# Hopelessness, Presence of Meaning in Life, and Existential Concern: A Latent Profile Analysis

*Umutsuzluk, Yaşamda Anlamın Varlığı ve Varoluşsal Endişe: Bir Gizil Profil Analizi*

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**ABSTRACT**

Objective: The present study uses the variables of hopelessness, the presence of meaning in life, and existential concern to obtain a broad conceptualization of suicide risk and aims to uncover distinct latent subgroups formed by these variables. It also examines the differences in levels of life satisfaction across these subgroups.

Method: The participants were 348 university students (265 women and 83 men) selected by the convenience sampling method. Data were collected with "Existential Concerns Questionnaire," "Meaning in Life Questionnaire," "Beck Hopelessness Scale," "Satisfaction with Life Scale," and a demographic information form. Latent profile analysis was used to reveal the subgroups formed by the variables of hopelessness, presence of meaning in life, and existential concern. The difference in life standards between the resulting profiles was examined with auxiliary variable analysis.

Results: The present study revealed four distinct profiles regarding suicide risk. Profile 1 was the largest group (45.7%) and was labeled as a no-risk group. Profile 2 (19.8%) was labeled as a high existential risk group. Profile 3 (23.3%) was labeled as a low-risk group. Profile 4 (11.2%) was labeled as a high-risk group. In addition, the results showed significant mean differences in the levels of life satisfaction across profile memberships (Profile 1 > Profile 2, 3 > Profile 4).

Conclusion: The results suggested the importance of practitioners being aware that suicide risk among youth may be grouped by different combinations of the variables hopelessness, presence of meaning in life, and existential concern, rather than on a continuum from low to high.

**Keywords:** Hopelessness, presence of meaning in life, existential concerns, life satisfaction, latent profile analysis

**ÖZ**

Amaç: Bu araştırmanın amacı umutsuzluk, yaşamda anlamın varlığı ve varoluşsal endişe değişkenlerini kullanarak intihar riski ile ilgili geniş bir kavramsal çerçeve oluşturmak ve oluşan bu kavramsal yapının gizil farklı alt gruplarını ortaya çıkarmaktır. Aynı zamanda ortaya çıkan alt grupların yaşam doyumu algılarının farklılaşıp farklılaşmayacağının da incelenmesi amaçlanmıştır.

Yöntem: Araştırmanın katılımcılarını 265 kadın ve 81 erkek olmak üzere uygun örnekleme yoluyla araştırmaya dâhil edilmiş toplamda 348 üniversite öğrencisi oluşturmaktadır. Veri toplama aracı olarak "Varoluşsal Endişe Ölçeği", "Yaşamda Anlam Ölçeği", "Beck Umutsuzluk Ölçeği" ve "Kişisel bilgi formu" kullanılmıştır. Umutsuzluk, yaşamda anlamın varlığı ve varoluşsal endişe değişkenlerinin oluşturduğu alt grupları belirlemek için gizil profil analizi kullanılmıştır. Ortaya çıkan alt grupların yaşam doyumu düzeyindeki farklılıkları ise yardımcı değişken analizi ile incelenmiştir.

Bulgular: İntihar riski bağlamında bu araştırmada dört profil ortaya çıkmıştır. Birinci profil risksiz grup olarak adlandırılmıştır ve %45.7 ile en büyük grubu oluşturmaktadır. İkinci profile katılımcıların %19.8'i dahil olmuşve bu profil ise yüksek varoluşsal risk grubu olarak adlandırılmıştır. Üçüncü profil düşük risk grubu olarak adlandırılmış ve katılımcılardan %23.3'ü bu profile dahil olmuştur. Dördüncü profil ise yüksek risk grubu olarak adlandırılmış ve katılımcılardan %11.2'si bu gruba dahil olmuştur. Bunların yanında sonuçlar, ortaya çıkan profillerin yaşam doyumu ortalamalarında anlamlı farklılıklar olduğunu göstermiştir (Profil 1 > Profil 2, 3 > Profil 4).

