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An Examination of the Correlation Between Future Anxiety and Perceived Wellness Among Students of the Faculty of Health Sciences

Sağlık Bilimleri Fakültesi Öğrencilerinin Gelecek Kaygısı ve Algılanan Esenlikleri (Wellness) Arasındaki İlişkinin İncelenmesi

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ABSTRACT

Objective: The aim of this study was to examine the correlation between future anxiety and perceived wellness among students of the faculty of health sciences.

Methods: The descriptive, cross-sectional, and correlational study comprised a sample of 197 students studying at the faculty of health sciences of a public university. The data were collected using the "Socio-demographic Data Form", the "Perceived Wellness Scale (PWS)", and the "Future Anxiety Scale (FAS)" in university students. The analysis of the study incorporated a range of statistical techniques, including descriptive statistics, normality analysis, reliability analysis, difference analysis, correlation analysis and regression analysis.

Results: The mean FAS score of the students was 2.768±0.713, and the mean PWS score was 4.178±0.663. The findings indicated a negative, moderate and significant relationship between students' future anxiety and their perceived wellness (r=-0.607, p>0.05).

Conclusion: As future anxiety levels increase, students' perceived wellness levels decrease. In this context, it is recommended that holistic intervention and support systems be developed at the individual, institutional and social levels in order to reduce students' future anxiety and increase their wellness.

Keywords: Future anxiety, perceived wellness, wellness, health sciences faculty students

ÖZ

Amaç: Bu araştırma, sağlık bilimleri fakültesi öğrencilerinin gelecek kaygısı ile algılanan esenlik düzeyleri arasındaki ilişkiyi incelemeyi amaçlamaktadır.

Yöntem: Tanımlayıcı, kesitsel ve ilişkisel türdeki araştırmanın örneklemini bir kamu üniversitesi sağlık bilimleri fakültesinde öğrenim gören 197 öğrenci oluşturmaktadır. Veriler, "Sosyo-demografik Veri Formu", "Algılanan Esenlik Ölçeği (AEÖ)" ve üniversite öğrencilerinde "Gelecek Kaygısı Ölçeği (GKÖ)" ile toplanmıştır. İstatistiksel analizlerde tanımlayıcı istatistikler, normallik testleri, güvenilirlik analizleri, fark analizleri, korelasyon ve regresyon analizleri kullanılmıştır.

Bulgular: Araştırmada öğrencilerin GKÖ puan ortalaması 2,768±0,713; AEÖ puan ortalaması 4,178±0,663' tür. İki değişken arasında negatif yönlü, orta düzeyde anlamlı bir ilişki saptanmıştır (r=-0,607, p<0,05).

Sonuç: Gelecek kaygısı arttıkça öğrencilerin algılanan esenlik düzeyi azalmaktadır. Bu bağlamda, öğrencilerin gelecek kaygısını azaltmak ve esenlik düzeylerini artırmak için bireysel, kurumsal ve toplumsal düzeyde bütüncül müdahale ve destek sistemlerinin geliştirilmesi önerilmektedir.

Anahtar kelimeler: Gelecek kaygısı, algılanan esenlik, wellness, sağlık bilimleri fakültesi öğrencileri

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INTRODUCTION

The Turkish Language Association (TDK) defines anxiety as "an uneasy feeling arising from the expectation of a bad situation" [1]. This phenomenon can vary from person to person, with some experiencing a transient reaction while others encounter a persistent and problematic response. According to the extant literature, state anxiety is defined as an emotional state that occurs temporarily depending on certain events. By contrast, trait anxiety is defined as a psychological state with a more long-term and generalised structure [2]. A variety of individual and environmental factors contribute to the development of anxiety. While factors such as gender, age, socio-economic status, parental attitudes and the number of siblings may influence the expression of this emotion, the educational and occupational status of the parents, as well as the child's academic achievements, are also significant contributors to its development [3,4]. In this context, future anxiety refers to an individual's inability to plan for the future and his/her anxiety about uncertainties. This type of anxiety, which is frequently observed especially in young individuals, increases with uncertainty, insecurity, perception of danger and inadequate coping skills. However, it has been stated that goal-setting and sharing behaviours play a protective role in reducing anxiety [5].

