# Chapter 4: Results

## Introduction

This chapter explores the issues of burnout among SUDCs who access services for substance abuse treatment organizations. This chapter seeks to describe the link between education/training levels, therapy readiness and burnout, that is analysis here clarifies some aspects related to counselor well-being in treatment of addiction.

There are three hypotheses regarding SUDCs in this chapter. Hypothesis 1 (H1): Null Hypothesis (H0): The level of education/ training and therapy evaluation score is not associated with the burnout tendency among SUDCs. Alternative Hypothesis (H1): The scores for low education/training and low therapy evaluation signify an increased likelihood of SUDCs burnout. Hypothesis 2: Null Hypothesis (H0): Education/training levels have a weak correlation with readiness for therapy among the SUDCs. Alternative Hypothesis (H1): Among SUDCs, education/training levels and therapy readiness have a positive relationship. Hypothesis 3 (H3): Null Hypothesis (H0): The correlation of the level of therapy ready and burnout was not significant among SUDCs. Alternative Hypothesis (H1): Negatively correlated is therapy readiness and burnout among SUDCs, the higher levels of therapy readiness are associated with lower frequencies of burnout.

The Chapter explores the variables and tests the hypothesis. To start with, descriptive statistics is used to understand the data that is to be analyzed. It then presents the theory that formed a basis for the study, whereby important terms connected with burnout, therapy readiness, and their relevancy to SUDC practice are discussed. Following this, the findings of the analyses are presented and discussed based on each hypothesis, unlocking meaning from the obtained results and their relevance for theory development and informed practice. Finally, the chapter ends with a summation of the main insights on SUDC burnout and counseling professionals’ experiences presented in this chapter.

## Descriptive Statistics

**Table 1**

Gender Distribution

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Gender | | | | | |
|  | | Frequency | Percent | Valid % | Cumulative % |
|  | Female | 27 | 75.0 | 75.0 | 75.0 |
| Male | 8 | 22.2 | 22.2 | 97.2 |
| Non Binary | 1 | 2.8 | 2.8 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The gender distribution of the sample data shows that 75.0% of valid responses were female respondents, who constituted the majority of individuals. Among the sample, males constituted 22.2%, and non-binary accounted for a small percentage of 2.8%. It is worth mentioning that a small percentage of respondents identify as male and as non-binary.

**Table 2**

Clinical practice treating substance use disorder

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| How many years have you worked in clinical practice directly treating substance use disorder patients in the United States? | | | | | |
|  | | Frequency | Percent | Valid % | Cumulative % |
|  | Less than 1 year | 1 | 2.8 | 2.8 | 2.8 |
| 1-5 years | 23 | 63.9 | 63.9 | 66.7 |
| 6-10 years | 7 | 19.4 | 19.4 | 86.1 |
| 11-15 years | 3 | 8.3 | 8.3 | 94.4 |
| 15 years + | 2 | 5.6 | 5.6 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The table shows how many years the respondents have worked in clinical practice treating substance use disorder in the United States. Among the legitimate cases, about 2.8% of respondents indicated that they had earned less than a year’s experience. The largest number of people, 63.9%, replied to having experience between 1-5 years; moreover, another large group of participants, the second place belongs to those with 6-10 years, which is 19.4%. Furthermore, 8.3% belongs to respondents between 11-15 years and 5.6% for clinicians aged 15 years and above.

**Table 3**

Primary Place of Employment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| What is your primary place of employment? | | | | | |
|  | | Frequency | Percent | Valid % | Cumulative % |
|  | Outpatient Care Centers | 22 | 61.1 | 61.1 | 61.1 |
| Psychiatric and Substance Abuse Hospitals | 5 | 13.9 | 13.9 | 75.0 |
| Residential Disability, Mental Health, and Substance Abuse Facilities | 6 | 16.7 | 16.7 | 91.7 |
| Other Residential Care Facilities | 1 | 2.8 | 2.8 | 94.4 |
| Offices of Other Health Practitioners | 2 | 5.6 | 5.6 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The table above shows the distribution of the respondents’ primary places of employment. There is a significant number of those who worked at outpatient care centers, with 61.1% followed by 16.7% of those who worked in a health and substance abuse facility. There is a 13.9% of those who worked in psychiatric and substance abuse hospitals. 5.6% of the respondents worked in the offices of other health practitioners. There are 2.8% of those who worked in other residential care facilities.

