



東華三院
Tung Wah Group of Hospitals



香港中文大學
The Chinese University of Hong Kong

Report of an Evaluation Study of the Program “RESTART”- Short-term Residential Treatment for Addiction



Report of an Evaluation Study
of the Program “RESTART”-
Short-term Residential Treatment for Addiction

「心引重行」短期住宿治療計劃成效研究報告



東華三院

Tung Wah Group of Hospitals



香港中文大學
The Chinese University of Hong Kong

Report of an Evaluation Study of the Program “RESTART”-

Short-term Residential Treatment for Addiction

「心引重行」短期住宿治療計劃成效研究報告

Principal Researcher

Nicole Wai-ting CHEUNG
Department of Sociology
The Chinese University of Hong Kong

Research Team

Elda Mei-lo CHAN
Ryan Hing-yan WONG
Community Services Division (Youth and Family Section)
Tung Wah Group of Hospitals

Daphne Nam-ying YEUNG
Annie Fong-pui KWOK

Program Team

Vanice Wing-yan CHAN
Sandy Yi-ling CHENG
Cheuk-hei IP
Rainbow Shuk-ling LAU
Community Services Division (Youth and Family Section)
Tung Wah Group of Hospitals

Ken Tze-cham NG
Ernest Chi-sing NGAN
Letty Ching-Yin SHAM
Mandy Sze-man WU

Collaborators

Department of Sociology,
The Chinese University of Hong Kong
Tung Wah Group of Hospitals CROSS Centre
Tung Wah Group of Hospitals Even Centre
Tung Wah Group of Hospitals Integrated Centre
on Addiction Prevention & Treatment

Published by:

Tung Wah Group of Hospitals

Copyright:

Tung Wah Group of Hospitals

Sponsored by:

Tung Wah Group of Hospitals Board of Directors

Published:

September 2017



Table of Contents

	Page
Acknowledgements.....	3
Chapter 1 Introduction	4
Chapter 2 Literature Review	6
2.1 <i>Understanding Addiction</i>	
2.2 <i>Recent Development of Residential Addiction Treatment</i>	
Chapter 3 Design and Content of Program "RESTART"	10
3.1 <i>Program Design and Models</i>	
3.2 <i>Program Plan</i>	
Chapter 4 Methodology	16
4.1 <i>Research Design</i>	
4.2 <i>Study Participants</i>	
4.3 <i>Measures</i>	
4.4 <i>Research Questions and Statistical Analysis</i>	
Chapter 5 Evaluation Results	28
5.1 <i>Trend Analysis</i>	
5.2 <i>Covariate Effects</i>	
Chapter 6 Discussions and Recommendations	38
References.....	42
Appendix 1 Tables and Figures of Findings	45
Appendix 2 Diagram of Service Model.....	64
Appendix 3 Study Questionnaire	65

Acknowledgements

Addiction is a highly complex public health and social issue. It often co-occurs with mental health problems and associated with financial and debt problems, family violence, self-harm and suicide. As one of the largest charitable organizations in Hong Kong, Tung Wah Group of Hospitals is committed to develop treatment programs that best assist individuals and families who are affected by addiction. Our short term residential program "RESTART" aims to create an addiction free environment where participants can practise healthy living and learn to deal with addiction urges. Family-based activities, together with emotional competency & relationship building activities are conducted in the residential camp to help participants revitalize family connection & rebuild their personal lives.

We would like to sincerely thank Professor Nicole Cheung Wai-ting of Department of Sociology, The Chinese University of Hong Kong, to be our principal investigator for the evaluation study of this project. Her expert input and devotion is much appreciated. Our gratefulness also goes to the participants who took part in this study, with openness and courage. We hope the results of this evaluation study will shed light on the design of our treatment programs and benefit more people who are suffering from addictive disorders.

Dr. LEE Yuk-lun, JP
Chairman

Board of Directors
Tung Wah Group of Hospitals



Chapter 1: Introduction

Tung Wah Group of Hospitals, Youth and Family Services Section offers a comprehensive support for individuals and families who are affected by multiple expressions of addiction such as alcohol, psychotropic substances, smoking, gambling, internet, sex, eating, stealing, etc.

According to our clinical experiences, a number of high risk factors such as family crisis, unemployment, financial difficulties and social dissociation would contribute to the chance of lapses and relapses. Although residential programs have been one of the available forms of addiction treatment, they are often expensive and require long-term commitment away from their usual daily environment. For those who are unable to take such a long period of leave from work, they may have to quit their job to be submitted in the program. In Hong Kong, most residential treatment programs mainly target cases with drug problems. Only a few short-term residential treatments are currently available for clients with addictive behaviors other than drug abuse and addiction in Hong Kong. Against this background, we developed a short-term residential treatment program namely Program “RESTART” based on the Acceptance and Commitment Therapy and Expressive Arts Therapy. The treatment program aimed at enhancing participants’ understanding of the underlying dynamics and triggers of their addiction problem, helping them to develop healthy coping and urge management skills, to restore self-efficacy and establish a healthy lifestyle. The name “RESTART” implies the following essences of the program:

Relationship building
Emotional competency
Self advocacy
Transformation
Acceptance
Relapse prevention
Taking steps of change

With the support of Professor Nicole Cheung Wai-ting, the Department of Sociology of The Chinese University of Hong Kong, an evaluation study adopting a pretest-posttest quasi-experimental design was carried out to assess the effectiveness of this short-term residential treatment program. Repeated-measures general linear models indicated that relative to the control participants, the experimental participants yielded significant increase in motivation to build a healthy life, willingness to disclose distress, increase of self-efficacy over time, whereas their perceived interference by addiction significantly reduced over time. These results suggest that the program “RESTART” short-term residential treatment program is a promising complement to treatment of diverse addiction problems.



Chapter 2: Literature Review

2.1 Understanding Addiction

Addiction has been a widespread global problem with heavy financial and societal costs (Witkiewitz et al., 2014). It comes in various forms, which often co-occur with each other, such as gambling and Internet. It is also common to comorbid with mental disorders (Yung et al., 2015). Many scholars therefore seek to pursue a deeper understanding of concurrent manifestation of addictive behaviors.

Extant literature supports that people with addiction problems tend to rely on ineffective emotional coping and addictive behaviors serve as an avoidant coping to escape from daily distress (Blaszczynski & Nower, 2002; Jacobs, 1986; Wood & Griffiths, 2007). Likewise, Blaszczynski and Nower's (2002) pathways model concurs that gambling could instigate the dissociation of mood and narrow attention.

The syndrome model of addiction argues that addiction could be conceptualized as "a syndrome with multiple opportunistic expressions" (Shaffer et al., 2004). The model is built on the observation that despite the various manifestations of addictive behaviors, they share many commonalities in terms of the etiology and the associated consequences. This model proliferates the understanding of the high relapse rate in addiction after receiving solely symptom-focused treatment. For clinicians, this conceptual model emphasizes the importance of in-depth multidimensional assessment and treatment for the interacting underpinnings of addictions. Our experimental short-term residential

treatment program described in this study represents one of the pioneer efforts to examine the implementation of insights derived from the syndrome model.

2.2 Recent Development of Residential Addiction Treatment

Many of the existing addiction interventions have been delivered on an individual basis in outpatient setting. It provides a tailor-made treatment for individuals who often have a greater control over the frequency and pace of therapy. However, significant dropout rates prior to their planned completion stage were reported (McLellan et al., 2005).

In view of the limitations of individual treatment and given the commonalities shared by people with addiction problems, worldwide residential programs targeting the underlying psychosocial issues have emerged to enhance treatment effects for people with different addiction problems. Many existing programs incorporate multiple modalities for an individual's treatment plan (McPherson et al., 2016). For example, the Gordon Moody Association (Gordon Moody Association, 2016) offered a 12-week residential treatment program for 82 male problem gamblers. At the end of program, the report revealed improvements on different aspects including participants' social functioning, general health, gambling activity, psychological functioning, occupational functioning, financial and legal condition, substance abuse and compliance. Furthermore, the 139 questionnaires received from ex-residents showed that the learning of adaptive coping strategies could maintain their health, wellbeing and quality of life.



The Gordon Moody Association also devised another treatment format particularly for women. They held a 4-day and 3-night retreat style residential program for women with gambling problems (Gordon Moody Association, 2016). The retreat intended to encourage female participants to recognize and accept emotions in daily living, as well as to learn adaptive coping instead of avoidance by means of addictive behaviors. The retreat was followed by a 12-week individual outpatient sessions and a fortnightly exclusive online group. Participants would then attend a second retreat for 3 days and 2 nights that focused on relapse prevention through which participants would be able to increase self-efficacy, set pragmatic goals, and nurture a sense of hope and control over their lives. They could then take part as ex-residents in outreach services and continue to access online facility of gambling therapy.

Witkiewitz and his colleagues (2014) compared modalities of relapse prevention programs at a nonprofit women's residential treatment centre in the US where residents were referred by the criminal justice system. They found that women who received mindfulness-based relapse prevention residential program reported lower relapse rate, fewer drug use days, and significant improvement in daily functioning such as fewer legal and medical problems at a 15-week follow-up when compared to those who received the typical relapse prevention residential program (Witkiewitz et al., 2014). These findings highlighted the potential role of the mindfulness component in relapse prevention of substance abuse.

Cedars at Cobble Hill, a private addiction treatment inpatient centre, offered a 7-day residential based multidimensional family program for people with alcohol and drug addiction (McPherson et al., 2016). The

program included 12-Step based recovery program, mindfulness exercises, group therapies, and individual therapy sessions. The outcome study revealed that engagement and understanding of family members or significant others increased the participants' treatment completion rate and the length of abstinence or reduced substance use, when compared to other participants without family involvement (McPherson et al., 2016). Their work underscores the value of family support in the therapeutic journey of people with addiction problems. A systematic review by Meis et al. (2013) found that behavioral couple or family therapy is more effective in reducing substance use by means of relationship adjustment than individual-based treatment. Several treatment models have been devised to strengthen family coping such as the 5-Steps Method (Copello et al., 2010a; 2010b) and coping skills training (Rychtarik & McGillicuddy, 2006). A program applying the Community Reinforcement and Family Training (CRAFT) approach to significant others of gamblers also proved that family members are active and influential participants in addiction treatment (Dutcher et al., 2009).



Chapter 3: Design and Content of Program "RESTART"

3.1 Program Design and Models

In Hong Kong, very few residential services are currently provided for clients with addictive behaviors other than drug addiction. Our clinical experience shows that individuals suffer from different expressions of addiction are vulnerable for lapses and relapses due to family crisis, unemployment, financial difficulties and social dissociation accompany with their enduring addictive behaviors. In view of our clients' needs to deal with various demands and problems in daily lives (such as work and family) and to increase the cost-effectiveness of treatment, a pilot short-term residential treatment program, named "RESTART", was designed and developed. The name "RESTART" built on the 7 core essences of the program including relationship building, emotional competency, self-advocacy, transformation, acceptance, relapse prevention, taking steps of change. The program contained a 4-day and 3-night overnight camp ("the treatment camp") followed by 3 consecutive post-camp workshops and one-day camp for people with different expressions of addiction excluding drug use due to the complication of physiological withdrawal.

The program was based on the Acceptance and Commitment Therapy (ACT) approach. It aimed at enhancing participants' psychological flexibility through improvement of self-understanding, developing adaptive emotional coping and urge management skills, restoring self-efficacy, establishment of routine and healthy lifestyles, and development of life goals. The post-camp workshops and day-camp served to reinforce the messages delivered

in the camp, further exploration in life goals, and commitment in taking steps. Peer and family supports are strengthened throughout the treatment program in order to empower the participants in striving for their life goals.

Upon psychoeducation of the interaction among one's thoughts, feelings, body changes and addictive behaviors, participants' increased awareness was expected to motivate them to develop skills for urge management and adaptive emotional coping. Moreover, the treatment camp was well structured to give participants a learning opportunity of initiating and experiencing a structured routine and a healthy lifestyle. The psychoeducation elements were provided in relationship building exercises of "blind walk" and "life rope", and use of art as adjunct in the treatment camp.

The adoption of the ACT model in the whole program also sought to help participants forge a more accepting and mindful relationship with their thoughts and feelings so that they would be less likely to stigmatize themselves and involve in behaviors that hinder their recovery (Luoma et al., 2008). It was argued that self-stigma could delay treatment seeking and led to lower self-efficacy and poorer quality of life (Luoma et al., 2008). Stronger self-stigma predicted a longer stay in residential addiction treatment (Luoma et al., 2014).

Furthermore, the program aimed to foster self-connection in the present moment, rather than being "hooked" on the thoughts or feelings of the past or future (Luoma et al., 2008). Experiential mindfulness exercises and metaphors were therefore frequently taught and practiced in the treatment camp, workshops and one day camp. Examples included breathing,



body scan, mindful eating and walking, and applying these processes at simulated high risk situations. Through these exercises, participants could be more sensitive to their present thoughts, feelings, and bodily sensations. ACT also emphasizes the exploration of a person's desired values and his or her commitment to acquire adaptive coping skills to manage the urges of addiction.

In addition to the components of Acceptance and Commitment Therapy (ACT), Expressive Arts Therapy was incorporated into the group therapy to better cater for the needs of the clients. The activities provided an unconventional and stimulating way to facilitate growth and healing (Sommers-Flanagan, 2007). Expressive arts therapy utilizes various modalities such as movement, art, music, writing, sound, and improvisation to communicate people's thoughts, emotions and beliefs. Art-making lets people become aware of their feelings and draw a deeper self-understanding through making symbolic and metaphorical pictures.

