

ประสิทธิผลของกลุ่มเสริมสร้างแรงจูงใจและบำบัดทางความคิดอย่างย่อต่อภาวะการเสพติดของ
ผู้ป่วยเสพยาบ้าที่มีโรคร่วมทางจิตเวช ณ โรงพยาบาลจิตเวชภาคใต้ ประเทศไทย



นาย ก.สินศักดิ์ สุวรรณโชติ

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรดุษฎีบัณฑิต

สาขาวิชาวิจัยเพื่อการพัฒนาสุขภาพ (สหสาขาวิชา)

บัณฑิตวิทยาลัย จุฬาลงกรณ์มหาวิทยาลัย

ปีการศึกษา 2553

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

EFFICACY OF GROUP MOTIVATIONAL INTERVIEWING PLUS
BRIEF COGNITIVE BEHAVIOR THERAPY (GMI-BCBT) FOR REPLAPSE
WITHIN AMPHETAMINE USERS WITH CO-OCCURRING PSYCHOLOGICAL
PROBLEMS AT SOUTHERN PSYCHIATRIC HOSPITAL IN THAILAND



Mr.K.Sinsak Suvanchot

ศูนย์วิทยุทรัพยากร
A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Research for Health Development

(Interdisciplinary Program)

Graduate School

Chulalongkorn University

Academic Year 2010

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Thesis Title EFFICACY OF GROUP MOTIVATIONAL INTERVIEWING
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SOUTHERN PSYCHIATRIC HOSPITAL IN THAILAND

By Mr. K.Sinsak Suvanchot

Field of Study Research for Health Development

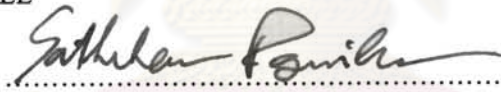
Thesis Advisor Assistant Professor Ratana Somrongsong, Ph.D.

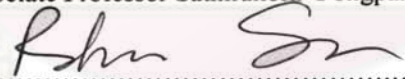
Thesis Co-advisor Darunee Phukhao, Ph.D.


Accepted by the Graduate School, Chulalongkorn University in Partial Fulfillment of the
Requirements for the Doctoral Degree


..... Dean of the Graduate School
(Associate Professor Pornpote Piumsomboon, Ph.D.)


THESIS COMMITTEE



..... Chairman
(Associate Professor Sathirakorn Pongpanich, Ph.D.)


..... Thesis Advisor
(Assistant Professor Ratana Somrongsong, Ph.D.)


..... Thesis Co-advisor
(Darunee Phukhao, Ph. D.)


..... Examiner
(Associate Professor Somrat Lertmaharit)


..... Examiner
(Assistant Professor Rangsiman Soonthornchaiya, Ph.D.)


..... External Examiner
(Associate Professor Sawitri Assanagornchai, M.D. Ph.D.)

ก.สินศักดิ์ สุวรรณโชติ : ประสิทธิภาพของกลุ่มเสริมสร้างแรงจูงใจและบำบัดทางความคิดอย่างย่อต่อภาวะการเสพติดของผู้ป่วยเสพติดยาบ้าที่มีโรคร่วมทางจิตเวช ณ โรงพยาบาลจิตเวชภาคใต้ ประเทศไทย (EFFICACY OF GROUP MOTIVATIONAL INTERVIEWING PLUS BRIEF COGNITIVE BEHAVIOR THERAPY (GMI-BCBT) FOR REPLAPSE WITHIN AMPHETAMINE USERS WITH CO-OCCURRING PSYCHOLOGICAL PROBLEMS AT SOUTHERN PSYCHIATRIC HOSPITAL IN THAILAND) อ. ที่ปรึกษาวิทยานิพนธ์หลัก: ผศ.ดร. รัตนา สำโรงทอง, อ. ที่ปรึกษาวิทยานิพนธ์ร่วม: ดร.ครุณี ภูขาว. 115 หน้า.

การใช้ยาบ้าเป็นปัญหาด้านสุขภาพที่สำคัญ โดยเฉพาะในสารกลุ่มเมทแอมเฟตามีน ก่อให้เกิดโรคทางจิตเวชร่วมกับภาวะการติดสารเสพติด ซึ่งปัจจุบันนี้ยังไม่มีการศึกษาที่ชัดเจน เกี่ยวกับการผสมผสานการบำบัดระหว่างการเสริมสร้างแรงจูงใจ และการบำบัดทางความคิดในการแก้ไขปัญหายาเสพติดและโรคร่วมทางจิตเวช การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อศึกษาผลของกลุ่มเสริมสร้างแรงจูงใจ และการบำบัดทางความคิดอย่างย่อร่วมกับการบำบัดขั้นพื้นฐานเพื่อลดการใช้ยาบ้าในกลุ่มผู้ป่วยที่เสพยาบ้าเป็นการศึกษาแบบกึ่งทดลอง จำนวน 2 กลุ่ม โดยประเมินข้อมูลพื้นฐานก่อนเข้าร่วมวิจัย และมีการติดตามผลการบำบัดจำนวน 3 ครั้ง ผู้เข้าร่วมการศึกษาคือผู้ป่วยเสพยาบ้าอย่างน้อย 1 ครั้ง ภายใน 1 เดือนที่รับการบำบัดที่คลินิกบำบัดยาเสพติดของโรงพยาบาลจิตเวช 2 แห่งในภาคใต้ของประเทศไทย ผู้ป่วยจากโรงพยาบาลที่หนึ่งถูกจัดอยู่ในกลุ่มควบคุม จำนวน 100 คน ผู้ป่วยจากโรงพยาบาลที่สองถูกจัดอยู่ในกลุ่มทดลอง จำนวน 100 คน ผลการศึกษาพบว่าร้อยละ 59.5 ของกลุ่มตัวอย่างมีโรคร่วม คือโรคซึมเศร้า ผู้ป่วยกลุ่มทดลองมีอัตราการรอดจากผลปัสสาวะเป็นบวกมากกว่ากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติในช่วงแรก จนถึง 3 เดือน(P value < 0.001) ซึ่งทั้งสองกลุ่มมีรูปแบบการใช้ยาเสพติดที่คล้ายคลึงกัน ค่าเฉลี่ยแบบวัดความวิตกกังวลและซึมเศร้าภายในกลุ่มเดียวกันมีความแตกต่างอย่างมีนัยสำคัญทางสถิติ (P value < 0.001) สรุปได้ว่ากลุ่มเสริมสร้างแรงจูงใจและการบำบัดทางความคิดอย่างย่อร่วมกับการบำบัดขั้นพื้นฐานสามารถลดการใช้ยาบ้าในผู้ป่วยที่รับการบำบัดแบบผู้ป่วยนอก ในโรงพยาบาลจิตเวช

สาขาวิชา วิจัยเพื่อการพัฒนาสุขภาพ

ปีการศึกษา 2553.

ลายมือชื่อนิติ 

ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก..... 

ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์ร่วม 

##4989651220 : MAJOR RESEARCH FOR HEALTH DEVELOPMENT

KEYWORDS : amphetamine intervention / co morbidity of addiction / psychiatric outpatient

K.SINSAK SUVANCHOT : EFFICACY OF GROUP MOTIVATIONAL INTERVIEWING PLUS BRIEF COGNITIVE BEHAVIOR THERAPY (GMI-BCBT) FOR REPLAPSE WITHIN AMPHETAMINE USERS WITH CO-OCCURRING PSYCHOLOGICAL PROBLEMS AT SOUTHERN PSYCHIATRIC HOSPITAL IN THAILAND. ADVISOR: ASST.PROF.RATANA SOMRONGTHONG, Ph.D., CO-ADVISOR: DARUNEE PHUKHAO, PhD., 115 pp.

Amphetamine abuse is a crucial global health problem. Methamphetamine addiction leads to mental illness and recurring psychological problems. To date, research on combined therapy for group motivation interview and brief cognitive behavior therapy to treat drug addiction problems yielded inconclusive results. The aim of this study is to evaluate the efficacy of a combined Group Motivational Interviewing and Brief Cognitive Behavior Therapy (GMI-BCBT) plus usual care in reducing amphetamine dependency in drug abused patients with recurring psychological problems. A quasi-experimental study design is used, with 200 patients from two psychiatric hospitals forming two groups of participants. The patients reported amphetamine use at least once in the past month prior to this study. They were all assessed at baseline and with three follow-up sessions. Patients in one psychiatric hospital were assigned to usual care and assessment-only study group (n=100); and patients at the other psychiatric hospital were assigned to a 4 sessions of GMI-BCBT intervention plus usual care (n=100).

Results showed that 59.5% of samples suffered from major depressive. The intervention group had significantly more survival rate from urine positive within 3 months (P value < 0.001). Both groups had similar in pattern of drug use in quantity and frequency. Their mean scores within group on Thai HADS were also significantly reduced at baseline and 3 and 7 months post intervention (P value < 0.001). These results suggest that the combined therapy of GMI-BCBT plus usual care positively reduce the rate of amphetamine use for the out-patients at psychiatric hospital.

Field of Study : Research for Health Development

Academic Year : 2010

Student's Signature K. SINSAK SUVANCHOT

Advisor's Signature Ratana Somrongthong

Co-Advisor's Signature Darunee Phukhao

ACKNOWLEDGEMENTS

I gratefully acknowledge the scholarship awarded to me. My dissertation were supported by the graduate school Chulalongkorn University scholarship for student.

I wish to express my deep appreciation to Assistant Professor Dr.Ratana Somrongthong and Dr.Darunee Phukhao for their valuable suggestions and guidance throughout this study. I would like to express my special thanks to Mr.Attapol Sukonthapirom, MD including Mrs.Nualta Apakupakul for their kind assistance in developing my research and data analysis.

I would like to thank the examining committee members, including Associate Professor Dr. Sathirakorn Pongpanich, Associate Professor Somrat Lertmaharit, Assistant Professor Dr. Rangsimun Sunthornchaiya, and Associate Professor Dr. Sawitri Assanagkornchai, MD for their valuable suggestions. In addition, I would like to thank the experts who validated the instruments I used in this research study.

I am grateful to Mrs.Kamontip Evan for helping me edit my writing throughout my dissertation and manuscript and for her friendship.

I gratefully acknowledge all of the patients and staffs at Suansaranrom Hospital and Songkhla Rajanagarindra Psychiatric Hospital who so willingly participated in this study. I also gratefully acknowledge all of psychiatric nurse team at Suansaranrom Hospital and Songkhla Rajanagarindra Psychiatric Hospital who so kindly supported this study by facilitating the intervention sessions and interviewing the baseline data of both groups. In addition, I would like to express my special thanks to my closest friend, Assistant Professor Dr.Wipawan Chaoum Pensuksan, for discussion, facilitating the intervention sessions in this study and for her kindest support throughout my graduate.

Finally, I am deeply indebted to my parents for their support all of my life and for encouraging me throughout my graduate career; my sister, Ms. Sinanath Suvanchot and my brother Mr. Rachachat Suvanchot and his family, for their understanding.

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CHAPTER I

INTRODUCTION

Background and Significance of the Research Problem

There has been a world-wide increase in the use of amphetamines, particularly methamphetamine (United Nations Office on Drugs and Crime [UNODC], 2003). Around the world, millions of people take pills and powder generically known as amphetamine type stimulant. Its consumption has stabilized in the past few years, though the improvement occurred mostly in developed countries. Elsewhere, especially in East, South- East Asia, and in the Middle East, the problem has worsened. An estimated 24.7 million people in the world, equivalent to 0.6% of the population, age 15-64, consumed amphetamines in 2006. Nearly 55% of the world's amphetamines users (14 million) are estimated to be in Asia. Most of them are methamphetamine users. Ninety seven percent of all amphetamine used in Asia are consumed in the East and South-East sub-region. The total number of amphetamines users in North America is estimated at around 3.7 million people or 15% of global users. Europe accounts for 10% of all users or 2.7 million people (UNODC, 2008a).

In 2006, some countries with high level of methamphetamine use reported a trend in drug taking: a decrease in one form and an increase in another. In Thailand, for instance, has reported a decrease use of drug tablet but an increase in crystalline form. The number of Amphetamine stimulant (ATS) related arrests increased significantly since 2005. Of the 84,073 ATS-related arrests in 2007, 97% were for methamphetamine tablet related offences, 2% for crystalline methamphetamine and less than 1% for 'ecstasy'-related offences. Increasing crystalline methamphetamine arrests may in part be due to trafficking of small amounts by a large number of

couriers, which also accounts for lower levels of seizures since 2005. On average, methamphetamine-related arrests have accounted for 75% of all drug-related arrests. Treatment data in Thailand shows a significant decline in admissions following the nearly 10-fold increase in 2003, when tens of thousands were in compulsory treatment. However, after the situation stabilized throughout 2005 and 2006, increases were noted in 2007. Among other things, the ‘war on drugs’ had the effect on reducing self-reporting of illicit drug use in surveys. Results between 2003 and 2006 indicated unusually low prevalence rates, possibly due to pressure from drug enforcement (UNODC, 2008b). The number of amphetamine users and offenders were found to increase highly during 2006 to 2008, as seen in Table 1-2.



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Table 1

Statistic on number of drug cases and offenders: throughout the country during 1999 – 2008 (Office of the Narcotics Control Board [ONCB], 2009)

Year	Numbers of Cases	Numbers of Offenders
1999	206,170	223,294
2000	222,614	238,380
2001	207,447	220,525
2002	208,817	220,106
2003	102,334	108,315
2004	55,423	60,669
2005	71,507	78,466
2006	82,986	91,251
2007	104,513	114,069
2008	110,652	119,959

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Table 2

Countrywide statistic on amphetamine cases and offenders during 2004 – 2008

(ONCB, 2009)

Substance	Arrest	2004	2005	2006	2007	2008
Methamphetamine (Yaba)	Case	34,860	54,076	59,564	80,045	110,380
	Offender	38,736	55,789	60,680	NA	118,631
	Amount(Kg)	2,797	1,597.5	1,217.9	NA	1,975.9

According to the ONCB (2009), the central region of Thailand had the highest prevalence of amphetamine cases.

This research is a pioneer study on the efficacy of the combined interventions to reduce amphetamine use and co-occurring psychological problems. Southern Thailand region was chosen for this study due to its lowest number of patients. This made the intervention more manageable to implement, monitor, evaluate and coordinate the training.

In the south region, the highest prevalence of amphetamine cases was found in Suratthani and Songkhla provinces. See

Figure 1-2.

Figure 1

Statistic on number of amphetamine users who received treatment: classified by regions in Thailand (ONCB, 2009)

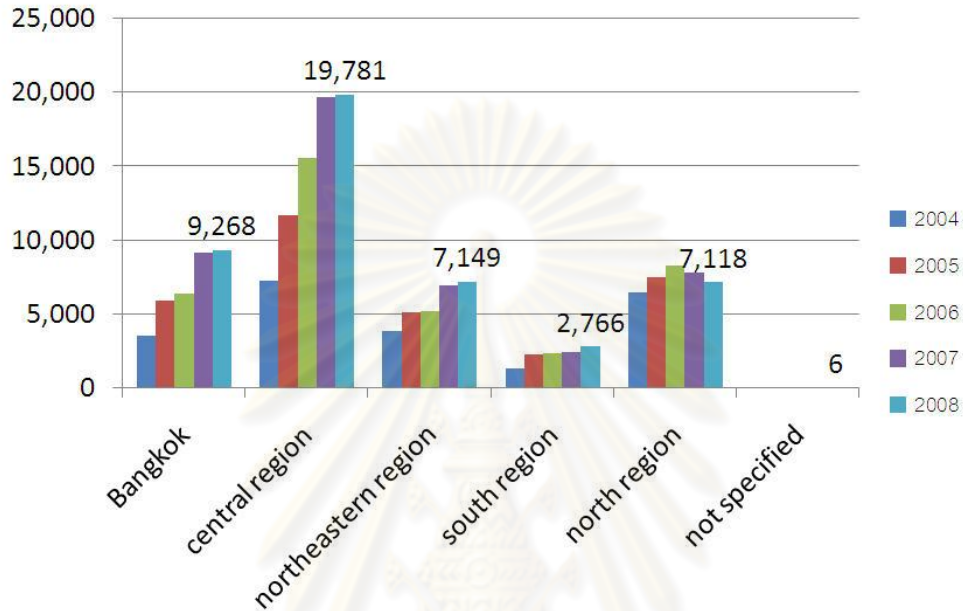
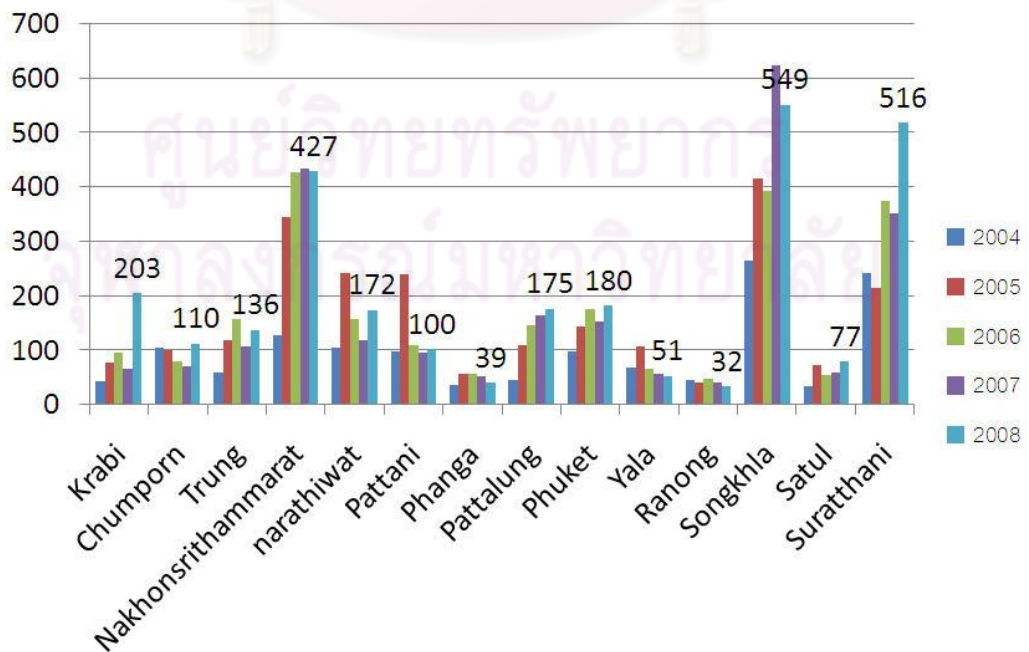


Figure 2

Shows statistic on number of amphetamine users who received treatment: classified by province in southern of Thailand (ONCB, 2009)



Most of amphetamine users who have psychological problems need to receive treatment at Outpatient Department (OPD) in psychiatric hospital. In southern Thailand, two psychiatric hospitals take responsibility for them as seen in Table 3.

Table 3

The number of amphetamine users who received treatment at Outpatient Department (OPD) (Suansaranrom Hospital report, 2008, Songkhla Rajanagarindra Psychiatric Hospital report, 2008)

Name of Hospital	Number of amphetamine users	
	2007	2008
Suansaranrom Hospital	82	182
Songkhla Rajanagarindra Psychiatric Hospital	331	145

The previous study noted that almost half (49.1%) of the current sample of amphetamine users reported that they had been diagnosed or treated for mental health problems and these problems occurred commonly after the commencement of regular amphetamine use (Baker et al., 2004). Some studies showed that the most common recurring psychological problems found among amphetamine users are anxiety, depression, poly-drug abuse and dependence. However, amphetamine induced psychosis can occur. It is common for amphetamine users to report a mixture of mood and anxiety symptoms (Baker and Dawe, 2005). Regular amphetamine use can be associated with a range of adverse outcomes, including psychological problems such as depression, anxiety, irritability, paranoia, difficulty concentrating, aggression, hallucinations and psychosis (Topp, Day, and Degenhardt, 2003). We have to put more emphasis on psychosocial interventions in the treatment and rehabilitation of substance misuses. There is a developing, though limited, evidence

base for their effectiveness from clinical trials and routine services. Psychological therapy and psychosocial interventions are skilled activities requiring specific training and supervision to be practiced safely.

In the last 25 years tremendous advances have been made in the development of psychosocial interventions for substance use disorders (Miller and Rollnick, 2002). At the beginning of this period, definitive information was available on effective treatments. Although there have been numerous efficacious psychosocial interventions for alcohol, marijuana, amphetamine and cocaine use disorders. There also have combination between pharmacotherapy and behavioral interventions for opiate dependence. In Thailand, psychiatric hospital offer several types of therapies to help patients who suffer from drug addiction. All of effective psycho-therapies were included brief advice, brief intervention, therapeutic community, group therapy, matrix program, cognitive and behavior therapy (Ministry of Public Health [MOPH], Thanyarak, 2001)

Addiction problems can stem from several factors, related to background and personnel differences. Nowadays there are several kinds of psychosocial interventions such as case management, counseling, Motivational interviewing (MI), Matrix Model, Cognitive Behavior therapy (CBT), Family counseling, aimed to help patients solve their own problems. However, many experts suggested that those treatments and therapies should have coverage assessments, motivate patients to participate in the program, and encourage the patient to set priority of the problems by their own (MOPH, Somdet Chaopraya Institute of Psychiatry, 2009).