**Table 4**

Age distribution

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Age | | | | | |
|  | | Frequency | Percent | Valid % | Cumulative % |
|  | 18-34 | 21 | 58.3 | 58.3 | 58.3 |
| 35-44 | 9 | 25.0 | 25.0 | 83.3 |
| 45-54 | 5 | 13.9 | 13.9 | 97.2 |
| 55-65 | 1 | 2.8 | 2.8 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The table above shows how many respondents fell into which age group. Most respondents, 58.3%, aged between 18 - 34, were in a youthful age group; such young people constituted an appreciable number. The age group 35 - 44 constituted 25.0% of the sample size, which is not a large population, although it was significant enough to be mentioned in this study. Also, approximately 13.9% of respondents fell into the middle age category of 45 - 54 years, while another small group represented the older generations by having between 2.8% of their population within the age bracket for those aged from 56 - 65 years.

**Table 5**

Relationship status distribution

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Relationship Status | | | | | |
|  | | Frequency | Percent | Valid % | Cumulative % |
|  | Married | 15 | 41.7 | 41.7 | 41.7 |
| Divorced | 1 | 2.8 | 2.8 | 44.4 |
| Separated | 3 | 8.3 | 8.3 | 52.8 |
| Cohabiting with a significant other or in a domestic partnership | 9 | 25.0 | 25.0 | 77.8 |
| Single, never married | 8 | 22.2 | 22.2 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The table above shows the distribution of the relationship status of the respondents. The highest percentage is 41.7%, which belongs to the married respondents. 25% of the respondents are cohabiting with a significant other or in a domestic partnership category. There is 22.2% that represents the single or never married group. The other categories like separated and divorced have 8.3% and 2.8%, respectively.

**Table 6**

*Religion status*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Religious Status | | | | | |
|  | | Frequency | Percent | Valid % | Cumulative % |
|  | Catholicism | 9 | 25.0 | 25.0 | 25.0 |
| Christianity | 7 | 19.4 | 19.4 | 44.4 |
| Judaism | 3 | 8.3 | 8.3 | 52.8 |
| Islam | 1 | 2.8 | 2.8 | 55.6 |
| Hinduism | 1 | 2.8 | 2.8 | 58.3 |
| No religion | 14 | 38.9 | 38.9 | 97.2 |
| Other | 1 | 2.8 | 2.8 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The table above shows the distribution of religious status. The religion status category with the highest percentage is No religion category with 8.9%, followed by 25% in the catholic category. A 19.4% represents Christians, whereas other categories like Judaism, Islam, Hinduism, and others have percentages of 8.3%, 2.8%, 2.8%, and 2.8% respectively.

**Table 7**

*Education level*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Education Level | | | | | |
|  | | Frequency | Percent | Valid % | Cumulative % |
|  | Grade School | 2 | 5.6 | 5.6 | 5.6 |
| High school degree | 2 | 5.6 | 5.6 | 11.1 |
| Associate degree | 2 | 5.6 | 5.6 | 16.7 |
| Bachelor’s degree | 4 | 11.1 | 11.1 | 27.8 |
| Master’s degree | 23 | 63.9 | 63.9 | 91.7 |
| Doctorate degree | 3 | 8.3 | 8.3 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The above table shows the distribution of education among the participants. The highest percentage, 63.9%, belongs to the participants with a master's degree. The other education levels, like bachelor's degree, doctorate degree, associate degree, high school degree, and grade school, have the following percentages: 11.1%, 8.3%, 5.6%, 5.6%, and 5.6%, respectively.