In the course of expressive arts therapy, individuals would benefit from a deeper understanding of their internal states including hurts, pains, struggles and ambivalence (Rogers et al., 2012). A meta-analysis found that arts therapy is able to boost clients' overall mental health by raising their emotional literacy, capacity to empathize with others, and management of difficult emotions (Meekums & Daniel, 2011). In particular, we applied person-centered expressive arts therapy (PCEAT) as devised by Natalie Rogers (Rogers et al, 2012; Sommers-Flanagan, 2007). She emphasized her father's, Carl Rogers', person-centered principles as a therapist. For instance, instead of giving advice, empathically listening to and respecting an individual's feelings and ability to search for own unique potential would be empowering.

Family members were involved in the process of the treatment program. Many studies demonstrated that involvement of family members contributes to the therapeutic process of addiction treatment. A systematic review by Meis et al. (2013) found that behavioral couple or family therapy is more effective in reducing substance use by means of relationship adjustment than individual-based treatment. In our program, individual and joint sessions were designed with the aim of helping family members understand the nature of addiction, use more productive ways to cope with addiction-related problems and mitigate their psychological distress.

We expected that participants who completed this short-term residential treatment program would show higher levels of health consciousness, be more motivated to initiate and sustain positive lifestyle change, develop adaptive stress coping skills, and attain higher levels of self-efficacy to control their addictive behaviors.

3.2 Program Plan

The short-term residential treatment program was designed based on Acceptance and Commitment Therapy and Expressive Art Therapy. It consists of 7 core components including relationship building, emotional competency, self-advocacy, transformation, acceptance, relapse prevention, taking steps of change presented as "RESTART". The program plan is outlined below:

➤ (I) 4 days and 3 nights overnight camp

1 st Day	2 nd Day	3 rd Day	4 th Day
AM SESSION			
	Healthy life style —Morning Exercise		
	Self-Understanding & Urge management —Mindfulness Practice		
Healthy life style Experiential Activity	Healthy life style —Healthy Interest Development		
	Art of Tea	Dance Movement Therapy	Physical Fitness
PM SESSION			
Relationship building Expressive Art Activities/ Therapy	Self-advocacy & Emotional competency - Expressive Art Activities/ Therapy	Self-advocacy & Emotional competency - Expressive Art Activities/ Therapy	Self-advocacy & Transformation - Expressive Art Activities/ Therapy
NIGHT SESSION			
Relationship building & Self-advocacy Experiential Activity	Emotional competency Experiential Activity	Relationship building Experiential Activity	Taking steps of change Experiential Activity

➤ (II) 3 Post-camp workshops

	Workshop 1	Workshop 1	Workshop 1
Core Components	Urge management, Acceptance & Self-advocacy	Acceptance, Self-advocacy & Relapse prevention	Emotional competency & Relationship building

➤ (III) One-day camp

Session	Core Components	Activities
AM Session	Healthy life style, Urge management & Acceptance	Morning Exercises
		Mindfulness Practice
		Art of Tea
PM Session	Relationship building	Learning I-message
	Transformation & Relapse prevention	Experiential Activity
NIGHT Session (*Joint family members session)	Relationship building & Taking steps of change	Review of the program
		Facilitating family members to show recognition and support
		Presentation of Certificates

➤ (IV) 3 family members' sessions

Session	Core objectives	Activities
Session 1	Enhance their understanding of the Syndrome Model of Addiction	Introduction of Syndrome Model of Addiction
	Introduce the Program "RESTART"	Introduction of Program "RESTART"
Session 2 & 3	Enhance their coping ability of addiction-related problems	Experiential Activity: Coping stances Sharing
	Mitigate their psychological distress	
	Prepare them for the joint session of day camp	



Chapter 4: Methodology

4.1 Research Design

As presented earlier, our experimental treatment program consisted of a four-full-day overnight intensive residential intervention, followed by three outpatient workshops in a weekly interval and concluded by one full-day non-overnight camp. The entire program lasted for six weeks. To evaluate the program, the current study adopted a pretest-posttest quasi-experimental design with a follow-up in two months after the entire program. We recruited participants for the experimental treatment and participants for the control condition who did not receive any form of activity or intervention delivered by the experimental treatment. The whole treatment program was offered three rounds in September 2014, June 2015, and March 2016. Accordingly, there were three cohorts of the treatment program, and each cohort received the same pattern of intervention. The three treatment cohorts were combined to form the experiment group. Likewise, there were three corresponding cohorts of participants in the control condition who were combined to form the control group.

Measurements of the outcome variables (described in the “Measures” section) for both the experimental and control groups were taken two weeks before the four-full-day overnight residential intervention began (pretest), and repeated immediately at the endpoint of that residential intervention (interim test) and in two tests with one of them conducted upon completion of the full-day non-overnight camp (posttest) and the other in two months subsequent to the entire program (follow-up). An interim test was proposed because it could capture the potential impact of the consecutive four-

day residential intervention as the most intensive part of the experimental treatment. The overall measurement schedule enabled tests of main time (within-group) effects, main group (between-groups, experiment versus control) effects, and interaction effects between group and time (treatment effects over time).

4.2 Study Participants

A total of 44 treatment participants were recruited from three treatment centres of TWGHs for multiple addictions (Integrated Centre on Addiction Prevention and Treatment, ICAPT), gambling disorder (Even Centre), and substance abuse (CROSS Centre). As participants indicated their willingness to partake in the experimental treatment, randomized experiment was not feasible. They were all assigned to the experimental group and voluntarily joined this evaluation study. While they received the experimental treatment for six weeks, they continued to receive usual services from the foregoing treatment centres in two-month follow up subsequent to the experimental treatment.

As the fact that treatment participants were self-selecting raised concerns about sampling bias, a viable option to achieve the quasi-experimental design was to construct an equivalent control group, who did not receive any form of activity or treatment delivered by the program, by matching with the experimental group in terms of age, gender, employment status, level of education, type of addiction, length of treatment received and severity of addiction problem. A total of 42 participants in the control condition were recruited from the three aforementioned treatment centres of TWGHs. It should be mentioned that they had been receiving usual



treatment services from TWGHs but not the experimental treatment while joining as the control participants for the current study.

Table 1 reports the sociodemographic, addiction, and mental health data of both the experimental and control groups. It also displays the results of chi square tests, which were performed to check the possible group differences in terms of gender, age, marital status, educational attainment, employment status, income, treatment received from TWGHs treatment centres, type and duration of addiction, presence of multiple addictions, length of treatment received for addiction, and presence of mental illness. Particularly noteworthy is that both the experimental and control groups came from diverse addiction backgrounds, with 60% of them having gambling disorder followed by sex addiction, alcohol and tobacco abuse, eating disorder, compulsive buying, and Internet addiction. The chi square results revealed no statistically significant group differences across all those attributes. In this light, the experimental and control groups were similar in terms of sociodemographic, addiction, treatment and mental health backgrounds, and the sampling bias was modest in this study.

Before the commencement of the groups, all experimental and control participants were informed through the written consent form that the purpose of the evaluation was related to the experimental treatment program; they were requested to complete four questionnaire surveys for the evaluation; their participation was voluntary; their names would be removed from all kinds of reports; their individual responses would not be shared with anyone outside the evaluation study and complete confidentiality of information provided was assured.

4.3 Measures

The self-report questionnaire contained a variety of questions regarding experimental and control participants' sociodemographic, addiction and mental disorder information: gender, age, marital status, current employment, past-month income, level of education, type of addiction (gambling disorder, sex addiction, Internet addiction, compulsive buying, eating disorder, smoking, and alcohol abuse), duration of addiction, treatment in TWGHs treatment centres, length of treatment received for respective addiction, and presence of mental illness. The present evaluation targeted six outcomes: health consciousness, motivation to build a healthy life, psychological distress, disclosure of distress, perceived interference by addiction, and self-efficacy of urge management. The instruments used to measure each, which showed satisfactory reliabilities, are introduced below. All outcomes were assessed in pretest, interim test, posttest and follow-up test; the experimental and control groups were administered corresponding measures. The full questionnaires for pretest and interim test are provided in Appendix 3. The questionnaires of the posttest and follow-up assessment are identical to the interim ones.

Health Consciousness Scale

The Health Consciousness Scale, a self-administered instrument, was used to assess the extent to which health concerns are integrated into the study participants' daily activities (Dutta-Bergman, 2004). It assumes that health conscious persons are wellness-oriented and hold positive attitudes toward preventive measures such as exercising and eating healthily. The scale consisted of five items: "Living life in the best possible health is very important to me," "eating right, exercising, and taking preventive measures



will keep me healthy for life," "my health depends on how well I take care of myself," "I actively try to prevent disease and illness," and "I do everything I can to stay healthy." The items were rated on a 5-point scale (1 = strongly disagree to 5 = strongly agree). The scale score ranged from 5 to 25. Higher scores represented higher levels of health consciousness. The Cronbach reliabilities of the health consciousness scale in this study were in .767 pretest, .827 in interim test, .824 in posttest, and .814 in follow-up.

Motivation to Build a Healthy Life Scale

Assessing motivation for change is deemed an important step in the treatment process that allows further refinement of the treatment particularly in motivational interviewing. This study modified the 12-item self-administered Motivation to Change Scale (Gaume et al., 2008) to gauge the motivation of the study participants to build a healthy life. The scale covered six dimensions, namely, desire, ability, reasons, need, commitment to change, and taking steps toward change, hypothesized to be active components of motivational interviewing. There were two items per dimension, rated on a 10-point scale (0 = definitely disagree to 10 = definitely agree). We obtained an individual's overall score by calculating the mean response to all items, and thus the scale score ranged from 0 to 10. Higher scores indicated higher levels of motivation to build a healthy life. The Cronbach reliabilities of the motivation scale in this study were in .924 in pretest, .930 in interim test, .957 in posttest, and .961 in follow-up. Below are the full twelve items:

1. *Desire: I want to build a healthy life.*
2. *Desire: I hope to build a healthy life.*
3. *Ability: I could build a healthy life.*
4. *Ability: I can build a healthy life.*
5. *Reason: There are good reasons for me to build a healthy life.*
6. *Reason: It is important for me to build a healthy life.*
7. *Need: I have to build a healthy life.*
8. *Need: I need to build a healthy life.*
9. *Commitment: I intend to build a healthy life.*
10. *Commitment: I am going to build a healthy life.*
11. *Taking steps: I am trying to build a healthy life.*
12. *Taking steps: I am doing things to build a healthy life.*

Kessler Psychological Distress Scale (K10)

The K10 scale was used to assess the study participants' psychological distress. K10 is a widely utilized 10-item self-administered screening measure for non-specific psychological distress including fatigue, nervousness, hopefulness, restlessness, depression, loss of energy, and worthlessness (Abdollahnejad et al., 2014; Kessler et al., 2002). The study participants reported how often during the past four weeks they experienced each of the ten distress symptoms (feeling tired out for no good reason, fearful, so nervous that nothing could calm you down, hopeless, irritable, so restless that you could not sit still, depressed, everything was an effort, so depressed that that nothing could cheer you up, and worthless). The responses for

each symptom were rated on a 5-point scale (1 = none of the time to 5 = all of the time). The scale score ranged from 10 to 50. Higher scores indicated higher levels of psychological distress. The Cronbach reliabilities of the K10 scale in this study were in .926 pretest, .946 in interim test, .952 in posttest, and .968 in follow-up.

Distress Disclosure Scale

We included disclosure of psychological distress as an outcome expected from the experimental treatment program. Disclosure tends to enhance professional help-seeking intention and psychological wellbeing such as self-esteem, life satisfaction and perceived social support (Kahn et al., 2012). The 12-item self-administered Distress Disclosure Scale (Kahn & Hessling, 2001) was used to measure the study participants' likelihood or willingness to disclose their psychological distress to others. The content domains of distress disclosure involved: (a) whether the disclosure was proactive (i.e., seeking out others to talk to) or reactive (i.e., only disclosing distress when prompted); (b) the audience to whom the distress was disclosed (friends or people in general); (c) the severity of distress (minor hassles, moderate distress, or serious trauma); and (d) the type of distress (event or problem, feeling or mood, thought, or behavior). The study participants were asked to indicate their extent of agreement with the twelve items of the scale as shown below. The responses were rated on a 5-point scale (1 = strongly disagree to 5 = strongly agree). The scale score ranged from 12 to 60. The responses were coded such that higher scores were indicative of a greater tendency to disclose psychological distress to others. The Cronbach reliabilities of the disclosure scale in this study were .947 in pretest, .911 in interim test, .935 in posttest, and .926 in follow-up. The full scale items are as follows:

1. *When I feel upset, I usually confide in my friends.*
2. *I prefer not to talk about my problems.*
3. *When something unpleasant happens to me, I often look for someone to talk to.*
4. *I typically don't discuss things that upset me.*
5. *When I feel depressed or sad, I tend to keep those feelings to myself.*
6. *I try to find people to talk with about my problems.*
7. *When I am in a bad mood, I talk about it with my friends.*
8. *If I have a bad day, the last thing I want to do is talk about it.*
9. *I rarely look for people to talk with when I am having a problem.*
10. *When I'm distressed I don't tell anyone.*
11. *I usually seek out someone to talk to when I am in a bad mood.*
12. *I am willing to tell others my distressing thoughts.*

Perceived Interference by Addiction Scale

Focusing on addictive behaviors, we devised two items to measure the interference of addiction perceived by the study participants. They included "the degree to which emotions are bothered by addiction" (0 = not bothering at all to 10 = very bothering) and "the degree to which everyday life is interfered by addiction" (0 = not interfering at all to 10 = very interfering). The two items were rated on a 10-point scale. The scale score ranged from 0 to 20, with higher scores reflecting higher degrees of interference by addiction. The Cronbach reliabilities of the interference scale were .839 in pretest, .882 in interim test, .962 in posttest, and .896 in follow-up.





