

The Relationship Between Alcohol and Substance Addiction and Death Anxiety: A Comparative Study

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Abstract

This study aims to examine the relationship between alcohol and drug dependence and death anxiety. To this end, the API short scale, the Abdel-Khalek Death Anxiety Scale and a sociodemographic form were administered to 69 individuals receiving support for substance dependence and 80 individuals who did not consume alcohol or drugs. According to the results, fear of visual stimuli ($t=-6.50$; $p<0.05$), fear of other reminders ($t=-4.39$; $p<0.05$), fear of death itself ($t=-3.09$; $p<0.05$) and death anxiety ($t=-3.23$; $p<0.05$) scores showed significant differences between the two groups. Participants who did not use alcohol and drugs had significantly higher fear of visual stimuli, fear of other reminders, fear of death itself and death anxiety scores than participants who received support for alcohol and drug addiction. A positive and significant relationship was found between the Diagnosis subdimension score ($r=0.25$; $p<0.05$) and the Addiction Severity Scale score ($r=0.26$; $p<0.05$) and fear of the afterlife. The study found a relationship between alcohol and drug addiction and death anxiety, with death anxiety scores being lower in individuals with alcohol and drug dependence.

Anahtar Kelimeler: Addiction, alcohol addiction, substance addiction, death anxiety

Alkol ve Madde Bağımlılığı ile Ölüm Kaygısı Arasındaki İlişki: Karşılaştırmalı Bir Çalışma

Özet

Bu çalışmada alkol ve uyuşturucu bağımlılığı ile ölüm kaygısı arasındaki ilişkinin araştırılması amaçlandı. Bu amaçla madde bağımlılığı konusunda destek alan 69 kişiye ve alkol ve uyuşturucu kullanmayan 80 kişiye BAPI kısa ölçeği, Abdel-Khalek ölüm kaygısı ölçeği ve sosyo-demografik form uygulandı. Sonuçlara göre görsel uyarlardan korkma ($t=-6,50$; $p<0,05$), diğer hatırlatıcılardan korkma ($t=-4,39$; $p<0,05$), ölümün kendisinden korkma ($t=-3,09$; $p<0,05$) ve ölüm kaygısı ($t=-3,23$; $p<0,05$) puanlarının iki grup arasında göre anlamlı farklılık gösterdiği belirlendi. Alkol ve uyuşturucu kullanmayan katılımcıların görsel uyarlardan korkma, diğer hatırlatıcılardan korkma, bizzat ölüm korkusu ve ölüm kaygısı puanları alkol ve uyuşturucu bağımlılığı nedeni ile destek alan katılımcılara göre anlamlı derecede yüksekti. Tanı alt boyut puanı ($r=0,25$; $p<0,05$) ile bağımlılık ölçeği puanı ($r=0,26$; $p<0,05$) ve ahiret korkusu arasında pozitif ve anlamlı bir ilişki bulunmuştur. Araştırma sonuçlarına göre alkol ve madde bağımlılığı ile ölüm kaygısı arasında ilişki bulunmuştur. Alkol ve madde bağımlılığı olan bireylerde ölüm kaygısı puanlarının daha düşük olduğu belirlendi.

Keywords: Bağımlılık, alkol bağımlılığı, madde bağımlılığı, ölüm kaygısı

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Başvuru : 9 Eylül 2024

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Kabul : 21 Ocak 2025

Introduction

In 2020, 211,991 individuals received outpatient treatment, while 9,824 received inpatient treatment for substance use (European Drug Report, 2021). These findings indicate the widespread nature of addiction.

Wiklund (2008) identified two fundamental motivations for maintaining an addiction: the desire to cope with daily life and the fear of confronting deeper existential themes, including dilemmas such as life and death. Therefore, it is essential to acknowledge the existential struggles individuals face when addressing addiction (Carreno & Pérez-Esobar, 2019).

