

# **Predictors of Reduction in Drug-Intake and Improvement in Mental Health in a Residential Setting for the Treatment of Addiction to Alcohol or Other-Drugs**

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# Abstract

- Adolescents, who were addicted to alcohol and/or other drugs, and exhibited mental health problems caused by their addiction, were admitted into a residential program for the treatment of addiction and co-morbidity.
- The young people underwent long-term psychological treatment and counselling for problems related to drug use and co-morbidity.
- They completed questionnaires designed to assess their background information, drug intake, mental/emotional health, physical health, social functioning and criminal behaviours.

## **Abstract (Continued)**

- Approximately three months after their departure from the residential setting, they were contacted and requested to answer the same questions since their departure from the treatment facility.
- Multiple regression analyses were conducted to examine the role of predictor variables in contributing to improvement in drug-intake, emotional health.
- Results showed that family functioning at follow-up and achievement rating of action plan goals at the end of treatment were the two major predictors of improvements in health and reduction in drug intake .

## **Ted Noffs Foundation: Overview**

- Young Persons (14-18 yrs old): Drug and Alcohol, and related Mental Health Problems
- Telephone Screening
- Complete Pre-Assessment Form
  - During Pre-treatment we collect demographic information, and assess substance use, mental and physical health, social and family functioning, criminal behaviours, etc.
- Treatment for Drug and Alcohol, and Co-morbid Issues

## **Ted Noffs Foundation: Overview (Contd)**

- Reasons for Departure: Self-discharge, Disciplinary Discharge, Program Completion (before three months), Program Completion (Three or more months)
- Counsellors rate YPs' achievement of action plan goals on a 4-point scale (0, none; 1, some; 2, moderate; and 3, significant)

## **Ted Noffs Foundation: Overview (Contd)**

- Post-treatment Form (For those YPs who are in the residential unit for at least 30 days): Three months after departure these YPs are contacted and complete the Post-treatment Form (very similar to the Pre-Treatment Form)

## Objective of Research

- Analysis of existing data has shown that, at follow-up, there is a significant reduction in drug intake and criminal behaviours, and significant improvement in physical and mental health.
- We were interested in determining the predictors of improvements at follow-up.

## **Objective of Research (Continued)**

Specifically, the objectives are:

1. To determine the Individual and comparative predictive value of
  - Length of stay in the residential unit
  - Number of drugs of concern at entry
  - Achievement rating of action plan objectives at departure
  - Family functioning at follow-up
  - Mental health at pre-treatment

## **Objective of Research (Continued)**

In predicting

- Drug intake at follow-up
- Drug dependence at follow-up
- Mental health and psychological well-being at follow-up
- Physical health at follow-up
- Criminal behaviour at follow-up

## **Objective of the Research (Continued)**

2. We were also interested in determining if males and females; young persons of different ages; and aboriginal and non-aboriginal young persons, exhibited differential improvements in drug intake, health and criminal behaviours at follow-up.

# Hypotheses

We predicted that:

- The longer the length of stay, the more will be the improvement in drug intake, addiction, health and criminal behaviours
- The better the achievement of action plan goals during treatment, the more will be the improvement in drug intake, addiction, health and criminal behaviours

# Hypotheses

We predicted that:

- The better the family functioning at follow-up, the more will be the improvement in drug intake, addiction, health and criminal behaviours
- The more the number of drugs of concern at entry, the less will be the improvement in drug intake, health and criminal behaviours

# Participants

- Data were analysed for the young persons who satisfied the following criteria:
  - Those who had alcohol and/or other drugs-related problems.
  - Those who entered Ted Noffs Residential treatment between 1 January 2005 and 30 June 2008 (approximately).
  - Those who underwent treatment for their AOD and related mental health problems for a minimum of 30 days.
  - Those who provided the follow-up data when they were contacted three months (or more) after their departure from the treatment facility.

## Participants (Continued)

- One hundred and seventy six young persons satisfied these criteria.
- Of the 176 participants, 73% were males and 27% were females. Participants were aged between 14 and 18 years, with a mean age of 16.6 years (SD = 1.0). Twenty eight percent of the participants were Indigenous young persons.

## **Pre- and Post-Treatment Assessment**

- Demographics, for example,
  1. Gender
  2. Age
  3. Aboriginal and Torres Strait Islander
  4. Other questions (e.g. education, income, etc.)