Self-Efficacy of Urge Management Scale

We adapted Gambling Self-efficacy Scale (May et al., 2003) to devise a 16-item self-administered instrument to assess the study participant's self-efficacy to control his or her addictive behavior under urges. Our measure directed the participants to envision themselves in sixteen situations in which some people experienced problems controlling their addictive behaviors. The situation domains covered unpleasant emotions, pleasant emotions, physical discomfort, testing personal control, urges and temptations, conflict with others, and pleasant times with others. The participants were asked to indicate how confident they were that they were able to control their compulsive behaviors in each situation by circling a number from 0 to 100 in increments of 20. The range of scores reflected the percent confidence that the participants had. An individual's overall score was obtained by computing the mean response to all items, or average percent confidence. In this connection, the scale score ranged from 0 to 100. Higher scores reflected higher levels of self-efficacy to manage urges. The Cronbach reliabilities of the self-efficacy scale in this study were .916 in pretest, .938 in interim test, .940 in posttest, and .950 in follow-up. The full scale items that correspond to the foregoing situation domains are shown below:

i) *Unpleasant emotions*

"If I felt I had let myself down."

"If I were angry at the way things had turned out."

ii) *Physical discomfort*

"If I had trouble sleeping."

"If my stomach felt like it was tied in knots."

iii) *Pleasant emotions*

"If I felt confident and relaxed."

"If I was enjoying myself and wanted to feel even better."

iv) *Testing personal control*

"If I wondered about my self-control over addictive behavior and felt like testing it."

"If I wanted to prove to myself that I could bet a few more times without losing control."

v) *Urges and temptations*

"If I remembered the good times I had when I was involved in the addictive behavior."

"If I suddenly had an urge to be involved in addictive behavior."

vi) *Conflict with others*

"If there were fights at home."

"If I had an argument with a friend."

"If I were at a place where other people were involved in addictive behavior."

"If I met a friend and he/she suggested that we are involved in addictive behavior together."

vii) *Pleasant times with others*

"If I were relaxing with a good friend and wanted to have a good time involving in addictive behavior."

"If I were with friends "out on the town" and wanted to increase my enjoyment."



4.4 Research Questions and Statistical Analysis

The evaluation study was designed to examine the effects of the experimental treatment program on the six outcome measures specified above, namely, health consciousness, motivation to build a healthy life, psychological distress, disclosure of distress, perceived interference by addiction, and self-efficacy of urge management. The research questions were as follows.

First, what are the latent effects of the experimental treatment? A trend analysis was done to indicate whether change over time was zero, linear, quadratic or cubic. In other words, the question was: Are the intervention effects stable, or do they fluctuate in some detectable fashion over time? The pretest, interim test, posttest, and follow-up data were analyzed for the trends.

Second, does the experiment group in the treatment condition show greater improvement than the control group? We hypothesized that experiment participants would improve on all outcome measures. Health consciousness, motivation to build a healthy life, distress disclosure, and self-efficacy to control addiction were expected to increase, whereas psychological distress and perceived interference by addiction were expected to decrease. Pre/interim by experiment/control group differences, and pre/interim/post/follow-up by experiment/control group differences, were statistically estimated.

Third, do some covariates condition treatment effects over time? Specifically, we queried whether scores on the outcomes of the experiments

and the controls differed longitudinally as a function of sociodemographic, addiction, and mental health statuses (Group \diamond Time \diamond Sociodemographic/Addiction/Mental Conditions).

Repeated measures general linear model (GLM) was used to address the three major research questions. GLM fits continuously measured dependent variables, which apply to the six outcome variables of this evaluation study. Specifically, we analyzed the data from pretest to interim test, and from pretest through follow-up assessment, among the experiment and control participants by using repeated measures GLM and computing Eta Squared to determine if there are significant between-groups (or main group) effects, within-group (or main time) effects, and group by time interaction (or treatment condition \times time) effects on individual outcome variable. In these repeated measures analyses, patterns of the change in individual outcome variable were discerned by partitioning the scores into between-groups and within-group components. Between-groups score was computed as the mean of repeated assessments of individual outcome (i.e., the across-time mean scores). Within-group score was computed from orthogonal polynomial contrasts that permit estimates of the magnitude of linear, quadratic, and cubic patterns of change over time. Group by time interaction effects seek to demonstrate treatment effects over time. Eta squared is an effect size statistic that can be interpreted as a squared correlation coefficient (the amount of the overall variation that can be accounted for by the source of effect in the form of group effect, time effect, and group by time interaction effect). It is a positive-valued statistic that ranges from 0 to 1 for which increasing values of the statistic represent effects that contribute more to the GLM model. All analyses were conducted in SPSS 23.0.



Chapter 5: Evaluation Results

5.1 *Trend Analysis*

The first analysis concerned the latent effects of the experimental treatment. We examined the experimental and control groups' pre/interim/post/follow-up mean scores. Study of mean scores over time suggests the pattern of time effects on each outcome. Repeated measures GLM was used to test for time effects and trend. Essentially, this was a test of whether the pre/interim/post/follow-up change was zero, linear, quadratic or cubic. Table 2 contains the mean scores and standard errors of the six outcomes (health consciousness, motivation to build a healthy life, psychological distress, disclosure of distress, perceived interference by addiction, and self-efficacy of urge management) estimated by repeated measures GLM. The trends of the outcome variables are graphed in Figure 1 to Figure 6. Table 3 presents the results of significance tests of linear, quadratic and cubic trends for each outcome.

As shown in Table 3, linear patterns were detected as statistically best fitting trends for all six outcomes of the experimental group, suggesting that the treatment effects were predicted to be relatively stable, rather than fluctuating, over time. The experimental group manifested a consistent increase in health consciousness, motivation to build a healthy life, distress disclosure, and self-efficacy to control addiction whereas their psychological distress and perceived interference by addiction consistently declined. Overall, positive latent effects of the experimental treatment were anticipated by the trend analysis.

On the other hand, only the patterns of scores for health consciousness and perceived interference by addiction were statistically discernable among the control group and showed linear trends in that their health consciousness ascended and perceived interference by addiction descended over time. For the other outcomes, no statistically significant fitting trends were observable in the control group.

Group Effects, Time Effects, and Group by Time Interaction Effects

The second research question addressed whether the experimental group in the treatment condition expressed greater improvement than the control group. To this end, a series of repeated measures GLM were performed to test for main group effects, main time effects, and interaction effects of group by time.

Table 4 summarizes the GLM results. Main experiment/control group effects were noted only for health consciousness ($p = .015$) and motivation to build a healthy life ($p = .031$) (Table 4a), meaning that group membership alone had predictive ability only for those two outcomes. However, significant main time effects (within-group change from pretest to interim test, and from pretest to follow-up, Table 4b and 4c) were found for virtually all outcomes, suggesting that participants appeared to improve on most outcomes with the passage of time irrespective of the experiment and control conditions. In this connection, it was essential to examine whether these time effects were conditioned by group (experiment/control) membership. The results on individual outcomes are elaborated below (Table 4d and 4e).



Group by Time Effect on Health Consciousness

The repeated measures GLM analyses did not observe statistically significant treatment effects over time (i.e., Group x Time) for the health consciousness score when comparing pretest and interim test ($F(1, 83) = 2.557, p = .114$, Eta squared = .030) and when including all four assessments from pretest through second follow-up ($F(3, 71) = .945, p = .423$, Eta squared = .038). Accordingly, the treatment did not seem to make a difference in health consciousness for the experiment participants longitudinally.

Group by Time Effect on Motivation to Build a Healthy Life

There was a significant treatment effect on the motivation score between pretest and interim test ($F(1, 82) = 5.874, p = .018$, Eta squared = .067), suggesting that the experimental participants tended to develop a stronger motivation to build a healthy life than the control participants at the intensive (four-day overnight) residential intervention endpoint. However, the motivation of the experiment participants did not sustain after the intensive residential intervention. When assessing from pretest through follow-up, the treatment effect on the motivation score did not reach statistical significance ($F(3, 70) = 1.954, p = .129$, Eta squared = .077).

Group by Time Effect on Psychological Distress

No significant treatment effects were found for the levels of psychological distress when comparing between pretest and interim test ($F(1, 82) = .322, p = .572$, Eta squared = .004) and over the course of four assessments ($F(3, 71) = 1.789, p = .157$, Eta squared = .070). It is interesting to note that as can be seen in Figure 3, both the experiments and the controls exhibited steady

reduction in psychological distress from pretest to posttest. At follow-up, whereas distress kept on decreasing among the experiments, the controls showed an abrupt rise in distress. Given this observation, we additionally tested the change of distress score in the two groups between two time points, that is, pretest and follow-up, but the difference was still marginally insignificant ($F(1, 74) = 3.902, p = .052$, Eta squared = .050). Taken together, our findings indicate that the distress level did not differ between the experimental and control participants in a significant manner across time.

Group by Time Effect on Distress Disclosure

The treatment effect on the disclosure of distress was marginally insignificant between pretest and interim test ($F(1, 82) = 3.495, p = .065$, Eta squared = .041). Yet, the experimental participants were significantly more likely to disclose distress than the control participants after the treatment when including all four assessments from pretest to follow-up in the repeated measures GLM ($F(3, 69) = 3.178, p = .029$, Eta squared = .121). These findings imply that although the treatment did not effect immediately at the end of the intensive (four-day overnight) residential intervention, the disclosure outcome emerged gradually after that intervention.

Group by Time Effect on Perceived Interference by Addiction

There was no significant treatment effect for the score of perceived interference by addiction on emotion and everyday life from pretest to interim test ($F(1, 83) = 1.449, p = .232$, Eta squared = .017). However, the perception of interference by addiction significantly lessened among the participants in the experiment condition relative to the participants in the control condition when including all four assessments from pretest



to follow-up in the repeated measures GLM ($F(3, 70) = 4.490, p = .006$, Eta squared = .161). Congruent with the above findings on disclosure of distress, these observations suggest that the mitigation effect on the perceived interference by addiction activated gradually after the intensive (four-day overnight) residential intervention.

Group by Time Effect on Self-Efficacy of Urge Management

Highly significant treatment effects were found for the overall self-efficacy score between pretest and interim test ($F(1, 77) = 14.236, p = .000$, Eta squared = .156) and from pretest to follow-up ($F(3, 59) = 6.635, p = .001$, Eta squared = .252). These results evince that the overall self-efficacy score of the experimental participants was remarkably higher than the control participants at the intensive (four-day overnight) residential intervention endpoint and that their increased self-efficacy was maintained over the post-intensive-intervention period. Equally notable is that the group by time interaction terms had the most predictive ability for self-efficacy of urge management relative to those of other outcomes, as shown by the coefficients of eta squared (.156 and .252, which mean that 15% to 25% of the self-efficacy variability was explained by the group by time interaction). In short, longitudinal benefits of the treatment were most apparent for overall self-efficacy.

Given the salience of self-efficacy, we supplemented analyses of its various dimensions (Table 5). The treatment effects varied across the subscales of self-efficacy under urges. We detected significant treatment effects on four of the seven self-efficacy subscale scores from pretest to second follow-up: unpleasant emotions ($F(3, 70) = 4.216, p = .008$, Eta squared = .153); physical discomfort ($F(3, 69) = 3.923, p = .012$, Eta squared = .146); urges

and temptations ($F(3, 70) = 3.899, p = .012$, Eta squared = .143); and conflict with others ($F(3, 66) = 7.799, p = .000$, Eta squared = .262). This means that the participants in the experiment condition performed better over time particularly in terms of confidence in managing unpleasant emotions, physical discomfort, temptations, and conflicting relationships.

However, when including all four assessments from pretest to follow-up in the GLM, the treatment effects on the subscale score of pleasant emotions ($F(3, 67) = 2.406, p = .075$, Eta squared = .097) and the subscale score of testing personal control ($F(3, 69) = 1.629, p = .191$, Eta squared = .066) fell beyond the significance level. Their insignificance remained when comparing pretest and interim test scores (pleasant emotions, $F(1, 79) = .430, p = .514$, Eta squared = .005; testing personal control, $F(1, 80) = 2.519, p = .116$, Eta squared = .031). The treatment effect on the subscale score of pleasant times with others appeared between pretest and interim test ($F(1, 78) = 7.102, p = .009$, Eta squared = .083), but the treatment effect became insignificant when including all four assessments of data ($F(3, 65) = 2.120, p = .106$, Eta squared = .089).

5.2 Covariate Effects

The third analysis considered whether scores on the six outcomes of the experiments and the controls differed longitudinally as a function of sociodemographic, addiction, and mental disorder covariates (Group x time x Sociodemographic/Addiction/Mental Disorder Covariates) using repeated measures GLM. The covariates included gender, age (39 years or below versus 40 years or above), marital status (single versus married/cohabitated versus separated/divorced/widowed), educational level (secondary or below



versus tertiary or above), employment status (full-time/part-time work versus unemployed), duration of addiction (4.5 years or less versus 5 years or more), multiple addictions (yes versus no), and mental illness (yes versus no). The longitudinal tests were segregated into pre/interim and pre/interim/post/follow-up periods.

Tables 6 through 13 depict the findings. Collectively speaking, those covariates did not significantly interact with group and time in affecting outcomes, except four results on disclosure of distress and motivation to build a healthy life, suggesting that sociodemographic background, addiction status and mental disorder did not add much to the variability of group by time interactions and to the explanation of longitudinal outcome differences.

