Chapter I

INTRODUCTION

"From 1870 to 1900, most physicians regarded addiction as a morbid appetite, a habit, or a vice. After the turn of the century, medical interest in the problem increased. Various physicians began to speak of the condition as a disease". The prevailing twentieth-century concept of addiction considers addiction to be a byproduct of the chemical structure of a specific drug (or family of drugs).

A concept that aims to describe the full reality of addiction must incorporate non-biological factors as essential ingredients in addiction-up to and including the appearance of craving, withdrawal, and tolerance effects.

Different cultures regard, use and react to substances in different ways, which in turn influence the likelihood of addiction. Thus, opium was never prescribed or considered a dangerous substance in India, where
it was grown and used indigenously, but it quickly became a major social problem in China when it was brought there by the British.

The external introduction of substance into a culture that does not have established social mechanisms for regulating its use is common in the history of drug abuse. The appearance of widespread abuse of and addiction to a substance may also take place after indigenous customs regarding its use are overwhelmed by a dominant foreign power.

A person’s desire for a drug cannot be separated from the situation in which the person takes the drug. The idea that opiate use cause personality defects was challenged as early as the 1920s where the personality traits observed among addicts preceded their drug use. Kolb’s view was summarized in his statement that “The neurotic and the psychopath receive from narcotics a pleasurable sense of relief from the realities of life that normal persons do not receive because life is no special burden to them”.

A major difficulty in assessing personality correlates of addiction lies in determining whether the traits found in a group of addicts are actually characteristics of a social group.
On the other hand, addictive personality traits are obscured by lumping together controlled users of a drug such as heroin and those addicted to it. Similarly, the same traits may go unnoted in addicts whose different ethnic backgrounds or current settings predispose them toward different types of involvements, drug or otherwise. Personality may both predispose people toward the use of some types of drugs rather than others and also affect how deeply they become involved with drugs at all (including whether they become addicted).

The strongest argument for addictiveness as an individual personality disposition comes from repeated findings that the same individuals become addicted to many things, either simultaneously, sequentially, or alternately.

When medical or public health organizations that subscribe to biological assumptions about addiction have attempted to define the term they have relied primarily on the hallmark behaviors of addiction, such as “an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means” (WHO Expert Committee on Mental Health, 1957) or, for alcoholism, “impairment of social or occupational
functioning such as violence while intoxicated, absence from work, loss of job, traffic accidents while intoxicated, arrested for intoxicated behavior, familial arguments or difficulties with family or friends related to drinking” (American Psychiatric Association, 1980). However, they then tie these behavior syndromes to other constructs, namely tolerance (the need for an increasingly high dosage of a drug) and withdrawal that are presumed to be biological in nature. Yet tolerance and withdrawal are not themselves measured physiologically. Rather, they are delineated entirely by how addicts are observed to act and what they say about their states of being.

In 1964 the World Health Organization (WHO) Expert Committee of Addiction-Producing Drugs changed its name by replacing “Addiction” with “Dependence.” At that time, these pharmacologists identified two kinds of drug dependence, physical and psychic.

“Physical dependence is an inevitable result of the pharmacological action of some drugs with sufficient amount and time of administration. Psychic dependence while also related to pharmacological action is more particularly a manifestation of the individual’s reaction to the effects of a
specific drug and varies with the individual as well as the drug.” In this formulation, psychic dependence “is the most powerful of all factors involved in chronic intoxication with psychotropic drugs abuses even in the case of most intense craving and perpetuation of compulsive abuse.”

Addiction, at its extreme, is an overwhelming pathological involvement. The object of addiction is the addicted person’s experience of the combined physical, emotional, and environmental elements that make up the involvement for that person. Addiction is often characterized by a traumatic withdrawal reaction to the deprivation of this state or experience. Tolerance—or the increasingly high level of need for the experience—and craving are measured by how willing the person is to sacrifice other rewards or sources of well-being in life to the pursuit of the involvement. The key to addiction, seen in this light, is its persistence in the face of harmful consequences for the individual.

Drug addiction as social menace has been world wide problem. In this context India is also no exception.

What makes India’s situation more critical and vulnerable is its precarious Geographical location.
India’s porous borders with Nepal, Burma, Bangladesh, uncertain and politically unstable conditions in Pakistan and Srilanka in addition to this India’s location between golden triangle and golden crescent makes India a major drug transit route for world. Golden triangle- is no man lands between Vietnam, Cambodia, Laos Burma and golden crescent is Afghanistan, & Pakistan and North West frontiers area the two major worldwide sources for drug.

And owing to world wide access from India with better transport majority of drug consignment finds transit route through India. And in the process of transit in a long run it has also created a market in India. Drug trafficking i.e. Heroin, Opium, Brown Sugar, Psytrophic, substances etc. in majority of India States are quite happening phenomenon.