Negative attitudes towards death are represented in the literature through various interchangeable terms, including death anxiety, fear of death, death threat, inability to accept death and death phobia (Tomer, 1994). Fear of death is a complex phenomenon that encompasses a mixture of thought processes and feelings: fear of physical and psychological deterioration, the fundamental feeling of solitude, the ultimate experience of separation, grief over death, the profound loss of self and a situation beyond our control, often resulting in extreme anger and despair (Firestone & Catlett, 2009). All human activity is shaped by the fear of dying, which is influenced by both collective and individual efforts to understand this inescapable existential reality (Wong & Tomer, 2011).

Heidegger, a prominent figure in existential philosophy, suggests that death is often ignored; people tend to think of it as a phenomenon that affects others rather than themselves. Conversely, Heidegger's concept of Dasein involves a constant awareness of death, even in everyday life (Ökten, 2019). Sartre posits that contemplating death leads individuals to confront the meaninglessness of life (Tomer, 1994). Kierkegaard was the first to differentiate between fear of death and death anxiety, describing the latter as the discomfort experienced by individuals who perceive their lives as limited and devoid of meaning (Geçtan, 2019; Shapiro, 2015). Kierkegaard accepts fear of death as a normal part of life, even asserting that death provides life with its meaning. Those who begin to experience death anxiety often feel an urgency to discover their true selves (Aydoğdu, 2016).

Yalom (2018) suggests that fear of death is one of the primary sources of anxiety. He posits that individuals develop defense mechanisms, such as viewing themselves as "special" or the ultimate savior, to cope with this anxiety. May and Yalom (1989) further argue that non-neurotic anxiety can provide opportunities for individuals to confront their existential dilemmas. Frankl interprets the fear of death as a motivating force for individuals to continue enjoying life (Gould, 1993). Close relationships have also been shown to help mitigate death anxiety (Mikulincer et al., 2003).

Abdel-Khalek (2005) compared death anxiety scores among individuals treated for schizophrenia, substance abuse and anxiety disorders with those in a control group. The results indicated that men with schizophrenia exhibited the lowest death anxiety scores, while men and women with substance abuse had the highest. Notably, the control group and addicts recorded the lowest death anxiety scores after the male schizophrenia patients (Abdel-Khalek, 2005). Similarly, Çiçek (2021) found no significant difference in death anxiety scores between the control group and those undergoing treatment for alcohol dependence. In a study by Razeghi et al. (2019), a relationship was reported between death anxiety and substance abuse. Another study conducted by Daradkeh and Moselhy (2011) on individuals seeking psychiatric help for substance addiction in Bahrain found that overall death anxiety scores were high, particularly among divorced, non-religious individuals with a history of substance abuse lasting over 20 years and those who smoked more than 20 cigarettes daily.

Boevig (2017), in a study involving participants from Alcoholics Anonymous (AA) meetings, concluded that there was no statistical relationship between the length of abstinence and death anxiety. Conversely, Kaur et al. (2015) found no correlation between death anxiety scores and the participants' residential or educational backgrounds among young people undergoing addiction treatment.

The results of studies examining the relationship between fear of death and addiction have been mixed. This variability may stem from differences in research samples, measurement tools and assessed variables. Nonetheless, the interplay between substance dependence and death anxiety remains a topic open for further exploration in the literature.

The literature review revealed a notable gap in studies addressing the relationship between death anxiety, the meaning of life and alcohol and drug addiction. The fundamental issue of this research is to explore the relationship between death anxiety—a core concept in existential psychology—and addiction, as well as addiction severity.

Methods

Participants and Procedure

The research model adopted a correlational approach to examine the relationships among multiple variables (Karasar, 2007). Specifically, this study focused on the associations between death anxiety, drug addiction and addiction severity.

Data collection for this study took place from June 1, 2022, to December 1, 2022, at three locations: the Istanbul Kagithane Green Crescent Counseling Centre, the Konya Green Crescent Counseling Centre and the Istanbul Independent Living Association's Bagcilar Branch. Alcohol and drug addicts receiving services from these centers and other voluntary organizations addressing addiction served as the primary study population. Additionally, scales were distributed via social media to individuals over 18 years old with no history of alcohol or substance abuse, constituting a control group. The sample included 69 individuals with alcohol or drug dependence and 80 participants in the control group.