The four exceptional results were:

- Group x time (pre/interim) x gender on distress disclosure ($F(1, 80) = 7.302, p = .008, \text{Eta squared} = .084$, Table 6);
- Group x time (pre/interim/post/follow-up) x gender on distress disclosure ($F(3, 67) = 3.714, p = .016, \text{Eta squared} = .143$, Table 6);
- Group x time (pre/interim/post/follow-up) x marital status on distress disclosure ($F(6, 132) = 2.399, p = .031, \text{Eta squared} = .098$, Table 8); and
- Group x time (pre/interim/post/follow-up) x addiction duration on motivation to build a healthy life ($F(3, 68) = 3.689, p = .016, \text{Eta squared} = .140$, Table 11).

They are also graphed in Figure 7, Figure 8 and Figure 9. The breakdown of

mean scores on disclosure by gender and marital status, and motivation by duration of addiction, are given in Tables 14 and 15.

We proceed to interpret the four exceptional results. With respect to distress disclosure, gender and marital status mattered in treatment effects. Figure 7 and Table 14 show that males were less likely to disclose distress to others than females irrespective of the experiment and control conditions, as indicated by the lower mean scores on disclosure in general among males from pretest to follow-up. Looking into group comparison, we found that while disclosure of the experimental participants of both genders rose significantly over time compared to the control participants, female experimental participants performed better than their male counterparts from pretest to follow-up. Yet, we should be aware that the disclosure scores of female experimental participants dropped at interim test before rising at post and follow-up tests, and this change was not observed in male experimental participants. That is why Group x time (pre/interim) x gender noted above was significant. Despite this, our results suggest that longitudinally treatment effects on distress disclosure were somewhat more visible in females than males. In addition, the trend analysis reported a linear pattern of increase in disclosure as the statistically best fitting trend for male experimental participants (linear, $p = .000$; quadratic, $p = .020$; cubic, $p = .125$), whereas no trends were significant for female experimental participants (linear, $p = .215$; quadratic, $p = .290$; cubic, $p = .444$). We can thus infer from the trend analysis that the treatment improvement on disclosure of distress was more steady and predictable in males relative to females.

Regarding the role of marital status in the treatment effects on disclosure



of distress, Figure 8 and Table 14 indicate that single participants, and participants who were separated, divorced or widowed, exhibited higher mean scores on disclosure than their married or cohabitated counterparts across the experiment and control conditions from pretest to follow-ups, while the experimental participants overall outperformed the control participants. Put alternatively, even within the experimental group, there were stronger positive treatment effects on distress disclosure for single, separated, divorced and widowed participants than for married and cohabitated participants. Further trend analysis suggested that a linear pattern of rise in pre/interim/post/follow-up disclosure scores best described the change in the experimental participants across marital status (single: linear, $p = .027$; quadratic, $p = .137$; cubic, $p = .307$; married/cohabitated: linear, $p = .013$; quadratic, $p = .026$; cubic, $p = .286$; separated/divorced/widowed: linear, $p = .001$; quadratic, $p = .226$; cubic, $p = .629$). This points out that there were gradual and stable treatment effects on distress disclosure across marital status.

Duration of addictive behavior also significantly conditioned treatment effects on the motivation to build a healthy life. From Figure 9 and Table 15, the experimental participants with shorter years of addiction (4.5 years or fewer) were found to become more motivated to live healthily from pretest and follow-up in comparison to the experimental participants with longer years of addiction (5 years or more), while both groups scored higher on motivation than the control participants. We also tried another classification for duration of addiction (fewer than 10 years versus 10 years or more), but the treatment effect was not statistically significant based on this classification (GLM results not tabled here). Accordingly, the cutoff of 5 years of addiction problem was a noteworthy threshold. As revealed by the

trend analysis, the pattern of means for motivation among the experimental participants having a shorter duration of addiction (4.5 years or fewer) was best described as a linear trend (linear, $p = .016$; quadratic, $p = .729$; cubic, $p = .118$); their motivation was predicted to have a stable growth over time. By contrast, motivation of the experimental participants having a longer duration of addiction (5 years or more) was best described with a quadratic curve (linear, $p = .058$; quadratic, $p = .020$; cubic, $p = .343$); the means increased at first and then consistently dropped between the posttest and follow-up period, suggesting that their motivation development abated over time.



Chapter 6: Discussions and Recommendations

To recap, our experimental short-term residential treatment program “RESTART” derived insights from the syndrome model of addiction, with the goal of moving beyond the conventional approach of sole addiction symptom treatment to apply to individuals with diverse addiction backgrounds. To this end, we applied the acceptance and commitment therapy and the expressive arts therapy to treatment components targeting six outcomes that were hypothesized to be applicable across multiple manifestations of addiction. The six expected outcomes comprised health consciousness, motivation to build a healthy life, reduction of psychological distress and perceived interference by addiction, disclosure of distress to others, and self-efficacy of urge management. The evaluation study reported the effectiveness of the experimental treatment by assessing its impacts on the six outcomes, using a quasi-experimental design with experimental and control participants having tobacco, alcohol, gambling, compulsive buying, eating disorder, sex and Internet addiction problems. The experimental and control participants were surveyed in four intervals in which pretest before the commencement of the experimental treatment was conducted to compare with interim test at the end of the four-day overnight intensive residential intervention, posttest upon the completion of the entire experimental treatment, and follow-up test in two months subsequent to the experimental treatment.

This chapter discusses the implications of the evaluation findings for this experimental treatment program. First, the most important implication of the evaluation results is that the experimental treatment program appears to be a promising complement to treatment of diverse addiction problems, given longitudinal and linear (stable) treatment effects observed

for three outcomes among individuals with various addictive behaviors and multiple addictions. The experimental treatment program most apparently strengthened self-efficacy of the experimental participants to control addiction urges over time. It also yielded an increase in willingness to disclose distress and a decrease in perceived interference by addiction over time, but we should be aware that they might not emerge shortly at the end of the intensive four-day overnight residential intervention. The two consecutive post-camp workshops and one-day camp helped to activate and reinforce the distress disclosure and the reduced interference by addiction. More conceptually, these results overall suggest that this experimental treatment program offers preliminary support to the syndrome model of addiction that emphasizes the need to look into and manage commonalities across addictive behaviors.

Second, there was a short-term treatment effect on the motivation to build a healthy life, which emerged at the end of the four-day overnight intensive residential intervention but failed to persist during other experimental treatment activities (two weekly post-camp workshops and one-day camp) and post-treatment time. The elements and intensity of post-camp workshops and one-day camp warrant review in order to enhance the maintenance of a healthy lifestyle.

Third, contrary to what we expected, the experimental treatment did not influence health consciousness and psychological distress. Future treatment should reconsider the training activities of healthy lifestyle and emotion management. Given the short-run nature of our experimental treatment, it is possible that health consciousness and psychological wellbeing need longer treatment.



Fourth, this experimental short-term residential treatment program is a potential modality that suits not only across types of addiction but also sociodemographic and mental health circumstances. The experimental treatment effect was not found to vary across the sociodemographic (gender, age, marital status, level of education and employment status), addiction (length of addiction and presence of multiple addictions), and mental illness backgrounds, as most covariates did not add to explain the treatment effects on the six outcomes in a statistically significant manner.

However, the above conclusion should not be overstated because gender, marital status, and years of addiction exhibited some conditioning on disclosure of distress and motivation to build a healthy life. While the experimental treatment fostered disclosure of distress longitudinally, this treatment effect varied by gender and marital status. The increase in the willingness of male and married or cohabitated participants to disclose distress was not as much as that of their female and single, separated, divorced or widowed counterparts after treatment. Future replication of the experimental treatment should pay more attention to males and married or cohabitated individuals, and take into account gender- and marital-status-specific training on the disclosure of distress. Likewise, while the treatment effect on the motivation to build a healthy life was short term as discussed above, a longitudinal treatment effect became apparent when considering the duration of addiction. Participants with shorter years of addiction (4.5 years or fewer) had a stronger motivation to initiate and maintain a healthy lifestyle than those with longer years of addiction (5 years or more) after treatment. A plausible explanation is that for individuals with longer years of addiction, addiction has become a normalized way of life. They may find it difficult, if not impossible, to re-learn and adjust to healthy living. Fine-tuning of the experimental treatment and providing tailor-made individual

follow-up sessions to target individuals with a longer duration of addictive behaviors merits consideration.

Lastly, the evaluation study did not involve family members, and therefore it remains unclear regarding whether the positive treatment effects we observed might be in part a result of family involvement. As introduced in the first chapter, our experimental treatment provided training sessions for family members in separation and in conjunction with the experimental participants. Those sessions sought to address family members' emotions and needs, share with them the treatment content and the experimental participants' progress, and motivate them to show recognition and support to the experimental participants. Future evaluation should include participating family members and sort out how far their emotions, support and perceived treatment progress contribute to the six outcomes among the experimental participants.



References

- Abdollahnejad, R., Delfabbro, P., & Denson, L. (2014). Psychiatric co-morbidity in problem and pathological gamblers: Investigating the confounding influence of alcohol use disorder. *Addictive Behaviors, 39*, 566-572.
- Blaszczynski, A., & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction, 97*, 487-499.
- Copello, A., Ibanga, A., Orford, J., Templeton, L. & Velleman, R. (2010b). The 5-step method: Future direction. *Drugs, Education, Prevention and Policy, 17*, 203- 210.
- Copello, A., Templeton, L., Orford, J. & Velleman, R. (2010a). The 5-step method: Principle and practice. *Drugs, Education, Prevention and Policy, 17*, 86-99.
- Dutcher, L.W., Anderson, R., Moore, M., Luna-Anderson, C., Meyers, R.J., Delaney, H.D., & Smith, J.E. (2009). Community Reinforcement and Family Training (CRAFT): An effectiveness study. *Journal of Behavior Analysis in Health, Sports, Fitness and Medicine, 2*, 80.
- Dutta-Bergman, M.J. (2004). Primary sources of health information: Comparisons in the domain of health attitudes, health cognitions, and health behaviors. *Health Communication, 16*, 273-288.
- Gaume, J., Bertholet, N., Daepfen, J.B., & Gmel, G. (2008). The Change Questionnaire predicts change in hazardous tobacco and alcohol use. *Addictive Behaviors, 38*, 2718-2723.
- Gordon Moody Association. (2016). *Gordon Moody Association Impact Report*. Retrieved from <https://www.gordonmoody.org.uk/impact-reports> on 13 January 2017.
- Jacobs, D.F. (1986). A general theory of addictions: A new theoretical model. *Journal of Gambling Behavior, 2*, 15-31.
- Kahn, J.H., & Hessling, R.M. (2001). Measuring the tendency to conceal versus disclose psychological distress. *Journal of Social and Clinical Psychology, 20*, 41-65.
- Kahn, J.H., Hucke, B.E., Bradley, A.M., Glinski, A.J., & Malak, B.L. (2012). The distress disclosure index: A research review and multitrait-multimethod examination. *Journal of Counseling Psychology, 59*, 134-149.
- Kessler, R.C., Andrews, G., Colpe, L.J., Hiripi, E., Mroczek, D.K., Normand, S.L.T., Walters, E.E., & Zaslavsky, A.M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine, 32*, 959-976.
- Luoma, J. B., Kulesza, M., Hayes, S. C., Kohlenberg, B., & Larimer, M. (2014). Stigma predicts residential treatment length for substance use disorder. *The American Journal of Drug and Alcohol Abuse, 40*, 206-212.
- Luoma, J.B., Kohlenberg, B.S., Hayes, S.C., Bunting, K., & Rye, A.K. (2008). Reducing self-stigma in substance abuse through acceptance and commitment therapy: Model, manual development, and pilot outcomes. *Addiction Research & Theory, 16*, 149-165.
- May, R.K, Whelan, J.P., Steenbergh, T.A., & Meyers, A.W. (2003). The gambling self-efficacy questionnaire: An initial psychometric evaluation. *Journal of Gambling Studies, 19*, 339-357.
- McLellan, A.T., McKay, J.R., Forman, R., Cacciola, J., & Kemp, J. (2005). Reconsidering the evaluation of addiction treatment: from retrospective follow-up to concurrent recovery monitoring. *Addiction, 100*, 447-458.
- McPherson, C., Boyne, H., & Willis, R. (2016). The role of family in residential treatment patient retention. *International Journal of Mental Health and Addiction*, doi:10.1007/s11469-016-9712-0.

Meekums, B., & Daniel, J. (2011). Arts with offenders: A literature synthesis. *Arts in Psychotherapy, 38*, 229-238

Meis, L.A., Griffin, J.M., Greer, N., Jensen, A.C., MacDonald, R., Carlyle, M., Rutks, I., & Wilt, T.J. (2013). Couple and family involvement in adult mental health treatment: A systematic review. *Clinical Psychology Review, 33*, 275-286.

Rogers, N., Tudor, K., Tudor, L.E., & Keemar, K. (2012) Person-centered expressive arts therapy: A theoretical encounter. *Person-Centered and Experiential Psychotherapies, 11*, 31-47.

Rychtarik, R.G., & McGillicuddy, N.B. (2006). Preliminary evaluation of a coping skills training program for those with a pathological-gambling partner. *Journal of Gambling Studies, 22*, 165-178.

Shaffer, H.J., LaPlante, D.A., LaBrie, R.A., Kidman, R.C., Donato, A.N., & Stanton, M.V. (2004). Toward a syndrome model of addiction: Multiple expressions, common etiology. *Harvard Review of Psychiatry, 12*, 367-374.