**Table 8**

*Job title distribution*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Job Title | | | | | |
|  | | Frequency | Percent | Valid Percent | Cumulative Percent |
|  | Behavioral Technician | 4 | 11.1 | 11.1 | 11.1 |
| Addiction Counselor | 16 | 44.4 | 44.4 | 55.6 |
| Psychotherapist | 12 | 33.3 | 33.3 | 88.9 |
| Clinical Psychologist | 4 | 11.1 | 11.1 | 100.0 |
| Total | 36 | 100.0 | 100.0 |  |

The data in the table shows the distribution of jobs of the respondents. The highest percentage, 44.4%, belongs to the respondents who work as addiction counselors. The other category is psychotherapy, with 33.3%. At the same time, the last two categories, behavioral technician and clinical psychologist, have 11.1%.

**Table 9**

*Target variables*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Descriptive Statistics | | | | | |
|  | N | Mean | Std. Deviation | Skewness | |
| Statistic | Statistic | Statistic | Statistic | Std. Error |
| Emotional Exhaustion (EE) | 36 | 33.86 | 13.53 | -.180 | .393 |
| Depersonalization (DP) | 35 | 12.43 | 5.77 | .809 | .398 |
| Personal Accomplisment (IPA) | 36 | 46.72 | 5.60 | -.813 | .393 |
| Therapy Readiness Score | 36 | 73.98 | 10.39 | -.333 | .393 |
| Valid N (listwise) | 35 |  |  |  |  |

The table above describes and analyzes four measures undertaken on the surveyed population. First, the mean Emotional Exhaustion (EE) score is 33.86, with a standard deviation 13.53 and skewness value of -0.18. The depersonalization (DP) has a mean of 12.43 with a standard deviation of 5.772 and a skewness value of .81. The third is the personal accomplishment (IPA), with a mean score of 46.72 and a standard deviation of 5. 604 and a skewness value of -.81.  The last one Therapy Readiness Score (TRS) mean was 73.98 with a standard deviation 10.39. The value of the skewness coefficient at -.333 hints at a slightly left-skewed distribution at this point. It implies that the data can have a tail on the left side, which is slightly heavier. These summary statistics are a good overview of the distribution and variance involving the measured variables found among the surveyed population.

## Inferential Statistics

**Table 10**

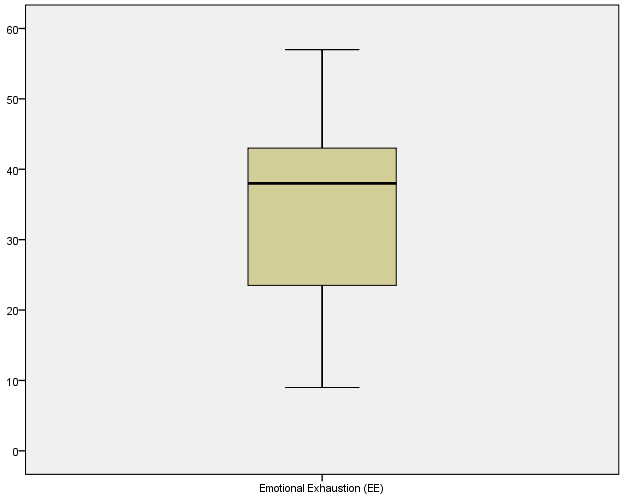
*Shapiro test*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Statistic | df | Sig. |
| Emotional Exhaustion (EE) | 0.958 | 35 | 0.202 |
| Depersonalization (DP) | 0.925 | 35 | 0.02 |

The Shapiro- Wilk test was used to test the normality for emotional exhaustion and Depersonalization variables. The data shows EE significantly assumed a normal distribution, W(35)=.96, p=.20. However, Depersonalization violated the assumotion of normality, W(35)=.93, p=.02.