Brief intervention is another effective strategy that has long been recognized as an effective treatment modality for facilitating behavior change. Several recent reviews have further strengthened the empirical support for these methods. There is also growing evidence that targeted behavioral interventions can be effective in relapse reduction rate (Tucker et al., 2002).

In southern part of Thailand, two psychiatric hospitals also have criteria for addiction patient screening. These criteria based on the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD 10). They also have several types of counseling programs including Brief Advice (BA) and Brief interview (BI), for mild and moderate cases. In severe cases, they have Cognitive Behavior Therapy (CBT) and Matrix Program to deal with their complicate problems (MOPH, Somdet Chaopraya Institute of Psychiatry, 2009).

The previous study (Kanittha Pumpradub, 2004) evaluated the stakeholders' satisfaction of the Matrix program for Amphetamine dependence, and to explore problems and demands. The sample was the consumers and providers from 73 hospitals in the Public Health Region XI. The results showed high level of satisfaction among consumers regarding to appropriate services. They believed to quit from amphetamine dependence. The main sessions in the program such as group therapy, family education group, individual counseling, early recovery skills group, relapse prevention groups, and social support group were accepted. The researcher suggested that this program should be set in a private room and for shorter duration. Therapists who took part in the program felt satisfied by the nature of the work undertaken. They felt proud to take part in it; felt that it was useful and helped them gain more experience.

To date, there is no research on combined therapies, using Group Motivation Interview (GMI) and Brief Cognitive Behavior Therapy (BCBT) to deal with drug addiction problems. The previous study also has not consistently been shown to improve combine therapy plus usual care among amphetamine users with co-occurring psychological problems.

The researcher is interested in examining the efficacy of GMI-BCBT plus usual care for reducing amphetamine use and co-occurring psychological problems among amphetamine users who received medical care in Outpatient Department (OPD) of psychiatric hospital. This intervention was designed to (1) enhance

patients' motivation to comply with treatment program; (2) increase the awareness of risks associated with amphetamine use; and (3) decrease co-occurring psychological problems. This study is focused on amphetamine users in Southern Thailand only.

Objectives of the Study

The aim of the study is to evaluate the impact of a GMI-BCBT plus usual care on amphetamine use, and co-occurring psychological problems within two groups of OPD cases. The researcher also investigated the efficacy of the intervention versus usual care only in reducing amphetamine use, and co-occurring psychological problems using urine test, Timeline Follow-back (TLFB), and Thai Hospital Anxiety and Depression Scale (Thai HADS).

Research Questions

1. Does Group Motivational Interview and Brief Cognitive Behavior Therapy (GMI-BCBT) plus usual care more efficacious than the usual care only in reducing amphetamine use among amphetamine users who got medical service in Outpatient Department (OPD) of psychiatric hospital?

2. Does Group Motivational Interview and Brief Cognitive Behavior Therapy (GMI-BCBT) plus usual care more efficacious than the usual care for reducing co-occurring psychological problems who got medical service in Outpatient Department (OPD) of psychiatric hospital?

Hypotheses

From the research question, a series of analyses in this study will test the null hypothesis for the efficacy of GMI-BCBT plus usual care as undifferentiated from the usual care only for reducing amphetamine use and psychological problems scores in amphetamine users, evaluated by urine test and Thai HADS.

The alternative hypothesis is stated that the efficacy of GMI-BCBT plus usual care is different from the usual care only for reducing amphetamine use and psychological problems scores in amphetamine users, evaluated by urine test and Thai HADS.

Conceptual Framework

Conceptual framework of this study composes of two concepts (1) the Transtheoretical Model (TTM) of intentional human behavior change; and (2) the five aspect model.

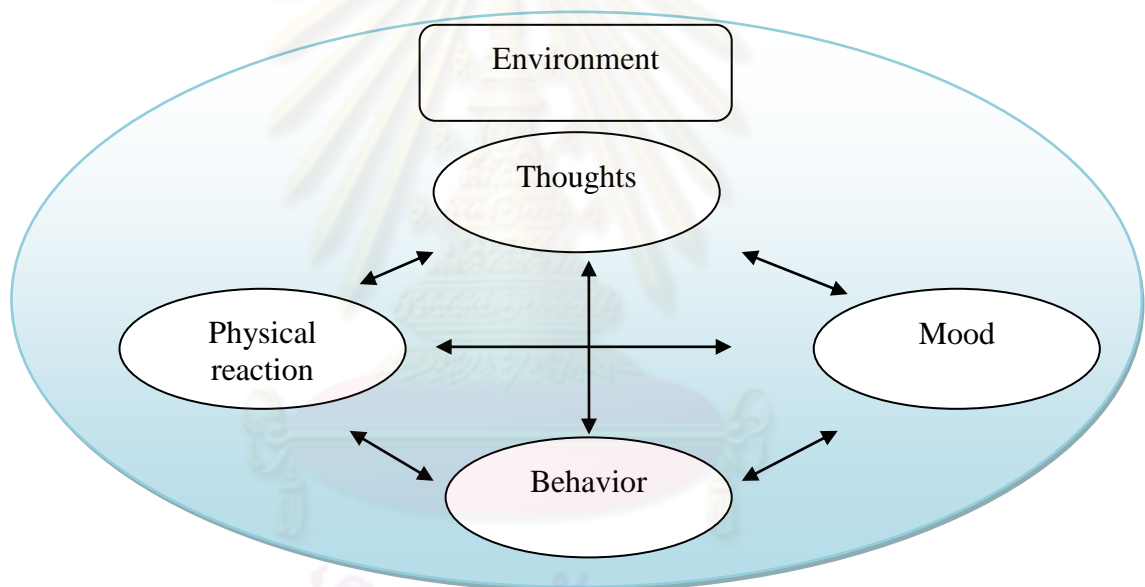
The notion that behavior change involves a process that occurs in increments and involves specific and varied tasks is at the heart of the transtheoretical model (TTM) of intentional human behavior change (Miller and Rollnick, 2002). This model offers an integrative framework for understanding the process of behavior change. Change involves the initiation, modification, or cessation of a particular behavior. The TTM views behavior change as a series of gradual steps that involve multiple tasks and require different coping activities rather than a single dimension. The stages of change represent a key component of the TTM and describe a progression through which people pass as they change a behavior (DiClemente and Velasquez, 2002).

The five aspect model

The five aspect model is also a straightforward structure for developing a conceptualization. As the following diagram (Greenberger and Padesky, 1995: 4 cited in Grant et al., 2004: 14-15) illustrates, this model can be extremely helpful in achieving a clearer understanding of how elements of difficulties experienced and how they interact is a useful way in which to introduce some key cognitive behavior skills.

Figure 3

Conceptual framework for the five aspect model



The environment aspect is the overall context in which other aspects are experienced. This context refers to both specific and more abstract meaning of term 'environment', including past and present influences. For instance a person's ethnicity, sexual orientation, family upbringing, socioeconomic, accommodation and work status may all count as environmental aspect of life in this model. More specific environmental aspect of a problem would include being alone or in a crowd, darkness or being close to or far from home.

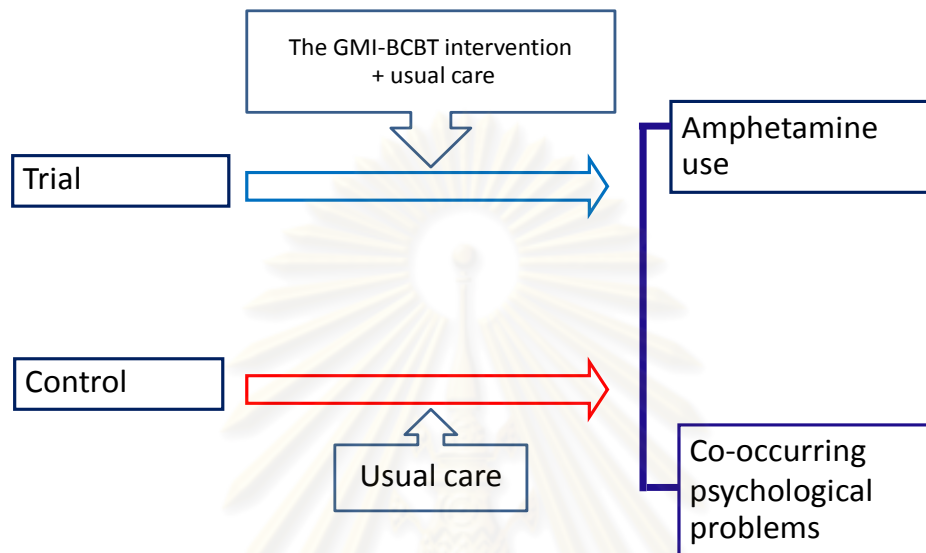
Thoughts include memories, attitude, images and benefit as well as everyday conscious (automatic thinking). Mood refers to emotional experience such as fear sadness, guilt, anger and shame. Behavior refers to the person's specific actions in the difficult situation. This often includes avoidance or repeated pattern or behavior. Physical reaction might well take the form of anxiety experience, such as churning the stomach or more chronic experience, such as lack of sleep or symptom of substance misuse. (Grant et al., 2004: 14-15)

Brief intervention therapy is any intervention that is purposely limited in the number and length of contacts. It has long been recognized as an effective treatment modality for facilitating behavior change (Tucker et al., 2002: 11-13) and as a modality for translating health behavior intervention research into practice. A major attraction of brief interventions is their cost-effectiveness. They have the potential to reach a large number of clients, are less time consuming than conventional methods, and can be conducted by non specialist workers (Heather, 1989 cited in Tucker et al., 2002: 11-13). The structure of the GMI-BCBT intervention is simple and brief. Trained psychiatric nurse personnel can apply this intervention in a short period of time to reduce amphetamine use and co-occurring psychological problems for OPD cases. The conceptual framework for this study is presented in Figure 4.

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Figure 4

The conceptual framework in this study



Definition of Terms

Amphetamine use is a pattern of amphetamine use which is measured by Timeline Follow-back. The urine screening test also was performed to confirm amphetamine use. This test indicated by the total number of negative amphetamine urine samples during 24 weeks of 3 times follow up phase.

Amphetamine Users are Thai patients aged 15 to 40 years who use amphetamine at least once a month and have some psychological problems related to amphetamine use. All of them get medical service in outpatient department of psychiatric hospital, Southern Thailand.

Co-Occurring Psychological Problems are mental health problems which present at least one type of substance related disorder among amphetamine user such as anxiety and depression.

Outpatient is the patient who use amphetamine and register for treatment at Fasai clinic and Matrix clinic in psychiatric hospital, Southern Thailand.

GMI-BCBT is an intervention based on TTM, and five aspect model approach using a brief intervention process. The researcher developed this intervention to (1) enhance patients' motivation to comply with treatment program; (2) increase the awareness of risks associated with amphetamine use; and (3) decrease co-occurring psychological problems.

Usual care is a brief psychotherapy which composes of brief advice (BA) and brief intervention (BI) in psychiatric hospital.



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CHAPTER II

LITERATURE REVIEWS

The review of the literature in this chapter is organized into five major parts. The first part is concerned with drug addiction concept. The second part is related to history of amphetamine use. The third part reveals co-morbid conditions for amphetamine use. The fourth part focuses on prevention and treatment strategies to reduce amphetamine use. The fifth part concerns concepts in the application of the intervention.

Addiction concept

Addiction is a chronic, often relapsing brain disease that causes compulsive drug seeking and use despite harmful consequences to the individual who is addicted and to those around them. Drug addiction is a brain disease because the abuse of drugs leads to changes in the structure and function of the brain. Although it is true that for most people the initial decision to take drugs is voluntary, over time the changes in the brain caused by repeated drug abuse can affect a person's self control and ability to make sound decisions, and at the same time send intense impulses to take drugs. Similar to other *chronic, relapsing* diseases, such as diabetes, asthma, or heart disease, drug addiction can be managed successfully. And, as with other chronic diseases, it is not uncommon for a person to have a relapse and return to drug abuse habit. Relapse, however, does not signal failure. Rather, it indicates that treatment should be reinstated, adjusted, or that alternate treatment is needed to help the individual regain control and recover (National Institute on Drug Abuse [NIDA], 2008). The first behavioral theory of drug addiction was offer by the psychiatrist Abraham (1965) who viewed addiction as the product of operant conditioning. He

also proposed the conceptually straightforward theory that each ingestion of drug reinforces drug seeking behavior by providing immediate and powerful reinforcement. Drug-seeking behavior is then elaborated into complex life style through the association of the secondary reinforcers with the primary reinforcer of drive reduction. More recently, the motivational learning theorist proposed an intriguing alternative model which he referred to as the opponent process theory of acquired 'motivation'. Basically, the theory assumed that the brains of all mammals are organized to oppose or suppress high level of arousal, whether the feeling be positive or negative. The adaptive advantage of this process is presumably to ensure that the behavior is not disrupted by intense physiological arousal. Thus, the primary arousal or *a* process is elicited by and unconditioned stimulus, or follow operant reinforcement, and the opponent or *b* process act to suppress *a* process. If the primary process is pleasant and reinforcing the opponent process will be aversive and punishing, and vice versa (Barber, 2002: 1-12).

According to George (George, 1989 cited in Barber, 2002: 1-40), there are three key elements of the social learning theory of addiction. First, addictive behavior are socially acquired and multiply determined. They are influenced by past learning, situation antecedents, biological make up, cognitive process and reinforcement contingency. Situation antecedents are more often call high risk situation and they refer to factor such as time of day, places, people or emotional states which cure drug seeking behavior. Cognitive process refers to primarily expectation about the likely consequence of ingesting the drug. Reinforcement contingencies refer to the reward aspect of drug consumption; and the principles of behavioral reinforcement dictate that the more frequent and the more proximate are the positive consequence of ingestion, the more likely it is that ingestion will recur. A second aspect of the social learning approach is a general acceptance that addiction occurs along a continuum. Thus, the very same principles are used to explain the acquisition and maintenance of

dependence and non dependence drug use. The third and final key element of social learning theory is the view that additive behavior are attempt at coping, albeit maladaptive ones.

History of amphetamine use

Amphetamines were first synthetically derived in 1887 and were subsequently used as appetite suppressants; currently, the Food and Drug Administration has approved dextroamphetamine and methyphenidate for treatment of narcolepsy and attention deficit disorder. Reports of amphetamine abuse date from the 1930s (Ellinwood, King, Lee cited in Grant, 2005: 194-195)

Amphetamine use in Asia has been reported for decades in Japan, South Korea, and Thailand (Vichai Poshychinda, 1993: 77-90). Early studies in Thailand have included a 1972 report from Bangkok, which showed that 5 - 10% of secondary and vocational students had used amphetamines, and a 1984 study, in which 21% of truck drivers and factory workers reported use of the drug. Since 1993, amphetamine use has been widespread among the country's urban youth and become popular due to low cost and easy access. In 2001, the most commonly abused drugs in Thailand were amphetamine-type stimulants, with an estimated 2.5 million users. Although Thailand has laws against the sale and use of amphetamines, these are not always enforced and the use of amphetamines by the individual is legal. Thailand has been trying to slow the spread of amphetamines into the country, but the geography of the borders makes it nearly impossible to stop. An estimated 700 million amphetamine pills were smuggled into Thailand in 2001 (Bureau for International Narcotics and Law Enforcement Affairs, 2001).

Co-morbid condition for amphetamine use

There has been a substantial increase in the use of amphetamine in Thailand in recent year. K.sinsak Suvanchot (1999) has been survey co-morbidity with amphetamine and heroin users in Thanyarak hospital. This study was found that mood disorder was the most prominent psychological problem in 51.4 percent of subjects. Manic disorder was the most common finding, 42.3 percent, follows by major depressive disorder, 34.9 percent Amphetamine users were significantly more affected by panic attack and manic disorder than heroin users (p value < 0.05).

Many people use psycho stimulants and, although the majority who use occasionally by non-injecting routes of administration do not experience problems (Hall et al., 1993). It appears that as many as 30% of amphetamine users develop a psycho stimulant use disorder (Hall et al., 1998).

There seems to be gender differences in drug use and its effects. Women were found to be more dependent on and committed to MA but showed diminished (amphetamine-stimulated) dopamine responses and a decreased degree of toxicity, as indicated by a lower incidence of emergency department–related deaths involving MA. A pervasive co-morbidity of depression or depression-related characteristics was presented in women MA users, suggesting that MA may serve as a type of self-medication for their depression. These findings not only highlighted the need for consideration of gender when assessing MA use, but also served to direct efforts at prevention and treatment programs that address the specific needs of men and women (Dean, 2008).

There are now a number of studies in which a range of psychological symptoms have been documented among amphetamine users including depressed mood, anxiety, irritability, paranoia, mood swings, difficulty concentrating, aggression, hallucinations and psychosis (Topp et al., 2003). It would appear that many of these symptoms are related to the use of amphetamine and abate on cessation of use. Cross-sectional studies have suggested that perhaps up to half of regular amphetamine users report that these symptoms emerge after the commencement of regular amphetamine use. However, it is possible that some symptoms may have pre-dated the use of amphetamine and may be related to the initial use of the substance. The risk of experiencing adverse effects of amphetamine appears to be related to dose, with the risk of harm reduced with less than twice weekly use and the use of small amounts (Darke et al., 1994).

Prevention and treatment strategies to reduce amphetamine use

Manit Srisurapanont, Ngamwong Jarusuraisin, and Phunnapa Kittirattanapaiboon reviewed the evidence on the treatment for amphetamine dependence and abuse is very limited. Only four drugs have been investigated in 4 studies with small sample sizes. This review finds no controlled trials of a psychosocial intervention for amphetamine dependence and abuse. The small number of treatment studies may reflect the fact that this issue has been received less attention than the treatment for other substances, such as alcohol, heroin, or cocaine. In addition, any conclusion of this review should be considered as tentative. The evidence shows that fluoxetine, amlodipine, imipramine and desipramine have very limited benefits for amphetamine dependence and abuse. Fluoxetine may decrease craving in short-term treatment. Imipramine may increase duration of adherence to treatment in medium-term treatment. Apart from these distal benefits, no other benefits, in particular the proximal ones, can be found. This limited evidence

suggests that no treatment has been demonstrated to be effective for the treatment of amphetamine dependence and abuse (Manit Srisurapanont et al., 2008)

Despite the popularity of amphetamine and increasing regular use of the drug and its associated problems, there is a paucity of research evaluating the effectiveness of interventions for regular users of amphetamine. Motivational interviewing has been effectively employed among cocaine users with depression to enhance attendance at psychiatric outpatient services. A brief approach for amphetamine users with mild to moderate depression could be to conduct an assessment, provide self-help materials on amphetamine and depression, while those with severe depression may be referred to specialist mental health services with a motivational intervention to enhance attendance. (Baker and Dawe, 2005).

Concepts in the application of the intervention

Over the last three decades, the randomized controlled trial or ‘psychotherapy technology’ approach has been the dominant model of inquiry in research on addiction treatment (Morgenstern and McKay, 2002). Behavioral therapies can help motivate people to participate in drug treatment; offering strategies for coping with drug cravings; teach ways to avoid drugs and prevent relapse; and help individuals deal with relapse if it occurs. Behavioral therapies can also help people improve communication, relationship, and parenting skills, as well as family dynamics. Many treatment programs employ both individual and group therapies. Group therapy can provide social reinforcement and help enforce behavioral contingencies that promote abstinence and a non-drug using lifestyle. Some of the more established behavioral treatments, such as contingency management and cognitive-behavioral therapy, are also being adapted for group settings to improve efficiency and cost effectiveness.

However, particularly in adolescents, there can also be a danger of iatrogenic, or inadvertent, effects of group treatment; thus, trained counselors should be aware and monitor for such effects. Because they work on different aspects of addiction, combinations of behavioral therapies and medications (when available) generally appear to be more effective than either approach used alone (NIDA, 2009).

CBT is another approach that has been adapted for work with substance users. Attributes of CBT models include cognitive restructuring (Dobson, 1988), teaching skills for coping (Khantzian et al., 1990) and for preventing relapse (Marlatt and Gordon, 1985), and building the therapeutic alliance (Horvath and Luborsky, 1993). The cognitive-behavioral intervention utilized in the present study was based on the Matrix Model, a relapse prevention therapy originally developed for outpatient cocaine treatment (Hill et al., 1995) and subsequently adapted for cocaine-using methadone patients (Magura et al., 2002).

