社會福利署
Social Welfare Department

Family 愛+人
健健康康 開開心心 和和氣氣
賽馬會和諧社會計劃
Health Happiness Harmony
A Jockey Club Initiative for a Harmonious Society

SCHOOL OF PUBLIC HEALTH
THE UNIVERSITY OF HONG KONG
香港大學公共衞生學院

FAMILY: A Jockey Club Initiative for a Harmonious Society

愛+人：賽馬會和諧社會計劃

Report Series
Community-based Projects

「家．心健康」計劃

Holistic Health Family Project

FAMILY Health, Happiness and Harmony - 3Hs

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PROJECT TEAM

Project Title:
Holistic Health Family Project

Funder:
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PREFACE (1)

Joining our community partners to build a harmonious society

Demographic shifts, economic upheavals and changing societal norms and values are steadily creating new processes and relationships within families, as is immigration across borders. As a result, family structure in society is becoming more complex and diverse, creating many areas of discord in family life.

To address these evolving challenges, The Hong Kong Jockey Club Charities Trust earmarked funding of HK$250 million in 2007 to launch a citywide project titled “FAMILY: A Jockey Club Initiative for a Harmonious Society” (the FAMILY Project), in collaboration with the School of Public Health of The University of Hong Kong. Approaching the issue from a public health perspective, the project is aimed at devising suitable preventive measures and strengthening the message of FAMILY Health, Happiness and Harmony (“the FAMILY 3Hs”) for better holistic family health.

Over the past ten years, a wide range of community partners have come together to implement more than 20 community-based intervention programmes under the FAMILY Project. At the same time, diversified, interactive capacity training workshops have been organised for social service practitioners to help them promote the FAMILY 3Hs and holistic FAMILY health more effectively. Altogether, the FAMILY Project has directly benefited over 350,000 members of the public.

In addition, we have published a series of practice manuals and project reports to share the valuable data and experiences collected for the FAMILY Project from household surveys and community-based programmes. These serve as useful resources for policy makers and social service providers to help foster a more harmonious community.

“Improving family holistic health in probationers-a mixed methods evaluation” was successfully implemented in 2015 in partnership with the SWD. Its aim was to examine the effectiveness of a brief and combined family intervention on probationers’ physical and psychosocial well-being. Through this report, we hope to demonstrate that simple interventions can be effective in improving self-efficacy and self-esteem, promoting physical and psychosocial health, encouraging physical exercise habits and enhancing family relationships among probationers.

On behalf of The Hong Kong Jockey Club Charities Trust, I would like to express my deepest gratitude to the FAMILY Project Team of the School of Public Health of The University of Hong Kong, as well as SWD and all collaborating parties involved in the project. It is our partners’ incredible support that has made the project such a success, and is helping to spread the FAMILY 3Hs and FAMILY holistic health messages to everyone in the community.

Mr. Leong CHEUNG
Executive Director, Charities and Community, The Hong Kong Jockey Club

PREFACE (2)

In January 2015, I participated in a District Forum organised by the SWD Central, Western, Southern and Islands District Social Welfare Office at Cyberport. One of the main speakers of the day was Professor Lam Tai Hing of the School of Public Health at The University of Hong Kong. I remembered Professor Lam had given a very vivid talk about his study on “Zero-time Exercise” (ZTEx). It was very different from a conventional talk where the audience had to sit still. Instead, Professor Lam was very humorous and he had invited us to exercise with him to keep in better shape. It was hilarious, and I enjoyed every moment of it. Of course, at the same time, I did shed a bit of sweat and burn off some calories.

In fact, the purpose for me to participate in the District Forum, as a Social Work Officer of Eastern Probation and Community Service Orders Office, was to learn some new skills to bring back to my office to enhance the service we can provide for offenders and their families. Since July 2012, the seven Probation and Community Service Orders Offices have started an integrated model whereby the probation officer not only has to provide conventional statutory supervision to probationers, but is also required to run direct programmes and activities to the offenders and their families to facilitate the offenders’ rehabilitation and reintegration into the community. It is a very challenging job as we have to design programmes, which can suit and benefit our wide range of clients, who are from all sectors of society and face different life stress and hardship. Luckily, I met Dr. Agnes Lai, Project Manager of Professor Lam’s research team, at lunch and she introduced me to the HKU territory-wide Happy Family Community Project with the Hong Kong Jockey Club. Dr Lai and I continued to correspond after this meeting and within months, with the full support from the SWD management, we were very lucky to be able to invite Professor Lam and his research team to develop and conduct a “Holistic Health Family Project” exclusively for probationers and their families of Eastern Probation and Community Service Orders Office.

“Holistic Health Family Project” aims at promoting FAMILY harmony, happiness, and health to our clients through doing ZTEx and participating in family activities organised by the Probation Office. When the project was first launched, we faced many problems, such as how to randomise and recruit enough suitable participants (300 probationers and their families in total) to participate in the project and be willing to provide their personal social data for research studies. To equip our staff members, probation officers and the clerical officers the necessary theoretical background and procedures of research also required a lot of effort and patience. Much thanks to Professor Lam and the FAMILY Project Team for their valuable advice, great support and training to our staff-members, we have overcome many hassles and this ambitious project has been implemented smoothly and has progressed successfully in the past two years. We have witnessed how disengaged families can be reconnected through participating in “Zero-time Exercise” activities together and how they found and rebuild their trust and loving relationship through joining the “Holistic Health Family Project”. It is an honourable experience to our probation officers too because the project has allowed us to participate in such a prestigious and innovative research project to evaluate the effectiveness of our work as well as to build up wisdom and knowledge to enhance skills and professionalism within the probation service.

