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The mediating role of learned meaninglessness in the relationship between Hikikomori and unemployment anxiety among Turkish university students

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Abstract

This study examines the relationship between unemployment anxiety, learned meaninglessness, and hikikomori tendencies among university students in Türkiye, emphasizing the mediating role of learned meaninglessness. Analysis of 445 students shows that unemployment anxiety predicts hikikomori tendencies, amplified by learned meaninglessness. Students from lower-income backgrounds and those living alone exhibit higher hikikomori tendencies, while gender, age, and academic year have no significant impact. The study highlights that unemployment anxiety predicts hikikomori tendencies, and that this relationship is partially mediated by learned meaninglessness. Supporting individuals' sense of purpose and reducing unemployment-related concerns may help mitigate hikikomori risk.

Keywords Hikikomori · Unemployment anxiety · Learned meaninglessness · Social withdrawal

Résumé

Cette étude examine la relation entre l'anxiété liée au chômage, le sentiment d'absurdité apprise et les tendances hikikomori chez les étudiants universitaires en Türkiye, en mettant l'accent sur le rôle médiateur du sentiment d'absurdité ap-

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prise. L'analyse de 445 étudiants montre que l'anxiété liée au chômage prédit les tendances hikikomori, effet amplifié par le sentiment d'absurdité apprise. Les étudiants issus de milieux à faibles revenus et ceux vivant seuls présentent des tendances hikikomori plus marquées, tandis que le genre, l'âge et l'année universitaire n'ont pas d'impact significatif. L'étude souligne que l'anxiété liée au chômage prédit les tendances hikikomori, et que cette relation est partiellement médiatisée par le sentiment d'absurdité apprise. Renforcer le sentiment de but chez les individus et réduire les préoccupations liées au chômage pourraient contribuer à atténuer le risque hikikomori.

Zusammenfassung
Diese Studie untersucht den Zusammenhang zwischen Arbeitslosigkeitsangst, erlernter Sinnlosigkeit und Hikikomori-Tendenzen bei Studierenden in der Türkei, wobei der vermittelnden Rolle der erlernten Sinnlosigkeit besondere Bedeutung zukommt. Die Analyse von 445 Studierenden zeigt, dass Arbeitslosigkeitsangst Hikikomori-Tendenzen vorhersagt, wobei dieser Zusammenhang durch erlernte Sinnlosigkeit verstärkt wird. Studierende aus einkommensschwächeren Verhältnissen sowie solche, die allein leben, weisen ausgeprägtere Hikikomori-Tendenzen auf, während Geschlecht, Alter und Studienjahr keinen signifikanten Einfluss haben. Die Studie verdeutlicht, dass Arbeitslosigkeitsangst ein Prädiktor für Hikikomori-Tendenzen ist und dass dieser Zusammenhang teilweise durch erlernte Sinnlosigkeit vermittelt wird. Die Förderung eines Sinnempfindens sowie die Reduktion arbeitslosigkeitsbezogener Sorgen könnten dazu beitragen, das Risiko für Hikikomori zu verringern.

Resumen
Este estudio examina la relación entre la ansiedad por desempleo, la falta de sentido aprendida y las tendencias hikikomori en estudiantes universitarios de Türkiye, haciendo hincapié en el papel mediador de la falta de sentido aprendida. El análisis de 445 estudiantes muestra que la ansiedad por desempleo predice las tendencias hikikomori, intensificadas por la falta de sentido aprendida. Los estudiantes de entornos con menores ingresos y aquellos que viven solos presentan mayores tendencias hikikomori, mientras que el género, la edad y el año académico no tienen un impacto significativo. El estudio destaca que la ansiedad por desempleo predice las tendencias hikikomori y que esta relación está mediada parcialmente por la falta de sentido aprendida. Apoyar el sentido de propósito de los individuos y reducir las preocupaciones relacionadas con el desempleo puede ayudar a mitigar el riesgo de hikikomori.

Introduction

Hikikomori, broadly defined as severe social withdrawal, was first observed in Japan in the late 1990s (Kato et al., 2019). Although initially perceived as a culture-bound phenomenon specific to Japanese society, its emergence in diverse countries over time has led to increasing recognition that hikikomori represents a global public health concern (Takefuji, 2023; Tamaki, 2013; Teo et al., 2018). Cases have been

reported in Italy, Ukraine, Slovakia, Oman, Spain, Portugal, and several other countries, demonstrating the phenomenon's cross-cultural relevance (Carpita et al., 2024; Chan et al., 2024; Correia Lopes, 2024; Frankova, 2019; Malagón-Amor et al., 2020; Miriam et al., 2024). In Türkiye, the first hikikomori-related study was conducted by Kaşak et al. (2022), who examined socially withdrawn youth through a qualitative lens. Although determining prevalence remains challenging because of cultural differences and varying diagnostic criteria, increasing awareness of social withdrawal worldwide suggests that hikikomori-like tendencies may also rise in Türkiye in the coming years (Kato et al., 2019; Teo and Gaw, 2010). In addition to this global pattern, work on youth in Türkiye points to structural conditions that shape the transition to autonomous adulthood. Extended school-to-work transitions, high youth unemployment, and ongoing economic insecurity can prolong dependence and limit opportunities for independent living (Çelik, 2013; Işık, 2016; İslamoğlu & Alp, 2019). Recent discussions on youth precarity further highlight how these constraints reinforce reliance on the family and contribute to a sustained sense of immobility during emerging adulthood (Gökşen et al., 2023). While not examined directly in relation to hikikomori, these dynamics outline a broader context in which withdrawal-like patterns may become more conceivable.

Literature review

Definition and scope of Hikikomori

The concept gained broader recognition following Saito's work *Hikikomori: Adolescence without End*, which defined hikikomori as the absence of school or work attendance for over 6 months and spending most of that time at home (Saito, 1998). Other studies similarly emphasize prolonged home confinement, avoidance of social participation, and withdrawal from social activities as key features of hikikomori (Tamaki, 2013; Teo et al., 2018). Despite some overlapping symptoms with depression-such as anhedonia, low motivation, and social withdrawal researchers consistently highlight that hikikomori constitutes a distinct phenomenon with unique developmental patterns.

