



Types of Medication-Assisted Treatment for Opioid Use Disorder in Turkey: The Perceptions of Inpatients about Treatment Success

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Objective The aim of this study was the following. When the different dynamics of agonist or antagonist treatments considered it is assumed that the eligible treatment to the individual may be maintained with high efficacy. Thus, we aimed to examine the difference between treatment methods, considering sociodemographics and positive perception for treatment success.

Methods The number of 136 individuals which their ages range between 19–50 and have been getting agonist (buprenorphine/naloxone) or antagonist (naltrexone) treatment because of opioid use disorder while resting in clinics have been evaluated to reveal the factors that may alter their perception about treatment and have been compared with sociodemographic variables and characteristics such as sociotropic and autonomic. Therefore, “Sociodemographic Data Evaluation Form,” “Predictive Factors for The Addiction Treatment Success Scale,” and “Sociotropy-Autonomy Scale” were used to assess the sociodemographic data, the perception towards factors which have been affected to the treatment and characteristics. The data of the individuals have been collected by the researcher via face-to-face interviews while patients were residential in the clinic.

Results According to results of our study, it has been detected that there are some differences in the perception of treatment success between individuals who have been getting agonist or antagonist treatments such as treatment method ($p < 0.05$), treatment frequency ($p < 0.01$) and parents' vital statuses ($p < 0.05$).

Conclusion At the end of the study it has been understood that medical and social benefits after the selection of eligible treatment methods which is suitable for individual's perception and characteristics have to be considered.

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Key Words Opioid use disorder, Agonist, Antagonist, Implant, Perception, Success of treatment.

INTRODUCTION

Treatment options for opioid use disorder are constantly changing in line with the recent developments within this field. These treatment options can be generalized as detoxification or opioid withdrawal under the medical supervision, maintenance treatment by using other opioid agonists (methadone, levomethadyl acetate or buprenorphine) and other pharmacological treatment methods focused on abstinence and therapeutic communities (antagonist treatment). An individual's willingness to accept the treatment and choosing the appropriate

treatment method after that depends on his/her experiences, family relations, addiction severity.¹

Oral naltrexone, a daily use medicine developed for the treatment of the opioid use disorder, has been approved for clinical use in the USA since the 1970s and has many different forms. Naltrexone has been listed in World Health Organization's treatment guidelines due to its positive effects such as the prevention of the harmful effects from the non-prescribed opioid use and relapses in the individuals presenting withdrawal symptoms.² However, individuals' compliance problems with the treatment during clinical applications have raised doubts about the efficacy of the oral naltrexone and in 2010, FDA approved the use of the extended-release injectable naltrexone in relapse prevention programs (in conjunction with psychosocial programs) to benefit from its 30 days long blockade effects on opioid receptors from 1 dose.³ Another form of the naltrexone is the subcutaneous implant form. Naltrexone's implant form was developed in Australia⁴ and has been started to be used in standard clinical applications in Russia with Rus-

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sia's acquisition of its medical use permits.

Currently, two main methods are being used for the treatment of opioid use disorders in Turkey's Alcohol and Substance Addiction Research and Treatment Centres (ASARTC). These methods are: Using an agonist (buprenorphine) for withdrawal or replacement treatments or using an antagonist (naltrexone) for relapse treatment.

Personal, environmental, and sociodemographic factors can be considered as predictive factors on the success rate of addiction treatment. Individuals can be hesitant to accept the treatment for rapidly progressive and destructive disorders such as opioid use disorder. In that regard, choosing the proper treatment method in line with the individual's decisions about the treatment is very important. Therefore, maintaining the treatment's efficiency is only possible by considering the different dynamics of the agonist and antagonist treatments. Individuals' perceptions of treatment success, certain sociodemographic factors, and personality traits are regarded as the determiners for the treatment's efficiency.

This study was conducted to examine the personality traits of the individuals who have undergone agonist or antagonist treatments for opioid use disorder in an inpatient setting and their perceptions of addiction treatment success.