Sommers-Flanagan, J. (2007). The development and evolution of person-centred expressive art therapy: A conversation with Natalie Rogers. *Journal of Counseling and Development, 85*, 120-125.

Witkiewitz, K., Warner, K., Sully, B., Barricks, A., Stauffer, C., Thompson, B.L., & Luoma, J.B. (2014). Randomized trial comparing mindfulness-based relapse prevention with relapse prevention for women offenders at a residential addiction treatment center. *Substance Use & Misuse, 49*, 536-546.

Wood, R.T., & Griffiths, M.D. (2007). A qualitative investigation of problem gambling as an escape-based coping strategy. *Psychology and Psychotherapy: Theory, Research and Practice, 80*, 107-125.

Yung, K., Eickhoff, E., Davis, D.L., Klam, W.P., & Doan, A.P. (2015). Internet addiction disorder and problematic use of Google Glass™ in patient treated at a residential substance abuse treatment program. *Addictive Behaviors, 41*, 58-60.

Appendix 1: Tables and Figures of Findings

Table 1. Sociodemographic, addiction, and mental health characteristics of experimental and control groups

	Experimental group (N = 44)	Control group (N = 42)
Gender (Chi square = .021, df = 1, p = .885)		
Male	34 (77.3%)	33 (78.6%)
Female	10 (22.7%)	9 (21.4%)
Age (Chi square = 2.293, df = 4, p = .682)		
	Mean = 48.4	Mean = 45.4
29 or below	6 (13.6%)	7 (16.7%)
30 to 39	7 (15.9%)	7 (16.7%)
40 to 49	8 (18.2%)	12 (28.5%)
50 to 59	16 (36.4%)	10 (23.8%)
60 or above	7 (15.9%)	6 (14.3%)
Marital status (Chi square = 7.178, df = 5, p = .208)		
Never married	9 (20.5%)	11 (26.2%)
Married	24 (54.5%)	22 (52.4%)
Cohabitated	1 (2.3%)	1 (2.4%)
Separated	5 (11.4%)	0 (0.0%)
Divorced	3 (6.8%)	7 (16.6%)
Widowed	2 (4.5%)	1 (2.4%)
Education (Chi square = 4.003, df = 2, p = .135)		
Primary or below	10 (22.7%)	5 (11.9%)
Secondary	18 (40.9%)	26 (61.9%)
Tertiary or above	16 (36.4%)	11 (26.2%)
Current employment (Chi square = 5.556, df = 4, p = .235)		
Full-time work	21 (47.7%)	28 (66.7%)
Part-time work	7 (15.9%)	3 (7.1%)
Unemployed	9 (20.5%)	9 (21.4%)
Homemaker	1 (2.3%)	0 (0.0%)
Retired	6 (13.6%)	2 (4.8%)
Past-month income (Chi square = 3.213, df = 5, p = .667)		
None	12 (27.3%)	7 (16.7%)
HKD 5000 or below	4 (9.1%)	2 (4.8%)
HKD 5001 - 10000	8 (18.2%)	8 (19.0%)
HKD 10001 - 20000	9 (20.4%)	14 (33.3%)
HKD 20001 - 30000	5 (11.4%)	4 (9.5%)
HKD 30001 or above	6 (13.6%)	7 (16.7%)



Table 1 (continued)

	Experimental group (N = 44)	Control group (N = 42)
Whether having received treatment in TWGHs treatment centre (Chi square = .030, df = 2, p = .985)		
Even Centre on pathological gambling	27 (61.4%)	25 (59.5%)
ICAPT on multiple addictions	14 (31.8%)	14 (33.3%)
CROSS Centre on substance abuse	3 (6.8%)	3 (7.2%)
Type of addiction (The percentages were added up to more than 100% due to multiple choices allowed.)		
Problem gambling (Chi square = .030, df = 1, p = .863)	27 (61.4%)	25 (59.5%)
Sex addiction (Chi square = .154, df = 1, p = .695)	6 (13.6%)	7 (16.7%)
Eating disorder (Chi square = .299, df = 1, p = .584)	2 (4.5%)	1 (2.4%)
Internet addiction (Chi square = .966, df = 1, p = .326)	1 (2.3%)	0 (0.0%)
Compulsive buying (Chi square = .821, df = 1, p = .365)	2 (4.5%)	4 (9.5%)
Alcohol abuse (Chi square = .154, df = 1, p = .695)	6 (13.6%)	7 (16.7%)
Smoking (Chi square = 1.342, df = 1, p = .247)	8 (18.2%)	4 (9.5%)
Others (e.g., stealing) (Chi square = .954, df = 1, p = .329)	3 (6.8%)	1 (2.4%)
Multiple addictions (Chi square = .204, df = 1, p = .652)		
Yes	9 (20.5%)	7 (16.7%)
No	35 (79.5%)	35 (83.3%)
Duration of addiction (Chi square = 1.105, df = 5, p = .950)		
1 year	4 (9.1%)	4 (9.5%)
2 to 3 years	5 (11.4%)	6 (14.3%)
3.5 to 5 years	6 (13.6%)	3 (7.1%)
5.5 to 10 years	9 (20.5%)	10 (23.8%)
10.5 to 20 years	10 (22.7%)	10 (23.8%)
More than 20 years	10 (22.7%)	9 (21.4%)

Note: Chi square test was used for testing differences between experimental and control groups.

Table 1 (continued)

	Experimental group (N = 44)	Control group (N = 42)
Length of treatment received for addiction (Chi square = 3.141, df = 2, p = .208)		
Less than 3 months	20 (45.4%)	17 (41.5%)
4 to 12 months	9 (20.5%)	15 (36.6%)
More than 1 year	15 (34.1%)	9 (22.0%)
Mental illness (Chi square = .034, df = 1, p = .853)		
Yes	8 (18.2%)	7 (16.7%)
No	36 (81.8%)	35 (83.3%)
Type of mental illness among those who reported mental illness (Multiple choices allowed)		
Depression / dysthymia	6	4
Anxiety disorder	2	3
Substance-induced psychosis / schizophrenia	2	0

Note: Chi square test was used for testing differences between experimental and control groups.

Table 2. Parameter Estimates for Scores of Outcome Variables from Pretest to Follow-up

Outcome Variable	Measurement	Experimental group		Control group	
		Mean	SE	Mean	SE
Health Consciousness	Pretest	21.13	.45	20.41	.45
	Interim test	22.53	.41	20.92	.41
	Posttest	22.79	.40	21.32	.40
	Follow-up	22.29	.43	21.46	.44
Motivation to Build a Healthy Life	Pretest	8.08	.22	7.92	.23
	Interim test	8.75	.20	7.96	.21
	Posttest	8.64	.23	7.82	.24
	Follow-up	8.67	.22	8.11	.23
Psychological Distress	Pretest	24.24	1.45	25.59	1.47
	Interim test	23.89	1.49	24.30	1.51
	Posttest	19.53	1.37	22.41	1.39
	Follow-up	17.84	1.80	24.38	1.82
Distress Disclosure	Pretest	35.08	1.89	37.72	1.92
	Interim test	39.49	1.48	38.44	1.50
	Posttest	40.73	1.60	38.86	1.62
	Follow-up	42.46	1.52	39.08	1.54
Perceived Interference by Addiction	Pretest	12.47	.81	13.61	.83
	Interim test	11.95	.85	11.56	.87
	Posttest	8.55	.98	10.22	1.01
	Follow-up	5.71	.87	10.25	.89
Self-efficacy of Urge Management (SEUM): Overall	Pretest	56.84	2.91	65.01	2.95
	Interim test	69.61	2.89	63.27	2.93
	Posttest	73.40	2.95	65.24	2.99
	Follow-up	76.09	2.78	69.48	2.82
SEUM: Unpleasant Emotions	Pretest	50.51	3.78	55.14	3.99
	Interim test	67.44	3.44	55.14	3.63
	Posttest	67.95	3.73	61.43	3.94
	Follow-up	71.54	3.39	62.57	3.57
SEUM: Physical Discomfort	Pretest	61.32	4.41	66.86	4.59
	Interim test	70.26	3.82	66.29	3.98
	Posttest	74.47	3.83	68.00	3.99
	Follow-up	79.47	3.56	68.00	3.71

Table 2 (continued)

Outcome Variable	Measurement	Experimental group		Control group	
		Mean	SE	Mean	SE
SEUM: Pleasant Emotions	Pretest	73.16	3.53	72.73	3.79
	Interim test	80.79	2.84	75.45	3.04
	Posttest	86.32	2.63	73.03	2.83
	Follow-up	87.11	2.48	76.06	2.67
SEUM: Testing Personal Control Subscale	Pretest	55.00	4.20	54.00	4.38
	Interim test	67.11	3.97	55.14	4.13
	Posttest	72.11	3.85	60.00	4.01
	Follow-up	73.16	3.47	63.43	3.61
SEUM: Urges and Temptations	Pretest	52.56	4.08	54.86	4.31
	Interim test	70.00	3.71	53.71	3.92
	Posttest	72.31	3.33	57.43	3.52
	Follow-up	73.33	3.44	63.71	3.63
SEUM: Conflict with Others	Pretest	55.14	3.25	62.32	3.44
	Interim test	67.97	3.28	56.82	3.47
	Posttest	72.57	3.09	61.06	3.27
	Follow-up	74.59	3.09	65.00	3.27
SEUM: Pleasant Times with Others Subscale	Pretest	64.72	3.64	64.55	3.80
	Interim test	71.11	3.49	60.91	3.65
	Posttest	73.61	3.52	60.00	3.67
	Follow-up	76.67	3.46	64.58	3.62

Table 3. Trend Analysis of Repeated Measures General Linear Models

Outcome Variable	Linear	Quadratic	Cubic
Health Consciousness			
Experimental group	p = .004	p = .007	p = .738
Control group	p = .049	p = .524	p = .907
Motivation to Build a Healthy			
Experimental group	p = .006	p = .050	p = .098
Control group	p = .603	p = .357	p = .294
Psychological Distress			
Experimental group	p = .000	p = .555	p = .037
Control group	p = .465	p = .175	p = .189
Distress Disclosure			
Experimental group	p = .000	p = .159	p = .456
Control group	p = .295	p = .774	p = .974
Perceived Interference by			
Experimental group	p = .000	p = .109	p = .334
Control group	p = .000	p = .092	p = .783
Self-efficacy of Urge			
Experimental group	p = .000	p = .026	p = .348
Control group	p = .082	p = .107	p = .780

Table 4. Summary of Group by Time Repeated-Measures General Linear Models on Outcome Variables

Source of Effect	F	df	p	Eta squared
a. Between Groups (Experiment / Control)				
Health Consciousness	6.264	(1, 73)	.015	.079
Motivation to Build a Healthy Life	4.867	(1, 72)	.031	.063
Psychological Distress	2.648	(1, 73)	.108	.035
Distress Disclosure	.203	(1, 71)	.653	.003
Perceived Interference by Addiction	3.336	(1, 72)	.072	.044
Self-efficacy of Urge Management	.890	(1, 61)	.349	.014
b. Within Group (Time: Pretest / Interim Test)				
Health Consciousness	8.666	(1, 83)	.004	.095
Motivation to Build a Healthy Life	9.474	(1, 82)	.003	.104
Psychological Distress	1.397	(1, 82)	.241	.017
Distress Disclosure	3.585	(1, 82)	.062	.042
Perceived Interference by Addiction	5.316	(1, 83)	.024	.060
Self-efficacy of Urge Management	8.567	(1, 77)	.000	.156
c. Within Group (Time: Pretest / Interim Test / Posttest / Follow-up)				
Health Consciousness	5.367	(3, 71)	.002	.185
Motivation to Build a Healthy Life	2.928	(3, 70)	.040	.111
Psychological Distress	7.742	(3, 71)	.000	.246
Distress Disclosure	6.872	(3, 69)	.000	.230
Perceived Interference by Addiction	20.834	(3, 70)	.000	.472
Self-efficacy of Urge Management	12.721	(3, 59)	.000	.393
d. Group by Time (Pretest / Interim Test)				
Health Consciousness	2.557	(1, 83)	.114	.030
Motivation to Build a Healthy Life	5.874	(1, 82)	.018	.067
Psychological Distress	.322	(1, 82)	.572	.004
Distress Disclosure	3.495	(1, 82)	.065	.041
Perceived Interference by Addiction	1.449	(1, 83)	.232	.017
Self-efficacy of Urge Management	14.236	(1, 77)	.000	.156
e. Group by Time (Pretest / Interim Test / Posttest / Follow-up)				
Health Consciousness	.945	(3, 71)	.423	.038
Motivation to Build a Healthy Life	1.954	(3, 70)	.129	.077
Psychological Distress	1.789	(3, 71)	.157	.070
Distress Disclosure	3.178	(3, 69)	.029	.121
Perceived Interference by Addiction	4.490	(3, 70)	.006	.161
Self-efficacy of Urge Management	6.635	(3, 59)	.001	.252

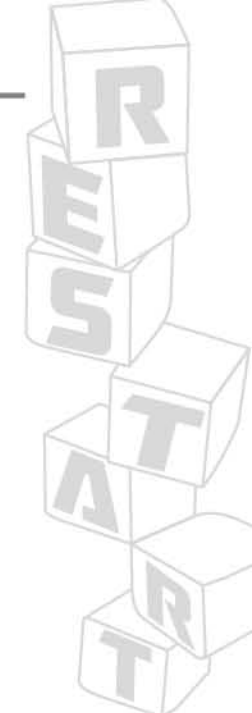


Table 5. Summary of Group by Time Repeated-Measures General Linear Models on Dimensions of Self-efficacy of Urge Management