Sonuç: Bulgular, ruh sağlığı uzmanlarının gençlerde intihar riskinin düşükten yükseğe bir doğrusal süreklilik göstermeyebileceğini; yaşamda anlamın varlığı, umutsuzluk ve varoluşsal endişe değişkenlerinin farklı kombinasyonlarından oluşacak şekilde gruplandırılabileceğinin farkında olmalarının önemini göstermektedir.

**Anahtar sözcükler:** Umutsuzluk, yaşamda anlam varlığı, varoluşsal endişe, yaşam doyumu, gizil profil analizi

## Introduction

The increasing risk of suicide among young people is alerting researchers to better understand suicide risk and seek ways to reduce it. To better understand suicide risk, we focus on the concepts of hopelessness, meaning in life, and existential concern. Hopelessness describes a set of cognitions characterized by pessimism about the future (Beck et al. 1974). Expectation of negative events in the future, feeling of giving up, and thwarted goals are the basic components of hopelessness (Marchetti 2019). Hopelessness based pessimistic explanatory style is the focus of the cognitive model of depression (Abramson et al. 1989). Negative expectations for the future are a fundamental vulnerability factor in terms of depression, as they may have a negative impact on both cognitive and affective processes. From a biological perspective, for example, depressed people consciously and

unconsciously show higher amygdala arousal to negative situations and that the arousal state is more permanent after the stimulus disappears has been evaluated as markers of negative expectations for the future (Auerbach et al. 2013). Hence, hopelessness is a transtheoretical determinant of suicidal thoughts as well as depression (Beck et al. 1985, 2006, Hagan et al. 2015, Marchetti 2019). This is because hopelessness as well as a lack of anticipated happiness is cognitive markers specific to depression (Ghahramanlou-Holloway et al. 2007). Additionally, hopelessness is considered a successful concept in predicting suicide risk (Troister et al. 2015). Concerning suicide risk, besides hopelessness, which describes pessimistic future expectations, another important potential source of theoretically negative future-oriented cognitions is existential concern resulting from awareness of finitude.

Death anxiety has been conceptualized as a transdiagnostic factor in the development of psychopathology (Iverach et al. 2014). Relatedly, existential concern defines the fear of death that occurs as a result of the basic dynamics of existence such as meaninglessness and fundamental loneliness (van Bruggen et al. 2017). Theoretically, death, the possibility of meaning/meaninglessness, choice/responsibility and ultimate isolation are the basic building blocks of existential anxiety (Yalom 1980). Although there is no research directly examining existential concern and hopelessness together, there is strong evidence that death anxiety may trigger depression-related difficulties (Menzies et al. 2019). Accordingly, results of a study conducted with therapist and counselor, point out the role of existential anxiety beyond meaning experiences in severity of depression (Pellens et al. 2022). Considering that depression is essentially based on the assumption that it is impossible to experience pleasure, it may be argued that existential concern may also be associated with suicide risk. On the other hand, freedom is considered the dominant factor in the dynamics that trigger existential concern (Shahar 2022). The reason freedom is at the center is that there is no ready-made prescription for meaning in life, and the self may create its meaning (Shahar 2022).

Meaning in life describes life as having subjective sense, being a matter for others, and having purpose (King and Hicks 2021). Making sense of the world in a coherent way is cognitive, the central life purpose regulatory function is motivational, and the perception that existence is significant is evaluative components of meaning in life (Steger 2012). Each of these components of meaning in life emerges in daily routine and relationships (Pérez-álvarez 2016). Although meaning in life seems to be a subjective entity, relationships and family relationships in particular, are the focal variables of meaning in life (Glaw et al. 2017).

An important consequence of meaning in life is that it may have a cognitive, motivational and evaluative buffering effect on depression and suicide. For instance, meaning in life was found to have a moderating role in the link between suicide risk and hopelessness in women diagnosed with borderline personality disorder (Marco et al. 2017), and mental disorders (Marco et al. 2016). However, another three-stage study with a non-clinical sample indicated that meaning in life moderated the link between hopelessness and suicidal thoughts only in the first stage, but no such finding was found in the other two stages (Goodwill 2023). As a result of a study conducted with Chinese youth, presence of meaning in life (PML) mediated the link between hopelessness and suicidal behavior (Lew et al. 2020). In a study conducted with adolescents, the variables of hopelessness and meaning in life were compiled under the existential attitude meta concept and a negative relationship was reported between PML and hopelessness (Brassai et al. 2012). Therefore, different mediation, moderation, and paths have been reported and the relationship strengths fluctuate in studies on the link between meaning in life and hopelessness.