Kato et al. (2020) proposed an international diagnostic framework for hikikomori before the coronavirus disease 2019 (COVID-19) pandemic. This framework emphasizes three core features: significant social isolation at home, a withdrawal period lasting at least 6 months, and marked functional impairment or distress related to the isolation. Additionally, severity classifications based on frequency of leaving the home (mild, moderate, severe) have been proposed, with individuals leaving home 4 or more days per week typically not meeting criteria. Periods of withdrawal lasting 3–6 months are considered "pre-hikikomori."

Hikikomori is believed to be associated with and influenced by various factors in its onset and progression. Teo and Gaw (2010) explained that hikikomori in Japan stems from high expectations for success, feelings of shame, and tendencies to avoid societal roles. According to the authors, fear of failure and rejection can lead individuals to withdraw from social life. This withdrawal may be intensified by

overprotective or demanding parenting, which pushes children toward solitude and detachment from society. The multifaceted nature of this syndrome can result in prolonged social withdrawal.

Hikikomori, learned meaninglessness, and unemployment anxiety

Learned meaninglessness is a multidimensional construct that reflects the erosion of purpose, coherence, and agency in individuals' lives. Drawing from both existential and motivational theories, the concept helps explain why certain individuals may become increasingly vulnerable to social withdrawal. From an existential perspective, learned meaninglessness aligns with Frankl's (1963) notion of the "existential vacuum," characterized by apathy, disengagement, and diminished meaning. Motivationally, it resembles learned helplessness (Seligman, 1975), as repeated experiences of futility, failure, or uncontrollability can foster the belief that efforts to construct or sustain meaning are pointless. However, unlike learned helplessness, which focuses primarily on perceived lack of control, learned meaninglessness involves a deeper collapse of existential meaning and self-coherence, resulting in a disconnection from one's values and goals despite their cognitive presence (Arslan & Uzun, 2025). This multidimensional structure—cognitive, emotional, and existential—has been associated with active disillusionment, existential fragmentation, and repeated meaning violations (Mikulincer & Lifshin, 2022), distinguishing it from broader meaning-in-life frameworks (Alencar & de Freitas, 2023). Reduced meaning in life has also been shown to negatively affect well-being and contribute to depressive symptoms (Kalkan & Vural Batık, 2019).

Another phenomenon associated with hikikomori is learned meaninglessness, which refers to the internalization of socially constructed meanings that lose their perceived validity, leading individuals to withdraw from efforts to cope with life's challenges. When individuals experience persistent uncertainty regarding their future roles—as in contexts of high unemployment or economic instability—the erosion of meaning can intensify, making them more susceptible to social withdrawal. The theoretical relevance of learned meaninglessness in explaining hikikomori therefore lies in its capacity to account for how existential depletion and motivational collapse converge to foster withdrawal from social and professional life.

Hikikomori can disrupt individuals' educational and professional functioning, thereby heightening unemployment anxiety and feelings of learned meaninglessness. These experiences may further erode life meaning and increase the risk of withdrawal from the workforce, particularly among university students who are highly vulnerable to unemployment-related distress (Statt, 1994, as cited in Korkmazer, 2020). Factors such as fear of failure, high expectations, and social pressures can intensify this withdrawal, and individuals struggling to cope with job-related stress show stronger hikikomori tendencies (Hihara et al., 2022; Lin et al., 2022).

Thus, unemployment anxiety and learned meaninglessness represent key psychosocial contributors to social isolation, underscoring hikikomori as not only an individual issue but also a broader public health concern requiring comprehensive social and psychological interventions (Tamaki, 2013). Beyond these pressures, prolonged

withdrawal is associated with notable declines in mental and interpersonal functioning, including heightened internalizing symptoms and reduced relationship maintenance (Nonaka et al., 2025). A qualitative study further demonstrates that extended withdrawal is often accompanied by profound loneliness and psychic strain, with recovery hinging on inner motivation and supportive relational contexts (Hareven et al., 2024). This erosion of functioning frequently amplifies concerns about competence and employability, particularly under socioeconomic pressures, as prolonged unemployment is linked to diminished control and disengagement from personal and social functioning (Rözer et al., 2020; Soral et al., 2024).

Within this process, the emergence of learned meaninglessness—a state reflecting the collapse of coherence and existential significance—may help explain how extended withdrawal contributes to heightened unemployment anxiety and the weakening of psychological agency. By integrating learned meaninglessness into the conceptual model of hikikomori, this study addresses a gap in the existing literature and provides a stronger theoretical foundation for understanding why unemployment anxiety may contribute to social withdrawal among young adults.

National and international studies

A review of national and international literature on hikikomori reveals studies across fields such as psychology (Kulaberoğlu & Hocaoğlu, 2024; Onaral, 2020), sociology (Arıkan, 2024; Coşan, 2021), and communication sciences (Demir, 2017; Karakaş, 2019; Kin, 2024). Although originally conceptualized in the Japanese context, hikikomori has since been observed in multiple countries. Cross-cultural research conducted in South Korea (Lee et al., 2013), Hong Kong (Wong et al., 2015), Italy (Tolomei et al., 2023), and the USA (Teo et al., 2015) has identified similar patterns of prolonged social withdrawal, though with culturally specific nuances. These findings suggest that hikikomori may reflect a broader psychosocial response to global stressors such as academic pressure, social alienation, and digital overstimulation. Despite this growing body of work, no study in either national or international literature has specifically explored the intersection of hikikomori with unemployment anxiety and learned meaninglessness a gap this study aims to address. While hikikomori is typically defined as a clinical condition involving prolonged social withdrawal and significant functional impairment, this study adopts a dimensional approach. Specifically, we focus on hikikomori tendencies, which refer to subclinical levels of social withdrawal that may signal psychosocial distress without meeting full diagnostic criteria (Kato et al., 2020; Teo et al., 2018). This distinction is important, as the measurement tool employed, the 25-item Hikikomori Questionnaire (HQ-25), does not by itself indicate a formal diagnosis. Rather, it captures a range of withdrawal-related attitudes and behaviors, allowing us to assess predisposition or risk within a non-clinical university sample. This study aims to examine the relationships between hikikomori, unemployment anxiety, and learned meaninglessness among Turkish university students and to evaluate the mediating role of learned meaninglessness in these relationships. The methodological and conceptual novelty of this study lies in its integration of unemployment anxiety and learned

meaninglessness within the context of hikikomori for the first time in Türkiye. While the international literature has primarily explored hikikomori in relation to psychopathological factors, this study adopts a broader biopsychosocial and existential perspective. By analyzing how existential emptiness mediates the link between structural stressors and social withdrawal, the study introduces a novel explanatory framework. Additionally, the construct of "learned meaninglessness"—not previously tested in relation to hikikomori—is empirically evaluated here for the first time, making a unique contribution to the global hikikomori literature. Considering the limited number of studies on hikikomori both in Türkiye and globally, the results of this research are expected to make significant contributions to the literature.