METHODS

Subjects

The study population was constituted of individuals that have been diagnosed with opioid use disorder by the DSM-5/ICD-10 criteria and have undergone treatment for 3 months in Adana Dr. Ekrem Tok Psychiatric Hospital's ASARTC (Alcohol and Substance Addiction Rehabilitation and Treatment Center). 394 individuals aged between 19–56, were receiving treatment during the study date. Out of these 394 individuals, 68 individuals who have received antagonist treatment and 68 individuals who have received agonist treatment (136 in total) have accepted to participate in this study and constituted the sample group.

The study was approved by the Çukurova University Medicine Faculty Non-Invasive Ethical Clinical Researches Ethical Committee (Approval No. 2018-12, 78).

For data collection 3 methods were used: To collect the introductory information of the individuals who have received opioid use disorder treatment the "Sociodemographic Data Collection Form", to examine the perception of these individuals on the treatment the "Predictive Factors For The Addiction Treatment Success Scale (PFS)" and, to determine the personality traits of these individuals "Sociotropy-Autonomy Scale (SAS)" was used. The researcher collected the data from the participants that received treatment for their opioid use

disorder between the dates of September 2018–November 2018 in Adana Dr. Ekrem Tok Psychiatric Hospital's ASARTC. The Data were collected by face-to-face interviews with the participants, during their inpatient treatment in ASARTC 2 and 3 clinics. By taking the recommendations of the health professionals into account the individuals whose inpatient treatment recently started, the individuals that have presented withdrawal symptoms in the previous 1–3 days, and the individuals presenting insufficient cognitive function as a result of their buprenorphine treatment have been included in the study when they have achieved sobriety.

Questionnaire

Sociodemographic Data Collection Form

The "Sociodemographic Data Collection Form" that has been used in the study was semi-structured into two parts to determine the sociodemographic and clinical characteristics of the individuals. The first part of the form included demographic data about age, sex, marital status, occupation, etc. whereas the second part of the form included data about the age of substance use initiation, age at entering treatment and the legal issues individuals have experienced as a result of their substance use.

Predictive Factors For The Addiction Treatment Success Scale (PFS)

Predictive Factors For The Addiction Treatment Success Scale was constructed by Turan and Yargiç in 2010.⁵ After conducting a pilot study, Turan and Yargiç have identified several factors that can affect the success or failure of the treatment and observation programs and classified these factors under two groups. Social and Legal Factors Sub-scale, the first group, included 17 items, and the second group, Psychological Factors Sub-scale included 11 items. The scale is constructed in 4-point Likert type and has an internal consistency ratio of 0.879 for both sub-scales.

Sociotropy-Autonomy Scale (SAS)

SAS is a self-evaluation scale used to determine personality traits related to social dependency and social independency.⁶ The scale was introduced by Beck et al.⁷ in 1983, and was constructed in 5-point Likert type containing 60 items. It has two sub-scales of 30 items to measure sociotropic and autonomic personality traits. The scale's reliability score for the sociotropy is in the range of 0.89–0.94, and for autonomy it is in the range of 0.83–0.95.⁸

Statistical analyses

Statistical analyses of the study were done with the pack-

aged software named SPSS (IBM SPSS Statistics 22; IBM Corp., Armonk, NY, USA). Categorical variables of the descriptive statistics acquired by the study were summarized as numbers or percentages, whereas continuous variables were tabulated by considering mean values, standard deviation, median, minimum, and maximum values. In the comparison of the categorical variables between groups, chi-square test was used. To check whether the constant variables within the group distributed normally or not Kolmogorov Smirnov test was used. When comparing two independent groups, if the variables presented normal distribution Independent Samples T test, if the variables distributed non normally Mann Whitney U test was used. When comparing more than two independent groups, in situations where the constant variables distributed normally One-Way ANOVA test was used whereas in case of non-normal distribution Kruskal-Wallis H test was used. The significance level was set at 0.05 for all the tests it was applied.

RESULTS

Demographics

The sociodemographic data of the participants are shown in Table 1. When the constant variables of this data analyzed, mean value and the standard deviation of the participants' ages were calculated as 27.57 ± 5.34 (min-max:19;56). For the age of opioid misuse initiation, mean value and the standard deviation were calculated as 17.53 ± 4.25 (min-max: 10;32).