India’s narcotics policy like permitting opium cultivation through authorizes licensing has also created drug nuisance in some provinces. Mainly authorize licensing of cultivation that is allowed in M.P. Maudsour; Manali (H.P.) and in some parts of North East India.

And it is seen adjoining to this area a kind of drug proliferation has earned drastic increase in Population of drug addicts.
Terrorism financing through drug laundering or trafficking is another problem which compounded the addiction related problem in India.

Thought India numerous N.G.O., & Govt. agencies have come forward to tackled drug menace through various Preventive and rehabilitation program.

Almost every under Indian state have well established govt. Department as Social welfare, Health Department and Narcotics Department.

These three agencies do look after policy and strategy for drug trafficking control, prevention & rehabilitation program. Almost every Indian state has at least one rehabilitation centre for drug de-addiction and treatment. Though all centre may or may not be functioning with well equipped, trained personnel and affective programs, some level of efforts and experimentation are in place.

Research Scholar happens to visit Rehabilitation centre in Dimapur (Nagaland) Imphal, Guwahati (Assam), and Santiniketan (W.B.).
An effort to understand the programs of this centre ultimately brought forward the facts that, majority of centre's rehabilitation programs are treatment centric. Programs are confined within medication to revive the normal functioning of body, intensive counseling some time more base on religious discourse, meditation, occasional yogenic sessions etc.

These observations are in sharp contrast to what has been emphasized in rehabilitation programs of developed countries like U.S., Germany, U.K. etc.

A structured and organized exercise programs emphasizing fitness are seen as essential component of every drug de-addiction and rehabilitation programs in the west.

The efficacy of exercise programs for drug rehabilitation has also been well established through numerous researches. Research on such experimentation have provided the necessary technical back-up and feed back to successful implementation of exercise programs in drug rehabilitation.

This is where we Indians seems lacking very badly. The reasons that our rehabilitation centre's are not experimenting with comprehensive
exercise programs and following mainly orthodox programs are many. There is acute resource crunch, lack of expertise in terms organizing exercise programs a general attitudinal Indian tendency of resistance to any new change etc.

Of all above reasons scholar found the lack of expertise in exercise programming and administering such programs was the major obstacle in Indian context.

What way physical exercises or fitness development could impact significantly on rehabilitation of drug addicts is not well understood in India.

The very fact that ability development, working capacity improvement, improvement in body image, health improvement, immunity development that could be realized through a organized exercise programs and all this has significant bearing on addicts psycho-especially emotions, personality, approach towards life etc. needs to be well understood by people concern, dealing with drug addict rehabilitations.

Research scholar would not like to outrightly infer that the existing programs of various centres are obsolete and ineffective. It has been
successful to a extend. Research scholar is of firm view that much could have been done in this directions.

And hence conceptualized this research project to experiment a comprehensive rehabilitation programs making it all inclusive so that efficacy of organized exercises can be investigated within Indian context and environment.

**Statement of the Problem**

The pathological state that results from addiction of drugs is a highly complicated one. At its extreme state it is decline of physical ability, degeneration of function of various organic systems and loss of emotional balance, mental functioning and at worst is continuance of drug dependence.

It has been frequent observation that rehabilitation programs of various rehabilitation centers emphasize more on medication treatment and rehabilitation measures like counseling, religious prayer session, hobby pursuance and nutritional measures.
The emphasis on extensive counseling, the religious prays session or discourse to raise morale, be ethical and consider drug dependence as sin, unethical and must be discarded once for all.

Though such measures seems good but only when it is proven to be affective.

The typical withdrawal symptom, the unstoppable urge and will to resist a next dose of drug among addicts is not that easy to deal with. Mere believing it's a sin, it is bad will not make and addict capable to discard his habit at one go. It is known fact that they have the habit inspite of knowing its all ill effects.

What is at stake is to win a major psychological battle. But the means to win this battle has to be very comprehensive. It requires to be perfect blend of program that takes care health, habit and psychological wellbeing and education.

Research scholar is of opinion that the typical rehabilitation program followed in Indian centers is not well organized and systematic. It not only neglect physical aspect of health and values of recreation etc. but also reduces the total level of personality as a whole.
Exercise therapy is being successfully used in psychological and physical rehabilitation of mentally and physically handicapped people, mental and physical re-generation of old people, heart and diabetic patients etc. Research scholar is of firm view that organized exercise programmed can cause significant effect in ability development, functional capacity development, development in health, immunity and self image by improving fitness. And all this as a whole could bring in psychological development such as self-believes, optimism, will power etc. And hence worth experimenting for rehabilitation of drug addicts.

With above understanding this research project was conceptualized and titled as “Effect of Comprehensive Alternative Exercise Therapy in Rehabilitation of Drug Addicts”.