The first aim of this study is to reveal different profiles based on hopelessness, PML, and existential concerns scores of undergraduate students. Suicide risk is generally associated with hopelessness (Hagan et al. 2015, Troister et al. 2015, Marchetti 2019), meaning in life (Marco et al. 2016, 2017), and existential concern (Critchfield and Harvell-Bowman 2023, Jalali Azar et al. 2024) in the literature. Therefore, we use the variables hopelessness, PML, and existential concern to obtain a broad conceptualization of undergraduate students' suicide risk. In this context, a low level of hopelessness and existential concern and a high level of meaning in life indicate a low risk of suicide, and vice versa, a high level. We use latent profile analysis to reveal subgroups of the population regarding suicide risk. Examining the differences between profiles with related variables is widely used to verify the profiles revealed (e.g. Blustein et al. 2020, Çarkıt 2024, 2025). Therefore, we examine the differences in life satisfaction levels between the profiles. Life satisfaction is the cognitive component of subjective well-being and expresses the individual's global evaluation of their overall life (Diener et al. 1985). The literature is consistent about the negative relationships between life satisfaction and suicide risk (e.g., Koivumaa-Honkanen et al. 2001, Zhang et al. 2017, Bryan et al. 2024). Therefore, the group with a high risk of suicide may be expected to show lower levels of life satisfaction.

Investigating hopelessness, presence of meaning and existential concern with person-centered research methodology in this study is based on some theoretical and pragmatic inferences. It was taken into account that first the COVID-19 pandemic and then the devastating Kahramanmaraş/Türkiye earthquake disasters could prime existential terror, especially among young people. Beside, difficulties such as economic fluctuation and youth unemployment created a pessimistic existential framework for the future, especially among university students. Furthermore, it has been argued that research on existential variables related to young people is little researched (Lundvall et al. 2020). Hence, exploring PML, existential concern, and hopelessness, which are structures that will be theoretically vital variables for depression and suicidal behaviors, with the person-centered paradigm, was deemed worth researching. Via person-centered lens, it was aimed to obtain nuanced findings for possible risks profile beyond the limitations arising from variable-centered approaches that showed a fluctuating network of relationships in previous research on the mentioned concepts. After revealing these profiles, it explores whether there is a significant difference between the life satisfaction levels of the profiles.

All in all, the present study extends the literature on suicide risk by considering hopelessness, PML, and existential concern variables together to conceptualize suicide risk among undergraduate students and by adopting latent profile analysis to demonstrate how this set of variables uniquely configures to reveal subgroups of the population. Given that the study is exploratory and that no previous profile analysis has been conducted with hopelessness, PML, and existential concern variables, it is difficult to hypothesize. Therefore, only the research questions are included below for greater consistency with the methodology. Given that latent profile analysis will reveal different configurations, the present study employs an exploratory approach in line with this methodology to answer the following questions: RQ 1: Are there quantitatively and qualitatively different profiles of hopelessness, PML, and existential concerns? RQ 2: Are there significant differences between undergraduate students with distinct profiles regarding life satisfaction?

## Method

### Sample

Participants of this study consist of 348 Turkish undergraduate students (265 women – 83 men). Convenience sampling was used in the selection of the participants. The mean age of the participants is 21.77 (range of 18 to 44 years, SD = 3.29). When the distribution of participants is examined in terms of academic level, 2 (0.6%) were in a foreign language preparatory class, 88 (25.3%) were freshmen, 68 (19.5%) were sophomores, 85 (24.4%) were juniors, and 105 (30.2%) were seniors.