Emotional reactions such as anxiety have been demonstrated to exert an effect on an individual's level of wellness. TDK defines the concept of wellness as "the state of being well, salvation, anti-disease" [1]. Dunn [6] conceptualised wellness as a multidimensional structure; this approach was subsequently developed by subsequent researchers who added physical, psychological, emotional, spiritual, social, occupational, intellectual and environmental dimensions [7,8]. The term "perceived wellness" is defined as the positive evaluations that individuals have about their health. This concept pertains to the subjective perception of one's own health status, as opposed to an objective determination of physical wellness.

The theoretical models developed in this direction have expanded the scope of the concept of wellness and are based on the understanding of perceived wellness, which is based on the subjective health assessment of the individual [9,10]. The concept under discussion is subjective in nature and consists of five main components: The perceptual nature of wellness, integrated systems, multidimensionality, salutogenic orientation and disposition orientation [9,11].

The extant theoretical frameworks posit that emotional experiences, such as anxiety, can influence how individuals perceive their wellness. Research findings indicate that heightened anxiety may potentially diminish psychological resilience and exert a negative influence on subjective well-being [5,12]. A review of the extant literature in the Turkish context reveals that, while future anxiety and perceived wellness have been the focus of separate lines of inquiry, their interrelationship remains largely unexplored. The study's originality derives from its status as one of the first to examine future anxiety and perceived wellness in a national context.

Accordingly, the aim of this study is to examine the correlation between future anxiety and perceived wellness levels of the students of the faculty of health sciences. In this context, the research seeks to provide answers to the following questions:

1. What are the levels of future anxiety and perceived wellness among the students of the faculty of health sciences?

2. Is there a statistically significant relationship between students' future anxiety and perceived wellness levels?

3. Do students' future anxiety and perceived wellness levels differ significantly according to socio-demographic variables such as age, gender, department, year of study, and income level?

MATERIAL AND METHOD

This quantitative research, which is descriptive, cross-sectional and correlational, was conducted with students studying at the faculty of health sciences of a state university between September and December 2024. The population comprised 286 enrolled students. The target minimum sample size was set at 167 students, with a 5% margin of error and 95% reliability. A face-to-face survey was administered to 210 students using a convenience sampling method. Thirteen incomplete or biased surveys were excluded from the analysis, which was conducted on 197 students, yielding a response rate of 68.8%. The participants completed the survey in approximately 10 to 15 minutes In this study, fourth-year students from the health management (HM) (n=2) and emergency aid and disaster management (EADM) (n=3) departments were not included in the analyses due to their insufficient representation, which would not allow for reliable statistical interpretation. Moreover, as the nursing department is newly established, only first-year students participated, which constitutes a limitation in terms of examining wellness across different academic levels. An ethics committee decision was obtained for the study, from the Ardahan University Scientific Research and Publication Ethics Committee (approval number: E-67796128-800-2400021393, date: 04.07.2024). Additionally, permission to conduct the survey was obtained from the Dean of the Faculty of Health Sciences, dated September 12, 2024, and numbered 2400030566. Prior to the survey, volunteer participants were informed, and written and verbal consent was obtained.

Data Collection Tools

The data were collected from university using a face-to-face questionnaire including the Socio-demographic Data Form, the Perceived Wellness Scale (PWS) and the Future Anxiety Scale (FAS) in university students. The data form incorporated demographic variables, such as age, gender and department. The PWS, developed by Adams [7] and adapted into Turkish by Memnun [9], is a 36-item, six-point Likert-type scale (1=strongly disagree to 6=strongly agree) measuring six dimensions: physical, emotional, social, psychological, spiritual, and intellectual. Twelve negative items are reverse-coded (2, 4, 7, 11, 12, 14, 17, 23, 25, 29, 34,

and 37), and total scores range from 36 to 216, with scores ≥144 (average ≥4) indicating high perceived wellness. Original internal consistency ranged from α=0.64 to 0.81 for subscales and α=0.91 for the total scale. In the Turkish adaptation studies Cronbach's alpha (α) value was 0.84 [9,11]. The FAS, developed by Geylani and Çiriş Yıldız [13], includes 19 items on a five-point Likert scale across two subscales: Fear of the Future (FF) and Hopelessness about the Future (HF), where higher scores reflect greater future anxiety [13]. Original α values were 0.95 (FF), 0.88 (HF), and 0.91 (FAS) [13].