**Delimitations**

The study was conceptualized with a definite purpose to experiment a structured alternative rehabilitation program. Hence feasibility of conducting this experiment in terms of subject availability, personal supervision during exercise session, place to conduct etc. was very
crucial. Therefore, the delimitations of the study were decided considering all above.

1) The study was conducted at Elmhirst Institute of Community Studies, Santiniketan, and West Bengal. And the addict patients reported in the centre for de-addiction and rehabilitation were only exclusively used as subjects.

2) The study was further confined to addicts to those drugs that were as found available.

3) Further, the comprehensive alternate therapy program was confined within following areas:
   a. Yoga
   b. Meditation
   c. Physical Exercise
   d. Recreational Games

4) The study was confined to the following variables for testing:
   a. Psychological Variables
      i. Self-Confidence
      ii. Personality Profile
iii. Attitude

b. Physical Variables
   i. Flexibility
   ii. Cardio-respiratory Endurance
   iii. Explosive Leg Strength
   iv. Speed

c. Physiological Variables
   i. Heart Rate
   ii. Blood Pressure

**Hypotheses**

Research scholar had made an extensive survey of various rehabilitation centers and critically studied existing programs of the centers prior to conceptualization of this study. An intensive review of literature pertaining drug de-addiction and rehabilitation program was also made. And hence on the basis of above and with a thorough understanding of this study following hypotheses were formulated.
1. The alternative comprehensive exercise program will significantly effect and improve all the physical and physiological functioning of drug addicts selected to experiment upon variables from physical and psychological domains.

2. Further the program will also significantly improve personality profile, attitude, and self-confidence of drug addicts selected as psychological variables to experiment upon.

3. The alternative rehabilitation program will be significantly better effective than existing rehabilitation program of Elmhirst Institute of Community Studies in every aspect.

4. Findings of the study will significantly establish the efficacy of alternative comprehensive exercise rehabilitation program in Indian context and environment.

5. Findings of the study will reveal significantly the finer aspects of experimenting, conducting research project of this kind in terms of
issues pertaining to organization of exercise program, monitoring & supervision of drug addicts.

**Definition and Explanation of the Terms**

**Drug Addicts**

Drug Addiction is a state of periodic or chronic intoxication produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include: (i) an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means; (ii) a tendency to increase the dose; (iii) a psychic (psychological) and generally a physical dependence on the effects of the drug; and (iv) detrimental effects on the individual and on society.¹

Addiction is defined by tolerance, withdrawal, and craving. One can recognize addiction by a person’s heightened and habituated need for a substance; by the intense suffering that results from discontinuation of its use; and by the person’s willingness to sacrifice all (to the point of self-destructiveness) for drug taking.

Alternate Therapy

A variety of treatments, outside the scope of conventional medical practice, and used instead of standard treatments.\textsuperscript{2}

Meditation

Meditation is a practice of concentrated focus upon a sound, object, visualization, the breath, movement, or attention itself in order to increase awareness of the present moment, reduce stress, promote relaxation, and enhance personal and spiritual growth.\textsuperscript{3}

Recreation

A term sometimes used synonymously with leisure. However, recreation is usually used to describe active leisure. Sometimes its use implies that the activities have positive value in terms of mental and physical therapy\textsuperscript{4}.

\begin{itemize}
\item[\textsuperscript{2}] http://www.cancercare.mb.ca/Hope/bech_glossary.shtml
\item[\textsuperscript{3}] http://www.answers.com/meditation
\item[\textsuperscript{4}] http://www.answers.com/recreation
Yoga

The term "yoga" comes from a Sanskrit word meaning "union." Yoga combines physical exercises, mental meditation, and breathing techniques to strengthen the muscles and relieve stress.\(^5\)

Physical Exercise

Physical exercise is manual activity that develops or maintains physical fitness and overall health. It is often practiced to strengthen muscles and the cardiovascular system.\(^6\)

Drugs

A chemical substance, such as a narcotic or hallucinogen, that affects the central nervous system, causing changes in behavior and often addiction.\(^7\)

Cocaine

Cocaine is a highly addictive central nervous system stimulant extracted from the leaves of the coca plant.\(^8\)

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\(^5\) [http://www.answers.com/yoga](http://www.answers.com/yoga)

\(^6\) [http://www.answers.com/physical%20exercise](http://www.answers.com/physical%20exercise)

\(^7\) [http://www.answers.com/drugs](http://www.answers.com/drugs)
**Speed**

Robert has defined “Speed is the quickness with which one is able to move his body from one point to another.”

**Endurance**

Endurance is the ability of an individual to sustain a work load for a relatively prolong period.  

Barrow has defined “Cardiovascular Endurance is the ability for carrying on a exercise with sufficient duration and intensity to place stress on the heart, circulatory, and respiratory system for prolonged action.”