The inclusion criteria for the sample group were as follows: receiving support for alcohol or substance dependence, being over 18 years of age and possessing the intellectual capacity to respond to questions. Exclusion criteria included being under 18, having a neurological or psychiatric disorder and failing to complete certain questions on the data collection form. For the control group, inclusion criteria were being over 18 years old and having no history of alcohol or substance abuse, with exclusion criteria similarly including incomplete responses, being under 18, having a psychiatric or neurological disorder and any history of alcohol or substance abuse.

Participants completed an informed consent form, a sociodemographic information form, the Addiction Profile Index (API) and the Abdel-Khalek Death Anxiety Scale. After signing the informed consent form, participants received the relevant forms for completion.

Measures

Sociodemographic information form

The sociodemographic information form collected data on participants' gender, marital status, education level, living arrangements, employment status, alcohol consumption patterns, inpatient treatment history for alcoholism, family history of alcoholism, drug use, psychiatric history and any involvement with the criminal justice system. Information on age, age at the onset of alcohol use, suicide attempts and self-harm behaviors was also included.

Addiction profile index (API)

The API, developed by Ögel et al. (2015), was utilized to assess substance use patterns among alcohol and drug-dependent participants. This section included questions on the preferred substance, mode of use, age of substance initiation, age of preferred substance initiation and duration of use. The API consists of 23 items rated on a three-point Likert scale (1 to 3) across dimensions of frequency of substance use, diagnosis and life impact. In this study, the API demonstrated a Cronbach's alpha coefficient of 0.90, with sub-dimension alphas of 0.82, 0.83 and 0.87.

Abdel-Khalek death anxiety scale

This scale, developed by Abdel-Khalek (2004) and adapted into Turkish by Sarıççek Aydoğan et al. (2015), measures death anxiety. It includes 20 items on a five-point Likert scale (1 = not at all, 5 = a lot) covering five dimensions: fear of visual stimuli, fear of physical and mental pain, fear of other reminders, fear of the afterlife and fear of death itself. In

this study, the scale's Cronbach alpha coefficient was 0.92, with sub-dimension alphas of 0.86, 0.85, 0.77, 0.60 and 0.66, respectively. This scale was chosen for its demonstrated reliability in measuring death anxiety among clinical and non-clinical groups.

Data Collection Methods

Participants receiving support for addiction were approached through relevant non-governmental organizations, with data collection forms distributed after securing written consent. Participants completed the forms based on self-report, typically within 15 minutes, although this time varied because of individual factors. For the control group, an identical online questionnaire was administered using the snowball method via social media. Participants who agreed to the informed consent by checking a box could access the form, which also took approximately 15 minutes to complete.

Data Analysis

Data analysis was conducted using SPSS 16.0. Demographic data were presented as frequencies and percentages and compared using chi-squared tests based on alcohol and drug dependency status. Substance use information for dependent participants was also presented in frequency and percentage tables. Descriptive statistics, including means, standard deviations, skewness and kurtosis, were calculated for scale totals and sub-dimensions. Skewness and kurtosis within ± 1 were interpreted as approximate normality. For dimensions that did not meet normality, logarithmic transformations were applied and independent t-tests were used to compare scores between dependent and non-dependent groups. Pearson correlation was employed to assess the relationship between addiction severity and death anxiety, with significance set at $p < 0.05$.

Ethical Disclosures

Ethical approval was obtained from the Medical Research Ethics Committee of Ege University (approval number: 21-7.1T/23). Additionally, permission was received to use the scales in this study from the original researchers via email. Further permissions were obtained from the Turkish Green Crescent Society and the Independent Living Association to administer the forms.

Results

Of the 69 participants with alcohol or drug addiction, 98.6% were male, while 80% of the 80 non-addicted participants were female. Among the addicted group, 33.3% were married, compared to 51.3% of the non-addicted group. Family cohabitation was reported by 59.4% of addicts and 42.5% of non-addicts, while 62.3% of addicts and 82.3% of non-addicts reported employment. The mean age of addicted participants was 31.86 ± 8.16 years, compared to 34.39 ± 11.16 years in the non-addicted group. The average age of alcohol initiation was 15.65 ± 4.77 for the addicted group and 20.41 ± 3.23 for the non-addicted group. Table 1 provides a detailed breakdown of sociodemographic data.