### Procedure

Before the study, ethical approval was received from Nevşehir Hacı Bektaş Veli University Scientific Research and Publication Ethics Committee on 05.02.2025 with ref number 2025.01.44. Data were collected online (Google forms) by the researchers from their institution. It was sufficient for the participants to be undergraduate students at the researchers' institution and to volunteer for participation. No other exclusion criteria were used. The aim was to reach as many participants as possible. Since the online data collection platform (Google Forms) does not provide information on how many people opened the link or did not fill it out completely, there is no information on how many people were approached. No identifying information was requested from the participants. Data were only evaluated collectively by the researchers. On request, data are accessible from the authors.

The authors requested participation in the study by sharing the participation link in student social media groups. Participants first encountered a page containing information about the purpose of the present study. They then read and approved the informed consent form. Students voluntarily participated in this study. They also approved the informed consent form. All participants were free to terminate their participation at any time. Ferguson et al. (2020) stated that between 300 and 500 participants are adequate for latent profile analysis. The number of participants in the current study (N = 348) was in this range. Therefore, we deemed the number of participants sufficient for the current study.

### Measures

#### *Exsistential Concerns Questionnaire (ECQ)*

The Existential Concerns Questionnaire (ECQ) was originally proposed by van Bruggen et al. (2017). Ümmet et

al. (2018) later translated and validated the instrument for use with a Turkish population. The questionnaire includes 22 items across three dimensions: death anxiety, avoidance, and general existential anxiety. Participants answer the items on a 5-point Likert scale ranging from never to always. High scores from the ECQ indicate high existential concerns. The Cronbach's alpha of the ECQ were found to be .88 for total score, .85 for general anxiety, .72 for death anxiety, and .62 for avoidance (Ümmet et al. 2018). The Cronbach's alpha of the ECQ was found to be .93 for total score in the current study.

### Meaning in Life Questionnaire (MLQ)

The MLQ was developed by Steger et al. (2006). The MLQ was adapted for Turkish university students and adults by Boyraz et al. (2013). The Turkish MLQ consists of 10 items and two sub-scales (PML and search of meaning in life). PML subscale was used in this study. Participants respond to each statement using a 7-point Likert-type scale, with options spanning from absolutely untrue to absolutely true. High scores from the PML subscale indicate a more meaningful life. The Cronbach's alpha of the PML subscale of Turkish MLQ was found to be .88 (Boyraz et al. 2013). The Cronbach's alpha of the PML subscale of Turkish MLQ was also found to be .83 in the current data.

### Beck Hopelessness Scale (BHS)

The BHS was developed by Beck et al. (1947). The BHS was adapted for Turkish sample by Durak (1993). The Turkish BHS consists of 20 items. Participants answer the items as true or false. High scores from the BHS indicate high hopelessness. As it was not done by Durak (1993), Sarıçalı et al. (2022) conducted CFA to verify the construct of the Turkish BHS. The Cronbach' alpha coefficient of Turkish BHS was found to be .86 (Sarıçalı et al. 2022). The Cronbach's alpha of Turkish BHS was found to be .88 in the current data.

### Satisfaction with Life Scale (SWLS)

The SWLS was developed by Diener et al. (1985). The SWLS was adapted for Turkish sample by Durak et al. (2010). The Turkish SWLS consists of five items. Participants answer the items from 1 (strongly disagree) to 7 (strongly agree). High scores from the SWLS indicate high life satisfaction. Durak et al. reported an internal consistency of .81. The Cronbach's alpha of Turkish SWLS was found to be .87 in the current data.

## Statistical Analysis

First, preliminary analyses were conducted. Data were screened for outliers. The Mahalanobis distance test was used to detect outliers. In addition, the measurement model was tested to verify the validity of the scales used. Second, latent profile analysis was used to reveal subgroups formed by the variables of hopelessness, PML, and existential anxiety. To decide on the number of profiles, we considered the Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC), and the adjusted for sample size BIC (SABIC). Lower AIC, BIC, and SABIC values indicate a better profile solution (Nylund et al. 2007, Tein et al. 2013). Moreover, we considered the statistical significance of the Lo-Mendell-Rubin adjusted likelihood ratio test (LRT) and bootstrap likelihood ratio test (BLRT). A significant p-value (p < .05) suggests that the model with k profiles fits the observed data better than the model with k-1 profiles. The proportion of participants with the smallest profile should have been at least 5% (Spurk et al. 2020). In addition, entropy was employed to evaluate the classification accuracy (Hofmans et al. 2020). An entropy value above .8 indicates a good model fit (Muthén 2004, Tein et al. 2013). Finally, the theoretical coherence and interpretability of the identified profile solution were critically examined. Auxiliary analysis was used to compare the levels of life satisfaction (as an outcome variable) of the subgroups. When analyzing the outcome of profiles, the DU3STEP approach for the outcomes was used (Asparouhov and Muthên 2014).