Group Motivational Interviewing (GMI) has been studied in psychiatric patients with chemical dependence. In the study of efficacy of GMI for psychiatric inpatient, was investigated the effect of adding motivational interviewing in a group format to standard treatment for dually diagnosed psychiatric in-patients. All patients received standard care and in addition were assigned to either group motivational interviewing (GMI) or a therapist attention activity control group (TAAC). Of patients who attended aftercare and who used alcohol or drugs, those who participated in GMI attended significantly more aftercare treatment sessions, consumed less alcohol, and engaged in less binge drinking at follow-up compared with those in TAAC. These results provide preliminary evidence for the efficacy of GMI when added at the outset to an in-patient program (Ana, Nietert, and Wulfert, 2007).

Robert and others reviewed studies of psychosocial interventions for people with co-occurring substance use disorder and severe mental illness. They identified 45 controlled studies (22 experimental and 23 quasi-experimental) of psychosocial dual diagnosis interventions through several search strategies. Three types of interventions (group counseling, contingency management, and residential dual diagnosis treatment) showed consistent positive effects on substance use disorder, whereas other interventions have significant impacts on other areas of adjustment. Group counseling, residential treatment, and contingency management show fairly consistent results on substance use outcomes. No intervention showed consistent results on mental health outcomes, although legal interventions improve treatment attendance. Group counseling, case management, residential treatment, contingency management, and legal intervention show positive results on a variety of other outcomes such as social function, global function, quality of life and ability to complete daily activities. (Robert et al, 2008)

The evidence base for psychosocial interventions for psycho-stimulant dependence is not strong such as positive findings in community reinforcement with respect to cocaine use predominantly reported by a single U.S. research group. Meta-analysis indicates that Motivational interviewing (MI) have moderate efficacy in drug use but no cocaine specific studies included. Less effective was found in more severely disadvantaged groups and more severely dependent users. Meta-analysis of Relapse prevention (RP) indicates RP may be less effective among cocaine users than for other drug types ($r = -0.03$). Positive synergies identified in combination with pharmacotherapy. Mixed results of Cognitive behavior therapy (CBT) in psycho-stimulant users, although some value in RP, was found less effective among patients with cognitive impairment. Psychotherapy was more effective in psychiatrically symptomatic groups (Shearer, 2007).

An Australian study, comparing samples of people with psychosis using substances recruited for a treatment study of MI and CBT with an epidemiological study sample found that the former had better personal disability (everyday functioning) and a less chronic illness course (Baker et al., 2005).

In Thailand, literature review on Cognitive behavior therapy (CBT) only study on depression, schizophrenia patient and anxiety disorder which reveal effective of CBT program. (Kulthida Supakoon, 2006; Yuttana Ongarjsakulman, 2005; Natsai Hualaead, 2007). Motivational interviewing (MI) we found six study in Thailand which study on alcohol addiction problems within difference setting such as inpatient department (IPD), outpatient department (OPD), primary care unit (PCU). All of them show statistic significant between intervention group and control group (Manit Srisurapanont and Ngamwong Jarusuraisin, 2005; Darunee Pukhao, 2006). Darunee Pukhao (2009) has been review cognitive behavioral intervention for reducing alcohol. She was found that problems faced by alcoholics are due to 3 factors: 1) personal biological made-up; 2) psychological made-up including thoughts, intellectual levels and emotions and; 3) environmental impacts including family, and peer groups. All these factors need to be taken into consideration when planning a program to help patients recover from alcohol abuse. The focus should be on changing their thoughts/perceptions as well as teaching them skills to deal with risk situations--arisen from external influence and their own mental state. The researcher proposes the solutions to the problem as follows: 1) problem solving which involves behavioral analysis and developing coping skills through training (behavior coping skill training, cognitive behavior coping skill therapy and relaxation training) and 2) cognitive restructuring, aiming for positive behavioral changes due to restructuring of the thought process--as found in cognitive therapy.

There are insufficient controlled trials with comparable, validated outcomes to support one intervention over another. The overall impression is, however, that psychosocial interventions are moderately effective in reducing psycho stimulant use and associated problems (Baker et al., 2005). No overarching meta-analysis has been published, although a Cochrane Review protocol has been prepared. Better outcomes for behavioral, cognitive, and psychological approaches have been reported among more severely psychiatrically symptomatic populations, particularly those with depressive symptoms (Baker et al., 2006).

If the outcomes of most behavioral and cognitive approaches are broadly comparable, then cost-effectiveness may be an important consideration in developing future models of care. On this basis, briefer interventions will have advantages over more comprehensive but resource-intensive programs, such as the Matrix Program. Studies may also offer guidance as to the optimal intervention points (in terms of treatment history) and intervention targets (i.e., selection of patients with more severe psychiatric symptoms) (Shearer, 2007).

In this study, the researcher interests to implement combine intervention (GMI-BCBT) plus usual care for reduce amphetamine use and co-occurring psychological problems. This intervention was designed for amphetamine users who received treatment at drug treatment clinic outpatient department of psychiatric hospital in Southern, Thailand.

CHAPTER III

METHODOLOGY

This chapter describes research methodological approaches to test Group Motivational Interviewing and Brief Cognitive Behavior Therapy (GMI-BCBT) plus usual care in comparison to the usual care only. Research design, population and sample, setting, instrumentation, subjects' consent and protection of their right, data collection, intervention procedures, and data analysis are discussed as follows:

Research Design

Quasi experimental design was conducted, using two groups of participants: control and intervention. Both groups were assessed at baseline and there were three follow-up sessions from beginning of April 2010 to end of February 2011. Urine test was administered three times over seven months' period to evaluate the efficacy of GMI-BCBT plus usual care.

Population and Sample

Population consisted of patients who used amphetamine, had co-occurring psychological problems and registered as outpatients at the Suansaranrom Hospital and Songkhla Rajanagarindra psychiatric Hospital, Southern Thailand since June 2010.

The target population in this study refers to patients who received medication and psychotherapy treatment at the Matrix clinic, Suansaranrom Hospital and the Fasai clinic Songkhla Rajanagarindra psychiatric Hospital. Patients who had used amphetamine at least once within one month prior to registration for treatment at OPD and been diagnosed by the M.I.N.I. for the definite or probable to mild or moderate co-

occurring psychological problems, were eligible to take part in this study. The diagnosis was confirmed by psychiatrist base on ICD-10. They also had to be 15 to 40 years of age. Participants could speak Thai, able to communicate, and mentally reasonably-functioned. Patients were excluded if they suffered from symptoms or showed signs of a serious organic condition or physical health problems, associated with organic brain impairment.

1. Sample size

The target population in this study refers to sample size. The sample size is approximated based on statistical power analysis, at a significance level of .05, and a desired power of .80. The results of one meta-analysis study found that effects of the Motivational Interviewing (MI) intervention were more efficacious than no intervention in reducing alcohol consumption. Meta-analysis was used to examine the effects of 22 controlled intervention studies. On average, aggregate effect sizes (d) for nine studies of MI compared to other treatments was 0.43 (Eirini et al, 2006). Therefore, the effect size on F -test on mean in the analysis of variance and covariance was computed by using the equation (Cohen, 1988):

$$N = \frac{n_{.05}}{400f^2} + 1$$

Whereas $n_{.05}$ is the necessary sample size to detect $f = .05$ for a (significant level) = .05, with power = .80; the sub table of Table 8.4.4 illustrates $n_{.05} = 1571$ (Cohen, 1988).

f is the standard deviation of standardized means translated from d (ES index for the t -test), which is equal to $d/2$ (Cohen, 1988). Thus, $f = .43/2 = .215$

Substituting in the equation:

$$N = \frac{1571}{400(.215)^2} + 1 = 85.96$$

Using this equation, the target sample size for each arm in the study was 90. Over-sampling by at least 10% was undertaken in order to reduce the threat of sample attrition. The final study sample comprised of 200 amphetamine users, 100 patients for each group.

2. Sample selection

Participants were recruited from patients enrolled in two psychiatric hospitals at the outpatient department and who were diagnosed for amphetamine use disorders and co-occurring psychological problems, assessed by the M.I.N.I., TLFB, and Thai HADS. Prior to administering the M.I.N.I., TLFB, and Thai HADS, patients in one hospital were assigned to an intervention group and patient from another hospital to control group. Each group had 100 participants. Criteria for selecting participant for both groups were as follows:

- 2.1 They had a history of amphetamine use at least once prior taking part in the study
- 2.2 They were tested positive for amphetamine use.
- 2.3 They were diagnosed to have at least one type of co-occurring psychological problems.

Settings

This study included patients from two psychiatric hospitals to participate in this study. Patients from one hospital underwent intervention and patients from the other hospital were the control group. Using two hospitals took into account the researcher's concern about diffusion that may occur from interventions if the subjects of the two groups study in the same hospital.

Both hospitals had similar characteristics. Both were psychiatric hospitals located in Southern Thailand, and were agencies under the Department of mental health. They both offer similar services systems, with psychiatric nurses who provided Brief Advice (BA) and Brief Intervention (BI) services for drug addiction patients.

Instrumentation

Research instruments in this study comprised of: 1) A demographic data form; 2) the M.I.N.I.; 3) intervention process measures with self-efficacy scores, and satisfaction scores for GMI-BCBT; 4) outcome measures that comprised of TimeLine Follow-back, Motivational Change Ladder (MCL) scores, urine test, and Thai HADS scores; 5) a GMI-BCBT intervention; and 6) the usual care with the following data collected:

1. A demographic data form (developed by the researcher, based on reviewed literature and proven content validity by professionals who have worked with drug addiction problems) included personal information such as sex, age, marital status, level of graduation, occupation, perceived adequacy of their income, psychological illness problems, chronic illness problems, history of other substance use, and history of illegal drug use. This information could be collected by psychiatric nurse within 5-10 minutes.

2 The M.I.N.I. (Mini International Neuropsychiatric Interview) Structure diagnostic interview instrument for psychiatric disorder with 16 modules. This instrument was administered by well trained and qualified psychiatric nurses from Department of Mental Health. Its aim was to identify co-occurring psychological problems in amphetamine users. The nurse also spent 15 -30 minutes to administer M.I.N.I. on each patient to screen and diagnose amphetamine abuse and dependence.

3. Intervention process measures

This study used three assessment measures in the intervention process as follows:

3.1 The Self-efficacy Ruler (SR), a self report measure to assess the perception of participant's self-efficacy to change amphetamine use, with a scale from 0 – 10. (0 "I do not have the capability to change my amphetamine use," to 10 "I'm perfectly capable of changing my amphetamine use.")

3.2 Satisfaction scores for the GMI- BCBT intervention--another self-report instrument, used to assess clients' satisfaction after the completion of the intervention, with a scale from 1– 5. (1 "I am the least satisfied with this intervention," to 5 "I am completely satisfied with this intervention.")

4. Outcome measures

This study used four assessment outcome measures to evaluate the efficacy of intervention. Participant self-reporting amphetamine use, motivation to change, and level of anxiety and depression were assessed at baseline, as well as 2, 4 and 6 months post-intervention. Random urine specimen was collected at 2, 4 and 6 months, post-intervention. Detail of assessment are as follows:

4.1 TimeLine Follow-back (TLFB), (Sobell and Sobell, 1992), was developed to assess amphetamine use quantity/frequency/method/situation related to amphetamine use, and incorporates recall-enhancing techniques that result in reliable

information. The TLFB method uses important events, calendars, and other memory prompts to enhance recall. Data were collected from patients' self report.

4.2 The Motivation for Change Ladder (MCL), a self report measure based on Prochaska and Diclemente's stages of change model, which assesses individual's motivation to drinking behavior change. This measure asks participants to rate how ready they are to change amphetamine use behavior on a scale from 0 – 5. This instrument was adapted from Biener and Abraham (Biener and Abrams, 1991). Data were collected from patients' self report.

4.3 Thai HADS (Thai version of hospital anxiety and depression scales) was used due to its good reliability and validity for both anxiety and depression subscales. At the cut-off point of ≥ 11 of each sub-scale was the best cut-off point to detect anxiety disorder and depressive disorder. The sensitivity of anxiety and depression sub-scales of Thai HADS were 100% and 85.71% respectively, while the specificity were 86.0% for anxiety and 91.3% for depression. Both sub-scales also showed good internal consistencies with Cronbach's alpha coefficient of 0.86 for anxiety sub-scale and 0.83 for depression sub-scale. In conclusion, the study showed that Thai HADS is a reliable and valid instrument for the screening of anxiety and depression in Thai patients. It is a 14 items scale that measures anxiety and depression from 0 – 3 (0 = never, 1 = sometimes, 2= often, 3 = always). This instrument can be administered within 10- 15 minutes, allowing for a fast data collection.

4.4 Methamphetamine test Kit is a one-step immunoassay for the qualitative detection of methamphetamine in human urine. A cut-off point of this screening test is 1,000 ng/ml (positive).

The urine specimen and data from these instruments were collected and examined by psychiatric nurses.

Measurement tools were used in this study, which are shown in table

Table 4

Measurement tools in this study

Phase	Measurement tools	Objective	Scale	Reliability Coefficient (this study)
Baseline	1. The demographic data form	To assess personal information	No	-
	2. MINI (Mini International Neuropsychiatric Interview)	To screen and diagnose psychiatric disorders with 16 modules.	1 = Yes 0 = No	(1) Part current major depression episode Specificity =0.94 Sensitivity=0.98 Kappa = 0.87 (2) Part GAD Specificity =0.97 Sensitivity=1.00 Kappa = 0.89

Table 4

Measurement tools in this study (*continued*)

Phase	Measurement tools	Objective	Scale	Reliability Coefficient (this study)
In the intervention process	3. Self-efficacy Ruler (SR)	To assess the perception of participant's self-efficacy to change amphetamine use.	On a ruler from 0-10	-
	4. Satisfaction for the GMI-BCBT intervention	To assess clients' satisfaction of the intervention	On a 5 scale	-
Outcome measures	5. TimeLine Follow-Back (TLFB)	To assess amphetamine use per day and substance related situations	No (calendar technique)	-
	6. The Motivation for Change Ladder (MCL)	To assess motivation to change amphetamine use	On a ladder from 0-10	-

Table 4

Measurement tools in this study (*continued*)

Phase	Measurement tools	Objective	Scale	Reliability Coefficient (this study)
Outcome measures (cont.)	7. Thai HADS (Thai version of Hospital Anxiety and Depression Scales)	To assess depression and anxiety scores	Score from 0-3	(1) The cut-off point of each part ≥ 11 . (2) The sensitivity of anxiety and depression was 100%, 85.71% respectively (3) The specificity of anxiety and depression was 86.0%, 91.3% respectively
	8. Methamphetamine test Kit	To assess amphetamine use by urine test	Positive =1 Negative =0	A cut-off point of screening test is 1,000 ng/ml (positive)

5. The Group Motivation Interviewing – Brief Cognitive Behavior Therapy (GMI-BCBT) Intervention

The GMI-BCBT intervention was constructed and developed through these steps:

5.1 The researcher reviewed the literature of amphetamine use reduction interventions found in Thailand and analyzed the existing interventions in order to find useful strategies to respond to existing interventions' limitations.

5.2 A review of literature was conducted from both theoretical and empirical frameworks. The researcher looked at the intervention and approaches available in the West. This included that the evidence of effectiveness in identifying the status of evidence-base intervention, determinants, process and pathways involve in amphetamine use, related behavior change, measurement tools relating to those processes and pathways--in order to develop an intervention specifically for this project.

5.3 The researcher developed an in-depth interview to find out perceptions and opinion from former Thai addicts. (n = 4) about amphetamine use in order to find useful qualitative data to develop an intervention tailored to the need of specific population.

5.4 The researcher developed a broad structured model for intervention to reduce amphetamine use and co-occurring psychological problems among patients based on steps 5.1-5.3.

5.5 The intervention model was examined by 3 experts in order to correct and improve the content and structure of the intervention. These experts comprised of two

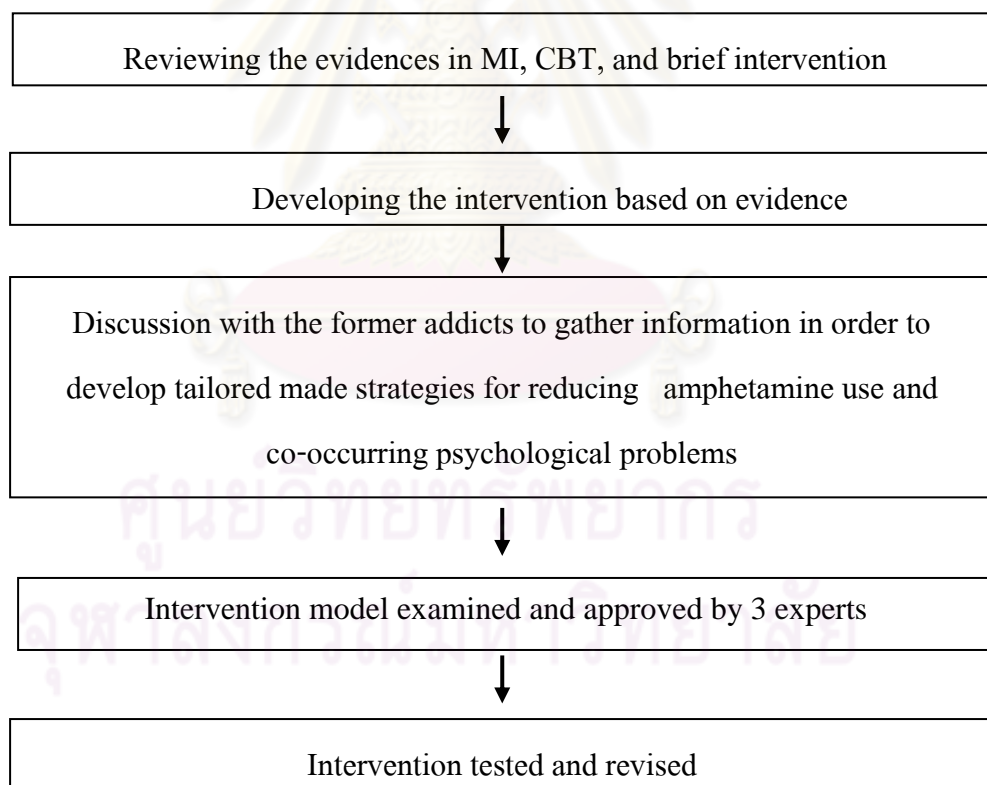
psychiatrists and psychiatric nurse who have expertise in brief interventions, motivational interviewing (MI), and cognitive behavioral therapy (CBT).

5.6 The researcher tested the intervention with psychiatric patients (n=7) in Inpatient Department (IPD) of psychiatric hospital and revised it before putting it to use with the participant in the present study.

The process for developing a GMI-BCBT intervention can be summarized in Figure 5.

Figure 5

The process of developing a GMI-BCBT intervention



6. Usual care

Usual care for drug addiction treatment in Thailand composes of Brief Advice (BA) and Brief Intervention (BI) (Ministry of Public Health [MPH], 2004).

6.1 Brief Advice (BA) aims to increase patients' self-awareness and encourage them to comply with drug addiction treatment. Each session last 5-10 minutes. Patient had been encouraged to get more information about treatment by therapist, was the expected outcome. The session is done by a psychiatric nurse.

6.2 Brief Intervention (BI) aims to identify current or potential problems with substance use and motivate patients at risk to change their substance use behavior. Each session lasts 20-30 minutes. Patients receiving and appropriate treatment are the expected outcome. The session is done by a psychiatric nurse.

Protection of Human Subjects' Rights

All participants needed to submit their signed consent forms prior to taking part in the study. Participants under 20 years of age would have to get consent forms signed by their parents.

Ethical approval was obtained from The Ethical Review Committee for Research Involving Human Research Subjects, Health Science Group, Chulalongkorn University, Thailand, before data collection could commence.

To begin, the researcher was permitted to meet the director of the two participating psychiatric hospitals in Phunphin District, Suratthani Province and in Meung District, Songkhla Province, in Southern Thailand. The directors of both hospitals were informed of the details of the present study and the benefits and risks to the patients. A letter asking for permission to collect data was drafted by the Graduate School, Chulalongkorn University and was submitted to the directors of both hospitals.

After human subject approval and permission from the ethical committee of both hospitals was granted, participants were screened for amphetamine use and co-occurring psychological problems with the M.I.N.I., TLFB, and Thai HADS. Patients who used amphetamine at least one time in the previous one month, had score positive in each M.I.N.I. module, and were willing to participate in the study were selected.