Table 1. Distribution of Participants by Demographic Characteristics (N=149)

Demographic variable	Groups	Addict		Nonaddict		X ²	SD	P
		N	%	N	%			
Gender	Male	68	98,6	16	20,0	92,95	1	0,000
	Female	1	1,4	64	80,0			
Marital status	Married	23	33,3	41	51,3	9,43	3	0,024
	Single	37	53,6	34	42,5			
	Widow	0	0,0	2	2,5			
	Divorcee/separate	9	13,0	3	3,8			
Educational background	Literate	1	1,4	2	2,5	67,05	4	0,000
	Primary school	3	4,3	0	0,0			
	Secondary school	16	23,2	0	0,0			
	High school	27	39,1	3	3,8			
	University and above	22	31,9	75	93,8			
Habitation	With Family	41	59,4	34	42,5	12,25	4	0,016
	Solitary	7	10,1	15	18,8			
	With Partner	14	20,3	29	36,3			
	With Friends	3	4,3	2	2,5			
	Homeless	4	5,8	0	0,0			
Employment status	Unemployed	21	30,4	1	1,3	27,03	4	0,000
	Working	43	62,3	65	82,3			
	Stay-at-home parent	0	0,0	2	2,5			
	Retired	3	4,3	4	5,1			
	Student	2	2,9	7	8,9			
Use alcohol	Yes	44	63,8	12	15,2	36,95	1	0,000
	No	25	36,2	67	84,8			
Time to start drinking alcohol during the day	Morning	9	22,0	0	0,0	7,32	3	0,062
	Noon	2	4,9	0	0,0			
	Afternoon	6	14,6	0	0,0			
	Evening	24	58,5	12	100,0			
Treatment for alcohol addiction before	No	15	21,7	13	100,0	29,79	3	0,000
	On one's own	11	15,9	0	0,0			
	Outpatient treatment	13	18,8	0	0,0			
	Inpatient treatment	30	43,5	0	0,0			
Family history of alcohol	No	48	69,6	65	85,5	17,47	3	0,001
	Parent	12	17,4	0	0,0			
	Sibling	5	7,2	2	2,6			
	Collateral Relatives	4	5,8	9	11,8			
Family history of substance abuse	No	48	69,6	73	91,3	13,72	3	0,003
	Parent	5	7,2	0	0,0			
	Sibling	8	11,6	2	2,5			
	Collateral Relatives	8	11,6	5	6,3			
Family history of psychiatric disease	No	60	87,0	59	73,8	12,44	4	0,014
	Father	5	7,2	2	2,5			
	Mother	2	2,9	2	2,5			

	Sibling	0	0,0	1	1,3			
	Collateral Relatives	2	2,9	16	20,0			
Psychiatric treatment other than alcohol/substance abuse	No	50	72,5	61	80,3	1,23	1	0,268
	Yes	19	27,5	15	19,7			
Detention	No	29	42,6	77	97,5	55,29	2	0,000
	Once	13	19,1	2	2,5			
	Multiple	26	38,2	0	0,0			
Detention because of substance abuse	No	11	26,2	2	100,0			
	Yes	31	73,8	-	0,00			
Jail	No	51	75,0	79	100,0	22,33	2	0,000
	Once	13	19,1	0	0,0			
	Multiple	4	5,9	0	0,0			
Jail because of substance abuse	No	7	36,8	-	-			
	Yes	12	63,2	-	-			
		\bar{X}	SS	\bar{X}	SS	t	p	
Age		31,86	8,16	34,39	11,16	-1,56		0,121
Age at onset of alcohol use		15,65	4,77	20,41	3,23	-3,24		0,000

Among the addicted participants (N=69), 53.6% reported using more than one substance as their preferred substance, 50.7% primarily consumed substances orally and 52.2% indicated cannabis as the first substance they used. The average age at first substance use among addicted participants was 19.04±6.74 years, while the mean age at initiation of their preferred substance was 22.06±6.81 years. The average duration of use for the preferred substance was 80.08±66.69 months.