Statistical Analysis

Data were analyzed using SPSS 24.0. Normality was assessed using the Kolmogorov-Smirnov test and skewness-kurtosis coefficients within ±2 [14]. All variables except social wellness were found to be normally distributed. Accordingly, parametric tests [Independent samples t-test One-Way Analysis of Variance (ANOVA)] were applied to normally distributed variables. The Kruskal-Wallis H test was preferred to ensure statistical reliability when group variances differed by fourfold or more from the smallest mean [15]. Descriptive statics [mean ($\overline{X}$), standart deviation, Pearson correlation, and multiple regression analyses were also performed; the level of significance was accepted as $p<0.05$.

RESULTS

In this study, the sample consisted of 197 students. The majority of participants were female (71.6%), and 43.7% were enrolled in the HM department. The most common age groups were 19 (26.4%) and 21 years (24.9%). A total of 43.1% of participants resided in provincial centers. The highest proportion of mothers had completed primary school (30.5%), while most fathers had completed secondary school (37.6%). The largest academic subgroup comprised first-year HM students (21.3%). Additionally, 54.3% of participants had health coverage under the Social Security Institution, and 52.3% reported that their household income was equal to their expenses (Table 1).

According to the Kolmogorov-Smirnov test, the variables FF, FAS and PWS satisfied the assumption of normality ($p>0.05$). Skewness and Kurtosis values were within the acceptable range of ±2 for all variables, except for social wellness. Accordingly, parametric tests (Independent samples t-test and ANOVA) were employed. However, when the difference in group sizes was fourfold or greater, non-parametric methods (Kruskal-Wallis H test) were preferred. The mean FAS score was at a moderate level ($\overline{X}$=2.768), while the mean PWS score was moderate to high ($\overline{X}$=4.178). In the present study, the Cronbach's alpha values for the PWS were α=0.859 for the total scale, with sub-dimensions ranging from α=0.743 (Spiritual) to α=0.858 (Social) Also, α values were found 0.865 (FF), 0.832 (HF) and 0.872 (FAS), respectively (Table 2). Both

Table 1. Demographic Characteristics of the Participants (n=197)

Variables	Group	f	%	Variables	Group	f	%
Gender	Female	141	71.6	Place of residence	Province	85	43.1
	Male	56	28.4		District	63	32.0
Age	18 years and below[1]	28	10.7		Village	49	24.9
	19 years[2]	52	26.4	Department	Health management	86	43.7
	20 years[3]	38	19.3		Emergency aid and disaster management	85	43.1
	21 years[4]	49	24.9		Nursing	26	13.2
	22 years and above[5]	30	14.2	Academic year by department	HM-1	42	21.3
Mother's educational status	Illiterate	50	25.4		HM-2	28	14.2
	Literate	8	4.1		HM-3	16	8.1
	Primary school	60	30.5		EADM-1	25	12.7
	Middle school	49	24.9		EADM-2	33	16.8
	High school	26	13.2		EADM-3	27	13.7
	Bachelor's degree	4	2.0		N-1	26	13.2
Father's educational status	Illiterate	6	3.0	Social security coverage	Social security institution (SGK)	107	54.3
	Literate	5	2.5		Other	30	15.2
	Primary school	47	23.9		None	60	30.5
	Middle school	74	37.6	Income status	Income is less than expenses	77	39.1
	High school	49	24.9		Income equals expenses	103	52.3
	Bachelor's degree	15	7.6		Income is more than expenses	17	8.6
	Master degree	1	0.5				

HM: Health management, EADM: Emergency aid and disaster management, N: Nursing

Table 2. Normality test, reliability analysis and average scores (n=197)						
Scales and sub-dimentions	**Mean ($\overline{X}$)**	**SD**	**Kolmogorov–Smirnov (p)***	**Skewness**	**Kurtosis**	**(α)**
FF	2.982	0.817	0.062*	0.153	-0.378	0.865
HF	2.338	0.879	0.000	0.485	-0.249	0.832
FAS	2.768	0.713	0.200*	0.199	-0.023	0.872
Psychological	4.027	1.100	0.001	-0.379	-0.301	0.794
Emotional	4.360	0.992	0.003	-0.699	0.737	0.808
Social	4.951	1.076	0.000	-1.687	3.104	0.858
Physical	3.714	1.173	0.014	-0.153	-0.376	0.811
Spiritual	3.746	1.323	0.000	-0.130	-0.832	0.743
Intellectual	4.187	1.004	0.003	-0.603	0.406	0.791
PWS	4.178	0.663	0.200*	-0.255	0.075	0.859