When the participants were asked, "How many times did you receive inpatient treatment within the clinics?" 33 of them (24.3%) said they have never received inpatient treatment, 30 of them (22.1%) said they have received inpatient treatment once, 43 of them (31.6%) said they have received inpatient treatment 2-4 times, 30 of them said (22.1%) said they have received inpatient treatment more than 4 times. When the participants were asked, "Is your mother still alive?" 128 of them (94.1%) said yes, and 8 of them (5.9%) said no (Table 2).

Table 1. Sociodemographic continuous variables of patients

Variables	$\bar{X} \pm SD$ (N=136)
Age	27.57 ± 5.34
Starting age	17.53 ± 4.25
Monthly income (Turkish Liras)	$3,034 \pm 3,305.48$
Autonomy	73.97 ± 21.70
Sociotropy	64.24 ± 21.28
Social and legal factors	47.42 ± 7.98
Psychological factors	31.67 ± 5.75
PFS total	79.09 ± 12.83

PFS: Predictive Factors for The Addiction Treatment Success Scale

Group differences for perception of treatment success

According to the data, mean value and standard deviation of the participants' autonomy scores are 73.97 ± 21.70 , whereas the mean value and standard deviation for sociotropy are 64.24 ± 21.28 .

Table 2. Sociodemographic categorical variables of patients

Variables	N (%), N=136
Age	
19-26	68 (50)
27 and above	68 (50)
Starting age	
14 and below	35 (25.7)
15-16	31 (22.8)
17-19	36 (26.5)
19 and above	34 (25)
Inpatient treatment frequency	
None	33 (24.3)
Once	30 (22.1)
2-4 times	43 (31.6)
Above 4 times	30 (22.1)
Marital status	
Married	47 (34.6)
Single	80 (58.8)
Divorced	9 (6.6)
Number of children	
None	94 (69.1)
1 child	21 (15.4)
2 children and above	21 (15.4)
Educational status	
Elementary	24 (17.6)
Secondary	48 (35.3)
High-school	56 (41.2)
Collage	8 (5.9)
Is mother alive?	
Yes	128 (94.1)
No	8 (5.9)
Is father alive?	
Yes	110 (80.9)
No	26 (19.1)
Beginning substance	
Marijuana	112 (82.4)
Heroin	14 (10.3)
Others*	10 (7.4)
Treatment history	
None	29 (21.3)
Exists	107 (78.7)
Criminal record	
None	62 (45.6)
Exists	74 (54.4)

*inhalant, alcohol, stimulant

When the individuals who are receiving the implant and sublingual treatments are compared in terms of psychological factor sub-scale point averages: For the participants receiving implant treatment, the mean value and the standard deviation of the psychological factor point were calculated as 32.65 ± 6.08 whereas for the participants receiving the sublingual treatment it is calculated as 30.69 ± 5.27 . This difference is statistically significant, according to Table 3 ($p=0.047$).

When the total PFS points for inpatient treatment times were compared, a statistically significant difference ($p<0.001$) were found between the PFS point averages of the “no history of inpatient treatment,” “once,” “2–4 times” and, “more than 4 times” groups. A similar statistical significance ($p<0.001$) was found when the inpatient treatment times for the sublingual group compared.

DISCUSSION

During the study date, the number of female individuals receiving inpatient treatment within the clinics was not sufficient enough to constitute a statistical data. Therefore, only male individuals have been included in the study. When the related literature about the opioid use disorder treatment and the treatments of other substance addictions (alcohol, marijuana, etc.) was reviewed, it was seen that the males constituted a majority in treatment groups. In one study, 98.8% of the participants were male.⁹ This data is consistent with the male-to-female ratio (93.5–100%) findings from the “Treatment and Probation Order” studies done in Turkey.^{10–12} The women that are using alcohol or other substances are negatively labeled in Turkish society; therefore, Turkish women tend not to use

them or use them in secret. This negative labeling can abstain women from using substances or prevent them from receiving treatment for their potential substance use disorders.¹³ Another possible reason for the difference between the male and female participant ratios could be the Turkish women’s lower rates of risky behavior display compared to men, as a result of their relatively low social participation rates.^{14–16}

When the “SAS” scores of the participants were analyzed, it was seen that the participants had relatively higher autonomy scores than sociotropy scores. This data suggests that the males present “autonomic” personality traits in terms of risky behavior display.