Source of Effect	F	df	p	Eta squared
Group by Time (Pretest / Interim Test)				
Unpleasant Emotions	12.120	(1, 80)	.001	.132
Physical Discomfort	3.850	(1, 80)	.053	.046
Pleasant Emotions	.430	(1, 79)	.514	.005
Urges and Temptations	11.738	(1, 80)	.001	.128
Testing Personal Control	2.519	(1, 80)	.116	.031
Conflict with Others	19.386	(1, 80)	.000	.195
Pleasant Times with Others	7.102	(1, 78)	.009	.083
Group by Time (Pretest / Interim Test / Posttest / Follow-up)				
Unpleasant Emotions	4.216	(3, 70)	.008	.153
Physical Discomfort	3.923	(3, 69)	.012	.146
Pleasant Emotions	2.406	(3, 67)	.075	.097
Urges and Temptations	3.899	(3, 70)	.012	.143
Testing Personal Control	1.629	(3, 69)	.191	.066
Conflict with Others	7.799	(3, 66)	.000	.262
Pleasant Times with Others	2.120	(3, 65)	.106	.089

Table 6. Interaction of Gender with Group and Time Repeated-Measures General Linear Models on Outcome Variables

Source of Effect	F	df	p	Eta squared
Group by Time (Pretest / Interim Test) and Gender				
Health Consciousness	1.345	(1, 81)	.250	.016
Motivation to Build a Healthy Life	.002	(1, 80)	.962	.000
Psychological Distress	.003	(1, 80)	.959	.000
Distress Disclosure	7.302	(1, 80)	.008	.084
Perceived Interference by Addiction	.019	(1, 81)	.089	.000
Self-efficacy of Urge Management	.075	(1, 75)	.785	.001
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Gender				
Health Consciousness	1.407	(3, 69)	.248	.058
Motivation to Build a Healthy Life	.954	(3, 68)	.420	.040
Psychological Distress	1.026	(3, 69)	.387	.043
Distress Disclosure	3.714	(3, 67)	.016	.143
Perceived Interference by Addiction	.362	(3, 68)	.781	.016
Self-efficacy of Urge Management	.264	(3, 57)	.851	.014

Table 7. Interaction of Age with Group and Time Repeated-Measures General Linear Models on Outcome Variables

Source of Effect	F	df	p	Eta squared
Group by Time (Pretest / Interim Test) and Age				
Health Consciousness	.140	(1, 81)	.710	.002
Motivation to Build a Healthy Life	.000	(1, 80)	.988	.000
Psychological Distress	1.658	(1, 80)	.202	.020
Distress Disclosure	.348	(1, 80)	.557	.004
Perceived Interference by Addiction	3.833	(1, 81)	.054	.045
Self-efficacy of Urge Management	.382	(1, 75)	.539	.005
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Age				
Health Consciousness	1.494	(3, 69)	.224	.061
Motivation to Build a Healthy Life	.286	(3, 68)	.835	.012
Psychological Distress	1.476	(3, 69)	.229	.060
Distress Disclosure	.134	(3, 67)	.939	.006
Perceived Interference by Addiction	2.261	(3, 68)	.089	.091
Self-efficacy of Urge Management	1.305	(3, 57)	.282	.064



Table 8. Interaction of Marital Status with Group and Time Repeated-Measures General Linear Models on Outcome Variables

Source of Effect	F	df	p	Eta squared
Group by Time (Pretest / Interim Test) and Marital Status				
Health Consciousness	.128	(2, 79)	.880	.003
Motivation to Build a Healthy Life	.772	(2, 78)	.466	.019
Psychological Distress	.643	(2, 78)	.528	.016
Distress Disclosure	1.342	(2, 78)	.267	.033
Perceived Interference by Addiction	2.188	(2, 79)	.119	.052
Self-efficacy of Urge Management	.360	(2, 73)	.699	.010
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Marital Status				
Health Consciousness	1.066	(3, 136)	.386	.045
Motivation to Build a Healthy Life	1.446	(6, 134)	.202	.061
Psychological Distress	.962	(6, 136)	.454	.041
Distress Disclosure	2.399	(6, 132)	.031	.098
Perceived Interference by Addiction	1.424	(6, 134)	.210	.060
Self-efficacy of Urge Management	1.115	(6, 112)	.358	.056

Table 9. Interaction of Education with Group and Time Repeated-Measures General Linear Models on Outcome Variables

Source of Effect	F	df	p	Eta squared
Group by Time (Pretest / Interim Test) and Education				
Health Consciousness	.018	(1, 81)	.893	.000
Motivation to Build a Healthy Life	.001	(1, 80)	.978	.000
Psychological Distress	.001	(1, 80)	.982	.000
Distress Disclosure	.253	(1, 80)	.616	.003
Perceived Interference by Addiction	.659	(1, 81)	.419	.008
Self-efficacy of Urge Management	.233	(1, 75)	.631	.003
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Education				
Health Consciousness	.995	(3, 69)	.400	.041
Motivation to Build a Healthy Life	.265	(3, 68)	.850	.012
Psychological Distress	.346	(3, 69)	.792	.015
Distress Disclosure	1.847	(3, 67)	.147	.076
Perceived Interference by Addiction	1.847	(3, 67)	.147	.078
Self-efficacy of Urge Management	.600	(3, 57)	.617	.031

Table 10. Interaction of Employment with Group and Time Repeated-Measures General Linear Models on Outcome Variables

Source of Effect	F	df	p	Eta squared
Group by Time (Pretest / Interim Test) and Employment				
Health Consciousness	1.078	(1, 81)	.302	.013
Motivation to Build a Healthy Life	.516	(1, 80)	.474	.006
Psychological Distress	.455	(1, 80)	.502	.006
Distress Disclosure	.605	(1, 80)	.439	.008
Perceived Interference by Addiction	2.765	(1, 81)	.100	.033
Self-efficacy of Urge Management	.143	(1, 75)	.706	.002
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Employment				
Health Consciousness	1.456	(3, 69)	.234	.060
Motivation to Build a Healthy Life	1.510	(3, 68)	.220	.062
Psychological Distress	.380	(3, 69)	.768	.016
Distress Disclosure	1.736	(3, 67)	.168	.072
Perceived Interference by Addiction	1.567	(3, 68)	.205	.065
Self-efficacy of Urge Management	.767	(3, 57)	.517	.039

Table 11. Interaction of Addiction Duration with Group and Time Repeated-Measures General Linear Models on Outcome Variables

Source of Effect	F	df	p	Eta squared
Group by Time (Pretest / Interim Test) and Addiction Duration				
Health Consciousness	1.495	(1, 81)	.225	.018
Motivation to Build a Healthy Life	.003	(1, 80)	.960	.000
Psychological Distress	1.196	(1, 80)	.277	.015
Distress Disclosure	.004	(1, 80)	.951	.000
Perceived Interference by Addiction	.960	(1, 81)	.330	.012
Self-efficacy of Urge Management	.373	(1, 75)	.543	.005
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Addiction Duration				
Health Consciousness	.614	(3, 69)	.608	.026
Motivation to Build a Healthy Life	3.689	(3, 68)	.016	.140
Psychological Distress	.562	(3, 69)	.642	.024
Distress Disclosure	.949	(3, 67)	.422	.041
Perceived Interference by Addiction	1.061	(3, 68)	.371	.045
Self-efficacy of Urge Management	.813	(3, 57)	.492	.041





Table 12. Interaction of Multiple Addictions with Group and Time Repeated-Measures General Linear Models on Outcome Variables

<i>Source of Effect</i>	<i>F</i>	<i>df</i>	<i>p</i>	<i>Eta squared</i>
Group by Time (Pretest / Interim Test) and Multiple Addictions				
Health Consciousness	.041	(1, 81)	.840	.001
Motivation to Build a Healthy Life	.581	(1, 80)	.448	.007
Psychological Distress	.221	(1, 80)	.640	.003
Distress Disclosure	.000	(1, 80)	.986	.000
Perceived Interference by Addiction	1.054	(1, 81)	.308	.013
Self-efficacy of Urge Management	1.214	(1, 75)	.274	.016
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Multiple Addictions				
Health Consciousness	.333	(3, 69)	.802	.014
Motivation to Build a Healthy Life	.965	(3, 68)	.415	.041
Psychological Distress	.610	(3, 69)	.611	.026
Distress Disclosure	.450	(3, 67)	.718	.020
Perceived Interference by Addiction	1.922	(3, 68)	.134	.078
Self-efficacy of Urge Management	1.567	(3, 57)	.207	.076

Table 13. Interaction of Mental Illness with Group and Time Repeated-Measures General Linear Models on Outcome Variables

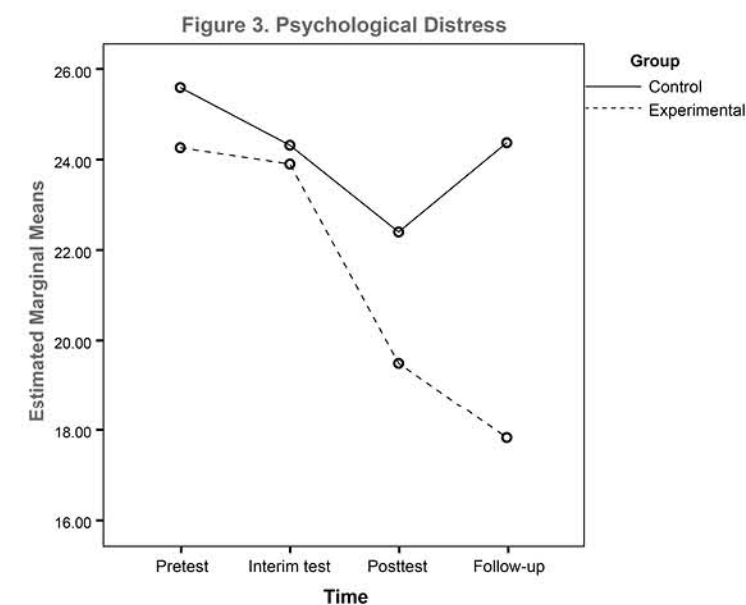
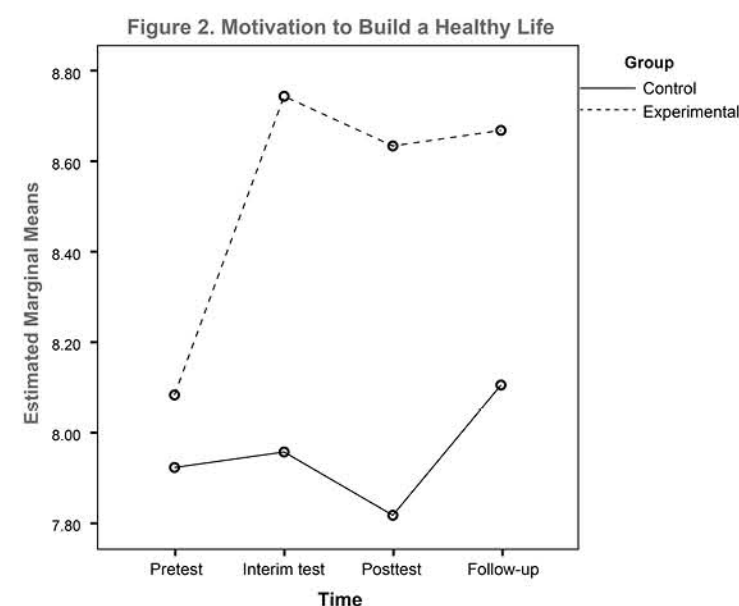
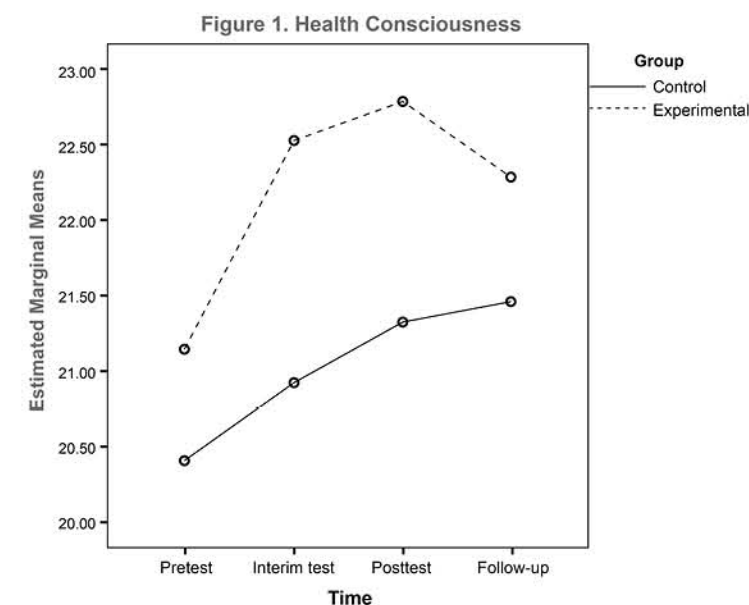
<i>Source of Effect</i>	<i>F</i>	<i>df</i>	<i>p</i>	<i>Eta squared</i>
Group by Time (Pretest / Interim Test) and Mental Illness				
Health Consciousness	.926	(1, 81)	.339	.011
Motivation to Build a Healthy Life	.086	(1, 80)	.769	.001
Psychological Distress	.113	(1, 80)	.737	.001
Distress Disclosure	.359	(1, 80)	.551	.004
Perceived Interference by Addiction	.715	(1, 81)	.400	.009
Self-efficacy of Urge Management	3.522	(1, 75)	.064	.045
Group by Time (Pretest / Interim Test / Posttest / Follow-up) and Mental Illness				
Health Consciousness	.954	(3, 69)	.415	.040
Motivation to Build a Healthy Life	.900	(3, 68)	.446	.038
Psychological Distress	1.315	(3, 69)	.276	.054
Distress Disclosure	.184	(3, 67)	.907	.008
Perceived Interference by Addiction	.737	(3, 68)	.533	.032
Self-efficacy of Urge Management	1.442	(3, 57)	.240	.071