*p<0.05
FF: Fear of the Future, HF: Hopelessness about the Future, FAS: Future Anxiety Scale, SD: Standard deviation, PWS: Perceived Wellness Scale

scales demonstrated strong internal consistency and construct validity, supporting their use in this population.

Table according to the results obtained from the difference analyses, future anxiety showed a statistically significant difference only by the grade variable (p<0.05). In contrast, perceived wellness varied significantly by age, department, grade, and income status (p<0.05). No statistically significant differences were found for the other variables (p>0.05) (Table 3).

The results of the ANOVA and least significant difference (LSD) post-hoc test based on age revealed statistically significant differences in psychological wellness [F(4.192)=3.499, p=0.009], intellectual wellness [F(4.192)=2.708, p=0.032], and overall PWS [F(4.192)=2.583, p=0.039]. Students aged 18 and under reported significantly higher levels of psychological wellness ($\overline{X}$=4.661) compared to those aged 20 and 21. This age group also demonstrated higher intellectual wellness ($\overline{X}$=4.571) and perceived wellness ($\overline{X}$=4.468) compared to students aged 21 (p<0.05) (Table 3).

According to the results of the ANOVA and Tukey post-hoc test based on the department variable, significant differences were found in the spiritual and intellectual wellness sub-dimensions, in addition to the overall PWS score (p<0.05) (Table 3). Students from the EADM department exhibited higher levels of spiritual wellness ($\overline{X}$=4.137), while students from the HM department demonstrated higher intellectual wellness levels ($\overline{X}$=4.465) compared to those in other departments. Furthermore, PWS scores of nursing students when compared to their counterparts from other departments (X^2=3.813) (Table 3).

Based on the results of the One-Way ANOVA and LSD post-hoc analyses conducted by grade, statistically significant differences were identified in several variables (p<0.05). HF scores were significantly lower in HM-1 students ($\overline{X}$=2.148) compared to EADM-3 ($\overline{X}$=2.615) and nursing-1 (N-1) ($\overline{X}$=2.623) students, while EADM-1 students ($\overline{X}$=2.000) scored lower than HM-3 ($\overline{X}$=2.613), EADM-3, and N-1. FAS levels were also lower in HM-1 ($\overline{X}$=2.549) and EADM-1 ($\overline{X}$=2.512) than in EADM-3 ($\overline{X}$=3.030) and N-1 ($\overline{X}$=3.062). Psychological wellness was significantly higher in HM-1 students ($\overline{X}$=4.506) compared to HM-2 ($\overline{X}$=3.902), EADM-2 ($\overline{X}$=3.917), EADM-3 ($\overline{X}$=3.648), and N-1 ($\overline{X}$=3.654). Spiritual wellness was highest in EADM-2 students ($\overline{X}$=4.768), followed by EADM-1 ($\overline{X}$=4.013), which was also significantly higher than that of N-1 students ($\overline{X}$=3.205). Intellectual wellness was significantly higher in HM-1 ($\overline{X}$=4.633) compared to HM-3 ($\overline{X}$=4.038), EADM-2 ($\overline{X}$=4.030), EADM-3 ($\overline{X}$=3.726), and N-1 ($\overline{X}$=3.746), while HM-2 ($\overline{X}$=4.457) and EADM-1 ($\overline{X}$=4.392) students also scored higher than EADM-3 and N-1. Finally, overall PWS was highest in HM-1 students ($\overline{X}$=4.425), followed by EADM-1 ($\overline{X}$=4.392) and EADM-2 ($\overline{X}$=4.219), while N-1 students had the lowest PWS scores ($\overline{X}$=3.813). These findings suggest that perceived wellness and future anxiety significantly differ by academic year and department (Table 3).

