Psycho-social factors associated with relapse in patients with substance use disorder
" A comparative study "

Thesis
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List of Contents

Page

List of Abbreviations

AA	:	Alcoholic anonymous
AMPA	:	Alpha-amino-3-hydroxy-5-methyl isoxazole-4-propionate
AUDs	:	Alcohol use disorder
AVE	:	Abstinence violation effect
BDNF/VAL:		Brain drived neurotrophic factor, valine genotype
CBT	:	Cognitive behavioral therapy
CO	:	Cooperativeness
COMT	:	Catechol-O-methyl transferase
CSDH	:	Commission on social health organization
DD	:	Dual diagnosis
ED	:	Emergency department
FDA	:	Food and drug administration
GABA	:	Gamma amino butyric acid
GHQ	:	General health questioner
HA	:	Harm avoidance
HIV	:	Human immune deficiency virus
HPA	:	Hypo-thalamo pituitary axis
HPH	:	Heliopolis psychiatric hospital
HRS	:	High risk situation
IQR	:	Interquartile range
KIBRA	:	Kidney, liver and brain expressed protein
LAAM	:	Levo alpha-acetyl-methadol
LC-NE	:	Locus ceruleus nore-epinephrine system
LP	:	Lapse prevention
LTD	:	Long term depression
LTP	:	Long term potentiation
M Glu-RS	:	Metabotropic glutamine receptors
MBRP	:	Mindfulness-based relapse prevention
MSNS	:	Medium spiny projection neurons
NA	:	Narcotic anonymous
NAcc	:	Nucleus accunbens
NE	:	Nore epinephrine

List of Abbreviations (Cont.)

NIDA	:	National institute on drug abuse
NMDA	:	N-methyl-D aspartate
NS	:	Novelty seeking
OCD	:	Obsessive compulsive disorder
OUDs	:	Opioid use disorder
PDs	:	Personality disorders
PFC	:	Pre frontal cortex
PIG	:	Problem of immediate gratification
PS	:	Persistence
RD	:	Reward dependence
RP	:	Relapse prevention
SCM	:	Stage of change model
SD	:	Self directedness
SES	:	Socio economic status
SNP	:	Single nucleotide polymorphism
SNS	:	Sympathetic nervous system
SPSS	:	Statistical package for social science
SRRS	:	Social readjustment rating questioner
ST	:	Self transcendence
SUD	:	Substance use disorder
TCI-r	:	Temprament character inventory-revised
TSF	:	Twelve step facilitation model
UNDOC	:	United nation office on drug and crime
VTA	:	Ventral tegmental area
WHO	:	World health organization

List of Figures

List of Tables

Abstract

Background:

There are many risk factors for relapse & they vary from person to person, Psycho-social factors, such as mental health, social functioning and significant life events, may also influence relapse rates and substance use among substance use patient.

Results:

the independent relapse predictors are; Using mono substance, the non-joining of group therapy after treatment or during period of abstinence, using heroin as a main substance of abuse, more than 50% chance having stress according to Life event scale, experiencing a shorter period of abstinence and failure of trying to quit substances at home.

Conclusion:

Relapses after treatment can be regarded as process variables, and as such, a part of the recovery cycle rather than an indication of failure.

Key Words: Relapse in substance use

Introduction

In the context of addictive behaviors, relapse occurs when the addict resumes his or her addictive behavior after a period of abstinence for people trying to control their behavior rather than trying to quit entirely, a relapse is a period of uncontrolled behavior, relapse is a hallmark of addiction, it is common even expected, that people who are attempting to overcome an addiction will go through one or even several relapses before successfully quitting, and relapse is even considered a stage of change model, which predict that people will cycle through a process of avoiding, considering quitting, taking active steps to quit & then relapsing **(Gorski et al., 2007c)**.

Definitions of relapse are varied, ranging from a dichotomous treatment outcome to an ongoing transitional process, such that progress toward the initiation or maintenance of a behavior change goal (e.g. abstinence from drug use) is interrupted by a reversion to the target behavior.

Relapse is best conceptualized as a dynamic ongoing process rather than a discrete or terminal event **(Witkiewitz et al., 2005b)**.

There are many risk factors for relapse & they vary from person to person a powerful need to stimulate reward centers within the brain can be the trigger point for an addict who is used to getting a certain drug, both external & internal factors can create the urge to use drugs again. Internal risk factors include a persistently negative mood, feeling stressed or depressed, a genetic predisposition or family history of addiction & coexisting psychiatric problems, while

significant external psychological or social stressor can play apart in bringing on a relapse, external or environmental risk factors can be even a happy events e.g. weddings &holidays celebrations, unhappy events can triggers a relapse as well, risk factors are very much individualized **(Marlatt et al., 2004c)**.

Psychosocial factors, such as mental health, social functioning and significant life events, may also influence relapse rates and substance use among substance use patients **(Hammerbacher et al., 2006)**.

In addition, research has shown that contextual factors, such as occupational activities, are relevant when considering relapse risk and substance use among individuals with substance use disorders, hence, it was of interest to examine psychosocial and contextual factors related to relapse and substance use among these patients **(Reece et al., 2007)**.

Therefore it is apparent that psycho-social factors plays a role in control of relapse and hence relapse prevention (RP).