## Results

### Preliminary Analysis

Two outliers were determined by the Mahalanobis distance test and excluded. The measurement model fitted well with the data ($\chi2 = 265.755$, df = 98, $\chi2/df = 2.71$, CFI = .94, TLI = .93, RMSEA = .070, SRMR = .063). As suggested, $\chi2/df$ value was lower than 3, the CFI and TLI values were greater than .90, and the RMSEA and SRMR values were lower than .08 (Hair et al. 2010). These results suggested that the scales are valid. Correlation coefficients among variables were low and moderate. The correlation coefficients and descriptive statistics are displayed in Table 1.

| Table 1. Correlation coefficients of study variables and descriptive statistics | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Correlations | | | Descriptive statistics | | | |
| | 1 | 2 | 3 | M | SD | Skewness | Kurtosis |
| 1. Existential concern | | | | 61.40 | 18.56 | .072 | -.436 |
| 2. Presence of meaning in life | -.43 | | | 23.79 | 6.36 | -.266 | -.436 |
| 3. Hopelessness | .45 | -.53 | | 6.68 | 4.94 | .705 | -.599 |
| 4. Life satisfaction | -.21 | .43 | -.37 | 18.48 | 6.71 | .091 | -.469 |

All correlations are significant at the p < .01 level. M = Mean, SD = Standard deviation

## Latent Profile Analysis

Table 2 shows the fit values of the models. The AIC, BIC, and SABIC values decreased for up to four profile models. All models produced entropy values above .80. The p values of BLRT and LMR showed that the four-profile model had a better fit than the five-profile model. The member rate of the smallest profile in the four-profile model was 11.2%. Considering all these indicators and rational integrity, we decided that the most suitable solution was the four-profile model.

| Table 2. Results of latent profile analysis | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | Number of parameter | AIC | BIC | SABIC | Entropy | LMR($p$) | BLRT($p$) | Rate in the smallest profile |
| 1 | 6 | 7405.75 | 7428.86 | 7409.83 | - | - | - | - |
| 2 | 10 | 7176.10 | 7214.62 | 7182.90 | .816 | .000 | .000 | 35.6 |
| 3 | 14 | 7117.70 | 7171.63 | 7127.22 | .859 | .035 | .032 | 12.6 |
| 4 | 18 | 7072.53 | 7141.87 | 7084.77 | .854 | .001 | .000 | 11.2 |
| 5 | 22 | 7061.30 | 7146.05 | 7076.26 | .859 | .130 | .121 | 2.8 |
| 6 | 26 | 7058.83 | 7158.99 | 7076.51 | .860 | .395 | .385 | 2.2 |

AIC = Akaike's Information Criterion; BIC = Bayesian Information Criterion; SABIC = sample-size adjusted BIC; LMR(p) = significance of Lo, Mendell, & Rubin adjusted likelihood ratio test; BLRT(p) = significance of bootstrap likelihood ratio test..

| Table 3. Characteristics for the four latent profiles of hopelessness, presence of meaning in life, and existential concern | | | | | |
|---|---|---|---|---|---|
| | Profile 1 $n$ = 159 (45.7%) Mean | Profile 2 $n$ = 69 (19.8%) Mean | Profile 3 $n$ = 81 (23.3%) Mean | Profile 4 $n$ = 39 (11.2%) Mean | Difference source |
| Hopelessness | 2.49 | 5.91 | 10.95 | 16.23 | |
| Presence of meaning in life | 27.60 | 21.71 | 21.52 | 16.74 | |
| Existential concern | 51.30 | 66.81 | 69.30 | 76.07 | |
| Outcome variable | | | | | |
| Life satisfaction | 21.02 | 17.06 | 17.23 | 13.15 | 1 > 2, 3 > 4 |

n = Number of people in the profile. Profile 1: No risk group; Profile 2: High existential risk group; Profile 3: Low risk group; Profile 4: High risk group.