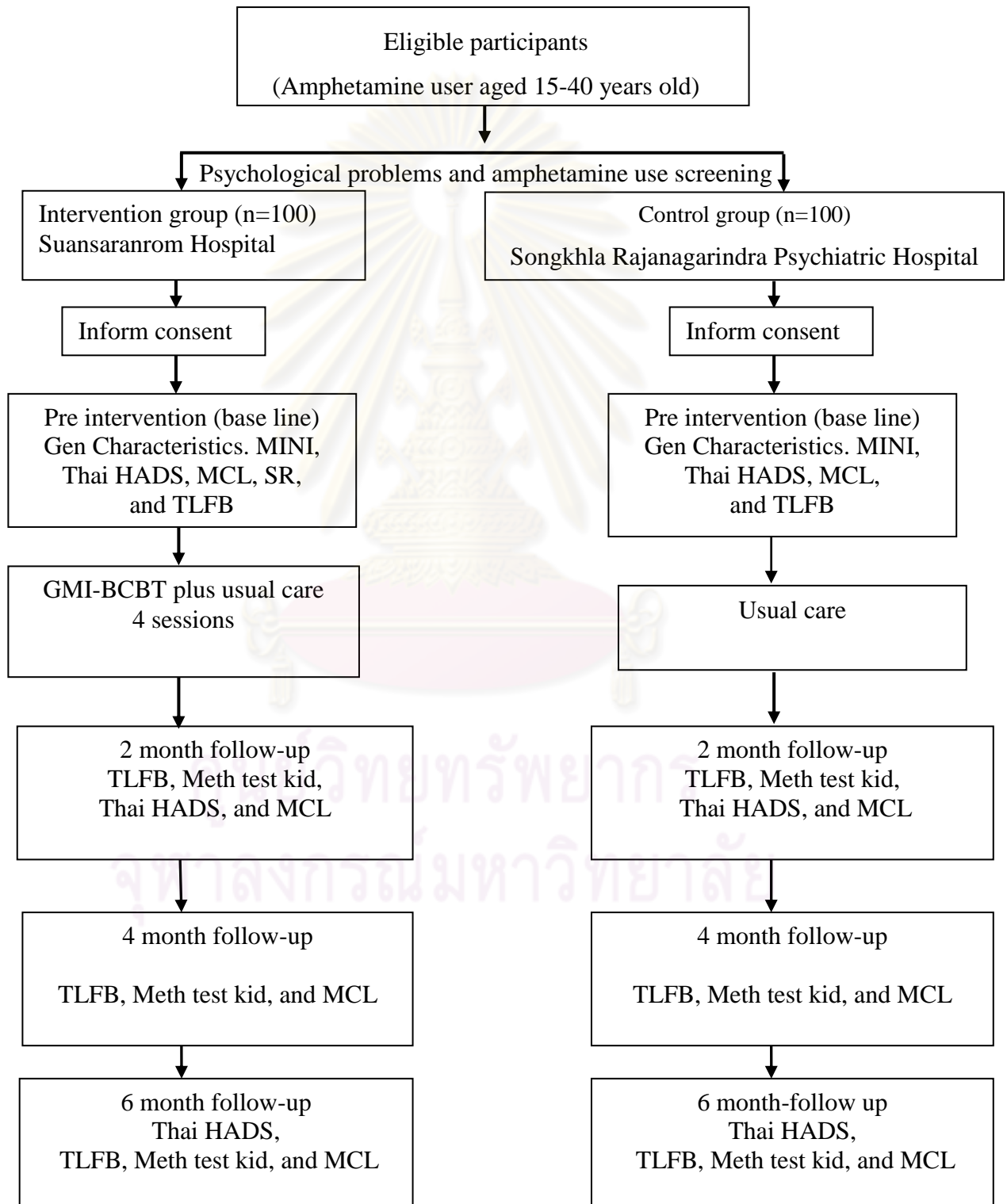
The researcher initially made an appointment with prospective participants to provide a personal introduction and to inform them of the procedures of the study. The prospective participants were invited to participate in the study and were assured that all information would be kept confidential, including the activities in the program and the persons involved in the program. They were also informed of the benefits and risks that were part of the study process and that they were free to withdraw from the study at any time if they wished. All participants received non-financial (health information) incentive.

Data Collection and Intervention Procedures

The researcher approached the patients who met all inclusionary criteria and were willing to make a commitment to the study. All patients had to supply signed consent forms prior to participation in the study. The researcher set up team work of 10 qualified co-researchers; 5 therapists and 5 research personals. These five therapists were psychiatric nurses who had been trained in basic counseling and worked in psychiatric wards for more than two years. The research procedures are presented in Figure 6

Figure 6

The research procedures



Control group

Patients assigned to the control group (non-intervention group) were advised that personnel from this study would contact them after 2, 4, and 6 months for follow-up data collection efforts.

GMI-BCBT group

The GMI-BCBT was administered to patients assigned to the intervention group. The main goal of the intervention was to minimize the level of drug use and reduce the risk of mental, physical, financial, social, and occupational health associated with regular amphetamine use. Patients were assisted to identify their own specific goals. For example, if a patient had a concurrent mental health problem, such as depression or a psychotic illness, a crucial goal thus would be to enhance his understanding of possible interactions between drug use (prescribed or illicit-drug taking) and his current psychiatric symptoms and potential health risks for prolonged amphetamine use.

The GMI-BCBT intervention composed of four following sessions:

Session 1 Motivation building—to encourage patients to comply with this program: (1 ½ - 2 hour per one group). Researcher divided 100 patients into 23 groups (4-7 persons per one group), with therapists acting as group facilitators.

This session was based on Group Motivational Interviewing Therapy (GMI). This helped participants to participate in group discussion and to give each other social support. It also enabled them to understand the problem more clearly.

The therapist's task is to create a set of conditions that would enhance the client's own motivation and commitment for attending/completing the GMI-BCBT program. Following the development of the client's commitment to change, the therapist assisted the client in learning skills that will help him/her achieve change.

Session 2 Goal setting: in this session, participants would be helped to set their goals. They were taught the cognitive concept and cognitive model so that they could analyze their own risk situations. They need to know what triggered the bad feeling which led them to take amphetamine. They also had to record their thoughts and emotions in the provide questionnaire forms.

Moreover patients were allowed to discuss the effective method in dealing with their own individual problems (tailor-made for individual). Therapist set homework for patients. The homework composed of risk situation analysis, automatic thought, feeling, alternative way to deal with dysfunctional thought (45 – 60 minutes per session).

Patients were told that it was possible to fit the person's experience of cravings into the following model.

BEHAVIOURS + PHYSICAL + THOUGHTS = CRAVING

Therapists and clients talked about specific or suitable activities which could help them to reduce amphetamine use and encourage them to stop using amphetamine.

Session 3 Therapists discussed with patients about their homework and problem solving evaluation, thought restructuring on risk situation, amphetamine use and pleasurable activities (45 – 60 minutes per session).

Therapists also discussed with clients about any possible delay, distraction, other alternatives and set pleasurable activities for clients, based on their own need. Therapists let clients write about their personal goals, positive thinking, succession and social support.

Session 4 Therapists discussed with patients about homework and evaluated their problem solving, thought restructuring on their risk situation, amphetamine use and pleasurable activities. Therapist also encourage them to review their own success

from the way of succession form and progress as well as revise their drug refusal skill to prevent future risk of relapse. (45 – 60 minutes per session)

All sessions were arranged by psychiatric nurses who were fully-trained for Group Motivation Interview and Brief Cognitive Behavior Therapy. This intervention is applied intervention, so it does not need to test fidelity. To control stability of intervention session, researcher gave a GMI-BCBT manual to all therapists. Researcher also had meeting with all research teams twice a week to discuss patients' problems and any problems that could occur between the sessions. Follow-up cards were created to remind patients of their schedules, activities and the GMI-BCBT sessions. When necessary, researcher would call to remind the patients about the follow up schedule to prevent attrition rate of drop-outs.

Patients were assessed at baseline (pre-treatment), 1 month post-treatment. This was followed by follow-up sessions where they could discuss their problems at 2, 4, 6 months post treatment. At 2 and 6 months, psychiatric nurses administered TLFB, Meth test Kit, Thai HADS and recorded the results of therapy in medical records. At 4 months patients were assessed on TLFB, Meth test Kit by psychiatric nurses and results were put on medical record.

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS for Windows). Descriptive statistics including means, standard deviations, frequencies and percentages, were computed to summarize demographic variables, amphetamine use and mental health problems between study groups. Differences between the intervention (GMI-BCBT plus usual care) and control group (usual care only) were evaluated using independent t-tests for continuous variables and Chi-square analyses for categorical variables.

Variables in which differences between two groups approached statistical significance identified as potential confounders will be included as covariates in the models. The effect of intervention was evaluated using a repeated measure of the analysis of covariance (ANCOVA) on the subjects' co-occurring psychological problems (Thai HADS) scores.

Survival analysis were used to study survival function of median survival time for the patient who get the event (urine positive for amphetamine use) to analyze survival rate by time.

Content from GMI and BCBT sessions and Timeline Follow-Back will be analyzed using content analysis to gain more understanding about patients' thought and perception in reducing amphetamine use and co-occurring psychological problems.



ศูนย์วิทยุทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

CHAPTER IV

RESULTS

This chapter focuses on the results of the study. The results are represented in 6 parts: (1) the subjects' characteristics, (2) the subjects' co-occurring psychological problems at baseline, (3) Impact of the GMI-BCBT plus usual care on process measures within intervention group, (4) Impact of the GMI-BCBT plus usual care on outcome measures, (5) The efficacy of intervention versus control condition, and (6) content analysis

RESULTS

Subjects' characteristics

The subjects in this study consisted of outpatient who were amphetamine users with psychological problems (n=200). They were divided into two groups: the intervention group (n= 100) and the control group (n=100). The mean age of the 200 participants was 24.98 years (SD = 5.18, min = 16, max = 40). The majority of participants were single 55 % (n = 110), finished Secondary education 51.5 % (n = 103) and were farmer 44.5 % (n = 89). Most of them perceived that they had sufficient income though 39.5 % (n = 79) had no savings. 71.5 % (n = 143) reported no history of psychological problem and 96.5 % (n= 193) had no physical illness. Most participants reported history of legal and illegal drug use 98.5 % and 78.5% (n = 197 and 157, respectively). Most of them were poly drug users. The most common methods of using amphetamine was transnasal inhalation passing water (n = 197).

Baseline characteristics of patients in the two study groups are summarized in Table 5. Patients in the intervention and control groups were similar with regards to age, marital status, educational level, occupation, history of psychological illness problems, history of illegal drug use, history of amphetamine cessation, amphetamine using pattern, requested for medication and counseling, concomitant treatment, and period of time for amphetamine cessation (all p 's > 0.05). The two groups did differ, however, according to perceived adequacy of their income, history of chronic illness problems, and requested for knowledge of substance (all p 's < 0.05).

Table 5
Subjects' Demographic Characteristics at baseline

Variables	Numbers (%)			P-value
	Total (n = 200)	Intervention Group (n = 100)	Control Group (n = 100)	
Age: mean (SD)	25.0 (5.18)	25.6(4.96)	24.4 (5.36)	0.11
Marital status				
Single	110(55.0)	53(53.0)	57(57.0)	0.76
Married	79(39.5)	42(42.0)	37(37.0)	
Others	11 (5.5)	5 (5.0)	6(.0)	
Educational level				
Primary & Secondary education	149 (74.5)	71 (71.0)	78 (78.0)	0.15
Occupational degree	34 (17.0)	22 (22.0)	12 (12.0)	
Bachelor and higher degree	17 (8.5)	7 (7.0)	10 (10.0)	

Table 5

Subjects' Demographic Characteristics at baseline (continued)

Variables	Numbers (%)			P-value
	Total (n = 200)	Intervention Group (n = 100)	Control Group (n = 100)	
Occupation				
Unemployed	41 (20.5)	20 (20.0)	21 (21.0)	0.86
Employed	159 (79.5)	80 (80.0)	79 (79.0)	
Adequacy of their income				
Enough and saving	48 (24.0)	32 (32)	16 (16.0)	0.001
Enough but not saving	79 (39.5)	45 (45)	34 (34.0)	
Not enough and no dept	21 (10.5)	5 (5.0)	16 (16.0)	
Not enough and dept	52 (26.0)	18 (18.0)	34 (34.0)	
Psychological illness problems				
Yes	57 (28.5)	24 (24.0)	33 (33.0)	0.10
No	143 (71.5)	76 (76.0)	67 (67.0)	
Chronic illness problems				
Yes	7 (3.5)	6 (6.0)	1 (1.0)	0.05
No	193 (96.5)	94 (94.0)	99 (99.0)	

Table 5
Subjects' Demographic Characteristics at baseline (*continued*)

Variables	Numbers (%)			P-value
	Total (n = 200)	Intervention Group (n = 100)	Control Group (n = 100)	
History of other substance use				
Yes	157 (78.5)	76 (76.0)	81 (81.0)	0.49
No	43 (21.5)	24 (24.0)	19 (19.0)	
History of ice use				
Yes	62 (31.0)	30 (30.0)	32 (32.0)	0.87
No	138 (69.0)	70 (70.0)	68 (68.0)	
History of cannabis use				
Yes	93 (46.5)	41 (41.0)	52 (52.0)	0.07
No	107 (53.5)	59 (59.0)	48 (48.0)	
History of 4 × 100 use (Boiling Kratom leaf with COKE, cough syrup and other substance)				
Yes	72 (36.0)	22 (22.0)	50 (50.0)	.00
No	128 (64.0)	78 (78.0)	50 (50.0)	
History of kratom use (Mitragina spiciosa)				
Yes	22 (11.0)	16 (16.0)	6 (6.0)	0.02
No	178 (89.0)	84 (84.0)	94 (94.0)	
History of inhalant use				
Yes	11 (5.5)	3 (3.0)	8 (8.0)	0.11
No	189 (94.5)	97 (97.0)	92 (92.0)	

Table 5
Subjects' Demographic Characteristics at baseline (*continued*)

Variables	Numbers (%)			P-value
	Total (N = 200)	Intervention Group (n = 100)	Control Group (n = 100)	
History of heroin use				
Yes	5 (2.5)	2 (2.0)	3 (3.0)	0.50
No	195 (97.5)	98 (98.0)	97 (97.0)	
History of zolam use				
Yes	9 (4.5)	2 (2.0)	7 (7.0)	0.08
No	191 (95.5)	98 (98.0)	93 (93.0)	
History of legal drug use				
Yes	197 (98.5)	99 (99.0)	98 (98.0)	0.5
No	3 (1.5)	1 (1.0)	2 (2.0)	
History of drinking beer				
Yes	122(61.0)	66 (66.0)	56 (56.0)	0.19
No	78 (39.0)	34 (34.0)	44 (44.0)	
History of alcohol use				
Yes	130 (65.0)	67 (67.0)	63 (63.0)	0.65
No	70 (35.0)	33 (33.0)	37 (37.0)	
History of smoking				
Yes and currently use	197 (98.5)	99 (99.0)	98 (98.0)	1.0
No	3(1.5)	1 (1.0)	2 (2.0)	
Method taking amphetamine				
Smoke through the water	197 (98.5)	100 (100.0)	97 (97.0)	0.25
Smoke without water	3 (1.5)	0 (0.0)	3 (3.0)	

Table 5
Subjects' Demographic Characteristics at baseline (*continued*)

Variables	Numbers (%)			P-value
	Total (N = 200)	Intervention Group (n = 100)	Control Group (n = 100)	
Amphetamine using pattern				
Continuous using	8 (4.0)	6 (6.0)	2 (2.0)	0.28
Intermittent using	192 (96.0)	94 (94.0)	98 (98.0)	
Amphetamine cessation (Life time)				
Yes	154 (77.0)	76 (76.0)	78 (78.0)	0.87
No	46 (23.0)	24 (24.0)	22 (22.0)	
Patient requested for medication				
Yes	198 (99.0)	99 (99.0)	99 (99.0)	1.0
No	2 (1.0)	1 (1.0)	1 (1.0)	
Patient requested for counseling				
Yes	197 (98.5)	99 (99.0)	98 (98.0)	1.0
No	3 (1.5)	1 (1.0)	2 (2.0)	
Patient requested for health education				
Yes	144 (72.0)	96 (69.0)	48 (48.0)	0.001
No	56 (28.0)	4 (4.0)	52 (52.0)	
Medication treated by physician(OPD card record)				
Antipsychotic drug				
Yes	157 (78.5)	77 (77.0)	80 (80.0)	0.73
No	43 (21.5)	23 (23.0)	20 (20.0)	

Table 5
Subjects' Demographic Characteristics at baseline (*continued*)

Variables	Numbers (%)			P-value
	Total (N = 200)	Intervention Group (n = 100)	Control Group (n = 100)	
Anti Depressant drug				
Yes	76 (38.0)	36 (36.0)	40 (40.0)	0.66
No	24 (62.0)	64 (64.0)	60 (60.0)	
Ant anxiety and hypnotic drug				
Yes	92 (46.0)	48 (48.0)	44 (44.0)	0.67
No	108 (54.0)	52 (52.0)	56 (56.0)	
Mood stabilizing Drug				
Yes	5 (2.5)	2 (2.0)	3 (3.0)	1.0
No	195 (97.5)	98 (98.0)	97 (97.0)	
Antiparkinson drug				
Yes	149 (74.5)	69 (69.0)	80 (80.0)	0.10
No	51 (25.5)	31 (31.0)	20(20.0)	
Anticonvulsant drug				
Yes	34 (17.0)	21 (21.0)	13 (13.0)	0.19
No	166 (83.0)	79 (79.0)	87 (87.0)	
The amount of time spent in				
amphetamine cessation month (SD)		8.58 (8.44)	7.62 (10.88)	0.77

Subjects' co-occurring psychological problems at baseline

The M.I.N.I. was administered to 200 patients. The results for prevalence of current lifetime mental and addictive disorders are presented in Tables 6. These show that 59.5 percent having had a mood disorder, 40.5 percent an anxiety disorder, 3.5 percent a psychotic disorder, and 90.5 percent a amphetamine dependence. Lifetime antisocial personality disorder was identified in 14 percent. Forty two (21%) subjects reported having attempted suicide in the past. When the MINI's scale was used to rate current suicide risk, thirteen subjects (6.5%) were at high risk, 5 (2.5%) were at medium risk and 24 (12%) were at low risk; the rest were considered not at risk. Numbers and percentage of co-occurring psychological problems at baseline are summarized in table 6 for patients in the intervention and control group.

The Thai-version of the Mini International Neuropsychiatric Interview, which was the structured diagnostic interview instrument for psychiatric disorders (MINI) were administered to 200 patients who suffer from amphetamine abuse and dependence. Across the sample, 59.5% (n=119) had major depressive current 2 weeks, 40.5% (n=81) had general anxiety disorder which were substance-induced; 28.0% (n=14) had anti social personality disorder. Patients in the intervention and control groups were similar with regards to drug use especially for alcohol and amphetamine, psychotic feature.

Table 6

Subjects' co-occurring psychological problems at baseline

Variables	Numbers (%)		
	Total (N = 200)	Intervention Group (n = 100)	Control Group (n = 100)
MAJOR DEPRESSIVE			
EPISODE (MDE)			
Current (2 weeks)	119 (59.5)	52 (52.0)	67(67.0)
Recurrent	40(20.0)	9 (9.0)	31 (31.0)
MDE with MELANCHOLIC			
FEATURE	48 (24.0)	10 (10.0)	38 (38.0)
DYSTHYMIA	8 (4.0)	3 (3.0)	5 (5.0)
SOCIADLITY Current	42 (21.0)	27 (27.0)	15 (15.0)
Risk: Low	24 (12.0)	22 (22.0)	2 (2.0)
Medium	5 (2.5)	2 (2.0)	3 (3.0)
High	13 (6.5)	3 (3.0)	10 (10.0)
MANIC EPISODE			
Current	10 (5.0)	0 (0.0)	10 (10.0)
Past	12 (6.0)	5 (5.0)	7 (7.0)
HYPOMANIC EPISODE			
Current	4 (2.0)	0 (0.0)	4 (4.0)
Past	4 (2.0)	1 (1.0)	3 (3.0)

Table 6

Subjects' co-occurring psychological problems at baseline (*continued*)

Variables	Numbers (%)		
	Total (N = 200)	Intervention Group (n = 100)	Control Group (n = 100)
PANIC DISORDER Current	2 (1.0)	1 (1.0)	1 (1.0)
AGORAPHOBIA	2 (1.0)	2 (2.0)	0 (0.0)
SOCIAL PHOBIA	3 (1.5)	1 (1.0)	2 (2.0)
OBSESSIVE COMPULSIVE DISORDER	13 (6.5)	4 (4.0)	9 (9.0)
POSTTRAUMATIC STRESS DISORDER	1 (0.5)	0 (0.0)	1 (1.0)
ALCOHOL DEPENDENCE	41 (20.5)	14 (14.0)	27 (27.0)
ALCOHOL ABUSE	42 (21.0)	15 (15.0)	27 (27.0)
AMPHETAMINE DEPENDENCE	181 (90.5)	93 (93.0)	88 (88.0)
AMPHETAMINE ABUSE	19 (9.5)	7 (7.0)	12 (12.0)
PSYCHOTIC DISORDER			
Life time	7 (3.5)	7 (7.0)	0 (0.0)
Current	2 (1.0)	2 (2.0)	0 (0.0)
MOOD DISORDER WITH PSYCHOTIC FEATURES			
Life time	2 (1.0)	2 (2.0)	0 (0.0)
GENERALIZED ANXIETY DISORDER	81 (40.5)	36 (36.0)	45 (45.0)
ANTISOCIAL PERSONALITY DISORDER	28 (14.0)	12 (12.0)	16 (16.0)

Impact of the GMI-BCBT plus usual care on process measures within intervention group

Mean SR scores pre intervention were also lower than post intervention (mean \pm SD: 6.71 \pm 1.02 vs. 7.72 \pm 0.71, $t = -10.90$, 99 df, $p < 0.001$). Effect sizes were calculated using Cohen's d to quantify the magnitude of difference in mean scores and to assess the practical significance of changes before and immediately after the intervention. The analysis revealed that mean SR scores had a 15.05% increase immediately after the intervention. The large effect sizes were found for SR ($d = 1.09$). The mean scores of satisfaction of the intervention at the last session were on a high level from a 5.0 scale (mean 4.75, SD 0.5). The details are as follow in table 7.