Participants displayed personality factors associated with substance use disorders such as novelty seeking, sensitivity to rewarding stimuli and reward-seeking behavior, and impulsive behavior. These findings are consistent with previous studies.^{17–19} Another study has shown that individuals who have decided to receive opioid use disorder treatment have more autonomic personality traits compared to sociotropic personality traits.²⁰

Age of the individuals can be regarded as an important factor in the addiction treatment acceptance, treatment attendance, and treatment success. In this study, the average age of the participants was calculated as 27.57 ($SD=\pm 5.34$). These results are consistent with the related literature. In a similar study,⁹ the average age of the participants was calculated as 28.23 ($SD=\pm 7.78$), and in another study, 75.7% percent of the sample group was constituted of individuals aged 18–25.²¹ It is generally thought that most of the substance use disorders develop in adolescence or young adulthood, whereas individuals’ opinions on treatment initiation or their treatment histories begin to form in adulthood.^{22,23}

When the PFS scores of the participants that are receiving agonist or antagonist treatments are analyzed, it was seen that the antagonist group had scored higher in psychological sub-scale point averages and total PFS points compared to agonist group. Additionally, a statistically significant difference was found between these groups ($p=0.047$, $p=0.045$). Antagonist treatment is different from traditional agonist maintenance treatments in terms of method of application and pre-treatment preparations. The aim of the antagonist treatment is to block the euphoria effect of the opioids, to prevent cravings and physical readdiction. Before administering naltrexone, a sustained effect synthetic opioid antagonist, the individual must detoxify and abstain from the substance for a few days following detoxification.²⁴

For the past 40 years, the most common and effective treatment options for substance addiction was maintenance treatments by using medical-use opioids instead of unprescribed opioids.²⁵ In the following years, it was found that pharmaco-

Table 3. Individuals who are receiving the implant and sublingual treatments are compared in terms of factors sub-scale and total point averages

	Implant (N=68)	Sublingual (N=68)	P
	$\bar{X} \pm SD$ Median (min–max)	$\bar{X} \pm SD$ Median (min–max)	
Autonomy	74.00 \pm 21.35 77.50 (22–120)	73.94 \pm 22.20 75 (26–118)	0.987
Sociotropy	63.84 \pm 20.57 66 (22–113)	64.65 \pm 22.12 62.50 (22–112)	0.826
Social and legal factors	48.47 \pm 8.53 48 (28–64)	46.37 \pm 7.30 47 (30–61)	0.125
Psychological factors	32.65 \pm 6.08 33.50 (18–42)	30.69 \pm 5.27 30.50 (20–40)	0.047
PFS total	81.12 \pm 14.04 81 (46–105)	77.06 \pm 11.35 75.50 (57–98)	0.045

PFS: Predictive Factors for The Addiction Treatment Success Scale

therapeutic interventions were effective only in the one third of the individuals.²⁶ Since the 2010s, agonists such as methadone have been started to be used in detoxification or maintenance treatments²⁷ in Turkey, and they were considered as promising treatment methods. However, the individuals who wanted to keep their substance use disorder treatments a secret showed a lack of interest in methadone treatments and methadone treatments were regarded as insufficient.^{28,29} When some studies about the treatment attendance rates reviewed, it was seen that more than 50% of the patients had discontinued their buprenorphine treatment (another partial agonist) after 6 months.³⁰⁻³² According to the findings of the two ethnographic and qualitative studies done with the individuals having opioid use disorders, it was found that the buprenorphine was abused to prevent withdrawal symptoms.^{32,33} In that regard, it can be said that most individuals perceive agonist treatments as a replacement for their addiction rather than a treatment.³⁴