Table 3 shows the characteristics of the four latent profiles for hopelessness, PML, and existential concern. Figure 1 presents the profile plot, which illustrates the characteristics of each identified profile based on z-scores. Profile 1 (our largest profile, 45.7%) included individuals who expressed themselves as having low levels of hopelessness and existential concern while also experiencing high levels of PML. Profile 1 could be referred to as the no risk group. The second profile (19.8%) represented people who reported the lower level of hopelessness and PML whiles the higher existential concern. This profile could be referred to as the high existential risk group. Profile 3 (23.3%) included individuals with slightly above-average hopelessness and existential concern, as well as slightly below-average PML. Profile 3 can be called the low risk group. Profile 4 (11.2%) included individuals with higher hopelessness and existential concern, as well as lower PML. Profile 4 can be called the high risk group.

The results of the distal variable (i.e., life satisfaction) analysis with the four-profile model retained are presented in Table 3. The results uncovered significant differences in life satisfaction among the profiles. Profile 1 showed the best outcomes in life satisfaction. Profile 1 members had the highest level of life satisfaction, followed by Profile 2 ($\chi2$ = 15.506, p = .000), Profile 3 ($\chi2$ = 13.816, p = .000), and Profile 4 ($\chi2$ = 61.300, p = .000), respectively. There was no significant difference between the life satisfaction levels of Profile 2 and Profile 3 members ($\chi2$ = 0.019, p = .891). Additionally, Profile 2 ($\chi2$ = 10.760, p = .000) and Profile 3 ($\chi2$ = 10.050, p = .002) members had higher life satisfaction than Profile 4 members.
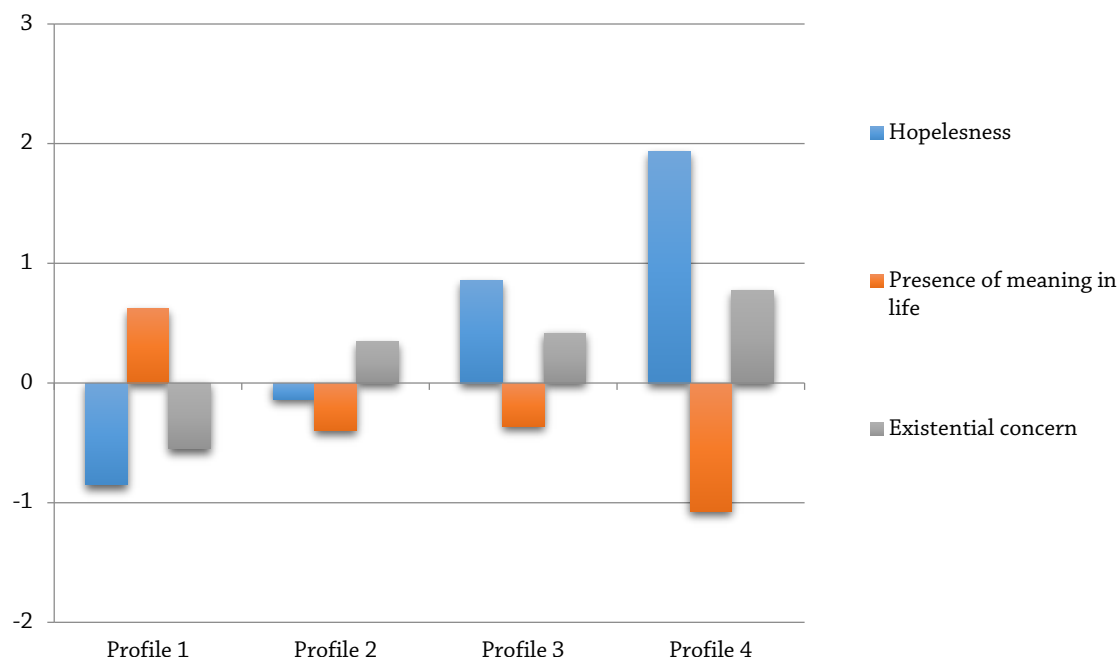
**Figure 1. Profile plot of hopelessness, presence of meaning in life, and existential concern**

Profile 1: No risk group; Profile 2: High existential risk group; Profile 3: Low risk group; Profile 4: High risk group.