The addiction severity score among alcohol- and substance-addicted participants was found to be 1.23±0.36, indicating a high level of addiction severity. The sub-dimension scores were as follows: frequency of use at 0.67±0.51, diagnosis at 1.37±0.62 and impact on life at 1.50±0.55. Table 2 provides detailed information on the substance use characteristics of the participants.

Table 2. Distribution of Alcohol and Substance Dependent Participants by Substance Use Habits (N=69)

Substance Abuse		N	%
Preferred substance	Methamphetamine	9	13,0
	Heroin	8	11,6
	Cannabis	5	7,2
	Ecstasy	1	1,4
	Drug	1	1,4
	Mixed	37	53,6
	Not specified	8	11,6
Way of using the substance	Incept	35	50,7
	Intranasally	9	13,0
	Inhalation	9	13,0
	Intra venal	6	8,7
	IV and intranasally	2	2,9
	Not specified	8	11,6
First used substance	Methamphetamine	4	5,8
	Heroin	8	11,6
	Volatile	4	5,8
	Cannabis	36	52,2
	Ecstasy	3	4,3
	Mixed	8	11,6
	Not specified	6	8,7
Age at onset of substance use	Year	19,04	6,74
Age at the onset of preferred substance use	Year	22,06	6,81
Duration of use of the preferred substance	Month	80,08	66,69

The mean score on the Death Anxiety Scale for alcohol- and substance-addicted participants was 2.15 ± 0.70 , indicating a low level of death anxiety among the study's addicted individuals. The highest mean score within the scale's dimensions was related to "fear of the afterlife" at 2.87 ± 0.97 , while the lowest mean score, 1.38 ± 0.55 , was associated with "fear of other reminders".

Table 3. Descriptive Statistics of Addiction Severity and Death Anxiety Scores of Alcohol and Substance-Addicted Participants (N=69)

Sub-dimensions	N	Min.	Max.	Min.	Max.	\bar{X}	SS	Skewness	Kurtosis
Frequency of substance use	69	0	2	0,00	1,75	0,67	0,51	0,59 ¹	-0,75 ¹
Diagnosis	69	0	2	0,00	2,00	1,37	0,62	-0,83	-0,24
Effects on life	69	0	2	0,00	2,00	1,50	0,55	-0,87 ¹	-0,11 ¹
Severity of Addiction	69	0	6	0,40	1,90	1,23	0,36	-0,37	-0,31
Fear of visual stimuli	69	1	5	1,00	5,00	1,76	0,82	0,99 ¹	0,81 ¹
Fear of physical and mental pain	69	1	5	1,00	5,00	2,81	1,17	0,26	-0,98
Fear of other reminders	69	1	5	1,00	3,25	1,38	0,55	0,70 ¹	-0,93 ¹
Fear of afterlife	69	1	5	1,00	5,00	2,87	0,97	0,19	-0,21
Fear of death itself	69	1	5	1,00	5,00	1,95	0,95	0,90	0,13
Death Anxiety	69	1	5	1,16	4,02	2,15	0,70	0,87	0,23

¹: Logarithmic transformation is applied.

Table 4. Descriptive Statistics of Death Anxiety Scores of Non-addicted Participants (N=80)

Sub-Dimensions	N	Min.	Max.	Min.	Max.	\bar{X}	SS	Skewness	Kurtosis
Fear of visual stimuli	80	1	5	1,00	5,00	2,72	1,04	0,01 ¹	-0,90 ¹
Fear of physical and mental pain	80	1	5	1,00	5,00	3,03	1,00	0,28	-0,67
Fear of other reminders	80	1	5	1,00	5,00	1,83	0,85	-0,09 ¹	-0,99 ¹
Fear of afterlife	80	1	5	1,00	5,00	2,83	1,09	0,14	-0,70
Fear of death itself	80	1	5	1,00	5,00	2,43	0,95	0,56	-0,23
Death Anxiety	80	1	5	1,00	4,93	2,57	0,84	0,48	-0,14

¹: Logarithmic transformation is applied.

