.

M: Mean value; SD: Standard deviation; F: F value; df: Degrees of freedom.

a: Variable means range from 1 to 5 (1 = Strongly agree, 5 = Strongly disagree).

The findings presented in Table 4 indicate that the satisfaction evaluations of users in the 18–35, 36–45, and 46–55 age groups differ statistically significantly not across all items, but across certain dimensions. According to the ANOVA results, statistically significant differences were identified for ten items at the $p < 0.05$ and $p < 0.10$ levels among users aged 18–35, 36–45, and 46–55 regarding their satisfaction evaluations of home office environments. The graphical representation of these findings is provided in Figure 2.



The variable means range from 1 to 5 (1 = Strongly agree, 5 = Strongly disagree).

Figure 2 The effect of age on home office users' satisfaction evaluations

In the graph presented in Figure 2, it is observed that users in the 18-35, 36-45, and 46-55 age groups generally selected the response “disagree” for the following items in their satisfaction

evaluations of home office environments: H2 (Household tasks and/or other concentration difficulties negatively affect me during work), H3 (I experience difficulty communicating with my colleagues and supervisors), H4 (I have difficulty coping with work-related technical problems), H5 (I experience difficulty in teamwork and collaboration), H10 (I experience difficulty maintaining work-life balance), H12 (The interior layout of my home office makes it difficult for me to concentrate on work), and H13 (My employer does not provide sufficient support during the work-from-home process). Therefore, it can be stated that users demonstrate a more positive attitude toward these seven aspects of working from home. When these findings are examined by age, it is observed that users in the 36-45 age group exhibit a more positive attitude than those in the 18-35 and 46-55 age groups for items H2, H3, H4, and H5; however, no statistically significant difference is found for H4 (see Table 4). For the remaining seven items, users in the 46-55 age group demonstrate a more positive attitude than those in the 36-45 age group for H9 (I am able to take regular breaks at certain intervals), H14 (I can manage work projects and tasks more effectively from my home office), H15 (I prefer working from home rather than at the workplace), H17 (I find the furniture/equipment I use in my home office ergonomically adequate), H18 (I find the furniture/equipment I use in my home office adequate in terms of storage), H19 (I find the number of furniture/equipment items in my home office sufficient), and H20 (I find the number of devices such as computer, printer, scanner, photocopier, etc., in my home office sufficient), and statistically significant differences are identified for these seven items (see Table 4). These findings indicate that the hypothesis proposed in H2 - "There are differences among users from different age groups in their satisfaction evaluations regarding home office environments." - is supported not at the level of all items, but rather in specific satisfaction dimensions.

4. Conclusion and Recommendations

In this study, the effects of the physical environmental characteristics of home office spaces on user satisfaction were examined, and the ways in which gender and age variables create differences in these satisfaction levels were revealed through quantitative data. The findings indicate that the remote working arrangement is evaluated as a functional and acceptable working model by a significant proportion of participants. Indeed, 70.1% of the participants stated that they consider their home office suitable as a general working environment. This result suggests that remote working has evolved beyond being merely a compulsory pandemic practice and has become, to a certain extent, an adopted working model. This finding supports the studies of Wheatley (2012), Tuna and Türkmen dağ (2020), and Akça and Küçükoğlu (2020), which emphasize that working from home can generate positive outcomes in terms of time management, flexibility, and job satisfaction.

However, it is also evident that the home office experience does not present a seamless structure across all dimensions. Of the participants, 26.4% reported experiencing concentration difficulties, 22.6% indicated challenges in communicating with colleagues and supervisors, and 24.2% reported encountering technical problems. These findings are consistent with the evaluations of Tutar (2007), ILO (2020), Graham et al. (2021), Oakman et al. (2020), and Xiao et al. (2021), which highlight that remote working may generate disadvantages such as social isolation, communication breakdowns, and technical infrastructure inadequacies.

Analyses concerning the gender variable demonstrate that satisfaction evaluations differ not across all items, but within specific dimensions. Significant differences were identified in H5 (I experience difficulty in teamwork and collaboration), H9 (I am able to take regular breaks at certain intervals), H14 (I can manage work projects and tasks more effectively from my home office), H15 (I prefer working from home rather than at the workplace), H16 (The flexibility of my working hours boosts my morale), H17 (I find the furniture/equipment in my home office ergonomically adequate), H18 (I find the furniture/equipment in my home office adequate in terms of storage), H19 (I find the number of furniture/equipment items sufficient), and H20 (I find the number of

technical devices sufficient). These findings indicate that gender may lead to differences particularly in work preference, perceptions of flexibility, ergonomic adequacy, and technical equipment sufficiency. Nevertheless, no significant gender differences were found in certain fundamental dimensions such as concentration, communication, technical problems, and work–life balance. This finding aligns with the approaches of Vischer (2007) and Kim et al. (2016), which emphasize the primary determining role of physical environmental characteristics on satisfaction. Additionally, the findings of Del Boca et al. (2020), Shockley et al. (2021), and Craig and Churchill (2021), who draw attention to increased domestic responsibilities of women during the pandemic, suggest that satisfaction perceptions cannot be evaluated entirely independently of social roles.

The age variable, on the other hand, revealed more pronounced differences in home office satisfaction. Significant differences were observed in H2 (Household tasks and/or other concentration difficulties negatively affect me during work), H3 (I experience difficulty communicating with colleagues and supervisors), H5 (I experience difficulty in teamwork and collaboration), H9 (I am able to take regular breaks at certain intervals), H14 (I can manage work projects and tasks more effectively from my home office), H15 (I prefer working from home rather than at the workplace), H17 (I find the furniture/equipment ergonomically adequate), H18 (I find the furniture/equipment adequate in terms of storage), H19 (I find the number of furniture/equipment items sufficient), and H20 (I find the number of technical devices sufficient). This result demonstrates that spatial expectations, ergonomic requirements, and perceptions of technical infrastructure may differ across generations. These findings are consistent with the evaluations of Oakman et al. (2020), Ipsen et al. (2021), and Ivasciuc et al. (2022), and support the findings of Candido et al. (2019) regarding intergenerational differences in spatial expectations.

Overall, home office satisfaction does not exhibit a homogeneous structure; rather, it is shaped by the interaction between physical environmental quality, ergonomic equipment adequacy, technical infrastructure capacity, and users' demographic characteristics. The findings particularly reveal that the adequacy of ergonomic furnishings, the quantity of equipment, and the capacity of technical devices play a determining role in satisfaction levels. This result supports the studies of Yıldırım et al. (2005), Yıldırım and Uzun (2010), and Müezzinoğlu et al. (2020; 2021), which demonstrate the influence of interior design on user perception and performance.

In light of the findings, it is recommended that home office spaces be designed in a manner that is responsive to users' ergonomic, technical, and spatial needs; that age-related differences be taken into consideration; that employees be provided with ergonomic furniture and technical equipment support; and that communication and organizational support mechanisms in remote working processes be strengthened. Such an approach will enhance the sustainability of the remote working model and contribute to establishing a more balanced structure of user satisfaction.

CRedit Authorship Contribution Statement

Kemal Yıldırım: Writing – review & editing, Writing – original draft, Methodology, Investigation, Analysis, Data curation, Conceptualization, Data visualization. Kübra Müezzinoğlu Başpınar: Writing – review & editing, Writing – original draft, Investigation. Pınar Arı: Writing – review & editing, Writing – original draft, Investigation.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

Data will be made available on request.

Ethics Committee Approval

Ethical approval for this study was obtained from the Social and Human Sciences Research Ethics Committee of Fırat University at its meeting held on 04 March 2026, with decision number 2026/5.

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Resume

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