## **Pre- and Post-Treatment Assessment (Continued)**

- **DRUG INTAKE**
- How many days in the last month did you drink alcohol (beer, wine, spirits)?  
Please specify \_\_\_\_\_ days
- On average how many standard drinks did you have on those days when you were drinking  
Please specify \_\_\_\_\_ drinks

## **Pre- and Post-Treatment Assessment (Continued)**

- **DRUG DEPENDENCE**
- 1a. Tolerance: A need for markedly increased amounts of the substance to achieve intoxication or desired side effect, or
- Tolerance: Markedly diminished effect with continued use of the same effect of the substance

## **Pre- and Post-Treatment Assessment (Continued)**

- **PSYCHOLOGICAL WELL-BEING**
- Feeling very trapped, lonely, sad, blue, depressed or hopeless about the future
- Having no energy and losing interest in work, school, friends, sex or other things you cared about
- Remembering, concentrating, making decisions or having your mind go blank

## **Pre- and Post-Treatment Assessment (Continued)**

- **MENTAL HEALTH (BSI)**
- Degree of distress or bother in the last 7 days (0, Not at all to 4, Extremely)
- Nervousness or shakiness inside
- Faintness or dizziness
- Trouble remembering things
- Feeling easily annoyed or irritated

## **Pre- and Post-Treatment Assessment (Continued)**

### **CRIMINAL BEHAVIOUR**

- What type of crimes have you committed in the last three months
- Property (e.g., stealing, break and enter
- Person (e.g., assault, assault and rob)
- Possess/use drugs
- Supply drugs (e.g., dealing)

## **Pre- and Post-Treatment Assessment (Continued)**

- **FAMILY FUNCTIONING**
- How often in the last three months have you had money problems, including arguing about money or not having enough money for food or housing
- How often in the last three months have you had conflict with your boyfriend/girlfriend/partner? By conflict, I mean verbal abuse, serious argument or violence, not a routine difference of opinion
- How often in the last three months have you had conflict with your relatives

# Predictor or Independent Variables

- Length of stay in the residential unit
- Number of drugs of concern at entry
- Achievement rating of action plan objectives at departure
- Family functioning at follow-up
- Mental health at pre-treatment
- Age
- Gender
- Aboriginality

## **Predicted, Dependent or Criterion Variables**

- Drug intake at follow-up
- Drug dependence at follow-up
- Psychological well-being at follow-up
- Mental health at follow-up
- Physical health at follow-up
- Criminal behaviour at follow-up

## Analysis

- SPSS Multiple regression analyses were conducted to ascertain the predictive value of predictor variables in predicting the criterion variables.
- All (8) predictor variables were entered into the equation simultaneously.

## Results and Discussion

- As indicated earlier, we analysed data for young people who entered the program between 1 January 2005 and 30 June 2008, who stayed in the residential unit for at least thirty days and for whom follow-up data were available.
- Data were analysed through correlational analysis and multiple regression analyses.

## Results and Discussion

Results of multiple regression analysis showed that:

### Mental Health at Follow-up

- The better the family functioning the better the mental health
- Females had poorer mental health than males ( $.10 > p > .05$ )
- The more the drugs of concern at entry the poorer the mental health ( $.10 > p > .05$ )

## Results and Discussion (Continued)

Results of multiple regression analysis showed that:

### Physical Health at Follow-up

- The better the family functioning the better the physical health
- The higher the achievement rating the better the physical health ( $.10 > p > .05$ )
- Females had poorer physical health than males ( $.10 > p > .05$ )

## Results and Discussion (Continued)

Results of multiple regression analysis showed that:

### Drug Dependence at Follow-up

- The better the family functioning the less the drug dependence
- The more the drugs of concern the more the drug dependence

## Results and Discussion (Continued)

Results of multiple regression analysis showed that:

### Drug Intake in the Last Three Months and in the Last Month

- The higher the achievement rating the less the drug intake
- The greater the length of stay the more the drug intake  
(???) ( $.10 > p > .05$ )
- The more the drugs of concern the more the drug intake  
( $.10 > p > .05$ )
- The better the family functioning the less the drug intake  
( $.10 > p > .05$ )

## Results and Discussion (Continued)

Results of multiple regression analysis showed that:

### Psychological Well-being

- The better the family functioning the better the psychological well-being
- Females had poorer psychological well-being than males
- The higher the achievement rating the better the psychological well-being ( $.10 > p > .05$ )
- The more the drugs of concern the poorer the psychological well-being ( $.10 > p > .05$ )

## Results and Discussion (Continued)

Results of multiple regression analysis showed that:

### Criminal Behaviours

- The more the drugs of concern the more the criminal behaviours
- The better the family functioning the less the criminal behaviours ( $.10 > p > .05$ )

## Results and Discussion (Continued)

Results of multiple regression analysis showed that:

### Achievement Rating

With a view to clarify the role of length of stay we also did a multiple regression analysis on the predictors of achievement rating at departure.

Results showed that

- The more the length of stay the better the achievement rating
- Females had better achievement rating than males ( $.10 > p > .05$ )

## Results and Discussion (Continued)

- Summary of Results
- Family functioning at follow-up seems to be the best predictor of drug intake, health and criminal behaviours at follow-up
- Achievement rating of action plan goals seems to be the next best predictor
- The reason the length of stay was not a major predictor may be explained in terms of the strong predictive value of length of stay in predicting achievement rating

## Results and Discussion (Continued)

- A Few Suggestions
  - Involve families in the program
  - Train families to function well as a family
  - Train family and friends to offer increased levels of social support
  - Work on the program with a view to improving the achievement rating of action plan goals
  - Encourage YPs to complete the program
  - Further research is required on many variables in the residential programs and the inter-relationships among these variables

**Thank You !**