The scores for "fear of visual stimuli" ($t = -6.50$; $p < 0.05$), "fear of other reminders" ($t = -4.39$; $p < 0.05$), "fear of death itself" ($t = -3.09$; $p < 0.05$) and "fear of death" ($t = -3.23$; $p < 0.05$) were significantly different based on alcohol and drug dependence status. Non-dependent participants reported significantly higher scores in "fear of visual stimuli," "fear of other reminders," "fear of death itself," and "fear of death" compared to alcohol and drug-dependent participants. In contrast, scores for the subdimensions "fear of physical and mental pain" and "fear of the afterlife" did not show significant differences according to alcohol and drug dependence status ($p > 0.05$).

Table 5. Comparison of Death Anxiety Scores by Substance Use Status

Sub-Dimensions	Groups	n	\bar{X}	SS	t	p
Fear of visual stimuli	Addict	69	1,76	0,82	-6,50	0,000
	Nonaddict	80	2,72	1,04		
Fear of physical and mental pain	Addict	69	2,81	1,17	-1,23	0,222
	Nonaddict	80	3,03	1,00		
Fear of other reminders	Addict	69	1,38	0,55	-4,39	0,000
	Nonaddict	80	1,83	0,85		
Fear of afterlife	Addict	69	2,87	0,97	0,26	0,794
	Nonaddict	80	2,83	1,09		
Fear of death itself	Addict	69	1,95	0,95	-3,09	0,002
	Nonaddict	80	2,43	0,95		
Death Anxiety	Addict	69	2,15	0,70	-3,23	0,002
	Nonaddict	80	2,57	0,84		

A significant difference was found between the sub-dimension scores for frequency of substance use, diagnosis and impact on life, as well as the overall severity of addiction scores and the scores for "fear of visual stimuli," "fear of physical and mental pain," "fear of other reminders," "fear of death itself," and "fear of death." However, no significant relationships were observed between these variables ($p > 0.05$). A positive and significant correlation was found between the Diagnosis sub-dimension score ($r = 0.25$; $p < 0.05$) and the Addiction Severity Scale score ($r = 0.26$; $p < 0.05$) with "fear of the afterlife."

Table 6. The Relationship Between Severity of Addiction and Death Anxiety (N=69)

Independent Variables	2	3	4	5	6	7	8	9	10
1. Frequency of substance use	0,53**	0,46**	0,68**	0,02	-0,10	-0,06	0,11	-0,04	-0,02
2. Diagnosis	1	0,75**	0,83**	-0,04	-0,02	0,16	0,25*	0,05	0,08
3. Effects on life		1	0,76**	-0,05	-0,11	0,08	0,16	-0,05	-0,01
4. Severity of Life			1	0,09	-0,02	0,19	0,26*	0,08	0,13
5. Fear of visual stimuli				1	0,37**	0,60**	0,17	0,59**	0,67**
6. Fear of physical and mental pain					1	0,43**	0,52**	0,74**	0,84**
7. Fear of other reminders						1	0,37**	0,54**	0,68**
8. Fear of the afterlife							1	0,59**	0,71**
9. Fear of death itself								1	0,91**
10. Death Anxiety									1

* p<0,05 ** p<0,01

Discussion

The observed relationship between existential concerns and substance use aligns with previous studies linking these concerns to risky behaviors, highlighting the psychological underpinnings of addiction (Alliegro, 2020). According to Yalom (2018), two of the four major existential concerns are death and meaninglessness. Supporting this perspective, Frankl's theory posits that one cause of psychopathology is the inability to find meaning in life, a condition described as existential emptiness (Csabonyi & Phillips, 2020).

Aligned with these theories, this study found that the subscales on the Death Anxiety Scale showed variations in the relationship between addiction and death anxiety. Results indicated that participants who did not use alcohol or drugs scored significantly higher on fear of visual stimuli, reminders of death and overall death anxiety compared to those receiving support for alcohol and drug addiction. Similarly, Abdel-Khalek's (2005) study of psychiatric patients found low death anxiety scores among addicts. This finding may have several explanations. Çetinkaya's (2022) study on alcohol-dependent individuals found that these participants were largely unaware of their mortality, suggesting a link between this lack of awareness and lower levels of death anxiety. It may be that individuals who overlook the prospect of death experience less death anxiety.