## Discussion

The present study sought to explore how hopelessness, PML, and existential concerns uniquely combine to differentiate undergraduate student groups, employing a latent profile analysis. Regarding RQ 1, the present study revealed four profiles among Turkish undergraduate students for hopelessness, PML, and existential (no risk, high existential risk, low risk, and high risk). Furthermore, regarding RQ 2, the significant differences among profiles in life satisfaction levels as outcomes, confirm the validity of the profiles. The present study is the first that applies LPA to explore undergraduate students groups with hopelessness, PML, and existential concerns scores. A four-profile solution provided the best fit to the data and allowed examining variations among three distinct variables. The first profile named no risk group captured a consistent cluster including low hopelessness and existential concerns along with high PML. The second profile, labeled as the high existential risk group, reflected high levels of existential concerns, and modestly low levels of hopelessness and PML. The only unexpected characteristic of this profile was the modestly low level of hopelessness. The third profile, labeled the low-risk group, shows consistency around low levels of PML with moderately high levels of hopelessness and existential concern. The fourth profile, labeled as the high-risk group, was characterized by the highest levels of hopelessness and existential concern, with the lowest levels of PML.

The first result revealed within the scope of the research is the profile of low hopelessness and existential concern and high presence of meaning. This result coincides with some variable centered studies showing an inverse predictive relationship between PML, hopelessness and existential concern (e.g., García-Alandete et al. 2014, Sun et al. 2022). This result of the study coincides with the finding that high PML and high search for meaning in life profiles are associated with life satisfaction in people with chronic illnesses (Dezutter et al. 2013). Additionally, when theoretical and empirical data are synthesized, there is evidence that existential difficulties and meaninglessness may be determinants of hopelessness as well as several psychological difficulties (Glaw et al. 2017). As a result of this research, it contributed to the theoretical integration specified through LPA by showing the intra/inter individual distribution of three concepts namely hopelessness, existential concern and meaning in life. The second finding of the research created the profile of high existential concern, modest low level hopelessness and PML. This profile reveals a nuanced finding that may be relatively difficult to obtain in variable-centered approaches. It may be speculated that members of this profile may experience existential concern relatively independent of the threat of a pessimistic future expectation or lack of meaning in life. This profile coincides with the propositions of terror management theory (Greenberg and Arndt 2012), which emphasizes that the threat of finitude, unlike other concerns, may operate implicitly and universally. Therefore, in terms of this profile, it can be speculated that existential concern may be a core difficulty beyond other lateral

existential issues like PML and hopelessness. The third finding of the present study revealed the profile indicating low meaning in life and modestly high levels of hopelessness and existential concern. It was determined that a BHS score of 9 was the cut-off point in predicting eventual suicide in the clinical population (Beck et al. 2006). Although this research was conducted on a non-clinical sample, it may be suggested that this profile may pose a risk for eventual suicide, as the average BSH score is above 10.

Final profile formed in the research depicts members with high hopelessness and concern and a low PML. This profile relatively overlaps with the premises of the hopelessness depression model (Abramson et al. 1989, Auerbach et al. 2013). According to the hopelessness model of depression, expecting bad things will happen and not good things to happen in the future and low perception of control over this course of events are the main causes of vulnerability. The high perception of hopelessness in this profile seems to correspond more directly with this hopelessness model of depression. Hopelessness, beyond anxiety, has been considered associated with depression, which is characterized by an intensification of sadness-based emotions (Ghahramanlou-Holloway et al. 2007). For this reason, hopelessness and anxiety have rarely been examined together in the literature. It is emphasized that, however, the vicious circle created by anxiety may also trigger hopelessness (Davila 2012). Similarly, in the general population, hopelessness showed the highest negative relationship with anxiety after depression (Kocalevent et al. 2017). On the other hand, existential concern had its own dynamics beyond had some common roots with general anxiety. Therefore, death anxiety has been conceptualized as a transdiagnostic factor for both depression and other anxiety-based difficulties (Menzies et al. 2019).