**Figure 1**

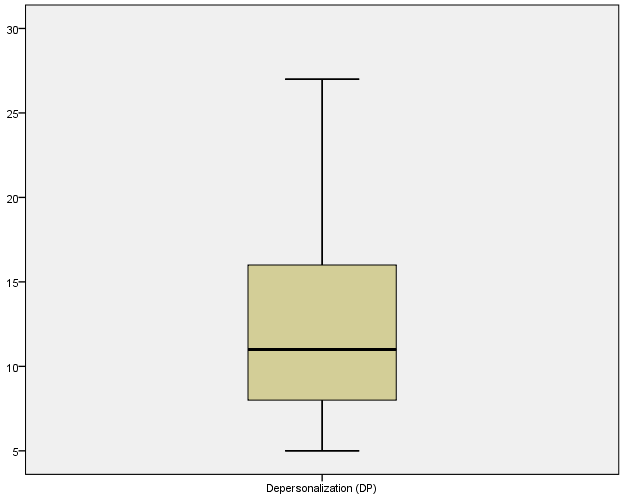
*Emotional Exhaustion*



The box plot above shows that the Emotional Exhaustion variable is skewed and there are no outliers in the data. The median line is close to the third quartile than it is in the first quartile.

**Figure 2**

*Depersonalization*



The box plot above shows that the Depersonalization variable is skewed and there are no outliers in the data. The median line is close to the first quartile than it is in the third quartile.

## Hypothesis I

The hypotheses suggest that individuals with low education and therapy readiness training will report higher burnout scores. A two-way ANOVA was conducted to examine the correlations between education, burnout, and therapy readiness, considering their levels. The interaction effects were evaluated using ANOVA by comparing the means at various levels of independent variables.

**Table 11**

*Roy’s Largest Root Multivariate test*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Multivariate Tests | |  |  |  |  |  |
| Effect |  | Value | F | Hypothesis df | Error df | Sig. |
| Intercept | Roy’s Largest Root | 2.43 | 32.77b | 2 | 27 | 0 |
| Therapy\_Readiness | Roy's Largest Root | 0.99 | 13.37b | 2 | 27 | 0 |
| Education\_Level | Roy's Largest Root | 0.56 | 3.15c | 5 | 28 | 0.02 |

a. Design: Intercept + Therapy\_Readiness + Education\_Level

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Roy’s Largest Root Multivariate test shows a significant effect for intercept, therapy readiness, and education level variables. Therapy readiness roy largest root is .99 with statistics (F=13.37, P=.00). Education level also shows a significant root largest root of .56 with an F statistic of 3.15 (P=.02).

**Table 12**

*Tests of Between-Subjects Effects*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Source | Dependent Variable | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | Emotional Exhaustion (EE) | 3518.87a | 6 | 586.48 | 6.07 | 0.00 |
|  | Depersonalization (DP) | 564.19b | 6 | 94.03 | 4.63 | 0.00 |
| Intercept | Emotional Exhaustion (EE) | 6099.70 | 1 | 6099.70 | 63.12 | 0.00 |
|  | Depersonalization (DP) | 531.61 | 1 | 531.61 | 26.19 | 0.00 |
| Therapy\_Readiness | Emotional Exhaustion (EE) | 2565.87 | 1 | 2565.87 | 26.55 | 0.00 |
|  | Depersonalization (DP) | 182.89 | 1 | 182.89 | 9.01 | 0.01 |
| Education\_Level | Emotional Exhaustion (EE) | 573.86 | 5 | 114.77 | 1.19 | 0.34 |
|  | Depersonalization (DP) | 243.14 | 5 | 48.63 | 2.40 | 0.06 |
| Error | Emotional Exhaustion (EE) | 2705.88 | 28 | 96.64 |  |  |
|  | Depersonalization (DP) | 568.38 | 28 | 20.30 |  |  |
| Total | Emotional Exhaustion (EE) | 45470.00 | 35 |  |  |  |
|  | Depersonalization (DP) | 6539.00 | 35 |  |  |  |
| Corrected Total | Emotional Exhaustion (EE) | 6224.74 | 34 |  |  |  |
|  | Depersonalization (DP) | 1132.57 | 34 |  |  |  |

a. R Squared = .565 (Adjusted R Squared = .472)

b. R Squared = .498 (Adjusted R Squared = .391)

The tests between subject’s effects corrected models show significance for both Depersonalization (DP) and Emotional Exhaustion (EE). The type II sum of squares for EE and DP is 3518.87 and 564.19, respectively. Their correspondence f- statistics and p-value are 6.07 (p=.00) for EE and 4.64 (p=.00) for DP.