Table 7

Mean score and SD within intervention group pre and post intervention (the GMI-BCBT plus usual care)

Variables	Mean (SD)		P-value
	Pre intervention (N = 100)	Post intervention (N = 100)	
Self efficacy ruler (SR)	6.71 (1.01)	7.72 (0.71)	0.001
Score: Mean (SD)			
Satisfaction of the intervention	-	4.75 (0.5)	-

Impact of the GMI-BCBT plus usual care on outcome measures

The impact of the GMI-BCBT plus usual care composed of three parts: (1) motivation to change, (2) amphetamine use, and (3) co-occurring psychological problems.

A: Impact of the GMI-BCBT plus usual care on the motivation to change within each condition group

The Motivational for Change Ladder (MCL) scores before and immediately after the intervention, were presented in Table 8 for the intervention group. Mean MCL scores pre intervention were lower than post intervention (mean \pm SD: 3.51 ± 0.58 vs. 3.98 ± 0.35 , $t = -8.41$, 99 df, $p < 0.001$). The analysis revealed that mean MCL scores had a 13.39% increase immediately after the intervention. The large effect sizes were found for MCL ($d = 0.84$). The results indicated that patients in the intervention group had MCL scores in each 5 times higher than those in the control group (all p 's < 0.001).

Table 8

Mean score and SD of The Motivation for Change Ladder (MCL) scores comparison between intervention and control groups

Variables	Mean (SD)		<i>t</i>
	Intervention (n = 100)	Control (n = 100)	
Baseline	3.51 (0.58)	2.67 (0.78)	8.66†
Immediately post-intervention	3.98 (0.35)	2.92 (0.73)	13.05†
1 st follow up	4.17 (0.45)	3.32 (0.77)	9.45†
2 nd follow up	4.45 (0.56)	3.50 (0.85)	8.94†
3 rd follow up	4.58 (0.60)	3.72 (0.91)	7.46†

Note. *p*-value from independence *t*-test: † *p* < 0.001

B: Impact of the GMI-BCBT plus usual care on amphetamine use within each condition group

The impact of the GMI-BCBT plus usual care on amphetamine use within each condition group divided into 2 parts (1) urine test, and (2) patterns of amphetamine use.

Urine test

Frequency and percentage of urine test positive are presented in Table 9 for patients in the intervention and control group. All 200 patients were requested to undergo 3 different urine tests to identify amphetamine use post intervention. The

results indicated that patients in the intervention group had urine test positive in 3 times lower than those in the control group (26.0% and 74.0%, respectively).

Table 9

Frequency and percentage of urine test positive within each condition group post intervention

	Urine test 1		Urine test 2		Urine test 3		Total
	Positive	Missing	Positive	Missing	Positive	Missing	Positive
Intervention	n = 100		n = 94		n = 88		total frequency = 177
	11	0	16	6	19	12	46
	(11%)		(17.0 %)	(6.4%)	(21.6%)	(13.6%)	(26.0%)
Control	n = 100		n = 92		n = 90		total frequency = 177
	55	0	44	8	32	10	131
	(55%)		(47.8%)	(8.7%)	(35.6%)	(11.1%)	(74.0%)
Total	n = 200		n = 186		n = 178		total frequency = 177
	66	0	60	14	51	22	177
	(33%)		(32.3%)	(7.5%)	(28.7%)	(12.4%)	(100%)

Note. Missing = patients were absent during follow-up sessions.

Patterns of Amphetamine Use

The main finding of TLFB in this study was pattern of amphetamine use which is presented in table 10. A total 200 patients reported quantity, frequency of amphetamine used, and other drugs used within two weeks per each follow up session. It was found that 42% of intervention group and 53% of control group reported quantity of amphetamine use 1-2 tablets amphetamine in each time; a few patients use 5-10 tablets at base line. At follow up 1-3, both group showed decreasing

amphetamine quantity only 0-4 tablets. Both group had the same frequency of amphetamine use at base line within 2 weeks (0-14 days). And all follow up sessions, both groups also reducing frequency of amphetamine use (0-5 days).

At baseline, the other drug types most commonly use with amphetamine are cigarette (96.0% in intervention group) (92.0% in control group). and alcohol (28.0% in intervention group) (49.0% in control group). And all follow up sessions, both groups reducing and abandon cigarettes and alcohol consumption. Control group increase more illegal drug use such as 4x100 and cannabis.

Table 10
Patterns of amphetamine use

Patterns of use	Min-Max							
	Intervention group				Control group			
	baseline	FU1	FU2	FU3	baseline	FU1	FU2	FU3
Quantity (tablets)	1-10	0-3	0-2	0-2	1-10	0-4	0-2	0-2
Frequency (days)	2-14	0-5	0-5	0-5	1-14	0-10	0-5	0-5
Other drugs used		FU1	FU2	FU3		FU1	FU2	FU3
		n(%)	n(%)	n(%)		n(%)	n(%)	n(%)
Cannabis		4(4.0)	6(6.4)	6(6.8)		17(17.0)	8(8.5)	7(7.5)
4 x 100		2(2.0)	4(4.3)	4(4.5)		35(35.0)	28(29.8)	29(31.2)
Alcohol		28(28.0)	22(23.4)	20(22.5)		49(49.0)	44(46.3)	44(46.8)
Cigarette		91(96.0)	85(90.4)	76(85.4)		92(92.0)	88(92.6)	85(90.4)

Note: FU1 = 1st follow up, FU2 = 2nd follow up, FU3 = 3rd follow up

C: Impact of the GMI plus BCBT on co-occurring psychological problems within each condition group

Mean baseline Anxiety scores and Depress scores from Thai version of Hospital Anxiety and Depression scale (Thai HADS) showed that the two groups did differ at baseline (p 's < 0.05). Mean baseline Anxiety scores were lower for patients in the intervention group, compared with those in the control group (mean \pm SD: 6.23 ± 4.04 vs. 9.94 ± 4.63 , $t = -6.03$, 198 df, $p < 0.001$). Mean baseline Depress scores were lower for patients in the intervention group, compared with those in the control group (mean \pm SD: 6.00 ± 3.75 vs. 9.22 ± 4.45 , $t = -5.53$, 198 df, $p < 0.001$).

Table 11 shows the mean baseline, 3 months, and 7 months post-intervention Anxiety scores and Depress scores for the two study groups. Patients in the intervention group had a 26.32% reduction in their Anxiety mean scores at 3 months post intervention and the moderate effect size was found (baseline mean 6.23 ± 4.04 vs. 3 months follow-up mean 4.59 ± 3.36 , $t = 4.80$, 99 df, $p < 0.001$, $d = 0.48$). At 7 months follow-up, the Anxiety scores among patients in the intervention group were 61.96% lower than the values noted at baseline and the large effect size was found (baseline mean 6.23 ± 4.04 vs. 7 months follow-up mean 2.37 ± 2.76 , $t = 10.32$, 88 df, $p < 0.001$, $d = 1.09$). Patients in the control group significantly decreased their anxiety at the 3 and 7 months follow-up. The large effect sizes were found. Their mean Anxiety scores at 3 months post-intervention were 37.73 % lower than the values noted at baseline (baseline mean 9.94 ± 4.63 vs. 3 months follow-up mean 6.19 ± 3.59 , $t = 9.21$, 99 df, $p < 0.001$, $d = 0.92$). By the 7 months post-intervention, the Anxiety scores were 52.92% lower than the values noted at baseline (baseline mean 9.94 ± 4.63 vs. 7 months follow-up mean 4.68 ± 3.83 , $t = 10.82$, 89 df, $p < 0.001$, $d = 1.14$).

With regards to the mean score of depression, patients in the intervention group had a 30% reduction in their mean scores at 3 months post-intervention and the moderate effect size was found (baseline mean 6.00 ± 3.75 vs. 3 months follow-up mean 4.20 ± 3.16 , $t = 4.93$, 99 df, $p < 0.001$, $d = 0.49$). At 7 months follow-up, the mean scores of depression among the patients in the intervention group were 63.83% lower than the values noted at baseline and the large effect size was found (baseline mean 6.00 ± 3.75 vs. 7 months follow-up mean 2.17 ± 2.73 , $t = 9.78$, 88 df, $p < 0.001$, $d = 1.03$). However, patients in the control group had also a significant reduction of 36.55% in their mean Depress scores at 3 months and the moderate effect size was found (baseline mean 9.22 ± 4.45 vs. 3 months follow-up mean 5.85 ± 3.61 , $t = 7.74$, 88 df, $p < 0.001$, $d = 0.77$). By the 7 months period of follow up the Depress scores among patients in this group were 53.47% lower than the values noted at baseline and the large effect size was found (baseline mean 9.22 ± 4.45 vs. 7 months follow-up mean 4.29 ± 3.77 , $t = 10.06$, 89 df, $p < 0.001$, $d = 1.06$).

Table 11

Outcomes Comparison between Intervention and Control Groups

Variables	Intervention group (n = 100) Mean (SD)			Control group (n = 100) Mean (SD)		
	Time			Time		
	Baseline	3 months	7 months	Baseline	3 months	7 months
Anxiety score	6.23	4.59	2.37	9.94	6.19	4.68
(SD)	(4.04)	(3.36) ^{a†}	(2.76) ^{b,c,†}	(4.63)	(3.59) ^{a†}	(3.83) ^{b,c,†}
Depression	6.00	4.20	2.17	9.22	5.85	4.29
score (SD)	(3.75)	(3.16) ^{a†}	(2.73) ^{b,c,†}	(4.45)	(3.61) ^{a†}	(3.77) ^{b,c,†}

Note. a = Baseline to 3 months FU; b = Baseline to 7 months FU; c = 3 months FU to 7 months FU; *p*-value from paired *t*-test: † *p* < 0.001

The efficacy of intervention versus control condition

A: The efficacy of intervention versus control condition on amphetamine use

Survival analysis results (Table 12 and figure 7-9) indicated that mean overall follow-up time of survivors was 208.8 days; range 47 to 221 days. The Kaplan-Meier curve showed that patients in the control group had lower survival rates. The 3-month survival rate was 44.5%, 95% CI (95.7-106.3) among those in the intervention group and 13.2 %, 95% CI (77.3-88.7) among patients in the control group. The table 12

showed that the median survival time of intervention group was longer than control group at phase 1 and 2 follow up. The log rank test at the first urine test follow-up only gave significance value ($p < 0.001$)

Table 12

Survival analysis comparison between intervention and control groups

FU	Intervention group				Control group				Log Rank test
	n	survival rate (%)	Median survival time	95%CI	n	survival rate (%)	Median survival time	95%CI	
FU1	100	44.5	101	95.7-106.3	100	13.2	83	77.3-88.7	33.8 [†]
FU2	94	37	160	150.0-170.0	92	16.2	155	152.8-157.2	1.7 ^{ns}
FU3	88	40.3	211	207.3-214.7	90	20	211	209.9-212.1	0.6 ^{ns}

Note. FU= follow up,

ns = non-significant

[†] $p < 0.001$

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Figure 7

Show survival function between time (days) and urine test positive at follow up 1

Kaplan-Meier survival estimates, by urine test

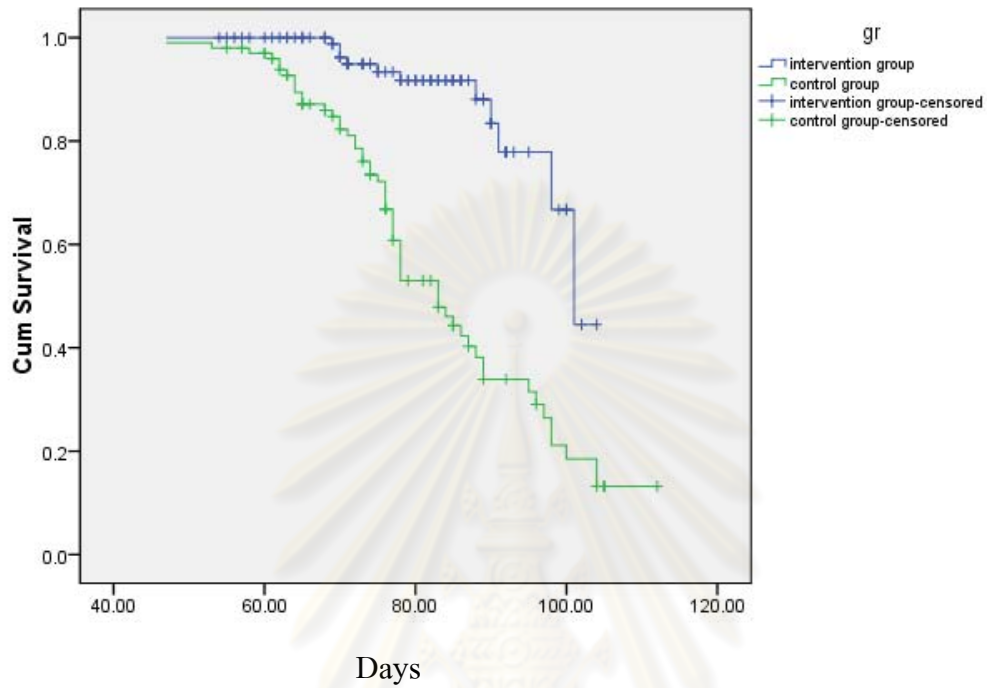
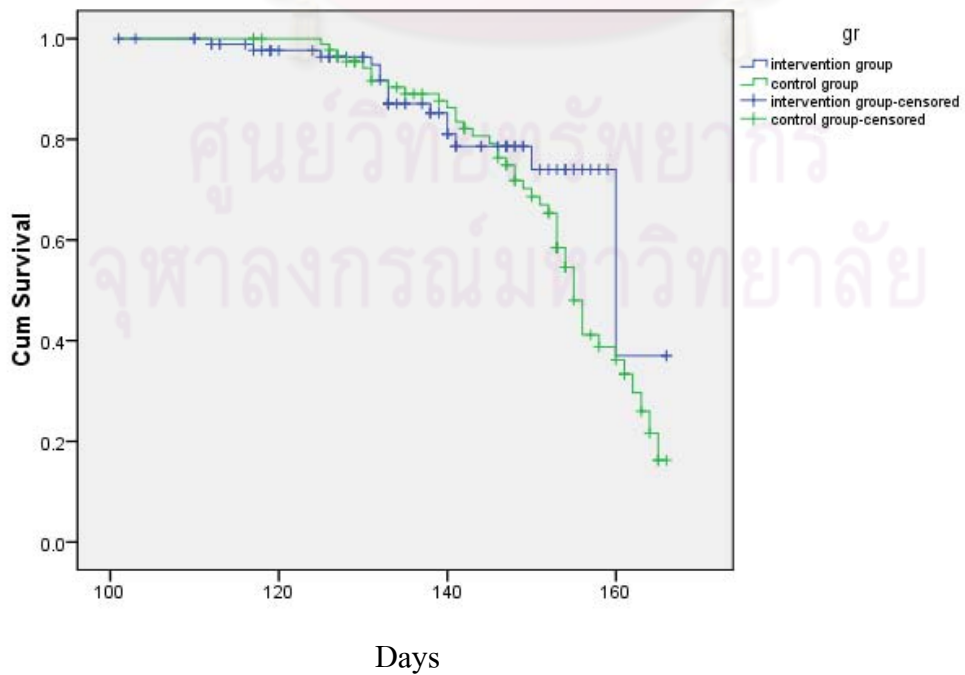


Figure 8

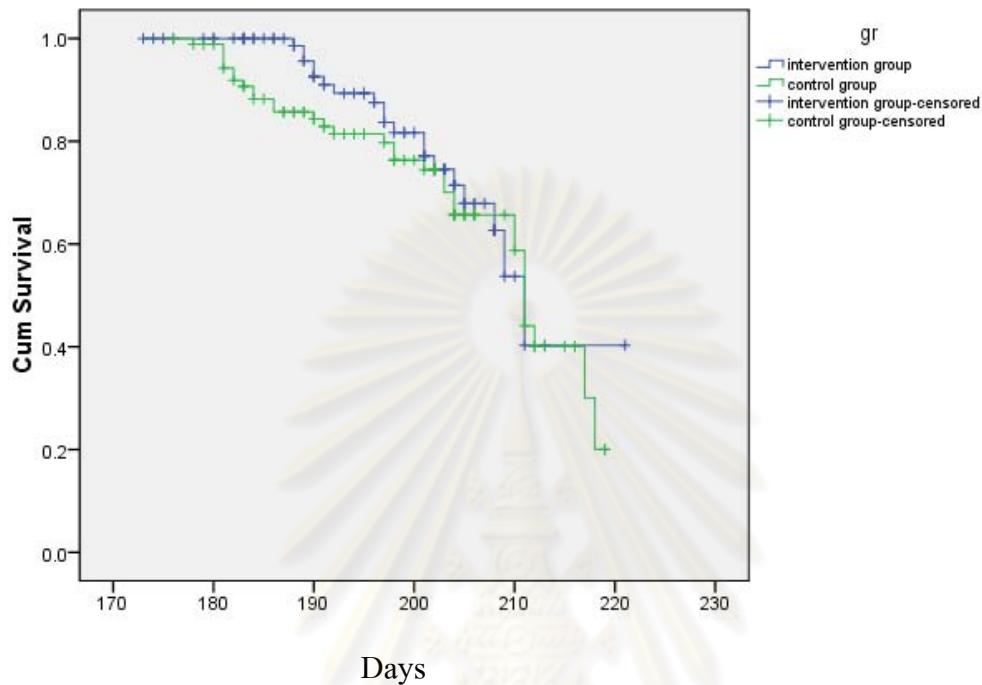
Show survival function between time (days) and urine test positive at follow up 2

Kaplan-Meier survival estimates, by urine test



Show survival function between time (days) and urine test positive at follow up 3

Kaplan-Meier survival estimates, by urine test



B: The efficacy of intervention versus control condition on co-occurring psychological problems

ANCOVA results (Table 13) indicated that Anxiety scores at all post-intervention time points were significantly lower for patients in the intervention group compared with the control, including baseline to 3 months, controlling for Anxiety scores at baseline and other covariates (perceived adequacy of their income, chronic illness problems, and requested for health education) . However, no significant group and time interaction was observed during each phase, including baseline to 3 months, $F(1, 199) = 0.62, p > 0.05$; baseline to 7 months, $F(1, 178) = 0.09, p > 0.05$. This result indicated that the Anxiety scores did not decrease significantly at all post-intervention time points in the intervention group in relation to the control group. Analysis of Depression scores revealed that values at all post-intervention time point

were significantly lower for the patients in the intervention group compared to the control group, even after controlling for Depress scores at baseline and other covariates. There were no significant interactions in the ANCOVA, indicating that the Depress scores did not decrease significantly at all post-intervention time points in the intervention group, in relation to the control group, including baseline to 3 months, $F(1, 199) = 0.08, p > 0.05$; baseline to 7 months, $F(1, 178) = 0.12, p > 0.05$. The effect size of the intervention program was not found in this study.

Table 13

ANCOVA Results: Intervention and Control Groups during Each Phase

Variables	Intervention group (n = 100) Mean (SD)			Control group (n = 100) Mean (SD)			ANCOVA (T0-T1)		ANCOVA (T0-T2)	
	Time			Time			F (Group x Time)	<i>d</i>	F (Group x Time)	<i>d</i>
	Baseline	Post-intervention FU1	Post-intervention FU3	Baseline	Post-intervention FU1	Post-intervention FU3				
Anxiety score (SD)	6.23 (4.04)	4.59 (3.36)	2.37 (2.76)	9.94 (4.63)	6.19 (3.59)	4.68 (3.83)	0.62 ^{ns}	0.003	0.09 ^{ns}	0.000
Depression score (SD)	6.00 (3.75)	4.20 (3.16)	2.17 (2.73)	9.22 (4.45)	5.85 (3.61)	4.29 (3.77)	0.08 ^{ns}	0.000	0.12 ^{ns}	0.001

Note. * ns = non-significant; *d* = effect size

T0-T1=baseline to 3 months post-intervention

T0-T2= baseline to 7 months post-intervention

FU1 = 1st follow up (baseline to 3 months)

FU3 = 3rd follow up (baseline to 7 months)

Content analysis

This study sought to carry out a content analysis to gain more understanding about patients thought and perceptions in order to reduce amphetamine use and co-occurring psychological problems. The data in this part comes from patients who participated in the intervention group (GMI-BCBT plus usual care). The baseline characteristics of patients in the GMI-BCBT plus usual care are shown in Table 14. Total groups in the GMI came to 23. For this content analysis, the researcher focused on two issues: (1) patients' perceptions of the benefit (advantages) and the cost (disadvantages) of using and reducing amphetamine, and (2) patients' dysfunctional thought record.