Another approach to interpreting these results is through a psychoanalytic lens. The relationship between Freud's "death instinct" concept and drug addiction has been explored since the early years of psychoanalysis (Ghaffari, 1987). The death instinct theory suggests that individuals may desire death rather than fear it and substance use may serve as a way to approach death by counteracting the superego (King et al., 2005).

Conversely, Sartre argues that a central existential issue is the tendency to avoid contemplating death (Tomer, 1994). A person who does not experience existential anxiety is unlikely to fear death. Frankl (2009) describes this as noegenic neurosis: an individual unconcerned by the meaning of death may experience life as less meaningful. However, reflecting on death is one way to give life meaning.

One of the most notable findings in this study relates to fear of the afterlife. Among alcohol- and drug-dependent participants, the highest score on the Death Anxiety Scale was for the fear of the afterlife sub-dimension. However, no significant difference was found between the two groups' scores on fear of the afterlife. This finding suggests that both groups share a similar level of fear regarding the afterlife, potentially influenced by religious beliefs. While religious teachings offer the promise of an afterlife, which may reduce death anxiety through the notion of heaven, they can also increase death anxiety with concepts like torment in the grave and hell (Ayten, 2009). This study did

not examine religiosity as a variable. Future research should consider examining the moderating role of religiosity and other existential factors on substance use and death anxiety, as understanding these influences may enhance targeted intervention strategies in addiction treatment.

A positive and significant relationship was found between the diagnosis sub-dimension of addiction and addiction severity with the fear of the afterlife sub-dimension. One possible explanation for this could be that individuals turn to alcohol or substances more frequently to cope with their fear of death, which increases their addiction severity. Conversely, individuals with increasing addiction severity may develop a heightened fear of the afterlife, perceiving themselves as closer to death. However, this association is correlational and causality cannot be inferred.

For both groups, the lowest mean score among the Death Anxiety sub-dimensions was for "fear of other reminders." This finding may be because of cultural factors. Cultures that adopt a more accepting attitude toward death tend to have less fear associated with death reminders (Ayten, 2009). In Türkiye, for example, traditions such as visiting cemeteries, participating in group burials and close relatives washing the deceased's body may lead to reduced fear associated with death reminders.

In the literature, death anxiety is commonly linked to generalized anxiety disorders. Studies further indicate that anxiety is a risk factor for alcohol and drug abuse (Alegría et al., 2010; Smith & Book, 2010), as individuals may turn to substances as self-medication. In such cases, addressing death anxiety could serve as a protective measure against addiction.

The specific characteristics of the research group also play an essential role in understanding the impact of existential factors. To assess these characteristics, the substance use and socio-demographic data of participants were included in the study. Results indicated that 53.6% of the sample used multiple substances, suggesting that most participants did not favor a single substance. Methamphetamine was the most frequently used substance among these choices, with a prevalence of 13%. Future studies should investigate existential factors in relation to specific preferred substances.

This study's findings offer insights that may benefit treatment approaches. Recognizing the role of existential concerns in recovery should not be overlooked, as addressing these factors may support the recovery process (Krentzman et al., 2010). Additionally, individuals who turn to alcohol and drugs to fill an existential void may benefit from interventions that help them understand this relationship and find meaning through constructive activities (Gerwood, 1998).

Limitations and Recommendations

This research has certain limitations. First, the sample group is predominantly male, which may limit the generalizability of the findings across genders. Additionally, the targeted sample group could not be fully accessed because of restrictions during the COVID-19 pandemic and data collection was limited to specific centers. Accessing the control group through online surveys may also introduce selection bias. The online format of the control group data collection may have introduced selection bias, potentially affecting the generalizability of findings to non-clinical populations. Furthermore, given the potential for social stigma, participants may not have provided fully honest responses regarding their history of addiction, legal issues and addiction severity, which could affect the reliability of self-reported data.

For future studies, it is recommended to balance variables such as gender and age when selecting the sample group and to increase the size of both the sample and control groups for broader representativeness. Employing a range of research techniques, such as focus groups and semi-structured interviews, is also suggested to deepen the understanding of this topic.

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