The results of the Kruskal-Wallis H test based on income status revealed statistically significant differences in social wellness and overall PWS scores (p<0.05, Table 3). Students whose income was less than their expenses reported significantly lower levels of social wellness and perceived wellness compared to those whose income was equal to their expenses [social wellness: $\chi^2(2)=11.480$, p=0.003; PWS: $\chi^2(2)=6.796$, p=0.033; 1<2] (Table 3).

According to the findings of Table 4, FF showed weak negative correlations with all perceived wellness dimensions, including psychological (r=-0.278), emotional (r=-0.412), social (r=-0.281), physical (r=-0.245), spiritual (r=-0.306), and intellectual wellness (r=-0.307) (p<0.01). HF demonstrated a moderate negative correlation with psychological wellness (r=-0.561, p<0.01), weak negative correlations with intellectual (r=-0.401), social (r=-0.442), and spiritual (r=-0.303) wellness (p<0.01), and very weak but statistically significant negative correlations with emotional (r=-0.283, p<0.01) and physical (r=-0.156, p<0.05) dimensions. The total FAS score was weakly negatively correlated with all wellness

Tablo 3. Analyses of Differences

Variables	n	Scales and Sub-dimentions									
		FF	HF	FAS	Psychological	Emotional	Social	Physical	Spiritual	Intellectual	PWS
Age											
18 years and below[1]	28	2.911±0.903	2.179±0.948	2.667±0.833	4.661±1.059	4.643±1.025	5.107±1.015	3.950±1.052	3.702±1.252	4.571±1.006	4.468±0.646
19 years[2]	52	2.844±0.843	2.300±0.853	2.663±0.741	3.995±1.024	4.490±0.976	5.019±0.980	3.742±1.180	3.603±1.295	4.177±1.021	4.200±0.688
20 years[3]	38	3.100±0.741	2.358±0.898	2.853±0.679	3.849±1.214	4.342±0.928	4.803±1.304	3.600±1134	3.816±1.212	4.037±1.072	4.085±0.643
21 years[4]	49	3.133±0.821	2.498±0.828	2.921±0.625	3.770±1.011	4.020±0.993	4.959±0.871	3.710±1.178	3.653±1.475	3.927±0.919	4.007±0.575
22 years and above[5]	30	2.893±0.763	2.267±0.931	2.684±0.709	4.142±1.080	4.450±0.976	4.858±1.296	3.593±1336	4.100±1.328	4.460±0.902	4.269±0.723
t/F/χ^2*; p; difference		F=1.128, p=0.344	F=0.710 p=0.586	F=1.232 p=0.299	F=3.49, p=0.009** LSD:1>3,4	F=2.358; p=0.055	F=0.432; p=0.786	F=0.455; p=0.768	F=0.780; p=0.539	F=2.708; p=0.032**; LSD: 1>4	F=2.583; p=0.039**; LSD:1>4
Department											
HM[1]	86	2.890±0.848	2.253±0.811	2.678±0.706	4.206±1.070	4.450±1.021	5.026±1.066	3.723±1.062	3.523±1.216	4.465±0.866	4.264±0.630
EA-DM[2]	85	2.985±0.766	2.336±0.906	2.769±0.669	3.962±1.106	4.331±1.051	4.976±1.105	3.826±1.306	4.137±1.341	4.040 ±1.056	4.203±0.641
N[3]	26	3.281±0.835	2.623±0.979	3.062±0.818	3.654±1.105	4.160±0.617	4.615±0.983	3.315±1.001	3.205±1.293	3.746 ±1.035	3.813±0.742
t/F/χ^2*; p; difference		F=2.319; p=0.101	F=1.779; p=0.172	F=2.955; p=0.054	F=2.839; p=0.061	F=0.913; p=0.403	F=1.507; p=0.224	F=1.910; p=0.151	F=7.581; p=0.001; Tukey: 2>1.3	F=7.130; p=0.001; Tukey: 1>2.3	F=4.911; p=0.008; Tukey: 3<1.2
Grade											
HM-1[1]	42	2.750±0.926	2.148±0.894	2.549±0.822	4.506±1.063	4.631±1.033	5.185±0.966	3.843±1.048	3.516±1.332	4.633±0.945	4.425±0.663
HM-2[2]	28	3.021±0.869	2.207±0.731	2.750±0.623	3.902±0.859	4.214±1.065	4.973±1.167	3.479±1.001	3.500±1.124	4.457±0.705	4.110±0.586
HM-3[3]	16	3.025±0.513	2.613±0.634	2.888±0.421	3.953±1.256	4.385±0.869	4.703±1.119	3.838±1.192	3.583±1.119	4.038±0.801	4.113±0.539
EADM-1[4]	25	2.768±0.671	2.000±0.821	2.512±0.628	4.360±1.123	4.607±0.932	4.970±0.950	3.744±1.423	4.013±1.078	4.392±1.040	4.359±0.695
EADM-2[5]	33	2.942±0.723	2.364±0.882	2.749±0.633	3.917±1.078	4.000±1.233	5.159±1.199	3.830±1.433	4.768±1.327	4.030±1.024	4.219.±.0.617
EADM-3[6]	27	3.237±0.851	2.615±0.938	3.030±0.672	3.648±1.050	4.481±0.814	4.759±1.119	3.896±1.052	3.481±1.265	3.726±1.045	4.040.±.0.601
N-1[7]	26	3.281±0.835	2.623±0.979	3.062±0.818	3.654±1.105	4.160±0.617	4.615±0.983	3.315±1.001	3.205±1.293	3.746±1.035	3.813±0.742
t/F/χ^2*; p; difference		F=1.954; p=0.074	F=2.303; p=0.036; LSD: 1<6.7; 4<3,6,7	F=2.760; p=0.014; SD: 1,4<6,7	F=3.047; p=0.007**; LSD: 1>2,5,6,7	F=1.901; p=0.083	F=1.255; p=0.280	F=0.968; p=0.448	F=5.407; p=0.000**; LSD: 5>1,2,3,4,6,7; 4>7	F=4.254; p=0.000**; LSD: 1>3,5,6,7; 2,4>6,7)	F=3.064; p=0.007**; LSD: 1>2,6,7; 7<4,57