Hypothesis of the work:

The psycho-social factors correlated with & play a role in control of relapse in patients with substance use disorder (SUD).

Aim of the work

To evaluate psycho-social factors associated with the relapse in the patients with substance use disorder (SUD).

Chapter one

Substance use disorder & relapse process

Introduction:

Drug addiction exacts an enormous medical, financial, and emotional toll on society in the form of overdose and health complications, family disintegration, loss of employment, and crime.

National Institute on Drug Abuse **(NIDA, 2012c)** estimates that the total cost of drug abuse in the U.S. exceeds $600 billion annually and it is particularly alarming to note a sharp increase in abuse of prescription drugs.

According to a report by the United Nations Office on Drugs and Crime **(UNODC, 2014c)**, global drug trafficking has involved more than 170 countries and regions with an annual drug trade volume over $800 billion, equivalent to 13% of the total amount of world trade, the number of global drug addicts is now 300 million, what's more, each year more than 200, 000 people are killed and 10 million people lose the ability to work as a result of drug use.

It is estimated that almost a quarter of a billion people between the ages of 15 and 64 years used an illicit drug in 2013, this corresponds to a global prevalence of 5.2 % (range: 3.4%-7.0%), suggesting that drug use has remained stable in the past three years, although the estimated number of drug users has actually risen by 6 million to 246 million (range: 162 million-329 million) owing to the increase in the global population, With some 27 million people (range: 15.7 million-39 million), or 0.6% of the population aged 15-64, estimated to suffer from problem drug use, including drug-use disorders or drug dependence

In Egypt according to **Drug Situation and Policy (2014)**, the narcotics problem costs the Egyptian economy approximately $800 million annually, including the amount spent on illegal drugs and what the government spends to combat the problem.

Egypt is considered a transit point for Southwest Asian and Southeast Asian heroin and opium moving to Europe, Africa, and the US, it is also considered as a transit stop for Nigerian couriers, Egypt is under concern as a money-laundering site, due to lax financial regulations and enforcement **(Drug Situation and Policy, 2014)**.

However, the average amounts seized are moderate, due to lack of interdiction capacity; particularly at the Cairo airport, which is assumed to be a transit hub for trafficking to Europe, therefore Egypt may play a significant role in the emerging southern trafficking gateway to Europe.

According to Socio-demographic Indicators for Substance Use and Abuse in Egypt **(Emad Hamdi and colleague, 2015).**

As regards the pattern of use, 19.3% were experimental users (of them 13.3% used substance once in their lives), and 6.7% were regular on substance use, while, 6.4% were fulfilling the criteria of dependence. These findings shed light on the impact of such a problem on the Egyptian society, about one fifth (19.1%) of the Egyptians were dealing regularly with substance(s).

The commonly used substances were found to be in the following order: Cannabis was the commonest in all regions, in total, 52.39% of the substance users were using Cannabis which represents 15.91% of the sample.

Alcohol was the 2nd common substance of use in all Egyptian governorates (5.9% of the sample), except in Upper Egypt, where the opiates (5.84%) were more commonly used than alcohol (4.68%).

Substance use disorder (SUD) is a chronically relapsing disorder characterized by (i) compulsion to seek and take the drug, (ii) loss of control in limiting intake, and (iii) emergence of a negative emotional state (e.g., dysphoria, anxiety, irritability), reflecting a motivational withdrawal syndrome when access to the drug is prevented (defined as dependence) **(Koob et al., 2005).**.

There are many **Risk factors of (SUD)** as shown in table (1), No single factor determines whether a person will become addicted to drugs or alcohol, the overall risk for addiction is impacted by the biological makeup of the individual, it can even be influenced by gender or ethnicity, his or her developmental stage, and the surrounding social environment (e.g., conditions at home, at school, and in the neighborhood) **(CDC, 2014b)**.

Table (1) Protective and risk factors of SUD

Life Area	Risk Factors	Protective Factors
Individual	Begins using at an early age. Impulsiveness and sensation seeking (risk taking) Poor social and coping skills Early childhood behavior problems Feeling alienated	Well developed social and problem solving skills. A sense of self-esteem
Family	History and patterns of use and attitudes toward drugs Inconsistency in parenting, supervision, discipline and	Good communication (in general and specifically about substance use) Supervision of children

Life Area	Risk Factors	Protective Factors
	nurturing Unclear family rules, expectations and consequences Family is conflict ridden, experiencing disruption	and activities (including the selection of friends) Rules are clear and consistently enforced Child feels connected, valued and supported Parents have expectations of child's success (i.e. grades)
Peer	Association with peers who use alcohol or other drugs or who engage in risk taking behaviors	Friends who do not use alcohol or other drugs and who do not support the behavior. One or more close friends Form long lasting friendships Rely on friends for emotional support
School	Academic problems Lack of commitment to school Lacks a sense of belonging in the school community	Success and commitment in school Involvement in extra-curricular activities School action/messages on drug use
Community	Alcohol and other drugs are easily accessible Community disorganization and low neighborhood attachment Laws, norms and attitudes favor drug use	Community sponsored activities Strong social bonds, child feels connected Community action/messages around drug use

(National Centre on Addiction& Substance Abuse, 2003)