Table 14. Parameter Estimates for Scores of Distress Disclosure by Gender and Marital Status

			Experimental group		Control group	
Covariate	Measurement	Mean	SE	Mean	SE	
Gender						
Male	Pretest	33.41	2.12	38.21	2.16	
	Interim test	39.97	1.68	37.89	1.71	
	Posttest	40.31	1.82	37.93	1.85	
	Follow-up	42.10	1.73	39.07	1.76	
Female	Pretest	42.13	4.04	35.63	4.04	
	Interim test	37.75	3.20	40.38	3.20	
	Posttest	42.25	3.46	42.13	3.46	
	Follow-up	43.75	3.30	39.13	3.30	
Marital Status						
Single	Pretest	33.22	3.85	37.91	3.48	
	Interim test	39.33	3.03	37.64	2.74	
	Posttest	39.22	3.22	37.91	2.91	
	Follow-up	40.11	2.91	36.82	2.64	
Married / Cohabitated	Pretest	32.89	2.72	36.78	2.72	
	Interim test	39.11	2.14	37.28	2.14	
	Posttest	38.83	2.27	37.67	2.74	
	Follow-up	39.33	2.06	39.78	2.06	
Separated / Divorced / Widowed	Pretest	40.70	3.65	39.86	4.37	
	Interim test	40.30	2.88	42.71	3.44	
	Posttest	45.50	3.05	43.43	3.65	
	Follow-up	50.20	2.76	40.86	3.30	

Table 15. Parameter Estimates for Scores of Motivation to Build a Healthy Life by Duration of Addiction

Covariate	Measurement	Experimental group		Control group	
		Mean	SE	Mean	SE
Addiction of 4.5 years or fewer	Pretest	8.09	.43	8.40	.46
	Interim test	8.59	.40	7.93	.42
	Posttest	8.28	.46	8.31	.48
	Follow-up	8.96	.43	7.92	.46
Addiction of 5 years or more	Pretest	8.08	.25	7.76	.27
	Interim test	8.80	.24	7.97	.25
	Posttest	8.76	.27	7.65	.28
	Follow-up	8.57	.25	8.17	.27



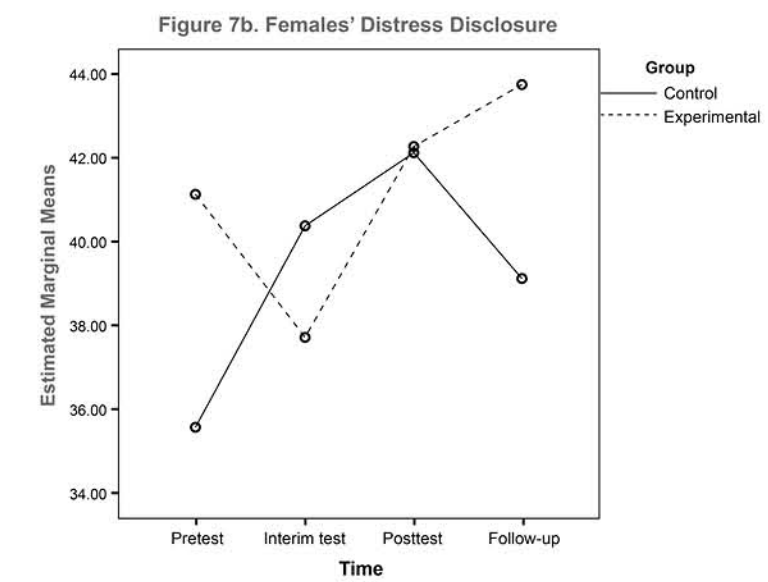
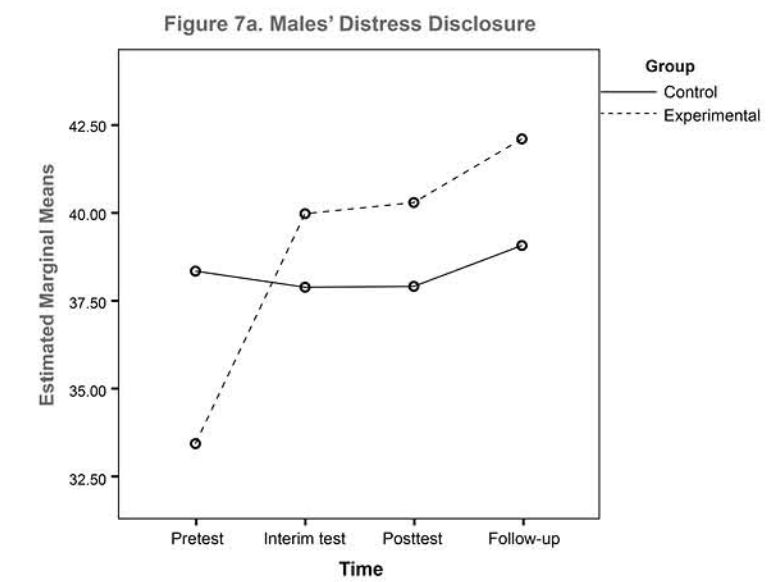
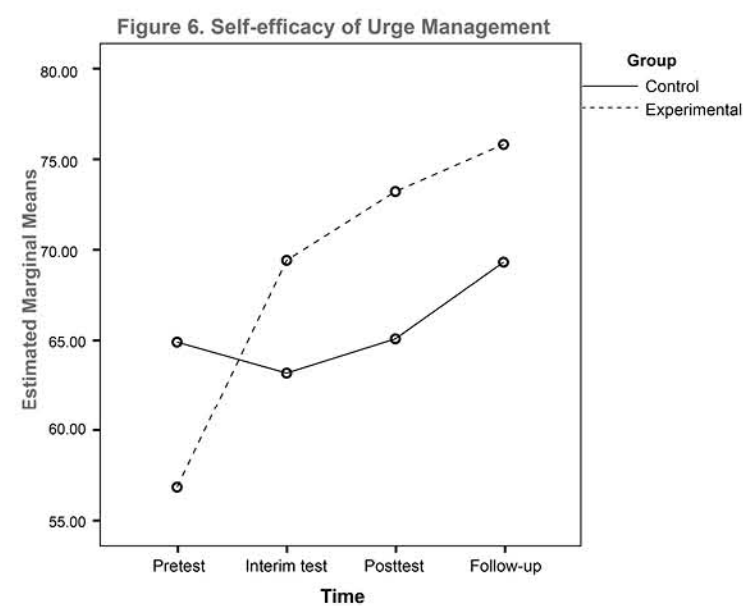
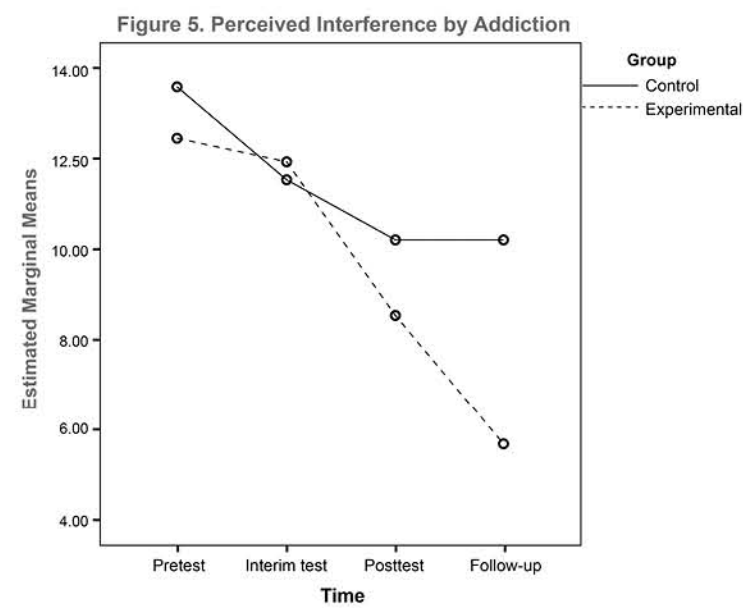
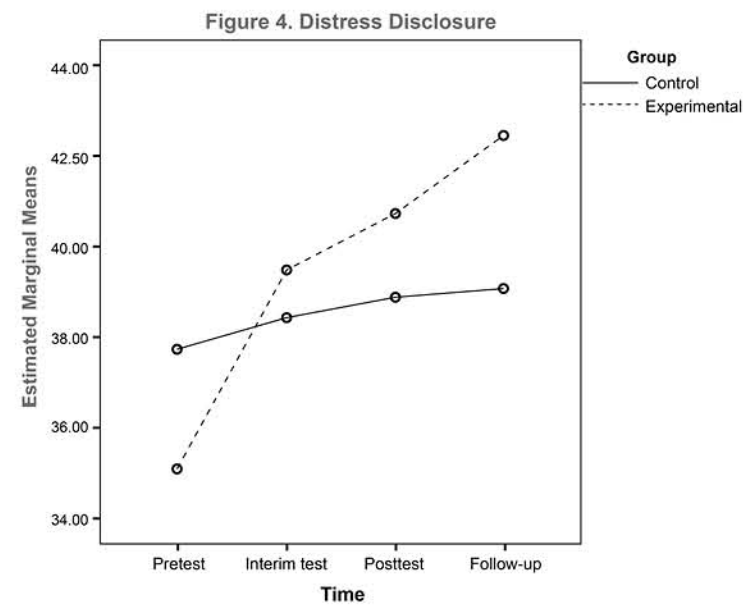