Moreover, the third and fourth profiles of this investigation reflect the average BHS score above 9, which is calculated as the cut-off point for identifying eventual suicide in the clinical sample (Beck et al. 2006). In particular, the mean BHS score of the final profile was identified to be above 16 in this non-clinical sample. The results showed that undergraduate students with different profiles had significant differences in the levels of life satisfaction. The results indicate that students in the high risk group report the lowest levels of life satisfaction, followed by the high existential risk and low risk groups, respectively. The group with the highest life satisfaction was the no-risk group. These results are consistent with previous research demonstrating a relationship between lower suicide risk profiles and higher life satisfaction (e.g. Huang et al. 2024).

The findings of the present study should be interpreted in light of limitations. The data for the present study were collected from a single source with self-report scales. Future studies may use data collected from multiple sources (e.g., parents and friends) to reduce the risk of possible common method bias and increase the reliability of the results. Considering its cross-sectional nature, it would not be correct to draw causal inferences from the results of this study. Future studies should be designed longitudinally to determine causal relationships between the antecedents and outcomes of profile membership. The use of the convenience sampling method in this study and the fact that most of the participants were women may limit the generalizability of the results. Therefore, selecting gender-balanced samples by the random sampling method in the future may increase the generalizability of the results. The life satisfaction score limits the scope of the well-being variables; in future research, employing well-being indicators such as positive and negative affect would broaden the results. It is important to consider the nature of the current sample (i.e., Turkish undergraduate students). Therefore, future research should replicate and extend the current results in other cultures. Finally, especially regarding profile 2, qualitative research should be conducted to gain in-depth knowledge and improve understanding of how students experience high levels of existential concern while experiencing low levels of hopelessness and PML.

The present results may have considerable practical implications. The present study conceptualizes the PML, hopelessness, and existential concern as indicators of suicide risk. Based on the current results, suicide risk patterns can be better understood, and suicide prevention and intervention strategies can be developed. Counselors should be aware that suicide risk may exhibit a pattern rather than considering a linear continuum from low to high. Therefore, the PML, hopelessness, and existential concern should be taken into consideration when assessing the suicide risk of undergraduate students. Moreover, the fact that hopelessness, meaning in life and existential concern show a common configuration, and the intra/inter individual distribution of this configuration creates meaningful sub-profiles, provided an exploratory basis for the integration of existential and cognitive behavioral therapeutic interventions.

## Conclusion

The view that cognitive behavioral and existential therapy models are paradigmatically and pragmatically irreconcilable seems to be changing in recent years. It is even argued that integration of cognitive behavioral and existential models may produce productive therapeutic outcomes (Heidenreich et al. 2021). Consistent with this philosophy of theoretical integration, for example, frustration discomfort, one of the concepts of rational

emotive therapy, was found to be a predictor of existential loneliness (Sarıçalı and Güler 2022). In this research, by taking advantage of the exploratory nature of the LPA, it was postulated that existential concern, hopelessness and the PML could form a common configuration. Hence, it was predicted that this configuration might reveal nuanced profile related to suicide risk. Accordingly, hopelessness, which is one of the milestones of the cognitive behavioral therapy model of depression and used as a reference in determining the risk of suicide, was explored together with the concepts of PML and existential concern, which are the basic concepts of existential therapy models. As a result of the LPA, it was explored that the three concepts mentioned together formed four profiles. These profiles were also confirmed by life satisfaction measure. Thus, keeping the limitations of this research in mind, through LPA, a contribution was made towards the theoretical reconciliation of existential and cognitive behavioral approaches. The finding that existential and cognitive behavioral models could be structured together would have some implications for counselors and other practitioners in the course of understanding, conceptualization and intervention for suicide.

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