The findings of this study are anticipated to guide the development of intervention programs addressing the triangle of hikikomori, unemployment anxiety, and learned meaninglessness. Research in this area is considered crucial for reintegrating individuals into society, reducing the negative effects of social withdrawal, providing families with recommendations for managing this condition, and equipping society with better tools to support these individuals. Furthermore, improvements that enhance individuals' sense of meaning in life and facilitate their adaptation to professional life are expected to emerge.

Methods

Research model

In this study, designed to examine the mediating role of learned meaninglessness in the relationship between unemployment anxiety and hikikomori among university students, the quantitative research method was employed as the research model. The quantitative research method, in the broadest sense, refers to the collection and analysis of numerical data (Büyüköztürk et al., 2020). Additionally, within the scope of the study, descriptive and causal-comparative methods, which are among the quantitative research methods, were used. The descriptive method is defined as a method used to investigate the existing situation on a particular subject, while the causal-comparative method is defined as a method used to compare groups that differ in specific variables (Gurbetoğlu, 2018).

In this context, the relationship between university students' unemployment anxiety, hikikomori tendencies, and levels of learned meaninglessness was examined using a simple mediation model. To our knowledge, this is the first empirical model to test the mediating effect of learned meaninglessness on the relationship between unemployment anxiety and hikikomori tendencies. The inclusion of the "learned meaninglessness" variable—a construct not previously employed in hikikomori studies—represents a conceptual and methodological innovation. This model enables a more nuanced understanding of how existential struggles contribute to social withdrawal behaviors among university students. Mediation analysis is a model that examines the relationship between the dependent and independent variables through a third variable. In this model, the relationship between the dependent and independent variables is not examined directly; instead, the relationship between the

independent variable and the mediator variable, as well as the mediator variable and the dependent variable, is analyzed (Yılmaz & İlhan-Dalbudak, 2018).

In the study, unemployment anxiety was considered the independent variable, learned meaninglessness the mediator variable, and hikikomori the dependent variable, and the model presented in Fig. 1 was constructed.

The directional structure of the mediation model—unemployment anxiety → learned meaninglessness → hikikomori tendencies—is grounded in theoretical frameworks that conceptualize social withdrawal as a response to economic threat and existential uncertainty. Unemployment anxiety reflects anticipatory stress regarding one's future role in society, economic survival, and personal adequacy, which aligns with models of future-oriented anxiety and behavioral disengagement. According to meaning-making theory and existential psychology, prolonged exposure to uncontrollable or threatening socioeconomic conditions erodes individuals' sense of purpose and agency, creating vulnerability to learned meaninglessness. This, in turn, increases the likelihood of withdrawal-based coping, consistent with models describing hikikomori as an avoidant response to overwhelming social and performance demands. For these reasons, the present model is theoretically aligned with a progression from socioeconomic threat to existential erosion and finally to behavioral withdrawal.

Participants

The population of the study consists of university students in Turkey who are enrolled in formal education in the 2023–2024 academic year. This study employed convenience sampling via voluntary online participation through social media and university-based communication channels (Büyüköztürk et al., 2020). In this method, all individuals willing to respond to the questionnaire were included in the sample (Coşkun et al., 2017), and the process of finding participants continued until the desired sample size was reached.

The sample size is 445 participants, of whom 90.8% ($n = 404$) are female and 9.2% ($n = 41$) are male (Table 1).

The high proportion of female participants (90.8%) reflects structural characteristics of the accessible student population. In Türkiye, social science departments, such as psychology, social work, and education, tend to have predominantly female student bodies, and voluntary online survey studies often yield higher female response rates. Therefore, the gender imbalance in this sample appears to stem from both demographic patterns in the target population and the nature of the data collection method rather than a sampling error.

Data collection tools

In the study, data collection tools included the Sociodemographic Information Form, the 25-item Hikikomori Questionnaire, the Learned Meaninglessness Scale, and the Unemployment Anxiety Scale.

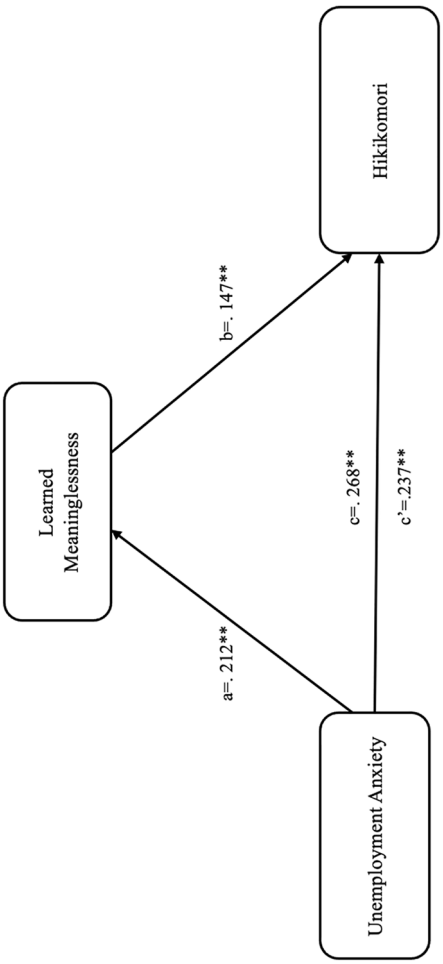


Fig. 1 Coefficients of the mediation mode

Table 1 Frequency analysis of participants

		f	Percentage (%)
Sex	Male	41	9.2
	Female	404	90.8
Age	18–19 years	187	42.0
	20 years and older	258	58.0
University	Government	26	5.8
	Foundation	419	94.2
University academic year	1st	342	76.9
	2nd	30	6.7
	3rd	28	6.3
	4th	45	10.1
Marital status	Married	2	0.4
	Single	437	98.2
	Other	6	1.3
Income	17,000 TL and below	82	18.4
	17,001 TL and above	363	81.6
Psychiatric diagnosis	Yes	20	4.5
	No	425	95.5
Participation in counseling	Yes	409	91.9
	No	36	8.1
Accommodation	Lives with others	430	96.6
	Lives alone	15	3.4