Therefore, the results support the hypothesis showing that individuals with low training or education and low therapy readiness among substance use disorder counselors report higher burnout scores. This is shown by the results of the ANOVA intercept, education level, and therapy readiness factors, indicating their significant effect on burnout scores among the SUDCs.

**Table 13**

*Levene’s test*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | F | df1 | df2 | Sig. |
| Emotional Exhaustion (EE) | 0.748 | 5 | 29 | 0.594 |
| Depersonalization (DP) | 1.57 | 5 | 29 | 0.2 |

The Levene’s test assessed the equality of error of variances for the dependent variable emotional exhaustion and depersonalization across groups defined by education level and therapy readiness score across groups of education levels. The test revealed that there was no significant differences in error variances for emotional exhaustion, F(5,29)=.75, p=.59 and depersonalization, (F5,29)= 1.57, p= .20.

## Hypothesis 2

The second hypothesis suggests a positive correlation between therapy readiness and education or training. Thus, to examine this relationship, a two-way ANOVA was conducted to assess the relationship among the variables. The test compares the means of the interaction effects at different levels of the variables using ANOVA.

**Table 14**

*Tests of Between-Subjects Effects*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | 420.66a | 5 | 84.13 | 0.75 | 0.59 |
| Intercept | 88761.81 | 1 | 88761.81 | 793.16 | 0.00 |
| Education\_Level | 420.66 | 5 | 84.13 | 0.75 | 0.59 |
| Error | 3357.29 | 30 | 111.91 |  |  |
| Total | 200802.97 | 36 |  |  |  |
| Corrected Total | 3777.96 | 35 |  |  |  |

a. R Squared = .111 (Adjusted R Squared = -.037)

With the help of Tests of Between-Subjects Effect, it is found that for the Corrected Model, the Type III Sum of Squares has 420.66 with 5 degrees freedom, and hence, the Mean Square comes up to 84.13. On the other hand, the associated F-statistic of 0.75 results in a level of significance at 0.59 value, thus implying that the effect on therapy readiness has no statistical significance as a whole. Similarly, the Education\_Level variable does not reflect a significant impact on therapy readiness as shown by an F-statistic of 0.75 (p= .57). The Rsquared is also very low, which is 11%, thus suggesting that 11% of the data can be fitted in the model.

**Table 15**

*Post Hoc Tests*

|  |  |  |
| --- | --- | --- |
| Tukey B |  |  |
| Education Level | N | Subset |
|  |  | 1 |
| Associate degree | 2 | 64.59 |
| Grade School | 2 | 67.76 |
| Bachelor’s degree | 4 | 70.46 |
| Master’s degree | 23 | 75.02 |
| Doctorate degree | 3 | 78.00 |
| High school degree | 2 | 78.68 |

The error term is Mean Square (Error) = 111.910.

a. Uses Harmonic Mean Sample Size = 2.821.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = 0.05.

Due to the multiple group comparisons, a Tukey B test was conducted to investigate the differing means of different educational levels. The mean scores were analyzed for each target group on education/ training level, but no statistically significant differences between the means were attained. It may be taken that there can be little or no substantive effect of an education/training level on therapy readiness.

In conclusion, the findings fail to confirm Hypothesis 2. The low level of education and training is not associated with therapy readiness based on information from two-way ANOVA and post hoc Tukey B tests.

**Table 16**

Levene’s Test

|  |  |  |  |
| --- | --- | --- | --- |
| F | df1 | df2 | Sig. |
| 3.296 | 5 | 30 | 0.017 |

The Levene’s test assessed the equality of error of variances for the dependent variable therapy readiness score across groups of education levels. The test revealed statistically significance error differences in error variances across groups, F(5,30)=3.30, p=.02.