Perceptions of benefit and cost of their current amphetamine use

Patients discussed the advantages and disadvantages of amphetamine use and its reduction during the GMI session. Group facilitator noted down the key words on a whiteboard. Some patients expressed a strong satisfaction with amphetamine, saying that it helped them with social integration and stress reduction (Table14). Group facilitator also asked about their concerns on the adverse consequences in carry on using amphetamine. Most patients worried about the costs of their current amphetamine use. These included health problems as well as issues concerning economic status, family relationships, and expectations from wives, parents, and others. Patients summarized the pros and cons of amphetamine use. Most of them agreed that they needed to reduce their amphetamine use. Some noted down their affirmations as follows:

“I am thinking about reducing amphetamine use now because many good things will occur in my life,” (patients in group 5, 12, 13, 15, 17).

“I would like to quit amphetamine use rapidly. Amphetamine makes me crazy all the time and I could not do my job anymore,” (patients in group 2, 3, 5, 7, 9, 11, 12, 13, 15- 18, 15, 19- 23).

Table14

Patients’ perceptions and key words that emerged in the content analysis from GMI session: Example statements

Current amphetamine use

Key words	Example*
A. Benefits of current amphetamine use	
(1) Social integrity	
I have more friends	“Amphetamine can make people change their behavior to be nice and kind so you can get many friends when you use it. I become more confident talking to them and they welcome me as one of their group.” (21)
(2) Stress reduction	
It is a time to relax and enjoy oneself.	“Amphetamine gives out a nice fragrance, like herbs or chocolates. It helps me to relax.” (6,12,15,22,21) “I can go out and party all night without feeling exhausted.” (2, 18, 23)
B. Costs of amphetamine use	
(1) Health Problems	
It is not good for my health	“Amphetamine makes me crazy and changing my personality.” (1, 3, 5, 6, 8-12, 23)

“Amphetamine causes accident when we feel funny and lose self-awareness.” (1-4, 6-10, 13, 15, 19-23)

(2) Economic Status

I do not have enough money “I spend too much money.” “I cannot save my money.” “Sometimes I try to steal my mum’s money in order to buy amphetamine.” (1-3, 6-7, 11, 14-17, 20-22)

(3) Expectations from parents and spouse

My parents and spouse cannot accept my behavior. “I always have arguments with my parents when I have the craving.” “I am now separated from my wife because she didn’t like me taking amphetamine.” (1-4, 6-23)

(4) Relationships with other persons

I cannot control my aggressive behavior “The other person in community did not accept my behavior they always call me a ‘drug addict or junkie’.” (1, 3-10, 16, 18, 22)

Note. * The numbers, following the example sentences represent group numbers of patient in GMIBCBT

Reduced Amphetamine use

Key words	Example*
A. Benefits of reduced amphetamine use	
(1) Health	
It is good for my health and body image	<p>“I feel better physically and mentally.” (1-4, 6-23)</p> <p>“I will be stronger and more attractive.” (11, 19)</p> <p>“I will be healthy.” (1-4, 6-23)</p>
(2) Economic Status	
I will have more money	<p>“I can save my money.” (5, 6, 10, 13, 16, 17, 19, 21, 23)</p> <p>“I can work well.” (1, 3, 11, 16, 19)</p>
(3) Expectations from parent and spouse	
My parents and spouse will accept my new behavior	<p>“Other people will accept my personality.” (1, 5, 8-9, 19)</p> <p>“Many people will accept my personality.” “I will be attractive to women who do not like drinkers.” (1-2, 4-6, 12, 18)</p> <p>“My parents and teachers will not be upset with my drinking behaviors.” (3, 8)</p>
(4) Relationships with other persons	
I can control my behavior	<p>“I will have fewer conflicts with family and others.” (3, 4, 7-8, 10-11, 14, 17, 20-21, 23)</p>

B. Costs of reducing amphetamine use

(1) Social Anxiety

My friendship with the peer- “I will have a small group of friends.” (8, 9,
group will be at stake. 23)

“My friends who sell amphetamine will have
lost profit from their business.” (8)

Note. * The numbers, following the example sentences, represent group numbers of patient in the GMI-BCBT

Dysfunctional thought related with amphetamine use

Patients attended 3 BCBT sessions, 1 session per week. They were given some homework to do by the therapists. After each BCBT session, patients discussed their risk situations, automatic thought, their feelings, alternative response and outcomes. They needed to understand the risk situations, how to deal with them and practice the alternative responses in order to reduce and abandon amphetamine use completely. (Table15). (N=100) During sessions most patients co-operated fully with the therapists.

Table 15

Patients' perceptions and key words that emerged in the content analysis from BCBT session: Example statements

A. High risk situation

Key words	Example*
(1) Family problems	<p>“My parents don't like me to do anything.”</p> <p>“When I go out my parents always complain.”</p> <p>“My sister blames me because I am unemployed.”</p>
(2) Peer pressures	<p>“I met my old friends who smoked amphetamine and they encouraged me to use amphetamine again.” “Yesterday, I felt very happy with my new job so I liked to celebrate with my friends.” “Many friends always smoke so I'd like to do the same.”</p>
(3) Social sanctions	<p>“Many people in the community always treat me like a mad man. They always call me “drug addict.” “I love my job so I try to do my best every time but when I make a mistake my boss and my friend always pick on me.”</p>

B. Automatic thought

Key words	Example*
(1) family problems	<p>“Nobody in my family cares about me anymore so drug use will make me feel better.”</p> <p>“My mum might not be happy if I travel at night. She might worry about my drug use.”</p>
(2) Peer Pressures	<p>“If I refuse to take drugs I will lose my friends.” “I thought I only tried it once; it shouldn’t have any effect.” “When I saw my friend use drug, I craved it too.”</p>
(3) Social sanctions	<p>“Everybody seems to have a negative perception of me and that really hurts.” “No one accepts me anymore.”</p>

C. Alternative response

Key words	Example*
(1) Family problems	<p>“My parents may worry about my own risk so they try to stop me going outside.” “My sister would like me to have a good job and live long; she doesn’t want anyone to look down on me.” “I think about my parents so I don’t want them worry about my drug use so I quit the drug. It is the best way to keep my parents</p>

- happy.”
- (2) Peer pressures “Amphetamine is harmful for me so I try to refuse my friends.” “I think celebration with my friend is a good idea but drug is not useful; it gives me headache and poor health.”
- (3) Social sanctions “Many people around me are like a mirror, reflecting feedback to me. This increases my self-awareness.” “My mistakes could affect my boss’ reputation so he had to tell me off sometimes--for future improvement.”

Outcome of thought restructuring

Following the intervention, most patients (n=100) said that when they initially came across risk situations that led to instant thought reactions, they briefly believed that those thoughts were likely to be real. Only after they had applied the alternative thought to these situations, their negative thought reactions turned more positive. Their depression was thus reduced from 80 percent to 20 percent.

Detail of amphetamine use

Following each BCBT session, therapists asked patients about their drug use especially for amphetamine and patients recorded detail in the Time Line Follow Back (TLFB) form. Additional details were provided as follow:

1.) Method for amphetamine use

All participants (N=200) described that they smoked amphetamine, using pipes. When the amphetamine smoke bubbled through the water and they took it via nasal insufflations.

2.) The reason of amphetamine drug use

Both groups gave similar reasons for taking other drugs to complement amphetamine, as follows.

They said that after they took amphetamine they smoked cigarettes to increase the effect of amphetamine.

The reason for drinking beer and alcohol was because both were readily available in daily life. Hence they could drink at their leisure or at parties. Seeing other people drinking certainly added to their own cravings.

Their reasons for taking amphetamine were twofold: they were often invited to join drug parties; they felt over-stressed and could not resolve the problems quickly enough.

For cannabis, they took it when friends asked them to join drug parties and when they wanted to have fun time with drugs.

3.) The reasons for taking other drugs after quitting amphetamine

Both groups always gave the same reasons for drug use after quitting amphetamine. They often smoked to wake themselves up. This helped them to get ready for work, especially those who worked as farmers or run their own business.

The well known drugs in southern area of Thailand are Kratom leaf and 4 × 100, commonly used after quitting amphetamine. This is because they are more available and cheaper than the other drugs. They said that they drank with their peer group to strengthen their friendships. Moreover, 4 × 100 helped them to relax.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This chapter provides discussion, a summary of this research study, and recommendations. The discussion is split between: (1) subjects' characteristics and (2) the efficacy of the Group motivation Interviewing plus Brief Cognitive Behavior Therapy (GMI-BCBT). The summary is divided into two parts. The first part focuses on conclusions based on the research results. The second part discusses the limitations of this study. Finally, the third part presents the recommendations of this research study.

DISCUSSION

Subjects' Characteristics

In this study, group comparisons were computed using independent t-tests and Chi square analyses. The results showed no significant differences in the variables of age, marital status, level of education, occupation, psychological illness problems, substance use history (Ice, cannabis, inhalant, heroine and Zolam), legal drug use history (alcohol, beer and cigarette), medical treatment and some concomitant disease (psychotic disorder, anxiety disorder and personality disorder) (all p 's > 0.05). Most of them were Thai male. The mean age of the patients was 24.98 (5.18). The characteristics of this population point to show several co occurring psychological problems which were often found in patients. Numerous studies have documented that men are more likely to consume amphetamine than women, (Baker, et al., 2004, Feeney, et al., 2006, Barrowclough, et al., 2009, Pluddemann, et al., 2010, and Essau, 2011).

Moreover, this study also found co-occurring psychological problems which so common in amphetamine user such as 59% mood disorder which show significant difference between group. Thai HADS scored also show higher scores at base line, anxiety score = 8.09 (4.72) and depressive scores = 7.61 (4.41) which confirm effect of amphetamine use. This is also supported by the preliminary research that was found in amphetamine user. Mood disorder was the most prominent psychological problem in 51.4 percent of subjects. Manic disorder was the most common finding, 42.3 %, follow by major depressive disorder, 34.9 percent. Amphetamine users were significantly more affected by panic attack and manic disorder than heroin users (p-value < 0.05) (K.Sinsak suvanchot, 1999).

Swendsen J., et al study the comorbidity of mental disorder and substance dependence, they were found that aggregate analyses demonstrated significant prospective risks posed by baseline mental disorders for the onset of nicotine, alcohol and illicit drug dependence with abuse over the follow-up period. Particularly strong and consistent associations were observed for behavioral disorders and previous substance use conditions, as well as for certain mood and anxiety disorders. Conditional analyses demonstrated that many observed associations were limited to specific categories of use, abuse or dependence, including several mental disorders that were non-significant predictors in the aggregate analyses (Swendsen, et al., 2010).

Common methamphetamine withdrawal symptoms include symptoms relating to depression, agitation, cognitive impairment and fatigue. These symptoms may last anywhere from a few days to a few months. Methamphetamine withdrawal is most commonly undertaken in an outpatient setting (Pennay and Lee, 2010).

Marshall and Werb also conducted a systematic review to identify scientific studies investigating health outcomes associated with methamphetamine use among young people aged 10–24 years. The International Classification of Diseases (ICD-10) was used to categorize outcomes and determine the level of evidence for each series of harms. They also identified 47 eligible studies for review. Consistent associations were observed between methamphetamine use and several mental health outcomes, including depression, suicidal ideation and psychosis. Suicide and overdose appear to be significant sources of morbidity and mortality among young methamphetamine users. This evidence confirmed for a strong association between methamphetamine use and increased risk of psychological problems. (Marshall and Werb, 2010).

Moreover, Salo R., et al. assess the prevalence of psychiatric co-morbidity in a large sample of methamphetamine dependent subjects using a validated structured clinical interview, without limitation to sexual orientation or participation in a treatment program. They was to assess whether the prevalence of psychiatric co-morbidities varied by gender. Structured clinical interviews (SCIDs) were administered to 189 methamphetamine dependent subjects and lifetime prevalence of DSM-IV diagnoses was assessed. Across the sample, 28.6% had primary psychotic disorders, 23.8% of which were substance induced; 13.2% had methamphetamine induced delusional disorders and 11.1% had methamphetamine induced hallucinations. A substantial number of lifetime mood disorders were identified that were not substance-induced 32.3%, whereas 14.8% had mood disorders induced by substances, and 10.6% had mood disorders induced by amphetamines. Of all participants, 26.5% had anxiety disorders and 3.7% had a substance-induced anxiety disorder, all of which were induced by methamphetamine. Male subjects reported a higher percentage of methamphetamine induced delusions compared to female abusers (Salo, et al., 2011).

In this study also found psychotic sign within amphetamine users and they were screen by MINI and found 1 % psychotic disorder life time, 12 % past manic episode. All of evidence are confirm about important co occurring psychological problems which we could concern when the patient join screening process at hospital in order to setting suitable treatment for them.

The two groups in this study did differ, however, according to adequacy of their income, chronic illness problems, History of 4 × 100 (boiling Kratom leaf with coke , cough syrup and the other drug such as Zolam) and history of kratom use. (all p 's < 0.05). These variables were treated as covariates in subsequent between-group comparisons.

The Efficacy of the Group Motivational Interviewing and Brief cognitive therapy (GMI-BCBT) plus usual care

Urine test and Thai HAD scores were used as the outcomes of impact of the GMI/BCBT plus usual practice in this study. The GMI/BCBT plus usual practice was significantly more efficacious than the usual practice only in reducing amphetamine use in psychiatric out-patient. Intervention group have more survival rate than the control group. The log rank test at the first urine test follow-up within 2 month after finish intervention session immediately and then survival rate by time between two groups gave significance value ($p < 0.01$). Mean of anxiety and depression scores were difference between groups at base line and it significantly reduction within group after finish intervention session at 2, 4, 6 months.

The GMI-BCBT plus usual practice was designed to (1) increase the awareness of risks associated with hazardous/harmful drug use especially for amphetamine use,

(2) enhance patients' motivation to join therapy , and (3) encourage patients to analyze high risk situation that make them sadly. Alternative way of thought will let them to practice and learning effect by their own in order to change their dysfunctional though and prepare suitable decision making in any situation in their life. This intervention model was intended to set up the stage of change. It assumed that change is likely to occur when the perceived benefits (advantages) of drinking are outweighed by the perceived costs (disadvantages) of continuing to drink (Miller and Rollnick, 2002).

This study show that The Motivational to Change ladder (MCL) scores of Intervention group was show significantly higher than control group within 3 follow-up sessions. Mean SR and MCL scores pre intervention were also lower than post intervention within intervention group. This result show that GMI session can build up motivation of the patient to comply with therapy more than usual care only. Referring back to the transtheoretical model (TTM) and stages of change, the patient are able to pass the pre-contemplation stage, the contemplation stage, the preparation stage, and stay in the maintenance stage at the two month after intervention. Some research was found that patients with chemical dependency and a co-morbid psychiatric disorder typically show poor compliance with aftercare treatment after join with GMI program, they increased some motivation to attend aftercare, thereby promoting greater treatment attendance (Ana, Nietert, and Wulfert, 2007). Some research also found that patients who attended aftercare and who used alcohol or drugs, those who participated in GMI attended significantly more aftercare treatment sessions, consumed less alcohol, and engaged in less binge drinking at follow-up compared with those in a therapist attention activity control group (Nietert, 2007). That is the reason of compliance with treatment after join GMI session of intervention group. The motivation change and self efficacy score has been shown in table 6 that mean MCL and SR scores before the intervention were higher than after the intervention.

Both groups show similar pattern of drug use within two weeks follow-up. Intervention group used other illegal and legal drug use accompany with amphetamine less than control group. This result show that intervention group had more awareness of risk prevention and concern about harm reduction concept of drug use. Base on cognitive model and brief therapy technique, therapist focus on cognitive model to enhance patients to recognize their high risk situation, though, emotion and explicit behavior. Then, therapist let patients accomplish the patient dysfunctional of thought. They are able to think more clearly, feel better, and make better decisions by dysfunctional though analysis table. Most of them can reveal high risk situation and restructure dysfunctional of though when they do their home work and go to practice. These results provided evidence of efficacy of the intervention in support of the model. Some study assigned randomly to either an active treatment (two or four sessions of CBT in addition to a self-help booklet) or control condition. A nine-block randomization schedule was used, which was coordinated by an independent clinical trials researcher. Assessments were scheduled at pretreatment, post-treatment (5 weeks following pretreatment assessment) and 6 months following the post-treatment assessment. Assessments were conducted by trained interviewers who were blind to participants' treatment allocation. The reason was shown that there was a significant increase in the likelihood of abstinence from amphetamines among those receiving two or more treatment sessions. In addition, the number of treatment sessions attended had a significant short-term beneficial effect on level of depression. There were no intervention effects on any other variables (HIV risk taking, crime, social functioning and health). Overall, there was a marked reduction in amphetamine use among this sample over time and, apart from abstinence rates and short-term effects on depression level, this was not differential by treatment group. Reduction in amphetamine use was accompanied by significant improvements in stage of change, benzodiazepine use,

tobacco smoking, poly-drug use, injecting risk-taking behavior, criminal activity level, and psychiatric distress and depression level (Baker, Lee, et al., 2005)

In this study, the results showed that mean baseline Thai HADS scores were lower for patients in the intervention group compared with those in the control group. However, ACOVAs statistic show Thai HADS mean scores non-significant difference between both group and has less effect size ($d < .001$). This result means that usual care (Brief advice, brief intervention and medication) have a good effect to reduce anxiety and depression rate of amphetamine use. That confirm by some systemic review which explored RCT study from 14 trials meeting their inclusion criteria. The majority of this research focused on substance use and mental health problems ($n = 8$) whilst the remaining trials focused on substance use and physical health problems ($n = 3$) and dual substance use ($n = 3$). The evidence-base was very heterogeneous and it was not possible to quantitatively pool the trial outcome data. There were generally positive outcomes of brief intervention targeting substance use and co-morbid physical health conditions but the evidence in the other two areas was equivocal. In the area of substance use and mental health problems, there were often significant changes reported for both intervention and control groups over time. Brief intervention tended to produce positive effects in patients with substance use and co-morbid physical health problems. However, there was a limited amount of research work in this area. The evidence of positive brief intervention effects in patients with substance use and mental health problems or dual substance use was less convincing (Kaner, Brown, and Jackson, 2011).

Moreover, most patients perceived that they were satisfied with the GMI-BCBT sessions. They gave many reasons regarding their satisfaction. First, this intervention is a new technique where all group members are given space to share

knowledge, experiences, and feelings. Second, it does not look down on patients who have drug addiction problems. Third, patients are the ones who create the stages for changing their drug use behavior. Fourth, they weigh the advantages/benefits and disadvantages/costs concerning their amphetamine use and its adverse effect by themselves. Finally, this intervention is not time consuming and is only 30 – 40 minutes per one session. In addition, patients also perceived that their personal the way of succession card was useful in curbing their amphetamine use. This card was created carefully by the themselves which compose of goal setting, positive thinking, accomplishment task and social support. This card can help them to recall their self commitment and help them to make suitable discussion about high risk situations and drug use. Same as Wipawan she also found that students also perceived that their personal commitment card was useful in curbing their heavy drinking and adverse consequences. This card was created collaboratively by the individual and his peers and included a commitment, personal and group goal, and harm reduction strategies (Wipawan C. Pensuksan, Surasak Taneepanichkul, and Williams, (2010).

The GMI implemented the principles of motivational interviewing: develop discrepancy, avoid argumentation, roll with resistance, express empathy, and support self-efficacy. This intervention also used collaborative MI methods, including open-ended questioning, affirmative, reflective listening, summarization, and elicit change talk or self-motivating speech. These methods aid in exploring ambivalence, promoting participants' self-efficacy, and encouraging the individual's motivation to change their amphetamine use among amphetamine dependence patient.

The BCBT implement the principle of cognitive behavior therapy: the five aspect model, Socratic dialoged, Understanding idiosyncratic meaning, Challenging absolutes, Reattribution, Labeling of distortion, Decatastrophizing, Challenging all or nothing

thinking, Cognitive rehearsal, Listing advantages and disadvantage. This method encouraged patient to assesses their high risk situation and restructure their negative thought to be positive by thinking about alternative way and assess the outcome. If they could not change anything they could arrange their mood suitability. Then, they can change their thought in positive way.