Sociodemographic Information Form

The Sociodemographic Information Form consists of questions prepared by the researchers to collect sociodemographic information about the individuals included in the study, such as age, gender, marital status, university type and level, and income level.

The 25-item Hikikomori Questionnaire

This scale was developed by Teo et al. (2018) to evaluate hikikomori as a severe form of social withdrawal. A Turkish validity and reliability study of this scale was conducted by Gündoğmuş et al. (2021). The scale consists of 25 items based on a 5-point Likert scale (0 = strongly disagree, 4 = strongly agree) and includes three subdimensions: socialization, isolation, and emotional support.

Items 4, 7, 10, 15, 21, and 25 are reverse scored. Each item is scored between 0 and 4, with the total scale score ranging from 0 to 100. The socialization subscale includes 11 items, the isolation subscale consists of 8 items, and the emotional support subscale comprises 6 items.

In the original form of the scale, the internal consistency analysis yielded a Cronbach's alpha value of 0.96 for the entire scale. In the Turkish adaptation by

Gündoğmuş et al. (2021), the scale's Cronbach's alpha reliability was calculated as 0.91. Additionally, Cronbach's alpha value for the socialization subscale was 0.89, for the isolation subscale was 0.76, and for the emotional support subscale was 0.74.

While the HQ-25 provides a reliable measure of social withdrawal tendencies, it is important to note that the scale does not establish a formal clinical diagnosis of hikikomori. Although international studies such as Teo et al. (2018) have suggested a provisional cut-off score of 42 to indicate potential risk, no clinically validated threshold currently exists for the Turkish version of the scale. Accordingly, in this study, scores on the HQ-25 were interpreted dimensionally. The term "hikikomori tendencies" refers to relatively elevated—yet subclinical—levels of social withdrawal as reflected by participants' scores, rather than meeting the full criteria for hikikomori syndrome.

Learned Meaninglessness Scale

The Learned Meaninglessness Scale was developed by Kalkan and Vural Batık (2019) to measure individuals' levels of learned meaninglessness. The scale consists of 23 items and is based on a 5-point Likert scale. It includes two subdimensions: meaninglessness and search for meaning. The lowest possible score on the scale is 23, and the highest possible score is 115. In the study conducted by Kalkan and Vural Batık (2019), the Cronbach's alpha reliability coefficient of the scale was reported as 0.94. In the current study, Cronbach's alpha values were calculated as 0.89 for both subdimensions: "meaninglessness" and "search for meaning." These results indicate a high level of internal consistency for the scale and its subscales in the present sample.

Unemployment Anxiety Scale

The Unemployment Anxiety Scale, developed by Özder et al. (2018), aims to measure the level of unemployment anxiety among teacher candidates. The scale consists of 14 items rated on a 5-point Likert scale and includes four subdimensions: workforce, constant anxiety, environment, and education. The overall Cronbach's alpha reliability coefficient of the scale was reported as 0.84. The internal consistency coefficients for the subdimensions were calculated as 0.84 for workforce (seven items), 0.61 for constant anxiety (two items), 0.64 for environment (three items), and 0.64 for education (two items). These values indicate that, while the overall reliability of the scale is high, the internal consistency of subdimensions—especially those with fewer items—is relatively lower.

Data Analysis

During the data analysis phase, an online survey was developed via Google Forms, incorporating sociodemographic questions and standardized scales. Following the approval of the ethical committee, the survey was disseminated to participants. Various platforms, including university social media accounts, student

club accounts, WhatsApp groups, Telegram, and LinkedIn, were used for data collection. The data collection process was conducted between 11 May 2024 and 15 August 2024. Participation in the study was entirely voluntary, and an "Informed Consent Form" appeared at the beginning of the survey. Participants could choose "I Agree/I Do Not Agree," allowing willing individuals to join the study while others could exit the survey.

Although confirmatory factor analyses (CFAs) were not conducted for the current sample, all measurement tools had previously been validated in Turkish populations. Therefore, internal consistency reliability (Cronbach's alpha) coefficients were calculated for each scale and its subdimensions.

Once the survey reached the required number of participants, various statistical methods were used to analyze the collected data. A total of 448 responses were collected. Prior to analysis, missing and outlier data were examined, and it was confirmed that there were no missing values in the dataset. However, three participants with *z*-scores exceeding 3.29 were excluded from the study (Field, 2009). Descriptive statistics and correlation results for the remaining 445 participants are presented in Table 2.

The skewness and kurtosis coefficients of the variables were found to be between −1 and +1, satisfying the normality assumption (Hair et al., 2013). Additionally, correlation coefficients between variables ranged from 0.143 to 0.270, indicating no multicollinearity problem (Hair et al., 2013).

To compare unemployment anxiety, hikikomori tendencies, and learned meaninglessness scores based on sociodemographic variables, independent sample *t*-tests and one-way analyses of variance (ANOVAs) were conducted. For variables showing significant differences in one-way ANOVA, the Scheffe test was performed since variances were homogeneously distributed.

For the mediation model, the Process macro extension developed by Hayes (2013) was used. In the mediation model, unemployment anxiety was the independent variable, learned meaninglessness was the mediator variable, and hikikomori was the dependent variable. Analyses were conducted using 5000 bootstrapped samples with a 95% confidence interval (CI). All analyses were performed using SPSS Statistics 22 and Process V4.2.