## Hypothesis 3

Hypothesis 3 suggests that burnout and therapy readiness used in the analysis will show a negative relation. It means a higher level of preparation for therapy will lead to low burnout scores. To test this hypothesis, a two-way ANOVA analysis of the therapy readiness and the burnout was conducted to determine between-subject correlation, with variances means for independent variables measured for levels mean response analyzed for both substantial and interaction effect using ANOVA.

**Table 17**

*Multivariate tests*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Effect |  | Value | F | Hypothesis df | Error df | Sig. |
| Intercept | Roy's Largest Root | 2.31 | 36.93b | 2 | 32 | .00 |
| Therapy\_Readiness | Roy's Largest Root | 1.03 | 16.49b | 2 | 32 | .00 |

a. Design: Intercept + Therapy\_Readiness

b. Exact statistic

The p-value from the multivariate tests is less than 0.05. Therefore, both Intercept and Therapy\_Readiness factors have a significant effect. Roy’s Largest Root for the Intercept is 2.308x1E-69, which has a significant F statistic of 36.93 (p=.00.).  Roy’s Largest Root estimation equals 1.03 for the Therapy\_Readiness with a value of p = 0.00, an F-statistic that is also significant (F=16.49).

**Table 18**

*Tests of Between-Subjects Effects*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Source | Dependent Variable | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | Emotional Exhaustion (EE) | 2945.00a | 1.00 | 2945.00 | 29.63 | .00 |
|  | Depersonalization (DP) | 321.05b | 1.00 | 321.05 | 13.06 | .00 |
| Intercept | Emotional Exhaustion (EE) | 6468.69 | 1.00 | 6468.69 | 65.09 | .00 |
|  | Depersonalization (DP) | 764.40 | 1.00 | 764.40 | 31.08 | .00 |
| Therapy\_Readiness | Emotional Exhaustion (EE) | 2945.00 | 1.00 | 2945.00 | 29.63 | .00 |
|  | Depersonalization (DP) | 321.05 | 1.00 | 321.05 | 13.06 | .00 |
| Error | Emotional Exhaustion (EE) | 3279.74 | 33.00 | 99.39 |  |  |
|  | Depersonalization (DP) | 811.52 | 33.00 | 24.59 |  |  |
| Total | Emotional Exhaustion (EE) | 45470.00 | 35.00 |  |  |  |
|  | Depersonalization (DP) | 6539.00 | 35.00 |  |  |  |
| Corrected Total | Emotional Exhaustion (EE) | 6224.74 | 34.00 |  |  |  |
|  | Depersonalization (DP) | 1132.57 | 34.00 |  |  |  |

a. R Squared = .473 (Adjusted R Squared = .457)

b. R Squared = .283 (Adjusted R Squared = .262)

Within the Between-Subjects Effects Tests, corrected models show results in highly significant effects for EE and DP. For the Emotional Exhaustion (EE), the Type III Sum of Squares is 2945.00 p with an F-statistic of 29.63 (sig=.00). The Type III Sum of Squares for Depersonalization is 321.05, with an F-statistic of 13.06 (Sig. = .00). Therefore the model is significant with an R squared of 45.7%.

These results support the hypothesis since the results of the ANOVA show significant intercept and therapy readiness factors.

## Summary

The chapter tested three hypotheses based on Substance Use Disorder Counselors (SUDCs). The first hypothesized that individuals with limited education and training, as well as more low therapy readiness in SUDCs, would score burnout higher. For example, the suggested hypothesis was supported by two-way ANOVA outcomes that revealed significant impacts on education and therapy readiness levels and intercept factors based on their burnout scores. The second hypothesis concerning a positive correlation between education/training and therapy readiness was tested utilizing separable ANOVA. However, the outcomes did not show statistical contrasts in scores of therapy readiness on the level of education/training. Lastly, a negative association between therapy readiness and burnout was examined in the third hypothesis, which implied that SUDCs would have lower levels of burnout for higher degrees of perceived good of the individual patient. This hypothesis was substantiated in the analysis that revealed a significant impact on therapy readiness and intercept factors at the scale of burnout scores. The findings reflected complicated dynamics between therapy readiness, education/training, and burnout among SUDCs, indicating the need for specialized measures tailored to this specific professional setting.