Clarke has defined “Cardiovascular endurance is the moderate contraction of large muscle group relatively long period of time, duration for which maximum adjustments of the circulatory and respiratory systems are necessary.”

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9 http://www.answers.com/cocaine  
11 Barrow McGee, “A Practical Approach to Measurement in Physical Education,” p.113  
12 Clarke & Clarke, “Application of Measurement to Health and Physical Education,” p.152
The definition given by Barrow and McGee is accepted for the purpose of this study.

**Flexibility**

Barrow has defined flexibility is the range of movement in a joint.\(^\text{13}\)

Johnson has defined flexibility is the ability of an individual to move the body and its parts through as wide a range of motion as possible without undue strain to the articulations and muscle attachment.\(^\text{14}\)

Thomas has defined flexibility is the capacity of the body to move freely through the full range of extension and flexion at the joints without undue restriction.\(^\text{15}\)

The definition given by Johnson is accepted for the purpose of this study.

\(^\text{13}\) Barrow McGee, “A Practical Approach to Measurement in Physical Education,” p.144


Explosive strength

Explosive strength is the capacity of the individual to release the maximum force in the shortest period of time.\(^\text{16}\)

Narcotics

An addictive drug, such as opium, that reduces pain, alters mood and behavior, and usually induces sleep or stupor. Natural and synthetic narcotics are used in medicine to control pain.\(^\text{17}\)

Self-Confidence

The socio-psychological concept of self-confidence relates to self-assuredness in one's personal judgment, ability, power, etc., sometimes manifested excessively.\(^\text{18}\)

Attitude

Attitude is a hypothetical construct that represents an individual's like or dislike for an item. Attitudes are positive, negative or neutral views of an "attitude object."\(^\text{19}\)

\(^\text{16}\) ibid. p.144
\(^\text{17}\) http://www.answers.com/narcotics
\(^\text{18}\) http://en.wikipedia.org/wiki/Self-confidence
**Personality**

Personality can be defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in various situations.\(^{20}\)

**Blood Pressure**

The pressure exerted by the blood against the walls of the blood vessels, especially the arteries. It varies with the strength of the heartbeat, the elasticity of the arterial walls, the volume and viscosity of the blood, and a person's health, age, and physical condition.\(^{21}\)

**Heart Rate**

The number of heartbeats per unit of time usually expressed as beats per minute.\(^{22}\)

\(^{19}\) [http://en.wikipedia.org/wiki/Attitude_(psychology)](http://en.wikipedia.org/wiki/Attitude_(psychology))

\(^{20}\) [http://en.wikipedia.org/wiki/Personality_psychoLOGY](http://en.wikipedia.org/wiki/Personality_psychoLOGY)

\(^{21}\) [http://www.answers.com/blood%20pressure](http://www.answers.com/blood%20pressure)

\(^{22}\) [http://www.answers.com/heart%20rate](http://www.answers.com/heart%20rate)
Significance of the Study

This study was conceptualized primarily with a noble idea that the addiction and rehabilitation programs that are existed in various centers of India needs to be introspected and evaluated. It needed to be made result oriented. And what ever it requires to improve in terms structure of the programs should be taken up.

An observation of program of various center clearly help to generalize that exercise programs have been grossly neglected in all the programs. This was quite revealing and in sharp contrast to what have been widely practices and advocated in the west. It seems efficacy of exercise therapy as means of rehabilitation was not well understood in India.

This study was a sincere effort in an endeavor to experiment a organized structured exercise program; blend in comprehensive package for de-addiction and rehabilitation of drug addicts in Indian context and environment. Hence it was obvious that study is significant in multiple terms.
First and foremost the study would reveal the efficacy of exercise program for such purposes as rehabilitation of drug addicts.

Secondly, its finding could be an eye opener to agencies, department, centers that deals with drug rehabilitation. In addition to above it will be significant in following way also.

Since the treatment in most of the rehabilitation center is based on medication and psychological counseling therefore the result of the study will help the professionals in formulating the alternative therapy program for drug addicts.

1. The current study will help in determining the effect of alternate therapy on the status of drug addicts.

2. The study will also help the rehabilitation experts as to which exercise should be prescribed to the drugs addicts and at which conditions.

3. The study will also help the medical practioner to prescribe the alternate exercise.
4. The findings of the study will help the coaches and physical education teachers to treat the players if they become addicted to some drugs.

5. The findings of the study will help the coaches and physical education teachers to treat the players if they become addicted to any drugs or substance abusers.

6. Finally the findings of the study will add to existing literature of exercise sciences, alternative & exercise therapy and drug rehabilitation.

The program, methodology etc. will provide reference, guideline to conduct such programs for future study in India.