Tablo 3. Continued

Variables	n	Scales and Sub-dimentions								
		FF	HF	FAS	Psychological	Emotional	Social	Physical	Spiritual	Intellectual	PWS
Income status											
Income < Expenses[1]	77	109.89	108	110.92	92.53	88.55	81.99	94.98	93.26	96.56	85.79
Income = Expenses[2]	103	92.59	95.3	92.25	102.66	107.71	110.4	100.79	103.46	98.49	107.37
Income > Expenses[3]	17	88.53	80.65	85.88	106.18	93.53	106.97	106.38	98	113.15	108.12
t/F/χ^2*; p; difference		χ^2=4.694; p=0.096	χ^2=4.138; p=0.126	χ^2=5.717; p=0.057	χ^2=1.697; p=0.428	χ^2=5.167; p=0.075	χ^2=11.480; p=0.003**; 1<2	χ^2=0.772; p=0.680	χ^2=1.426 p=0.490	χ^2=1.201 p=0.548	χ^2=6.796 p=0.03**1<2

*t=Independent simple t test, F= One-Way Analysis of Variance, χ^2=Kruskal-Wallis H test, **p<0.05
FF: Fear of the Future, HF: Hopelessness about the Future, FAS: Future Anxiety Scale, PWS: Perceived Wellness Scale, HM: Health management, EADM: Emergency aid and disaster management, N: Nursing, LSD: Least significant difference

dimensions, with coefficients ranging from r=-0.252 to r=-0.443 (p<0.01). At the overall scale level, FF was weakly negatively correlated with PWS scores (r=-0.498, p<0.01), while HF and FAS showed moderate negative correlations with PWS (r=-0.551 and r=-0.607, respectively; p<0.01). These results indicate that as future anxiety and its subdimensions increase, perceived wellness significantly decreases (Table 4).

A multiple regression analysis was conducted to examine whether FF and hopelessness predict perceived wellness. The overall model was statistically significant, F(2.194)=63.883, p<0.001, and explained approximately 39% of the variance in perceived wellness (R^2=0.397, adjusted R^2=0.391). Both FF (B=-0.270, β=-0.333, t=-5.499, p<0.001) and hopelessness (B=-0.316, β=-0.420, t=-6.919, p<0.001) were significant negative predictors of perceived wellness. Collinearity statistics (tolerance=0.846, variance inflation factor=1.183) indicated no multicollinearity problems (Table 5).