Table 2 Descriptive statistics and correlation coefficients between variables

	Descriptive statistics				Correlation		
	Mean	SS	Skewness	Kurtosis	Unemployment anxiety	Hikikomori	Learned meaninglessness
Unemployment anxiety	42.21	10.62	−0.06	0.04	1		
Hikikomori	65.73	10.54	−0.29	0.72	0.270**	1	
Learned meaninglessness	44.61	15.75	0.63	−0.29	0.143**	0.254**	1

Note. SS = Sum of squares, **p < .01

Results

The results of the mediation analyses conducted to test the research model are presented in Table 3. The model, in which unemployment anxiety is the independent variable, learned meaninglessness is the mediator variable, and hikikomori is the dependent variable, is statistically significant ($R = 0.35$, $R^2 = 0.12$, $F = 30.223$, $p < 0.001$).

When examining the direct effects of the model, unemployment anxiety positively predicts the mediator variable, learned meaninglessness ($B = 0.212$, $p < 0.01$), and the dependent variable, hikikomori ($B = 0.237$, $p < 0.001$). Additionally, the mediator variable, learned meaninglessness, positively predicts the dependent variable, hikikomori ($B = 0.147$, $p < 0.001$).

Moreover, the total effect of unemployment anxiety on hikikomori ($B = 0.268$, $p < 0.001$) and its indirect effect via learned meaninglessness ($B = 0.031$, 95% CI [0.007–0.067]) are also statistically significant.

To improve the interpretability of the regression coefficients, it is important to consider the scale ranges and average levels of the variables. The HQ-25 produces total scores between 0 and 100, and participants in this study reported a relatively high mean (M) hikikomori tendency ($M = 65.73$, SD = 10.54). The Unemployment Anxiety Scale ranges from 14 to 70, with a sample mean of 42.21 (SD = 10.62), indicating a moderate level of unemployment-related stress. Accordingly, the coefficient of 0.237 suggests that each 1-point increase in unemployment anxiety (on a 14–70 scale) is associated with a 0.24-point increase in hikikomori tendencies (on a 0–100 scale). Although the numerical effect size is modest, it remains meaningful given the elevated baseline hikikomori levels in the sample. Likewise, the indirect effect ($B = 0.031$) indicates that a portion of this association operates through increases in learned meaninglessness, reflecting the role of existential erosion in amplifying social withdrawal tendencies.

The visual representation of the coefficients obtained in Table 3 is provided in Fig. 1.

The findings of the independent samples t-tests and one-way ANOVAs conducted to compare unemployment anxiety, hikikomori, and learned meaninglessness scores based on sociodemographic variables are presented in Table 4.

The analysis revealed significant differences in unemployment anxiety scores based on academic year ($F = 15.297$, $p < 0.001$), and the presence of a psychiatric diagnosis ($t = 2.686$, $p<0.001$). Based on academic year, first-year students had significantly lower average scores compared with second-, third-, and fourth-year students. Additionally, participants with a psychiatric diagnosis had higher average scores than those without a diagnosis.

Significant differences were found in hikikomori scores on the basis of income ($t = 2.737$, $p < 0.01$) and accommodation ($t = -2.508$, $p < 0.05$). Regarding income, participants with an income of 17,000 TL or below had significantly higher hikikomori scores. Similarly, those living alone also had significantly higher hikikomori scores.

Table 3 Mediation model results

Independent variable	Mediator variable	Dependent variable	*B*	SE	*t*	*p*-Value	95% CI	
							Lower limit	Upper limit
Direct effects								
Unemployment anxiety	—	Learned meaninglessness	0.212	0.070	3.037	0.003	0.075	0.349
Unemployment anxiety	—	Hikikomori	0.237	0.045	5.304	0.000	0.149	0.325
Learned meaninglessness	—	Hikikomori	0.147	0.030	4.869	0.000	0.088	0.206
Total impact								
Unemployment anxiety	—	Hikikomori	0.268	0.045	5.912	0.000	0.179	0.358
Indirect impact								
Unemployment anxiety	Learned meaninglessness	Hikikomori	0.031	0.015	—	—	0.007	0.067

SE = Standard Error

Table 4 Comparison of unemployment anxiety, hikikomori, and learned meaninglessness scores according to sociodemographic variables

		Number (*n*)	Unemployment anxiety				Hikikomori				Learned meaninglessness			
			Mean	SS	*t/F*	*p*-Value	Mean	SS	*t/F*	*p*-Value	Mean	SS	*t/F*	*p*-Value
Gender	Male	41	42.05	11.95	−0.101	0.919	65.05	13.58	−0.433	0.665	49.32	18.78	2.014	**0.045**
	Female	404	42.23	10.49			65.80	10.20			44.14	15.35		
Age	18–19 years	187	41.54	10.70	−1.131	0.259	65.99	9.57	0.445	0.657	45.16	15.86	0.617	0.537
	20 years and older	258	42.69	10.55			65.54	11.21			44.22	15.69		
University	Government	26	40.92	11.73	−0.636	0.525	65.27	14.06	−0.228	0.819	52.19	15.95	2.544	**0.011**
	Foundation	419	42.29	10.56			65.76	10.31			44.14	15.63		
University academic year	1st	342	40.46 [a]	10.28	15.297	**0.000**	66.45	10.58	2.446	0.063	45.73 [a]	15.38	3.177	**0.024**
	2nd	30	46.87 [b]	10.41			63.03	12.84			44.03	17.94		
	3rd	28	46.86 [b]	11.35			62.54	10.22			40.86	17.48		
	4th	45	49.53 [b]	7.79			64.04	7.95			38.84 [b]	14.74		
Income	17,000 TL and below	82	40.79	10.44	−1.338	0.181	68.59	11.46	2.737	**0.006**	48.51	48.51	2.497	**0.013**
	17,001 TL and above	363	42.53	10.65			65.08	10.23			43.73	15.90		
Psychiatric diagnosis	Yes	20	48.40	12.46	2.686	**0.008**	68.85	13.24	1.357	0.176	44.10	16.19	−0.149	0.882
	No	425	41.92	10.45			65.58	10.39			44.64	15.75		
Participation in counseling	Yes	409	42.00	10.55	−1.401	0.162	65.65	10.35	−0.540	0.589	44.01	15.44	−2.734	**0.007**
	No	36	44.58	11.32			66.64	12.62			51.44	17.74		
Accommodation	Lives with others (family, friends, dormitory)	430	42.30	10.63	0.918	0.359	65.50	10.32	−2.508	**0.012**	44.60	15.84	−0.080	0.936
	Lives alone	15	39.73	10.42			72.40	14.50			44.93	13.15		