This present study uses GMI techniques for reducing drug and alcohol consumption such as Labries W.J., et al examines the effectiveness of a single session group motivational enhancement intervention with college students adjudicated for violation of alcohol policy revealed significant reductions in drinking behavior across time on all drinking variables for all participants. There also was a significant gender x time interaction effect for drinks per month (Labries, Lamp, Pedersen, Quinlan, 2006). Wipawan also evaluate alcohol harm reduction strategies, administered as the PD-GMI, among Thai male undergraduates. The PD-GMI used in this study resulted in statistically significant reductions in alcohol consumption and adverse consequences of alcohol use. This intervention was designed to increase the awareness of risks associated with hazardous/harmful alcohol consumption, enhance students' motivation to change their drinking behaviours, and encourage harm reduction strategies during episodes of alcohol consumption. The PD-GMI implemented the principle of motivational interviewing which includes specific protocols for promoting participants' self-efficacy and motivation for changing their drinking behaviours. These techniques were facilitated by having groups of students who were well known to each other, and thus comfortable with engaging in candid discussions about their current alcohol consumption behaviour patterns, adverse consequences, and positive outcomes. The group MI-based atmosphere provided students with the opportunity and means to discuss their attitudes and concerns maintaining friendships while changing

their alcohol consumption patterns (Wipawan Chaoum Pensuksan, Surasak Taneepanichkul, and Williams, 2010).

Baker, and et al was conducted CBT program among 214 regular amphetamine users. Main finding of this study was that there was a significant increase in the likelihood of abstinence from amphetamines among those receiving two or more treatment sessions. In addition, the number of treatment sessions attended had a significant short-term beneficial effect on level of depression. Overall, there was a marked reduction in amphetamine use among this sample over time and, apart from abstinence rates and short-term effects on depression level, this was not differential by treatment group. Reduction in amphetamine use was accompanied by significant improvements in stage of change, benzodiazepine use, tobacco smoking, polydrug use, injecting risk-taking behaviour, criminal activity level, and psychiatric distress and depression level. Regular amphetamine users who present to treatment settings could be offered two sessions of CBT, while people with moderate to severe levels of depression may best be offered four sessions of CBT for amphetamine use from the outset, with further treatment for amphetamine use and/or depression depending on response (Baker A., Lee N.K., et al., 2005).

CONCLUSIONS

This study's findings indicated that group motivational interviewing and brief cognitive behavior therapy (GMI-BCBT) plus usual care was effective in reducing amphetamine use rate within 3 month. The GMI-BCBT intervention was designed to (1) increase the awareness of risk associated with hazardous/harmful amphetamine use, (2) enhance patients' motivation to join treatment sessions, and (3) encourage them to analyze their dysfunctional thought and deal with high risk situation suitable

and effectively. These results provide preliminary evidence of the effective intervention for reducing amphetamine use among drug addiction patients at out-patient department in psychiatric hospital.

The analysis of survival rate showed that patients in the intervention group displayed significant survival rate at first time follow up (2 month after intervention) However, patients in the intervention and control group also had significant reductions of anxiety and depressive scores at follow up 2 and 3 Thus, as hypothesized, the findings support the idea that four sessions of GMI-BCBT administered as a plus therapy with usual care is effective in increasing survival rate of amphetamine use

The strengths of the present study include 90% of the sample complete follow-up rates. The strategies included the following for both group. There were three steps. First, in follow up time of out-patient department, they would like to consult their problems and require for medication to relief their psychiatric sign and symptom. Second, the researcher provide available of telephone number to contact easily and rapidly and then make a phone call to assess their behavior and problems continuously. Moreover, researcher contact with their relative or couple to assess data continuously. All patients feel satisfaction with follow up process that did not disturbed their job and leisure time

Limitations

The researcher acknowledges that there are some limitations in the present study. First, this study was to study the efficacy of GMI-BCBT plus usual care without limited to sexual orientation or participation in the program but when researcher screen the sample by inclusion criteria we found that male patient more than

female so this study try to focused specifically on male patients who suffer from amphetamine dependence in southern region of Thailand. Therefore, the study results may not generalize beyond this specific group. Second, the quasi-experimental approach did not succeed in creating equivalence between study groups. This important limitation hinders causal inferences. Multi-site studies with block randomization of enrolled subjects across each site will overcome this limitation in future studies. Due to the difficulties of self reporting in TLFB, amphetamine users was likely to reported patterns of use under or over estimate in quantity and frequency of amphetamine use. To mitigate the impact of recall bias and increase response validity, the researchers provided patients with assurances of anonymity and confidentiality. The researchers also stressed the importance of truthful responses and used multiple validated data collection instruments to assess patient' thought and affect.

RECOMMENDATIONS

The recommendations of the study are presented in two parts. The first part discusses implications for practice. The second part focuses on implications for research.

Implications for Practice

The findings confirm that the GMI-BCBT plus usual care is the more efficacious intervention in reducing amphetamine use within 3 months among patient who go to out-patient clinic in psychiatric hospital. Psychiatric hospital should develop brief intervention and brief advice integrated with GMI-BCBT intervention in order to

reducing complexity of therapy and set GMI-BCBT training program for staff. This study has positive implications for usual care efforts among Matrix clinic and Fasai clinic to follow up result of therapy in daily life of patient to prevent loss of follow up and increase motivation to join treatment and psychotherapy. The intervention demand additional resources such as counseling room and qualify staff in order to apply in real situation of drug addiction therapy at out-patient care in psychiatric hospital. If our results are confirmed in larger study populations, public health and health care providers should consider implementing programs such as this one as part of an overall psychotherapy for any addiction center.

Implications for Research

This study provides evidence that the GMI-BCBT holds significant influence in reducing amphetamine using rate within 3 after the intervention. In considering the limitations of the present study, more research is needed to evaluate the full efficacy of this intervention. Further research should consider multi-site samples, which may adjust for clustering in future randomized controlled trials. Future research in this area should also examine how GMI-BCBT plus usual care intervention or GMI-BCBT intervention only differs across gender, religion, culture, and for other addictive behaviors.

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ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



APPENDICES

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



APPENDIX A
RESEARCH INSTRUMENTS

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

แบบสอบถามข้อมูลทั่วไปผู้ป่วยติดสารเสพติดเกี่ยวกับสภาพทางจิต-สังคม

ข้อมูลส่วนบุคคล

HN

1. เพศ ชาย หญิง
2. วันเดือนปีเกิด..... อายุ.....ปี
3. สถานภาพ โสด คู่ หม้าย หย่า แยก
4. เชื้อชาติ ไทย อื่นๆ ระบุ.....
5. สัญชาติ ไทย อื่นๆ ระบุ.....
6. ระดับการศึกษา ไม่ได้เรียนหนังสือ ประถมศึกษา มัธยมศึกษา
 สายอาชีพ ระบุ..... อุดมศึกษา
 อื่นๆ ระบุ.....
7. ลักษณะการประกอบอาชีพในปัจจุบัน
 ว่างาน ทำธุรกิจส่วนตัว ระบุ..... แม่บ้าน
 นักศึกษา ผู้ใช้แรงงาน รับราชการ อื่นๆ ระบุ.....
8. รายได้จากการประกอบอาชีพต่อเดือนโดยเฉลี่ย.....บาท
9. รายได้เพียงพอกับรายจ่ายหรือไม่ เพียงพอ ไม่เพียงพอ

ประวัติครอบครัว

10. คุณมีพี่น้องจำนวน.....คน
11. คุณเป็นบุตรคนที่เท่าไรของครอบครัว
 คนที่ 1 คนที่ 2 คนที่ 3 อื่นๆ
ระบุ.....
12. กรุณาระบุรายละเอียดการเลี้ยงดูของบิดามารดาที่มีต่อตัวคุณ
 รักและเอาใจใส่ ปล่อยปละละเลย
 อื่น ๆ ระบุ.....
13. คุณมีความรู้สึกอย่างไรต่อวิธีการเลี้ยงดูที่บิดามารดากระทำต่อตัวคุณ
 ฟังพอใจ ไม่ฟังพอใจ
 อื่น ๆ ระบุ.....

เครื่องมือประเมินภาวะการใช้ยาบ้าด้วยตนเองของผู้เสพยาบ้า (Motivation for change ladder, MCL)

โดยประเมินจากการปีนบันได ว่าทำได้สูงเพียงใด ตามความเป็นจริง โดยวงกลมรอบข้อตรงกับตัวเองมากที่สุด



ขณะนี้ฉันอยู่ที่บันได ขั้นที่

พัฒนาจาก The contemplation ladder, Biener and Abram (1991)

แบบวัดศักยภาพในการปรับเปลี่ยนพฤติกรรม

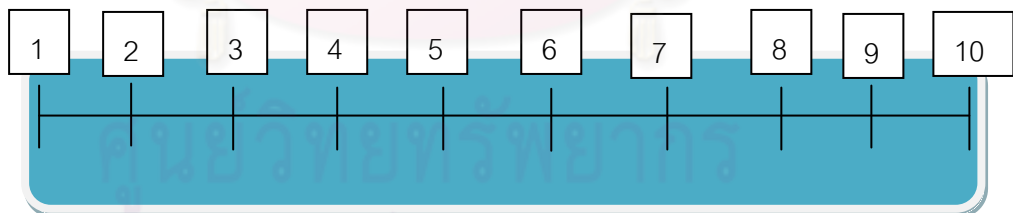
The self efficacy ruler (SR)

HN.....

จงวงกลมล้อมรอบตัวเลขที่ท่านคิดว่าตรงกับความคิดของท่านมากที่สุด

ไม่มีศักยภาพ
ในการปรับ
พฤติกรรม
ตนเอง

มีศักยภาพ
ในการปรับ
พฤติกรรม
ตนเอง
สูงสุด



จุฬาลงกรณ์มหาวิทยาลัย

M.I.N.I.

Mini International Neuropsychiatric Interview

Thai version 5.0.0-Revised 2007 DSM-IV

A. MAJOR DEPRESSIVE EPISODE

(→ หมายถึง: ให้ไปที่กรอบการวินิจฉัย, วงกลมล้อมรอบคำว่า "ไม่ใช่" ในทุกกรอบการวินิจฉัย, แล้วข้ามไปทำชุดต่อไป)

A1	ในช่วง 2 สัปดาห์ที่ผ่านมา, คุณมีอาการซึมเศร้า หรือ ห่อเหี่ยวตลอดเวลา, เกือบทั้งวัน, เกือบทุกวันหรือไม่?	ไม่ใช่	ใช่
A2	ในช่วง 2 สัปดาห์ที่ผ่านมา, คุณเบื่อหน่าย สนใจเรื่องต่าง ๆ ลดลงอย่างมาก หรือ แทบจะไม่รู้สึกสนุกเหมือนเดิม เกือบตลอดเวลาหรือไม่?	ไม่ใช่	ใช่
ข้อ A1 หรือ A2 ข้อใดข้อหนึ่ง ตอบว่า "ใช่" ใช่หรือไม่?		→ ไม่ใช่	ใช่

A3	ในช่วง 2 สัปดาห์ดังกล่าว, ขณะที่คุณมีอาการซึมเศร้าหรือเบื่อหน่ายนั้น คุณมีอาการต่อไปนี้หรือไม่?		
a	คุณเบื่ออาหาร หรืออยากรับประทานอาหารเพิ่มขึ้น เกือบทุกวัน หรือไม่? น้ำหนักตัวของคุณลดลงหรือเพิ่มขึ้นโดยที่คุณไม่ได้ตั้งใจที่จะลดหรือเพิ่ม หรือไม่? (เช่น ใน 1 เดือนมีน้ำหนักเพิ่มขึ้นหรือลดลง 5% ของน้ำหนักตัว หรือ ในคนที่มีน้ำหนัก 50 กก. มีน้ำหนักเพิ่มหรือลดลงประมาณ 2.5 กก.) คำตอบว่า "ใช่" ในข้อใดข้อหนึ่ง, ให้ลงคำตอบว่า "ใช่"	ไม่ใช่	ใช่*
b	คุณมีปัญหการนอนหลับเกือบทุกคืน (เช่น หลับยาก, ตื่นกลางดึก, ตื่นเช้ามืดกว่าปกติ หรือนอนมากกว่าปกติ) หรือไม่?	ไม่ใช่	ใช่
c	คุณพูดช้าลงหรือทำอะไรช้าลงกว่าปกติ หรือคุณรู้สึกหงุดหงิด, กระสับกระส่าย หรือ นั่งอยู่นิ่ง ๆ ไม่ได้ เกือบทุกวัน หรือไม่?	ไม่ใช่	ใช่*
d	คุณรู้สึกอ่อนเพลีย หรือไม่มีแรง เกือบทุกวัน หรือไม่?	ไม่ใช่	ใช่
e	คุณรู้สึกไม่มีค่าหรือรู้สึกผิด เกือบทุกวัน หรือไม่?	ไม่ใช่	ใช่
f	คุณไม่มีสมาธิ หรือตัดสินใจลำบาก เกือบทุกวัน หรือไม่?	ไม่ใช่	ใช่
g	คุณเคยคิดที่จะทำร้ายตัวเอง, อยากฆ่าตัวตาย, หรืออยากตาย ฆ่า ๆ หรือไม่?	ไม่ใช่	ใช่

+

ข้อ (A1-A3) ตอบว่า "ใช่" อย่างน้อย 5 ข้อ ใช่หรือไม่?

ไม่ใช่

ใช่*

**MAJOR DEPRESSIVE
EPISODE, CURRENT**

แบบสอบถาม Hospital Anxiety and Depression Scale ฉบับภาษาไทย (Thai HADS)

อารมณ์ความรู้สึกเป็นส่วนสำคัญส่วนหนึ่งของการเจ็บป่วย ถ้าผู้ดูแลรักษาผู้ป่วยเข้าใจสภาพอารมณ์ความรู้สึกเหล่านี้ของท่าน ก็จะช่วยให้การช่วยเหลือ และดูแลท่านได้ดียิ่งขึ้น

แบบสอบถามชุดนี้มีจุดมุ่งหมายที่จะช่วยให้ผู้ดูแลรักษาท่าน เข้าใจอารมณ์ความรู้สึกของท่านในขณะที่เจ็บป่วยได้ดีขึ้น กรุณาอ่านข้อความแต่ละข้อ และทำเครื่องหมายถูก ในช่องคำตอบที่ใกล้เคียงกับความรู้สึกของท่าน ในช่วง 1 สัปดาห์ที่ผ่านมา มากที่สุด และกรุณาตอบทุกข้อ

1. ฉันรู้สึกดีใจเครียด

() เป็นส่วนใหญ่ () บ่อยครั้ง

() เป็นบางครั้ง () ไม่มีเลย

2. ฉันรู้สึกเพลิดเพลินใจกับสิ่งต่างๆ ที่ฉันเคยชอบได้

() เหมือนเดิม () ไม่มากเท่าแต่ก่อน

() มีเพียงเล็กน้อย () เกือบไม่มีเลย

3. ฉันมีความรู้สึกกลัว คล้ายกับว่ากำลังจะมีเรื่องไม่ดีเกิดขึ้น

() มี และค่อนข้างรุนแรงด้วย () มี แต่ไม่มากนัก

() มีเพียงเล็กน้อย และไม่ทำให้กังวลใจ () ไม่มีเลย

บัตรนัด (Follow up card)



ผู้เข้าร่วมโครงการวิจัย ฯ

ชื่อสกุล.....

HN:.....ID: อายุ

..... ปี

วันที่นัดเวลา น.

นัดพบพยาบาลชื่อ

สถานที่.....

* พยาบาลแผนก OPD กรุณาโทรประสานที่หมายเลข

.....

การเตรียมตัวเพื่อร่วมการ
บำบัดในครั้งนี้สำหรับท่าน

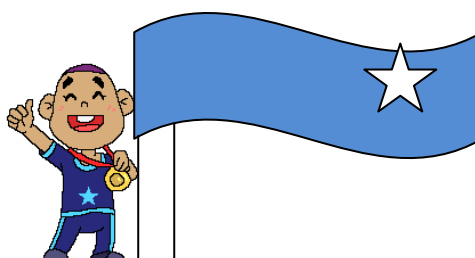
1.จัดเตรียมเอกสารที่ต้องใช้
เช่น บัตรผู้ป่วย,
แบบสอบถามปริมาณการใช้
ยาบ้า

2.มาพบพยาบาลตรงตามวัน
เวลาที่นัด หากไม่สามารถมา
ในวันเวลาดังกล่าวได้ให้แจ้ง
เลื่อนล่วงหน้าอย่างน้อย 1
สัปดาห์เพื่อจัดวันนัดใหม่



ศูนย์วิทยพัชกร
จุฬาลงกรณ์มหาวิทยาลัย

หนทางสู่ความสำเร็จ
(The way of succession)



เป้าหมายในชีวิตของ
คือ **ลด ละ เลิก ยาเสพติด.....**

ความคิดในแง่บวก

สิ่งที่ได้สำเร็จและสร้างความภาคภูมิใจ

ปัจจัยที่ส่งเสริม สนับสนุนเป็นกำลังใจให้เลิกยาเสพติด

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

แบบสอบถามปริมาณการใช้ยาบ้า (Time line follows back, TLFB)

คำชี้แจง แบบสอบถามชุดนี้จะสอบถามเกี่ยวกับปริมาณการใช้ยาบ้าของท่านในแต่ละวัน

- โดยขอความกรุณาให้ท่านระบุรายละเอียดตามประเด็นข้อสอบถามในแต่ละวันที่ได้ใช้จริง ภายในช่วงเวลา 1 เดือนที่ผ่านมา หรือ 4 สัปดาห์ที่ผ่านมา
- ในวันที่ท่านมิได้ใช้สารเสพติดใดเลยให้ใส่เลขศูนย์ “0” ในช่องที่ระบุข้อความว่า “จำนวน ครั้ง/ ปริมาณยาบ้าที่ใช้”
- ในช่องวิธีการใช้ให้ระบุวิธีการที่ท่านเสพ เช่น สูบ, ฉีด หรือ ใช้วิธีอื่น ๆ ตามที่ท่านใช้จริง
- ช่องยาเสพติดที่ใช้ร่วมกันให้ท่านระบุว่ามีการใช้ยาเสพติดใด ก่อนใช้ยาบ้า, ขณะที่ท่านใช้ยาบ้า หรือ หลังจากที่ท่านใช้ยาบ้าในวันนั้น เช่น บุหรี่ สุรา ฯลฯ
- ส่วนเหตุการณ์ที่นำไปสู่การใช้ยาบ้าแต่ละครั้งให้ท่านทบทวนว่ามีสถานการณ์ใดที่จูงใจให้ท่านหวนกลับมาใช้ยาซ้ำอีก เช่น เพื่อนชักชวน ปัญหาความเครียด ฯลฯ
- โดยอาจจะใช้ประกอบกับข้อมูลจากสมุดบันทึกประจำตัวของท่าน

รหัสผู้ตอบแบบสอบถาม.....

ชื่อผู้สัมภาษณ์.....

ชื่อผู้ตรวจรหัส.....