DISCUSSION

The study found that students experienced moderate levels of future anxiety, which may be influenced by individual, cultural, and environmental factors. Consistent with previous research, variations in future anxiety levels have been reported across different contexts [16-21]. Regarding wellness, participants exhibited moderate but nearly high levels. As highlighted in existing literature, wellness scores tend to be higher in the emotional and social dimensions. During the pandemic, social wellness showed an upward trend, whereas physical wellness declined [9,22-24]. Several factors have been identified as negatively impacting wellness during this period, including increased workload, fear of transmission, and a lack of awareness [25]. Nevertheless, some studies have reported low overall wellness levels [26] or found high general wellness alongside low physical wellness, particularly among academicians [27].

The study revealed that participants aged 18 years and under exhibited higher levels of wellness compared to those aged 21 and above, with statistically significant differences observed particularly in the psychological and intellectual dimensions (p<0.05). This finding is consistent with several previous studies [28]; however, other research has demonstrated that spiritual, physical, and intellectual wellness tends to increase with age [9,29-32]. Conversely, certain studies have reported no significant differences based on age or have suggested that individuals under 18 may perceive lower levels of wellness [8,23,26,27,33-36]. Taken together, these findings indicate that the relationship between age and wellness is not linear or unidirectional. Instead, it appears to be shaped by a complex interplay of factors such as developmental stage, level of responsibility, expectations, and social and environmental conditions. These results suggest that the association between age and perceived wellness is context-dependent and cannot be explained by age alone.

A significant disparity was identified in the dimensions of general wellness, spiritual, and intellectual wellness when the department variable was taken into account. Specifically, nursing students exhibited lower levels of general wellness, while EADM students demonstrated higher scores in spiritual wellness. Conversely, students from the HM department exhibited higher levels of intellectual wellness. This finding is consistent with previous research that has documented significant variations in wellness dimensions based on academic department [8,22,28]. These findings suggest that academic specialization may influence students' wellness levels through differences in curriculum structure, workload, and exposure to stressors. Overall, these results indicate that departmental context plays a key role in shaping students' wellness profiles.

Table 4. Correlation Analysis

Dimentions	1	2	3	4	5	6.	7.	8	9	10
1. FF	—									
2. HF	0.393**	—								
3. FAS	0.926**	0.711**	—							
4. Psychological	-0.278**	-0.561**	-0.443**	—						
5. Emotional	-0.412**	-0.283**	-0.431**	0.261**	—					
6. Social	-0.281**	-0.442**	-0.390**	0.446**	0.283**	—				
7. Physical	-0.245**	-0.156*	-0.252**	0.227**	0.282**	0.271**	—			
8. Spiritual	-0.306**	-0.303**	-0.358**	0.185**	0.171*	0.156*	0.029	—		
9. Intellectual	-0.307**	-0.401**	-0.399**	0.403**	0.154*	0.317**	0.165*	0.238**	—	
10. PWS	-0.498**	-0.551**	-0.607**	0.676**	0.634**	0.660**	0.595**	0.438**	0.614**	—

*p<0.05, **p<0.01
FF: Fear of the Future, HF: Hopelessness about the Future, FAS: Future Anxiety Scale, PWS: Perceived Wellness Scale

Table 5. Multiple Regression Analysis

Predictor	B	SE B	β	t	p	Tolerance	VIF
Constant	5.725	0.148	–	38.615	0.000	–	–
FF	-0.270	0.049	-0.333	-5.499	0.000	0.846	1.183
HF	-0.316	0.046	-0.420	-6.919	0.000	0.846	1.183

Note dependent variable=perceived Wellness (AEO). Model summary: R=0.630, R^2=0.397, adjusted R^2=0.391, F(2.194)=63.883, p<0.001, Durbin-Watson=1.883
SE: Standard error, VIF: Variance inflation factor, FF: Fear of the future, HF: Hopelessness about the future