Figure 8a. Single Participants' Distress Disclosure

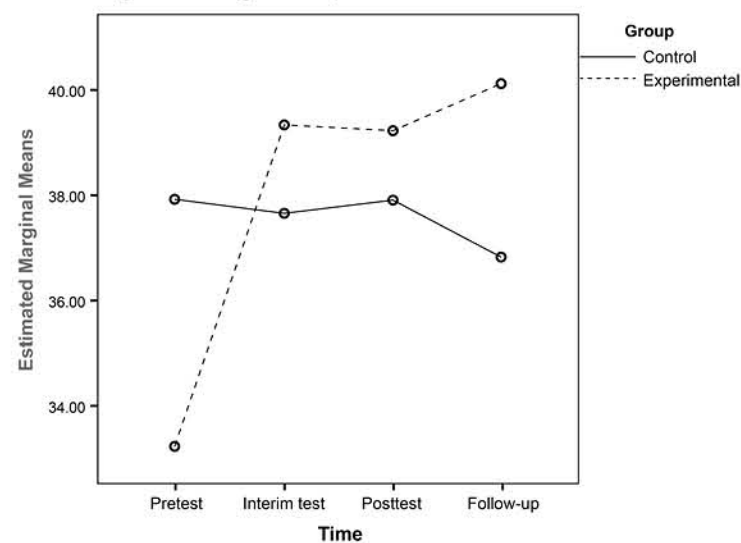


Figure 8b. Married / Cohabitated Participants' Distress Disclosure

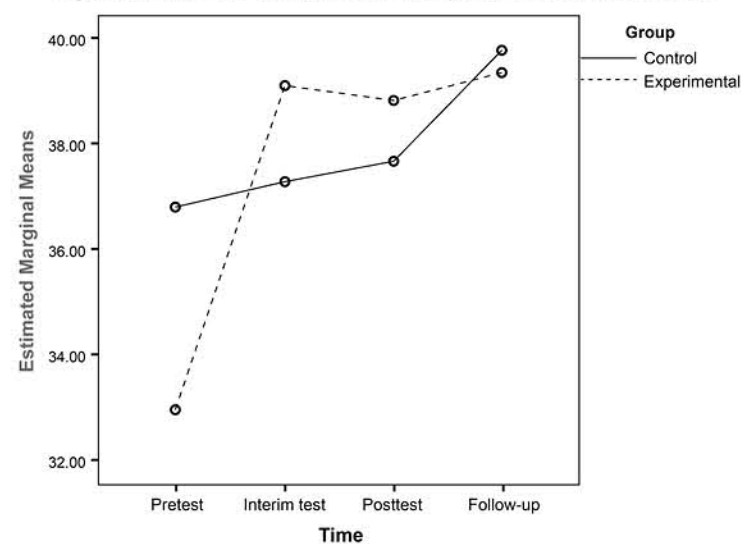


Figure 8c. Separated / Divorced / Widowed Participants' Distress Disclosure

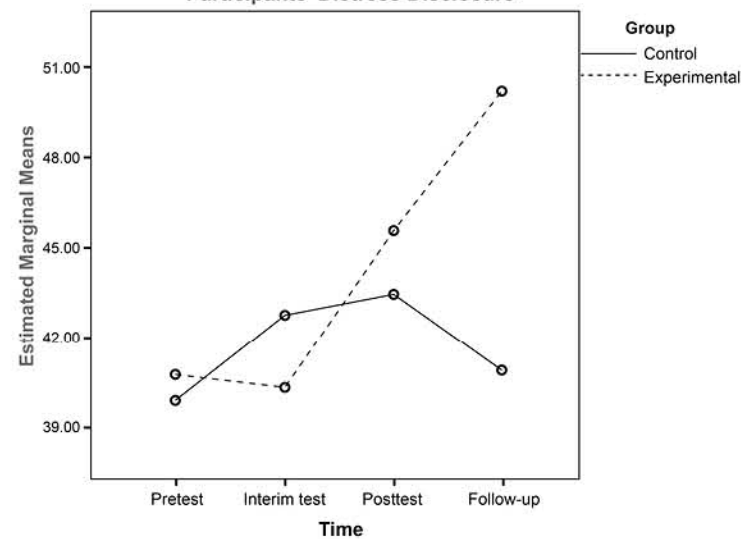


Figure 9a. Motivation of Participants with Addiction of 4.5 Years or Less

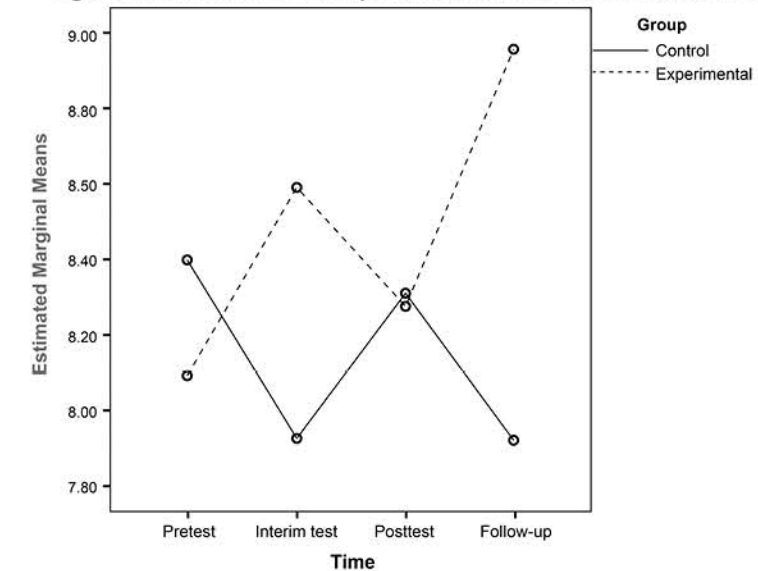
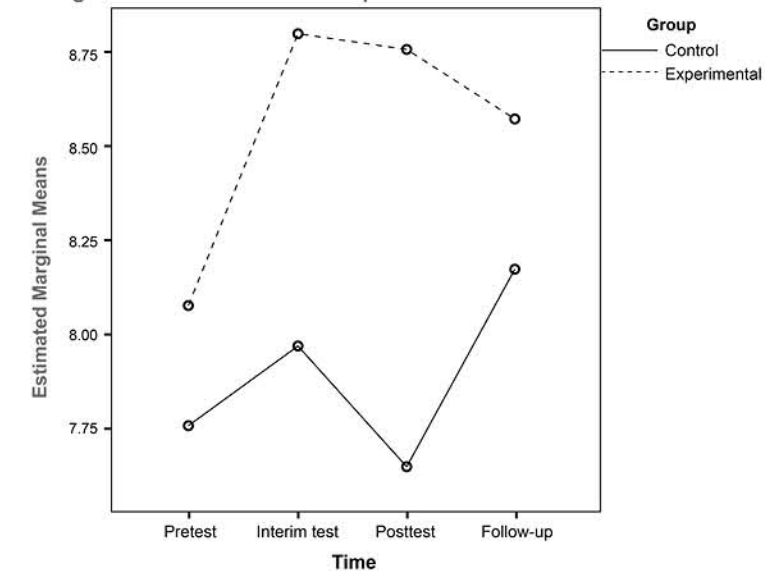
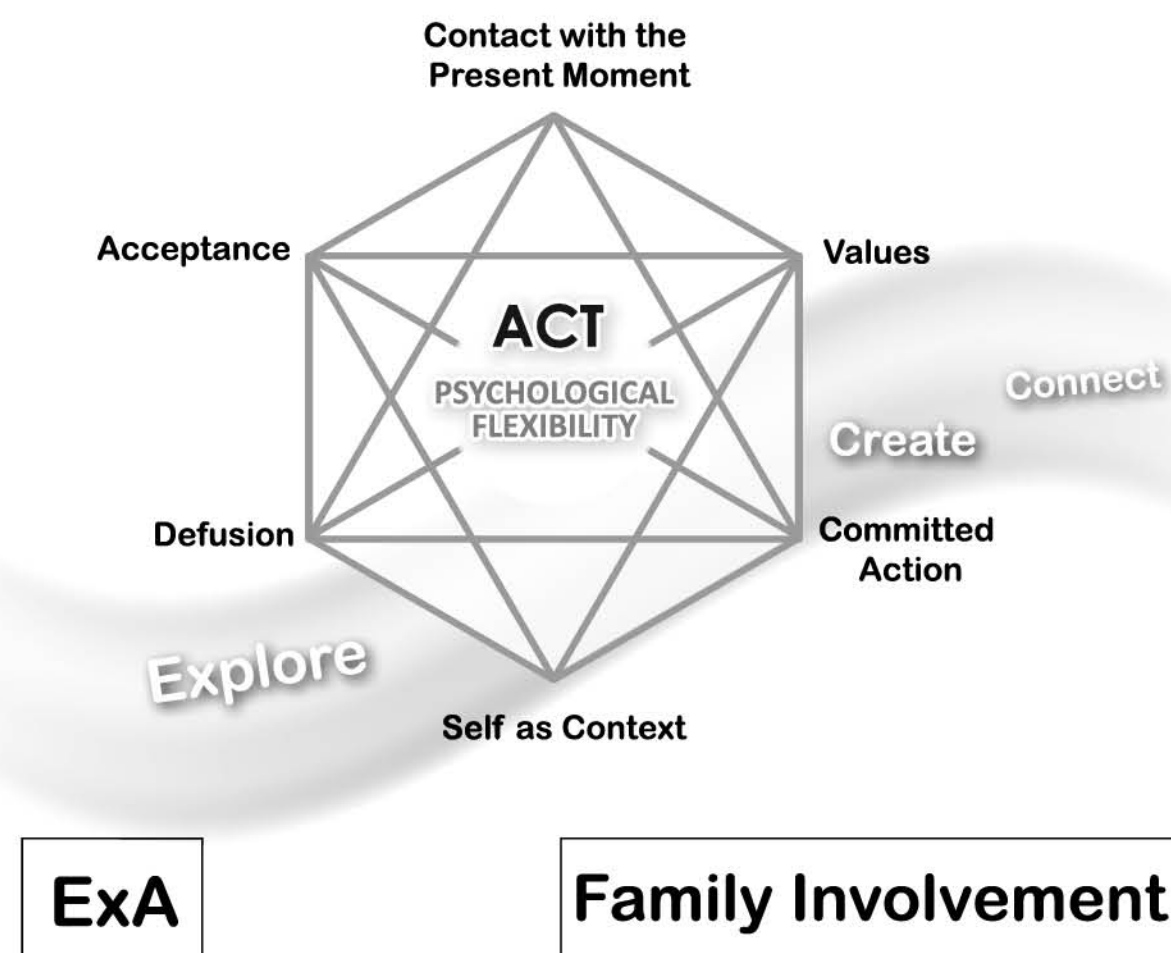


Figure 9b. Motivation of Participants with Addiction of 5 Years or More



Appendix 2: Diagram of Service Model



Appendix 3: Study Questionnaire



東華三院青少年及家庭服務
「心引重行」短期住宿治療計劃成效研究問卷

Part A

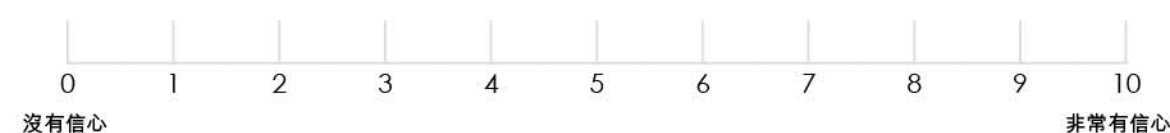
A1 成癮問題對你的情緒困擾程度：(請圈出合適數字)



A2 成癮問題對你生活各方面的干擾程度：(請圈出合適數字)



A3 你對控制自己成癮行為的信心程度：(請圈出合適數字)



A4 你能夠識別成癮行為的高危處境：(請圈出合適數字)



A5 當你處於高危處境下，你有信心控制自己的成癮行為：(請圈出合適數字)



A6 當你處於高危處境下，你能夠運用方法控制自己的成癮行為：(請圈出合適數字)



**Part B - Health Consciousness Scales 健康意識量表**

在回答以下各問題時，請圈出你認為最能夠反映你的狀況的答案。

	完全不同意	不同意	不肯定	同意	完全同意
1. 盡可能過一個健康的生活對我來說是非常重要的	1	2	3	4	5
2. 飲食適宜、持續運動及採取預防方法會讓我保持身體健康	1	2	3	4	5
3. 我的健康全賴我怎樣好好照顧自己	1	2	3	4	5
4. 我積極地嘗試預防疾病和病患	1	2	3	4	5
5. 我盡一切努力去保持身體健康	1	2	3	4	5

Part C - Motivation to Change Scale 動機改變量表

在回答以下各問題時，請圈出你認為最能夠反映你的狀況的答案。

	完全不同意	完全同意
1. 欲望：我想建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
2. 能力：我可以建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
3. 原因：我有充分理由去建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
4. 需要：我必需建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
5. 承諾：我打算建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
6. 行動：我正在嘗試建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
7. 欲望：我希望建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
8. 能力：我能夠建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
9. 原因：對我來說，建立一個健康的生活是重要的。	0 1 2 3 4 5 6 7 8 9 10	
10. 需要：我需要建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
11. 承諾：我將會建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	
12. 行動：我正在做一些事情去建立一個健康的生活。	0 1 2 3 4 5 6 7 8 9 10	

Part D - Kessler Psychological Distress Scale (K10)

在回答以下各問題時，請圈出你認為最能夠反映你的狀況的答案。在過去四星期，你有大約多少時間覺得：

	未曾	少許時間	有時	大部分時間	時時刻刻
1. 無緣無故十分疲累	1	2	3	4	5
2. 驚	1	2	3	4	5
3. 驚得無法冷靜下來	1	2	3	4	5
4. 絕望	1	2	3	4	5
5. 不安或煩躁	1	2	3	4	5
6. 坐立不安	1	2	3	4	5
7. 沮喪	1	2	3	4	5
8. 做任何事都很艱難	1	2	3	4	5
9. 傷心得無法振作起來	1	2	3	4	5
10. 自己很無用	1	2	3	4	5

Part E - Distress Disclosure Scale 願意傾訴困擾量表

在回答以下各問題時，請圈出你認為最能夠反映你的狀況的答案。

	完全不同意	不同意	不肯定	同意	完全同意
1. 當我感到難過時，我通常會向人傾訴。	1	2	3	4	5
2. 我寧願不談論我的問題。	1	2	3	4	5
3. 當我遇上不愉快的事情，我經常會找人傾談。	1	2	3	4	5
4. 我通常不會跟別人談論讓我難過的事情。	1	2	3	4	5
5. 當我感到沮喪或難過時，我傾向隱藏自己的感受。	1	2	3	4	5
6. 我嘗試找人傾訴我的困難。	1	2	3	4	5
7. 當我心情不佳時，我會向人傾訴。	1	2	3	4	5
8. 如果我經歷不順利的一天，我最不願意做的就是談論它。	1	2	3	4	5
9. 當我有困難時，我很少找人傾訴。	1	2	3	4	5
10. 當我感到困擾時，我不會告訴任何人。	1	2	3	4	5
11. 當我心情不佳，我通常會找別人傾訴。	1	2	3	4	5
12. 我願意把我困擾的思緒告訴別人。	1	2	3	4	5

Part F - Self-Efficacy of Urge Management Scale

請小心閱讀下列句子，並在其右方圈上適當的數字，來表示你在不同情況下，對控制你自己的成癮行為的信心。

		完全 無信心	幾乎 無信心	很少 信心	一般 信心	很大 信心	完全 有信心
1.	如果我感到失望。	0	20	40	60	80	100
2.	如果我與家人發生衝突不和。	0	20	40	60	80	100
3.	如果我時常失眠。	0	20	40	60	80	100
4.	如果我與朋友發生衝突不和。	0	20	40	60	80	100
5.	如果我覺得有自信和輕鬆的時候。	0	20	40	60	80	100
6.	如果我享受我所做的事，並想有更好的感覺。	0	20	40	60	80	100
7.	如果我回想過去進行成癮行為的快樂時光。	0	20	40	60	80	100
8.	如果我身處的地方有其他人進行成癮行為。	0	20	40	60	80	100
9.	如果我想考驗自己對成癮行為的控制力，因而想試驗一下。	0	20	40	60	80	100
10.	如果事情的結果令我感到生氣。	0	20	40	60	80	100
11.	如果我與好朋友輕鬆消磨一下，而我想透過成癮行為玩得開心。	0	20	40	60	80	100
12.	如果我覺得身體不適(如胃痛等)。	0	20	40	60	80	100
13.	如果我與朋友外出旅遊或公幹，並想有更多樂趣和享受。	0	20	40	60	80	100
14.	如果我遇見一個朋友，而他/她提議一起進行成癮行為。	0	20	40	60	80	100
15.	如果我忽然好想進行成癮行為。	0	20	40	60	80	100
16.	如果我想证明自己進行成癮行為多幾次也不會失控。	0	20	40	60	80	100

～ 全卷完 ～