As another method, naltrexone's implant form has been started to be used in antagonist treatments in place of placebos since mid 90s and showed effective results in heroin abstinence and prevention of relapse episodes.³⁵ Consistent effects of narcotic antagonists such as Naloxone and naltrexone on opioid and alcohol use disorders, provided a new alternative method for addiction treatment.^{36,37} Following these developments, countries that have provided only detoxification treatments such as Russia have started to implement antagonist treatments by totally discarding agonist treatments.³⁸ In a study done in Ukraine, a country providing both agonist and antagonist treatments, it was found that the individuals who are using heroin intravenously have often preferred naltrexone treatments.^{39,40}

Compared to agonist treatments, antagonist treatments cause a controlled withdrawal in treatment initiation without any induction process. Individuals' treatment readiness levels and their fear of withdrawal can affect their perception of antagonist treatment. In that regard, it is thought that the individuals show hesitancy while receiving antagonist treatments compared to agonist treatments.⁴¹⁻⁴³ However, by receiving antagonist treatments, implant naltrexone or depot naltrexone treatments, in particular, individuals can continue their daily lives as they don't have to get frequent inpatient treatments and this might affect their social interactions positively. With implant treatment, individuals can spend their time on returning to social life since they don't have to pay frequent visits to treatment clinics.⁴⁴ Subcutaneous implants do not leave clearly visible marks on individuals' bodies, and this could positively affect individuals' perception of treatment success.^{45,46} Additionally, individuals might forget or refuse to take their medicines (oral naltrexone, methadone, etc.) during their inpatient or outpatient treatments in the clinic. However, naltrexone's implant

form is quite effective in overcoming the problems of treatment compliance, forgetfulness, and agonist intake overdose.⁴⁷ Naltrexone eliminates the risk of agonist misuse; therefore, it is preferred in treatments.⁴⁸

According to this study's findings, another reason for the statistically significant difference between the naltrexone implant group and the suboxone group could be the strong quitting motivation of the naltrexone implant group. When related literature is reviewed, it was found that higher compliance rates provided better results in agonist treatment.^{46,49}

Naltrexone implants benefits such as elimination of agonist misuse risk and their effectiveness in treatment have been proved by several studies.^{40,50-52} Implant treatments can be considered more successful than agonist treatments since it provides long remission periods while having shorter treatment episodes.⁵³⁻⁵⁵

Naltrexone treatments' higher efficiency in comparison to traditional treatment methods is well documented by most of the clinical studies in the literature.^{50,56-58} Additionally, it was found that naltrexone implants are more effective in the prevention of opioid misuse compared to traditional agonist treatments (oral naltrexone) and placebo.⁵⁹

When the participants who are receiving agonist or antagonist treatments are compared by the number of times they have received inpatient treatment, it was found that the individuals who have received fewer inpatient treatments had higher and statistically significant total score in PFS* (and in all Sub-scales) in comparison to individuals that had inpatient treatments more than 2-4 times (Table 4).

Considering the addictive and destructive potential of the opioid use disorder it is normal for an individual to receive inpatient treatments in the clinics. In a study, the average value for the inpatient treatment times was calculated as 1.7.⁶⁰ In the study of Yalınz et al.,⁶¹ 77.6% of the Turkish heroin addicts living in Germany have reported that they have received inpatient treatment before and 28.6% of the addicts have reported they have received inpatient treatment more than 4 times. Substance use disorders, by their nature, is a quite difficult condition to overcome, and the individuals that try to quit their substance abuse may fail many times. This situation causes an increase in treatment frequency.⁶⁰ Most individuals are highly motivated to pursue their addiction treatments, but long withdrawal periods may negatively affect their compliance with the treatment.^{62,63} The findings of this study suggest that individuals with fewer inpatient treatment times have a more positive perception of treatment success. This positive perception possibly results from the implant treatments' long-term effects such as lower frequency of withdrawal, relapse, and lapse. When the related literature was reviewed, it was found that most of the individuals with no treatment history have