As indicated by grade level, first-year students demonstrated reduced levels of future anxiety in comparison to their upper-class counterparts across several departments (p<0.05). This finding is consistent with studies showing that future anxiety tends to increase with each successive academic year [19,28,37-39]. Recent research has indicated that anxiety levels are notably elevated among final-year students, primarily attributable to concerns regarding graduation, employment prospects, and the mounting pressure to plan for the future. Conversely, among early-grade students, factors such as challenges in adapting to university life, limited social support, and a lack of structured future planning have also been identified as contributing to elevated anxiety levels. However, several studies have found no significant differences in future anxiety based on grade level, or have reported higher anxiety in grades other than the final year [40-43]. In particular, elevated anxiety levels among first-year students have been associated with challenges such as adapting to university life, separation from family, and the social adjustment process [44].

In a similar vein, first-year students were found to have higher levels of wellness, with significant differences observed in the psychological, spiritual, and intellectual dimensions (p<0.05). These findings are consistent with previous research indicating that wellness levels may vary based on education level [28,30]. However, other studies have reported variations in specific dimensions or noted higher levels of wellness among upper-grade students [22,26]. These patterns highlight the importance of early-stage support mechanisms, as the decline in wellness across grade levels may reflect unmet psychological and academic needs.

Although this study did not find a statistically significant relationship between income level and future anxiety, previous research has shown inconsistent results. Some studies report higher anxiety among low-income individuals [42,45-48], while others find no meaningful association [20]. It has been proposed that economic anxiety may be influenced not only by actual income but also by individuals' perceptions of financial freedom and autonomy [49]. These findings imply that the relationship between economic status and future anxiety is complex and influenced by subjective perceptions. Regarding wellness, individuals whose income was lower than their expenditure reported lower overall and social wellness. However, previous studies have shown notable discrepancies between income and psychological wellness [30], suggesting that financial status alone may not fully explain variations in wellness.

Research findings indicate that future anxiety is a significant factor contributing to reduced overall wellness among students. During periods of heightened uncertainty, life satisfaction tends to decrease, psychological resilience is undermined, and general wellness deteriorates [50-53]. Rising academic pressures, unpredictability, and concerns about career prospects have been shown to directly affect the psychological wellness of university students [54]. The findings indicate that general well-being and wellness levels are not only influenced by current living conditions, but also by individuals' expectations and concerns regarding the future. Indeed, some studies have shown that there are inverse relationships between future anxiety and depression,

stress and happiness levels in medical and HM students [43,46]. In this context, the wellness of individuals can be regarded as a critical psychological buffer against the negative effects of future anxiety.

Study Limitations

This research only included students from the faculty of health sciences at one university, and the results cannot be generalized. It is assumed that participants understood the statements on the survey correctly and answered them as they understood.

CONCLUSION

The study revealed that students experienced moderate future anxiety and moderate to high levels of perceived wellness. A moderate, significant and negative correlation was indicated, suggesting that higher anxiety levels were associated with reduced overall wellness. While age, department, income, and grade level were associated with various wellness dimensions, only grade level significantly influenced future anxiety. The findings of this study indicate that students' perceptions of wellness are significantly influenced by their concerns regarding the future. Higher anxiety among upper-year students may be associated with the ambiguities surrounding graduation and employment prospects. Notably, students in practice-oriented departments, such as nursing, reported lower levels of wellness, likely due to the combined pressures of practical training and academic expectations. In view of these findings, academic institutions should consider ways to enhance access to psychological counselling, implement targeted anxiety-reduction programmes, and establish regular monitoring procedures for student wellness. It is imperative that higher education policies adopt a holistic, student-centred framework that integrates wellness-focused curricula, effective guidance systems, and employment support to foster sustainable student development.

Ethics

Ethics Committee Approval: Approval for the study was obtained from the Ardahan University Scientific Research and Publication Ethics Committee (approval number: E-67796128-800-2400021393, date: 04.07.2024).

Informed Consent: Prior to the survey, volunteer participants were informed, and written and verbal consent was obtained.

Footnotes

Author Contributions

Concept: EGA, AŞ; Design: EGA, AŞ; Data Collection or Processing: EGA, AŞ; Analysis or Interpretation: EGA, AŞ; Literature Search: EGA, AŞ; Writing: EGA, AŞ.

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