Significant differences were found in learned meaninglessness scores on the basis of gender ($t = 2.014$, $p < 0.001$), university ($t = 2.544$, $p < 0.05$), academic year ($F = 3.177$, $p < 0.05$), and income ($t = 2.497$, $p < 0.05$). Male participants had higher average scores than female participants. Students at state universities had higher average scores than those at private universities. Based on academic year, first-year students had higher average scores than fourth-year students. Participants with an income of 17,000 TL or below had higher average scores than those with an income of 17,001 TL or above.

Discussion

According to the research findings, participants showed generally elevated levels of hikikomori tendencies, indicating that social withdrawal may represent an emerging concern among young adults in Türkiye. In previous validation studies, Teo et al. (2018) proposed a score of 42 as a screening threshold indicating elevated risk of hikikomori. Although this threshold has not been psychometrically validated in Türkiye, the fact that the mean score in the current study clearly exceeds this benchmark suggests a potentially heightened level of social withdrawal in this population. This finding reveals that social isolation is a significant risk factor among young adults in Türkiye. However, these findings should be interpreted with caution, as there is currently no validated cut-off score for the HQ-25 scale specific to the Turkish population. Therefore, the results are interpreted descriptively rather than diagnostically. Studies conducted in other countries have reported lower average scores. International studies also report considerably lower levels of hikikomori tendencies among university students. Research conducted in Japan (Tateno et al., 2019; Teo et al., 2018) and Italy (Amendola et al., 2022) shows that young adults generally exhibit much lower withdrawal tendencies compared with the present sample. These cross-national differences suggest that hikikomori may vary according to cultural and socioeconomic factors and should therefore be interpreted within the unique context of each country. The relatively higher withdrawal tendencies observed in Türkiye may indicate that social isolation among young adults represents a more prominent concern and may be emerging as a potential public health issue.

In this study, the relationships between university students' hikikomori tendencies and sociodemographic variables were examined, and it was determined that there were no significant differences based on gender, age, academic year, or psychiatric diagnosis. These findings suggest that hikikomori behaviors are not solely influenced by demographic factors and that individuals' psychosocial contexts may have a stronger impact.

The fact that 90.8% of the participants in the study were female is notable, as gender was not found to have a significant effect on hikikomori tendencies. Similarly, studies in the literature, such as those conducted by Hu et al. (2022) in China and Wong et al. (2015) in Hong Kong, did not find statistically significant differences in hikikomori behaviors between men and women. Amendola et al. (2022) also emphasized that the effect of gender on hikikomori risk factors is generally limited. However, the high proportion of female participants may affect

the generalizability of the study's findings, and different results might be obtained with a more balanced sample.

Likewise, the age variable was not found to create a significant difference. Of the participants, 58% were in the 20-and-over age group. The homogeneity of the age groups and increased access to social support mechanisms may limit the influence of age on hikikomori tendencies. Lin et al. (2022) highlighted in their study that age alone is not a determinant of hikikomori and that an individual's social and psychological context has a stronger impact.

However, in a study conducted by Nazim (2024) with young adults in Lahore, a positive relationship was found between increasing age and hikikomori. Additionally, it was observed that women exhibited higher hikikomori symptoms compared with men. These conflicting findings highlight the need for more extensive and comprehensive research to understand the influence of cultural contexts and sample differences on hikikomori.

In the study, variables such as academic year and psychiatric diagnosis were also found to have no significant effect on hikikomori tendencies. Although the academic year variable suggests that students may encounter factors such as anxiety about finding a job and stress related to the end of student life as they progress through their studies, the absence of any significant differences in this study is noteworthy. This finding suggests that support mechanisms such as family, friend groups, and social environments, as well as individuals' psychological resilience, may play a more decisive role in this context. Regarding psychiatric diagnoses, it is known that conditions such as depression and anxiety have the potential to increase social isolation (Nazim, 2024). However, the low number of individuals with psychiatric diagnoses in this study may be the primary reason for the lack of a significant relationship. Previous research has shown that psychological diagnoses can increase social withdrawal behaviors. For instance, the study by Hu et al. (2022) found that individuals with psychiatric diagnoses were more prone to hikikomori behaviors. These findings highlight the necessity of conducting studies with larger samples to better understand the impact of psychiatric diagnoses on individuals' tendencies toward social withdrawal.

In terms of income level, individuals from lower-income families showed higher hikikomori tendencies. This finding suggests that economic insufficiencies can increase social withdrawal behaviors and strengthen the tendency to avoid social interactions. Additionally, a weak negative correlation between family income and social isolation was identified in the study. This indicates that individuals with lower income levels may be at greater risk of experiencing social isolation. Notably, Shahzad et al. (2024) found that social isolation is more prevalent among low-income individuals. However, in a study conducted by Hu et al. (2022) with young people in China, no relationship was found between hikikomori scores and monthly income. These contradictory findings suggest that the impact of income level on hikikomori may vary depending on the context. Regarding accommodation, university students living alone were found to have higher hikikomori scores. Living alone may lead to a lack of social support systems, which in turn can exacerbate social isolation.