Table 4. Individuals who are receiving the implant and sublingual treatments are compared in terms of factors sub-scale and total point averages regarding the question inpatient treatment frequency

Inpatient treatment frequency	Implant (N=68)	Sublingual (N=68)	p
	$\bar{X}\pm SD$	$\bar{X}\pm SD$	
	Median (min-max)	Median (min-max)	
Autonomy			
None	79.26±18.08 78 (48-116)	74.64±14.39 72 (58-100)	0.436
Once	75.44 ±26.12 68 (45-120)	68.38±27.30 65 (32-118)	0.516
2-4 times	69.13 ±23.35 77 (22-108)	72±24.36 75 (26-110)	0.696
Above 4 times	74.25±19.25 76.50 (41-113)	84.21±13.94 85 (61-106)	0.120
p	0.494	0.216	
Sociotropy			
None	63.79±17.25 70 (33-83)	62.86±15.30 57 (38-89)	0.873
Once	64.33±32.38 62 (22-113)	63.24±26.29 67 (22-112)	0.923
2-4 times	60.71±19.29 64.50 (22-94)	65.47±25.05 61 (22-106)	0.485
Above 4 times	68.31±19.13 69.50 (29-103)	67.43±18.40 65.50 (36-105)	0.899
p	0.734	0.938	
Social and legal factors			
None	54.32±6.07 56 (44-62)	52±5.44 52.50 (42-60)	0.267
Once	55.11 ±8.19 57 (41-64)	49.81±5.75 49 (40-61)	0.039
2-4 times	45.21±7.83 48 (28-56)	43.11±6.02 43 (32-55)	0.340
Above 4 times	42.69±5.37 43.50 (33-52)	40±5.63 40.50 (30-48)	0.192
p	<0.001	<0.001	
Psychological factors			
None	36.32±3.28 37 (29-41)	34.14±4.73 35.50 (24-40)	0.129
Once	33.27±5.84 33 (20-41)	33.48±3.98 34 (27-40)	0.069
2-4 times	30.96±6.50 33 (18-41)	28.16±4.37 28 (21-37)	0.115
Above 4 times	28.75±5.50 29 (20-41)	26.50±4.01 26 (20-34)	0.217
p	<0.001	<0.001	

Table 4. Individuals who are receiving the implant and sublingual treatments are compared in terms of factors sub-scale and total point averages regarding the question inpatient treatment frequency (continued)

Inpatient treatment frequency	Implant (N=68)	Sublingual (N=68)	p
	$\bar{X}\pm SD$	$\bar{X}\pm SD$	
	Median (min-max)	Median (min-max)	
PFS total			
None	90.63±8.93 93 (73-103)	86.14±8.12 89 (72-98)	0,149
Once	91.44±12.51 95 (69-105)	83.29±8.21 86 (67-94)	0,026
2-4 times	76.17±13.56 80 (46-97)	71.26±8.79 69 (59-87)	0,180
Above 4 times	71.44±10.07 71 (53-86)	66.50±8.15 65.50 (57-82)	0,155
p	<0.001	<0.001	

PFS: Predictive Factors for The Addiction Treatment Success Scale

started their rehabilitation process with implant treatments.⁶⁴ However, as the inpatient treatment frequency increases individuals develop negative attitudes and perceptions toward treatment success, and this could cause them to score lower in PFS scale. As the treatment frequency increase, individuals get into a state of learned helplessness, lose their motivation, and fail to meet treatment requirements.^{65,66}

When the participants have been compared in regards to their mothers' vital status, it was found that the participants who are receiving antagonist treatment and have their mothers alive had scored higher in PFS total points and sub-scales averages. This difference is statistically significant (Table 5). According to Reece's⁶⁷ study, working at a job prior to implant treatment and social support can affect the treatment outcome. Antagonist implant treatment is a relatively new treatment option in Turkey; however, it is being regarded as a promising development by most substance abusers and their families. This positive impression may cause encourage families to refer their relatives to implant treatments.^{68,69} In some cases, pressure from mothers and friends can affect the treatment process. Verbal persuasion can cause individuals to develop a positive perception of treatment.^{70,71}

Short term harms of the opioid use disorder can be noticed by the parents earlier than the individual, and this might motivate parents to search for a treatment for their child.⁷² Parents' economic and emotional support can positively affect the individuals' perception of treatment success.⁷³ In another qualitative study, it was found that the individuals developed a positive perception toward treatment and accepted the treatment after seeing their parents' sorrow.⁷⁴ Additionally, family and

Table 5. Individuals who are receiving the implant and sublingual treatments are compared in terms of factors sub-scale and total point averages regarding the question "Is your mother still alive?"