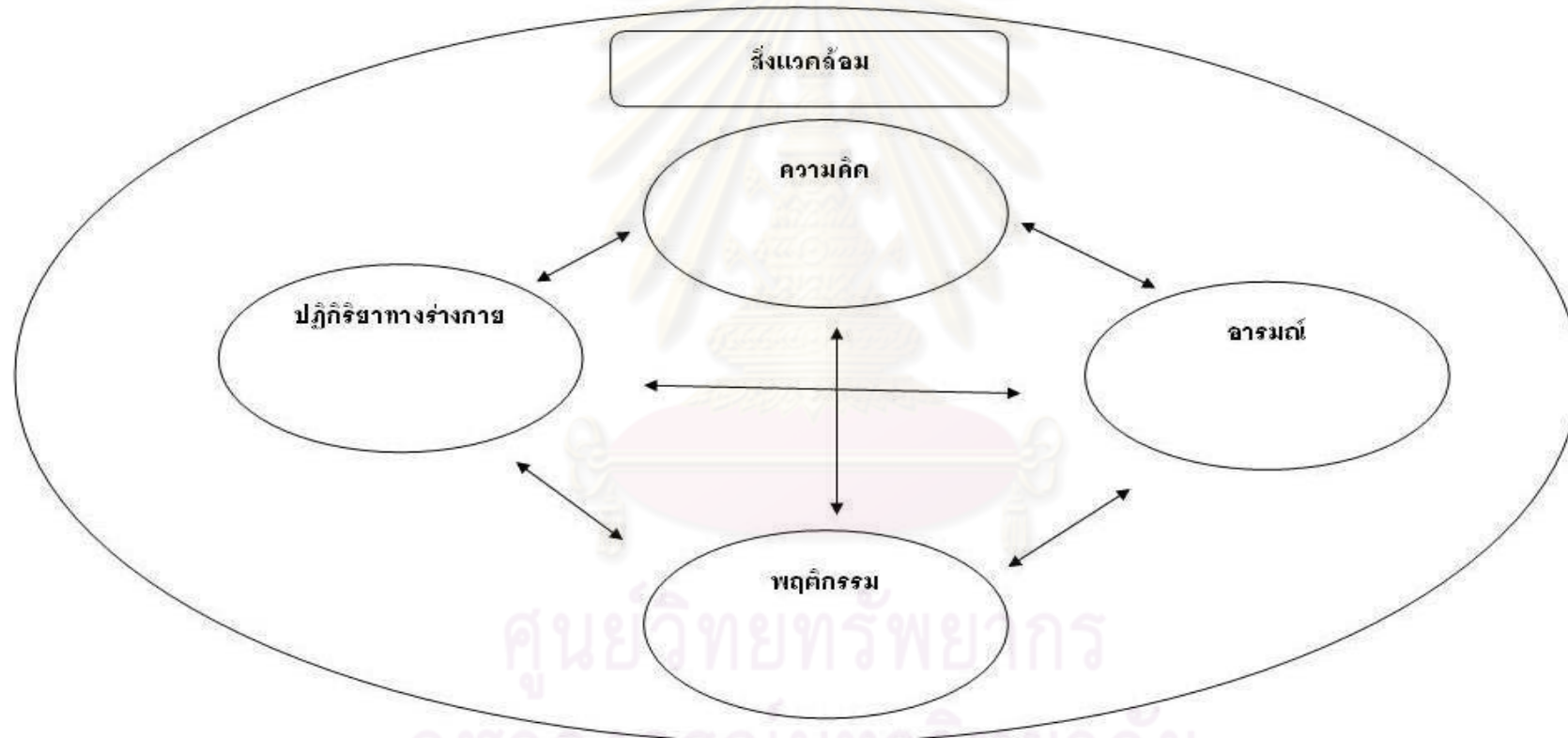
(Time line follows back, TLFB)

ข้อมูล	จันทร์	-----	อาทิตย์
จำนวนครั้ง/ปริมาณ ยาที่ใช้			
วิธีการใช้			
ยาเสพติดที่ใช้ร่วม ปริมาณและวิธีการใช้			
เหตุการณ์ที่นำสู่การ ใช้ยาเสพติดในครั้งนี้			

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

แผนภูมิความคิด

เป้าหมายในการนำมัลครังนี้.....



อ้างอิงจาก Greenberger and Padesky 1995: 4 cited in Alec Grant and et al, 2004

สงวนลิขสิทธิ์ ห้ามนำเผยแพร่ก่อนได้รับอนุญาต พ.ศ. 2553 พัฒนาโดย นาย ก.สินศักดิ์ สุวรรณโชติ นิสิต ปริญญาเอก สาขา วิจัยเพื่อการพัฒนาสุขภาพ จุฬาลงกรณ์มหาวิทยาลัย

ตารางบันทึกความคิดและอารมณ์

คำแนะนำ: เมื่อคุณรู้สึกแย่/ไม่ดี ให้ถามตัวเองว่า “ฉันกำลังคิดอะไรและใจของฉันรู้สึกอย่างไร?”
แล้วบันทึกลงในตารางนี้

วันที่	เหตุการณ์	ความคิดแรก/ ความคิดที่เกิดขึ้นทันที	อารมณ์	การพิจารณา ความคิดที่เกิดขึ้น	สิ่งที่ได้จากการพิจารณา ความคิด
20/ม.ค./53	เหตุการณ์ที่ทำให้คุณรู้สึกแย่/ไม่ดี ...วันนี้เพื่อนของฉัน ไม่โทรหาฉัน เลย....	ความคิดแรกที่เมื่อ เหตุการณ์นั้น เขาไม่คิดถึงฉันเลย..... (ความคิดที่เกิดขึ้นมี โอกาสเป็นจริงได้กี่ เปอร์เซ็นต์)90.....เปอร์เซ็นต์	อารมณ์ที่เกิดขึ้นจาก ความคิดแรกคืออะไรบ้าง อารมณ์คือ กังวล 90% เศร้า90..... % เสียใจ % น้อยใจ80..... % โมโห % โกรธ % อื่น ๆ %	ความคิดแรกก่อให้เกิดผลเสียต่อคุณอย่างไรบ้าง ..ทำให้ฉันรู้สึกแย่ และสูญเสียความมั่นใจในตัวเอง.. จากเหตุการณ์ที่เกิดขึ้นคุณสามารถคิดเป็นอย่างอื่นได้ หรือไม่ อย่างไรบางทีเขาคงยุ่งมาก หรือ ตีมิโทร.....ถ้าคิดในแง่ที่สุด เขาคงจะไม่โทรมาอีกเลย ฉันควร อยู่ให้ได้ ถ้าคิดในแง่ที่สุด เขาจะโทรมาตอนนี้ แต่ที่ เป็นไปได้มากที่สุดคือ ไม่นานนี้ก็โทรงี้ เขาจะโทรมา.....การที่เชื่อว่าเขาไม่คิดถึงฉันเลย ทำให้ฉันรู้สึกแย่ แต่ ถ้าฉันคิดได้ว่า ฉันอาจจะเข้าใจผิด ทำให้ฉันรู้สึกมี ความหวัง..... 1.) หากมีเหตุการณ์นี้เกิดขึ้นอีกคุณจะทำอย่างไรเพื่อให้ เกิดผลดีต่อตัวเองและคนรอบข้างฉันจะโทรหาเขาเอง..... 2.) หากเหตุการณ์นี้เกิดขึ้นกับเพื่อนสนิทของคุณ คุณจะ แนะนำเพื่อนอย่างไรถ้าเหตุการณ์นี้เกิดขึ้นกับเพื่อนสนิทของฉันชื่อ แอน ฉันจะบอกแอน ให้โทรหาเขา	1.) หลังจากได้พิจารณา ความคิดที่เกิดขึ้น คุณให้ค่า ความคิดแรกว่ามีโอกาสเป็น จริงได้กี่เปอร์เซ็นต์ความคิดแรกที่ว่าเขาไม่ คิดถึงฉันเลย ตกลงเหลือ 70%..... 2.) อารมณ์ที่เกิดขึ้นจาก ความคิดแรกเพิ่มขึ้น/ลดลง/ เท่าเดิม คิดเป็นกี่เปอร์เซ็นต์เศร้าลดลงเหลือ 60%.....น้อยใจคงเท่าเดิม 80%..... 3.) สิ่งที่คุณคิดจะทำต่อไปใน อนาคตที่จะเป็นผลดีต่อคุณ และคนรอบข้างคือสิ่งที่ฉันจะทำคือ ฉันจะ โทรหาเขาเอง และปรับความ เข้าใจกับเขา.....

อ้างอิงจาก Cognitive therapy: Basic and Beyond, Guilford Press, 1995.

สงวนลิขสิทธิ์ ห้ามนำเผยแพร่ก่อนได้รับอนุญาต พ.ศ. 2553 พัฒนาโดย นาย ก.สินศักดิ์ สุวรรณโชติ นิสิตปริญญาเอก สาขา วิชาวิจัยเพื่อการพัฒนาศูนย์สุขภาพ จุฬาลงกรณ์มหาวิทยาลัย

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



APPENDIX B
PROTECTION OF HUMAN SUBJECTS' RIGH

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

หนังสือแสดงความยินยอมเข้าร่วมการวิจัย

ทำที่.....

วันที่.....เดือน.....พ.ศ.

เลขที่ ประชากรตัวอย่างหรือผู้มีส่วนร่วมในการวิจัย.....

ข้าพเจ้า ซึ่งได้ลงนามท้ายหนังสือนี้ ขอแสดงความยินยอมเข้าร่วม โครงการวิจัย

ชื่อ โครงการวิจัย “ประสิทธิภาพของกลุ่มเสริมสร้างแรงจูงใจและบำบัดทางความคิดอย่างย่อต่อภาวะการเสพยาของผู้ป่วยเสพยาบ้าร่วมกับโรคร่วมทางจิตเวชที่มารับการรักษา ณ แผนกผู้ป่วยนอกโรงพยาบาลจิตเวชภาคใต้ ประเทศไทย”

ชื่อผู้วิจัย นาย ก.สินศักดิ์ สุวรรณโชติ

ที่อยู่ติดต่อ 39/1 หมู่ 2 ตำบล ทุ่งกง อำเภอกาญจนดิษฐ์ จังหวัด สุราษฎร์ธานี

โทรศัพท์ 083-1749303

ข้าพเจ้า ได้รับทราบรายละเอียดเกี่ยวกับที่มาและวัตถุประสงค์ในการทำวิจัย รายละเอียดขั้นตอนต่างๆ ที่จะต้องปฏิบัติหรือได้รับการปฏิบัติ ความเสี่ยง/อันตราย และประโยชน์ซึ่งจะเกิดขึ้นจากการวิจัยเรื่องนี้ โดยได้อ่านรายละเอียดในเอกสารชี้แจงผู้เข้าร่วมการวิจัยโดยตลอด และได้รับคำอธิบายจากผู้วิจัย จนเข้าใจเป็นอย่างดีแล้ว

ข้าพเจ้าจึงสมัครใจเข้าร่วมในโครงการวิจัยนี้ ตามที่ระบุไว้ในเอกสารชี้แจงผู้เข้าร่วมการวิจัย โดยข้าพเจ้ายินยอม ตอบแบบสอบถามและรับการสัมภาษณ์เพื่อคัดกรองโรคทางจิตเวช เข้าร่วมกลุ่มเสริมสร้างแรงจูงใจในการบำบัดยาเสพติด 1 ครั้ง และ รับการบำบัดทางความคิดเป็นรายบุคคล จำนวนทั้งสิ้น 3 ครั้ง รวมทั้งมีการติดตามผลการบำบัดโดยการตอบแบบบันทึกและแบบสอบถามเพื่อติดตามผลการบำบัดยาเสพติด และรับการตรวจปีสภาวะตามระยะเวลาที่กำหนด รายละเอียด 3 ครั้ง (หลังการบำบัด 2, 4 และ 6 เดือน)

ข้าพเจ้ามีสิทธิถอนตัวออกจากการวิจัยเมื่อใดก็ได้ตามความประสงค์ โดยไม่ต้องแจ้งเหตุผล ซึ่งการถอนตัวออกจากการวิจัยนั้น จะไม่มีผลกระทบในทางใดๆ ต่อข้าพเจ้าทั้งสิ้น โดยข้าพเจ้าจะได้รับการรักษาพยาบาลเช่นเดิม

ข้าพเจ้าได้รับคำรับรองว่า ผู้วิจัยจะปฏิบัติตามข้าพเจ้าตามข้อมูลที่ระบุไว้ในเอกสารชี้แจงผู้เข้าร่วมการวิจัย และข้อมูลใดๆ ที่เกี่ยวข้องกับข้าพเจ้า ผู้วิจัยจะเก็บรักษาเป็นความลับ โดยจะ

นำเสนอข้อมูลการวิจัยเป็นภาพรวมเท่านั้น ไม่มีข้อมูลใดในการรายงานที่จะนำไปสู่การระบุตัว
ข้าพเจ้า

หากข้าพเจ้าไม่ได้รับการปฏิบัติตรงตามที่ได้ระบุไว้ในเอกสารชี้แจงผู้เข้าร่วมการวิจัย
ข้าพเจ้าสามารถร้องเรียนได้ที่คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่
1 จุฬาลงกรณ์มหาวิทยาลัย ชั้น 4 อาคารสถาบัน 2 ซอยจุฬาลงกรณ์ 62 ถนนพญาไท เขตปทุมวัน
กรุงเทพฯ 10330

โทรศัพท์ 0-2218-8147 โทรสาร 0-2218-8147 E-mail: eccu@chula.ac.th

ข้าพเจ้าได้ลงลายมือชื่อไว้เป็นสำคัญต่อหน้าพยาน ทั้งนี้ข้าพเจ้าได้รับสำเนาเอกสารชี้แจง
ผู้เข้าร่วมการวิจัย และสำเนาหนังสือแสดงความยินยอมไว้แล้ว

ลงชื่อ.....

(นาย.กสินศักดิ์ สุวรรณโชติ)

ผู้วิจัยหลัก

ลงชื่อ.....

(.....)

ผู้มีส่วนร่วมในการวิจัย

ลงชื่อ.....

(.....)

ศูนย์วิทยทรัพยากร พยาน
จุฬาลงกรณ์มหาวิทยาลัย

หนังสือแสดงความยินยอมเข้าร่วมการวิจัย

สำหรับผู้ป่วย/ ผู้ปกครอง/ ผู้ดูแล

ทำที่

วันที่ เดือน.....พ.ศ.

เลขที่ ประชากรตัวอย่างหรือผู้มีส่วนร่วมในการวิจัย

ข้าพเจ้า ซึ่งได้ลงนามทำหนังสือนี้เกี่ยวข้องเป็น (โปรดระบุเป็น พ่อ/แม่/ผู้ปกครอง/ผู้ดูแล
ของ.....(ชื่อผู้มีส่วนร่วมในการวิจัย) ขอแสดงความยินยอมให้ผู้
อยู่ในปกครอง/ในความดูแลของข้าพเจ้าเข้าร่วมโครงการวิจัย

ชื่อโครงการวิจัย “ประสิทธิภาพของกลุ่มเสริมสร้างแรงจูงใจและบำบัดทางความคิดอย่างย่อต่อภาวะการเสพยาของ
ผู้ป่วยเสพยาบ้าร่วมกับโรคร่วมทางจิตเวชที่มารับการรักษา ณ แผนกผู้ป่วยนอกโรงพยาบาลจิตเวชภาคใต้ ประเทศ
ไทย”

ชื่อผู้วิจัย นาย ก.สินศักดิ์ สุวรรณโชติ

ที่อยู่ติดต่อ 39/1 หมู่ 2 ตำบล ทุ่งกง อำเภอกาญจนดิษฐ์ จังหวัด สุราษฎร์ธานี

โทรศัพท์ 083-1749303

ข้าพเจ้าและผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้า ได้รับทราบรายละเอียดเกี่ยวกับ
ที่มาและวัตถุประสงค์ในการทำวิจัย รายละเอียดขั้นตอนต่างๆ ที่จะต้องปฏิบัติหรือได้รับการปฏิบัติ
ความเสี่ยง/อันตราย และประโยชน์ซึ่งจะเกิดขึ้นจากการวิจัยเรื่องนี้ ข้าพเจ้าได้อ่านรายละเอียดใน
เอกสารชี้แจงผู้เข้าร่วมการวิจัยโดยตลอด และได้รับคำอธิบายจากผู้วิจัย จนเข้าใจเป็นอย่างดีแล้ว

ข้าพเจ้าจึงสมัครใจให้ผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้าเข้าร่วมในโครงการวิจัยนี้
ภายใต้เงื่อนไขที่ระบุไว้ในเอกสารชี้แจงผู้เข้าร่วมการวิจัย โดยข้าพเจ้ายินยอมให้ผู้ที่อยู่ในปกครอง/
ในความดูแลของข้าพเจ้า ตอบแบบสอบถามและรับการสัมภาษณ์เพื่อคัดกรองโรคทางจิตเวช เข้า
ร่วมกลุ่มเสริมสร้างแรงจูงใจในการบำบัดยาเสพติด 1 ครั้ง และ รับการบำบัดทางความคิดเป็น
รายบุคคล จำนวนทั้งสิ้น 3 ครั้ง รวมทั้งมีการติดตามผลการบำบัดโดยการตอบแบบบันทึกและ
แบบสอบถามเพื่อติดตามผลการบำบัดยาเสพติด และรับการตรวจปีสภาวะตามระยะเวลาที่กำหนด
รายละเอียด 3 ครั้ง (หลังการบำบัด 2, 4 และ 6 เดือน)

ข้าพเจ้ามีสิทธิให้ผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้าหรือเป็นความประสงค์ของผู้ที่
อยู่ในปกครอง/ในความดูแล ถอนตัวออกจากการวิจัยเมื่อใดก็ได้ โดยไม่ต้องแจ้งเหตุผล ซึ่งการถอน
ตัวออกจากการวิจัยนั้น จะไม่มีผลกระทบในทางใดๆ ต่อผู้ที่อยู่ในปกครอง/ในความดูแลของ
ข้าพเจ้าและตัวข้าพเจ้าทั้งสิ้น โดยจะได้รับการรักษาพยาบาลเช่นเดิม

ข้าพเจ้าได้รับคำรับรองว่า ผู้วิจัยจะปฏิบัติต่อผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้าตามข้อมูลที่ระบุไว้ในเอกสารชี้แจงผู้เข้าร่วมการวิจัย และข้อมูลใดๆที่เกี่ยวข้องกับผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้า ผู้วิจัยจะเก็บรักษาเป็นความลับ โดยจะนำเสนอข้อมูลจากการวิจัยเป็นภาพรวมเท่านั้น ไม่มีข้อมูลใดในการรายงานที่จะนำไปสู่การระบุตัวผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้าและตัวข้าพเจ้า

หากผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้า ไม่ได้รับการปฏิบัติตรงตามที่ได้ระบุไว้ในเอกสารชี้แจงผู้เข้าร่วมการวิจัย ข้าพเจ้าสามารถร้องเรียนได้ที่ คณะกรรมการพิจารณาจริยธรรมการวิจัยในคน กลุ่มสหสถาบัน ชุดที่ 1 จุฬาลงกรณ์มหาวิทยาลัย ชั้น 4 อาคารสถาบัน 2 ซอย จุฬาลงกรณ์ 62 ถนนพญาไท เขตปทุมวัน กรุงเทพฯ 10330 โทรศัพท์ 0-2218-8147 โทรสาร 0-2218-8147 **E-mail: eccu@chula.ac.th**

ข้าพเจ้าได้ลงลายมือชื่อไว้เป็นสำคัญต่อหน้าพยาน ทั้งนี้ข้าพเจ้าได้รับสำเนาเอกสารชี้แจงผู้เข้าร่วมการวิจัย และสำเนาหนังสือแสดงความยินยอมไว้แล้ว

ลงชื่อ..... ลงชื่อ.....

(นาย.กสินศักดิ์ สุวรรณโชติ)

(.....)

ผู้วิจัยหลัก

ผู้มีส่วนร่วมในการวิจัย

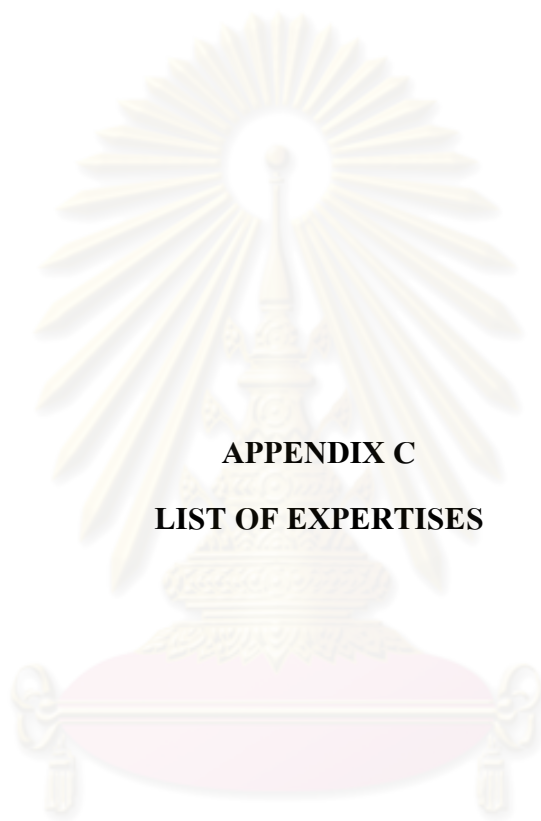
ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

ลงชื่อ.....
(.....)

พยาน

ลงชื่อ.....
(.....)

พ่อ/แม่/ผู้ปกครอง/ผู้ดูแล



APPENDIX C
LIST OF EXPERTISES

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

LIST OF EXPERTISES

1. Lt.Col.Pichai Saengcharnchai, M.D.
Department of Psychiatry & Neurology, Phramongkutkloao Hospital, Thailand

2. Natthorn Pithayaratsathien, M.D.
Department of Psychiatry, Chulalornkorn Hospital, Thailand

3. Assistance Professor, Penpak Uthith, Ph.D., RN.
Chulalornkorn University, Thailand



ศูนย์วิทยุทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

BIOGRAPHY

Name K.sinsak Suvanchot **Student ID** 4989651220

Date of Birth 11 October 1968

Educational Attainment

Degree	Name of Institution	Year of Graduation
MSc (Mental Health)	Chulalongkorn Unuversity	1999
B.P.H.	Sukhothai Thammathirat University	1998
B.N.S.	Boromrajonani College of nursing Sonkhla	1993
C.N.M.	Srithanya nursing college	1989

Scholarship

The dissertation were funded by the Scholarships for students Graduate school Chulalorngkorn University, Thailand.

Work-Position and Address

Registerd Nurse at Suansaranrom Hospital, Thailand