Our study revealed that unemployment anxiety has a significant and positive effect on learned meaninglessness. Although no studies directly examining the relationship between these two concepts were found in the literature, research analyzing unemployment anxiety and learned meaninglessness separately indirectly supports our findings. Unemployment adversely affects not only individuals' economic status but also their mental health. Sümer et al. (2013) stated that unemployment increases stress levels, reduces quality of life, and triggers feelings of meaninglessness. In this context, Kümbür Güler (2005) indicated that unemployment could lead to learned meaninglessness behaviors through a loss of self-confidence and a diminished sense of control. Learned meaninglessness is defined as the individual's abandonment of attributing meaning to life events and the development of passive acceptance in the face of life's difficulties (Kalkan & Vural Baltık, 2019). This suggests that unemployment anxiety can distance individuals from efforts to create subjective meaning in life and accelerate the process of learned meaninglessness. While the mediation model tested in this study assumes a unidirectional pathway from unemployment anxiety to hikikomori through learned meaninglessness, it is important to note that the cross-sectional design precludes definitive causal inferences. This directionality was guided by existing theoretical models and empirical studies suggesting that economic insecurity and existential frustration can lead to social withdrawal (e.g., Norasakkunkit & Uchida, 2014; Teo et al., 2018). However, alternative explanations, such as reverse or reciprocal causality, cannot be ruled out. For example, hikikomori tendencies may themselves foster existential distress by intensifying feelings of disconnection and perceived failure, thereby exacerbating unemployment anxiety. Future research employing longitudinal or cross-lagged panel designs would be better positioned to test these alternative models and clarify the temporal and potentially reciprocal dynamics among these constructs. Dursun and Şen (2022) noted that unemployment anxiety is positively associated with psychological symptoms such as depression, anxiety, and negative self-perception. Dereli and Kabataş (2009), Özçelik Kaynak and Öztuna (2020), and Ömür and Seçgin (2024) emphasized that unemployment anxiety increases levels of hopelessness. In this regard, hopelessness may weaken an individual's capacity to create meaning and goals for the future, thereby reinforcing the feeling of learned meaninglessness. Additionally, Çetinceli and Tüzün (2022) demonstrated that unemployment anxiety negatively affects life satisfaction and psychological well-being. These findings indicate that unemployment anxiety undermines individuals' hopes for the future, reinforcing feelings of hopelessness. Hopelessness, in turn, hinders individuals' efforts to assign subjective meaning to life events, leading to a loss of a sense of control, which forms the basis of the feeling of learned meaninglessness.

The findings of the study indicate that unemployment anxiety has a significant and positive effect on hikikomori. This finding suggests that university students experiencing unemployment anxiety are more likely to exhibit hikikomori behaviors. This highlights the importance of viewing unemployment anxiety not merely as an economic issue but also as a factor with profound psychological and social impacts on individuals. A review of the literature addressing the relationship between unemployment anxiety and hikikomori shows that the topic is often discussed within the broader context of unemployment and hikikomori. A study

conducted in Japan found that unemployment increases the likelihood of hikikomori (Nonaka & Sakai, 2021). Furthermore, it was determined that, compared with other participants, hikikomori individuals were significantly more likely to be students or unemployed (Fong & Yip, 2023). Similarly, another study by Kanai et al. (2024) in Japan revealed a strong relationship between unemployment and hikikomori.

Individuals who are neither engaged in education nor employment and who lose hope of finding a job often experience psychological deterioration and withdraw from society over time. This increases their risk of developing hikikomori behaviors (Coşan, 2021). In Japan, university students who experience deep concerns about entering the workforce have been noted to exhibit hikikomori tendencies. At the root of this anxiety lies the structure of the Japanese work system, which bases factors such as salary increases, social benefits, and status more on seniority and length of service than on individual achievements (Sugai, 2016). Additionally, the economic crisis of the 1990s and the rise in unemployment rates significantly deepened concerns about job security among Japanese youth. This, coupled with the pressure to conform to societal expectations, has played a key role in the spread of hikikomori behaviors (Guo, 2022).

Unemployment anxiety is known to trigger negative emotions such as depression, weak interpersonal relationships (Cho & Jang, 2010), hopelessness, anxiety (Dursun & Aytaç, 2009), low quality of life (Shin, 2019), helplessness (Sümer et al., 2013), stress, and concern for the future (Tekin Tayfun & Korkmaz, 2016). These negative emotions can lead individuals to completely isolate themselves from their social environment, creating a foundation for hikikomori behavior (Kulaberoğlu & Hocaoğlu, 2024). Examining the causes of these effects reveals that unemployment anxiety stems from factors such as lack of self-confidence, a pessimistic outlook, lack of information, reduced employment opportunities, and environmental/social pressures (Tekin Tayfun & Korkmaz, 2016). These factors make it more difficult for individuals to cope with unemployment anxiety, indirectly leading to social isolation and psychological problems. In this context, it can be concluded that economic and social factors have a direct impact on individuals' psychological states and behaviors. This indicates that hikikomori is not solely a psychological or cultural phenomenon but is also closely related to economic and social conditions (Kulaberoğlu & Hocaoğlu, 2024; Onaral, 2020). Therefore, combating the phenomenon of hikikomori requires more than psychological support; youth-oriented social policies aimed at reducing unemployment anxiety and addressing employment issues must be developed.

The findings of the study reveal a positive and significant relationship between learned meaninglessness and hikikomori behaviors. This suggests that individuals with high levels of purposelessness and existential doubt are more prone to social withdrawal behaviors. Previous studies support these findings. For instance, Kulaberoğlu and Hocaoğlu (2024) highlighted that the reduction of goals and expectations toward life among young adults for various reasons is an important psychological predictor of hikikomori. Similarly, Taku et al. (2023) found that hikikomori is strongly associated with thwarted belongingness and perceived burdensomeness, which increase social withdrawal behaviors. These findings are also consistent with meaning-centered perspectives, which suggest that a weakened sense of purpose

increases vulnerability to future-oriented anxiety. When social withdrawal limits opportunities for meaningful engagement, feelings of emptiness may intensify, making concerns about employability more pronounced. Accordingly, interventions that support value clarification, purpose-building, or structured goal setting may help reduce both meaninglessness and unemployment-related anxiety. From a therapeutic standpoint, integrating meaning-centered approaches—such as Logotherapy—with cognitive-behavioral strategies may further assist individuals in restoring purpose and strengthening their social connections (Ameli, 2016). Furthermore, it should be noted that the intensification of economic and social pressures leads young adults to experience more severe existential crises, which may contribute to an increase in hikikomori cases. This situation requires addressing not only individual psychological needs but also structural factors contributing to learned meaninglessness. Furthermore, the novelty of this study lies in its ability to conceptualize the link between unemployment anxiety and hikikomori not merely as a direct effect but also through the lens of existential vulnerability. By introducing learned meaninglessness as a mediator, the research pioneers a new explanatory pathway that has not been previously explored in hikikomori literature. This approach underscores the importance of meaning-centered psychological interventions, alongside social policy reforms, to address the roots of social withdrawal in young adults. Systematic interventions aimed at reducing employment problems, social injustice, and economic inequality can play a crucial role in preventing hikikomori behaviors.