"Is your mother still alive?"	Implant (N=68)	Sublingual (N=68)	P
	$\bar{X}\pm SD$	$\bar{X}\pm SD$	
	Median (min-max)	Median (min-max)	
Autonomy			
Yes	74.50±20.56 77.50 (25-120)	73.74±21.96 75 (26-110)	0.840
No	57.50±50.20 57.50 (22-93)	76±26.69 74.50 (40-118)	0.503
p	0.716	0.814	
Sociotropy			
Yes	64.38±20.37 67.50 (22-113)	46±26.87 46 (27-65)	0.884
No	63.84±21.35 61.50 (22-106)	73±30.01 79 (27-112)	0.305
p	0.216	0.336	
Social and legal factors			
Yes	48.62±8.49 48 (28-64)	46.24±7.24 47 (30-61)	0.092
No	43.50±12.02 43.50 (35-52)	47.67±8.54 46 (39-58)	0.600
p	0.407	0.652	
Psychological factors			
Yes	32.81±5.93 33.50 (18-42)	30.71±5.09 30.50 (20-40)	0.033
No	27±11.31 27 (19-35)	30.50±7.42 30.50 (22-40)	0.620
p	0.772	0.283	
PFS total			
Yes	81.44±13.83 81 (46-105)	76.95±11.24 77.50 (57-98)	0.047
No	70.50±23.33 70.50 (54-87)	78.17±13.46 78 (62-93)	0.568
p	0.281	0.804	

PFS: Predictive Factors for The Addiction Treatment Success Scale

friends have a quite an important role in supporting the individuals through the possible negative experiences they can have during their treatment.^{68,75}

When the individuals who have undergone agonist or antagonist treatments for opioid use disorder in an inpatient setting were reviewed with regards to factors for treatment success and sociotropic-autonomic personality traits; it was seen that their perceptions on treatment success were affected by the treatment method, treatment frequency, parents' vital statuses while individuals' monthly income did not make a significant difference.

By taking these findings into account, treatment methods can be altered regarding the individuals' personality traits and motivation. It is hoped that the findings of this study would be helpful in solving the problems related to treatment acceptance, treatment compliance, and recovery expectancies. Informing the individuals about the processes of these two treatment methods before initiating treatment can be helpful for them to choose the right treatment method for themselves and comply with their treatments. Affording an implant treatment can be difficult for some individuals. Aid agencies and social security institutions can have an effective role in the protection of the individuals and society by supporting these individuals in need.

There are some limitations to this study. One of them is the exclusion of women from this study. Another limitation is the relatively small size of the sample group. More people could be included in this study if it had a longer time period. Another limitation of this study is the presence of withdrawal symptoms on the individuals that are having inpatient treatments in ASARTC clinics and discontinuation of treatment. This limitation could affect the size of the sample group and participation rates.

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The authors completed their work in compliance with confidentiality standards.

Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Sunay Firat. Data curation: Mehmet Aykut Erk. Formal analysis: Mehmet Aykut Erk. Funding acquisition: Sunay Firat. Investigation: Mehmet Aykut Erk, Sunay Firat. Methodology: Mehmet Aykut Erk, Sunay Firat. Project administration: Sunay Firat. Resources: Sunay Firat. Software: Mehmet Aykut Erk. Supervision: Sunay Firat. Validation: Mehmet Aykut Erk. Visualization: Mehmet Aykut Erk. Writing—original draft: Mehmet Aykut Erk. Writing—review & editing: Sunay Firat.

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