This study determined that learned meaninglessness plays a partial mediating role in the relationship between unemployment anxiety and hikikomori. The findings show that unemployment anxiety not only has a direct effect on hikikomori but also creates an indirect effect by increasing a lack of meaning and purpose in life among individuals. The statistically significant indirect effect of unemployment anxiety on hikikomori through learned meaninglessness indicates that learned meaninglessness functions as a reinforcing factor in this relationship. These findings suggest that loss of meaning may function as an important psychosocial risk factor in shaping social withdrawal processes. Approaches aimed at reducing learned meaninglessness, particularly in individuals experiencing unemployment anxiety, could be effective in preventing hikikomori behaviors.

Limitations

This study is one of the limited number of investigations in Türkiye examining the relationship between hikikomori, unemployment anxiety, and learned meaninglessness. However, the fact that 90.8% of the participants were female represents a significant limitation in terms of gender balance. Although the present study did not find a statistically significant effect of gender on hikikomori tendencies, the overrepresentation of female participants may limit the generalizability of the findings to other gender groups. Given that previous studies have reported inconsistent results regarding the role of gender in hikikomori, the current findings should be interpreted with caution considering the gender composition of the sample.

Additionally, the cross-sectional design prevents any causal interpretations among the variables, and the exclusive use of self-report instruments raises the possibility of common-method bias. The study also did not include control variables such as personality traits, social support, or prior mental health history, which may have influenced the relationships examined. Future research using longitudinal designs, multi-method approaches, and broader sets of control variables would provide a more rigorous test of the proposed model.

Lastly, addressing a deep psychological and cultural phenomenon such as hikikomori through solely quantitative methods may have limited the understanding of its individual and contextual dynamics. In this regard, future research could benefit from qualitative or mixed methods approaches to develop a more comprehensive and culturally sensitive understanding of hikikomori.

Future research

While this study represents one of the initial steps toward understanding hikikomori tendencies in Türkiye, there is a need for more comprehensive research on this topic. Hikikomori is a multidimensional phenomenon that is influenced not only by individual psychological factors but also by socioeconomic and cultural variables. Therefore, addressing different factors at the regional level in future research will contribute to a more nuanced understanding of the phenomenon.

Additionally, longitudinal studies could provide a more detailed examination of the causal relationships between unemployment anxiety, learned meaninglessness, and hikikomori. Such designs would allow researchers to test not only the unidirectional model proposed in the present study but also alternative explanations such as reverse or reciprocal causality. Cross-lagged panel designs and structural equation modeling of bidirectional pathways could illuminate how existential and social stressors interact with social withdrawal over time.

Furthermore, research using qualitative methods could contribute to understanding the individual and contextual dynamics of hikikomori. Finally, interdisciplinary studies addressing the psychological, social, and cultural dimensions of hikikomori simultaneously would allow for a broader and more integrative perspective on this phenomenon.

Conclusion

This study is a pioneering investigation into the relationships between hikikomori tendencies, unemployment anxiety, and learned meaninglessness among university students in Türkiye. Although hikikomori was initially defined as a phenomenon specific to Japan, it has become a global public health issue. However, research on this topic in Türkiye remains limited. In this context, the study aims to address the gap in the literature while providing significant insights into how the phenomenon of hikikomori takes shape in the Turkish context. The findings of the study reveal that unemployment anxiety increases hikikomori tendencies both directly and indirectly

through learned meaninglessness. Unemployment anxiety among university students is not limited to economic concerns but also negatively impacts their processes of finding meaning in life. Particularly, learned meaninglessness has emerged as a critical mechanism that triggers social withdrawal behaviors in individuals. Unemployment anxiety and learned meaninglessness highlight both the individual and societal dimensions of the hikikomori phenomenon, making the social isolation tendencies of young people in Türkiye even more pronounced.

Hikikomori is a phenomenon that must be carefully examined in the context of rising youth unemployment rates and social pressures in Türkiye. Factors such as postgraduation job-seeking anxieties, unemployment, inadequate employment policies, high levels of competition, and economic instabilities are significant contributors to the risk of hikikomori. Additionally, cultural elements such as societal norms and family pressure can complicate individuals' tendencies toward social withdrawal. In this regard, it is evident that hikikomori is not merely an individual problem but is closely related to Türkiye's economic and social dynamics. Beyond these national factors, future research on hikikomori may benefit from incorporating broader sociocultural dynamics. For instance, digital disengagement—or conversely, excessive reliance on online environments—has been identified as both a coping mechanism and a risk factor for prolonged social withdrawal. In addition, gendered dimensions of hikikomori deserve further exploration, as cultural expectations around masculinity and femininity may shape how individuals express or conceal withdrawal behaviors. Finally, the impact of the COVID-19 pandemic on social habits and remote engagement has potentially redefined baseline norms for isolation, complicating the differentiation between adaptive solitude and pathological withdrawal. As one of the first large-scale studies on hikikomori in Türkiye, this research makes a unique contribution to the field. The findings demonstrate that social services and psychological support mechanisms can play a critical role in addressing the phenomenon of hikikomori.

The findings of this study have practical implications not only for social policy but also for university-based counseling and mental health services. University counseling centers can play a vital role in the early identification of hikikomori tendencies and offer meaning-centered psychoeducational programs to support students' existential needs. Moreover, expanding access to career counseling, group-based guidance programs, and social skills development initiatives may help mitigate the impact of unemployment anxiety among young adults. Such holistic interventions may contribute not only to individual well-being but also to the broader prevention of social withdrawal at the systemic level.

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Declarations

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Informed consent Informed consent was obtained from all participants to be included in the study.

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