Once again, on behalf of our service, I would like to extend my heartfelt thanks to Professor

Lam Tai Hing and his research team, Dr Agnes Lai, Dr Joanna Chu, Miss Alice Wan, and Miss Jamie Chan. I would also like to thank the Hong Kong Jockey Club Charities Trust for its generosity in supporting this project. Finally, I would like to thank all participating families for their trust and positive feedback to our service, which has contributed greatly to the success of this meaningful project.

Mrs. Carol THOMAS
Social Work Officer
Eastern Probation and Community Service Orders Office
Social Welfare Department

PREFACE (3)

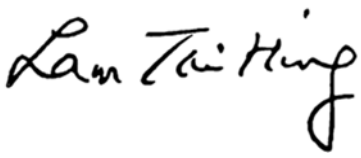
We are most grateful to The Hong Kong Jockey Club Charities Trust which initiated and donated HK$250 million to fund and launch a citywide project entitled “FAMILY: A Jockey Club Initiative for a Harmonious Society”, in collaboration with the School of Public Health of The University of Hong Kong (HKU-SPH). Since 2008, the FAMILY Project has successfully completed many community-based and public education projects to develop cost-effective preventive measures to promote FAMILY health, happiness, and harmony (3Hs).

In view of growing health challenges locally and globally to increase physical activity in the population, the current phase of FAMILY Project focused on Family Holistic Health. We have designed a simple approach, namely “Zero-time Exercise” (ZTEx) which are simple movements and stretching that can be done anytime, anywhere, and by anybody, that do not require extra time (hence zero time), money or equipment. It is a foot-in-the-door approach to start with a small amount of exercise and to reduce sedentary time.

The FAMILY Project Team was invited by Social Welfare Department (SWD) to collaborate in the design, implementation, and evaluation of the Holistic Health Family Project. This pilot project employed an innovative approach which integrated positive psychology, social learning theory, and public health approach. The interventions were brief, simple, and low-cost targeting the service recipients and their families. In deep collaboration with experienced probation officers and stakeholders, and volunteers, the FAMILY Project Team organised a Train-the-Trainer Programme and then developed and delivered 2 ZTEx workshops to 28 SWD officers.

The Holistic Health Family Project has been completed with great success and its benefits have been extended from service workers to the participants and their families. I wish that through this report, the findings, and experiences can be shared with the community partners and other stakeholders, and the messages and strategies of using ZTEx to promote healthy lifestyle and positive family relationship can be spread across the territory, which will lead to better personal well-being, family relationship, and FAMILY 3Hs.

On behalf of the FAMILY Project Team, I express my sincerest gratitude to the SWD and all collaborating parties for their professionalism, commitment, and hard work. We are particularly grateful to the volunteers, participants, and their families for their active participation in the workshop and evaluation, and particularly to Mrs. Carol Thomas for initiating this project and the strong support from her and her staff.



Professor LAM Tai Hing
Principal Investigator, FAMILY: A Jockey Club Initiative for a Harmonious Society
Sir Robert Kotewall Professor in Public Health
Chair Professor of School of Public Health, The University of Hong Kong

FAMILY: A JOCKEY CLUB INITIATIVE FOR A HARMONIOUS SOCIETY

Background

To help build a more harmonious society, The Hong Kong Jockey Club Charities Trust invited the School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong to collaboratively launch a project entitled FAMILY: A Jockey Club Initiative for a Harmonious Society ("FAMILY Project") with funding of HK$250 million. The project aims to identify the sources of family problems, to devise, implement, and evaluate preventive measures, and to promote FAMILY health, happiness, and harmony (3Hs) through a territory-wide household survey, intervention projects and public education.

The project

The project comprises three components:

1. Social barometer

a) Territory-wide Household Survey

The FAMILY Cohort, a population-based cohort study focusing on the family as a unit, was carried out from 2007 to 2014. It aimed to identify the source of domestic problems and derive preventive responses that are complementary, wide-reaching, pervasive, and cost-effective. Survey findings can provide useful information to relevant organisations for the planning of future programmes and initiatives.

b) Hong Kong Family and Health Information Trends Survey (HK-FHInTS)

During 2009 to 2017, the FAMILY Project Team has conducted one Hong Kong population cross-sectional telephone survey almost every year to assess changes in family and health information seeking behaviours among the general public and the impact of the Project's programmes in promoting FAMILY 3Hs. Six surveys were completed in 2009, 2010, 2012, 2013, 2016, and 2017 respectively, with extensive media coverage which have helped raise public awareness of FAMILY 3Hs messages.

2. Intervention and community-based programmes

The FAMILY Project Team has been working closely with government departments, numerous social service, and related organisations to develop and implement interventions to strengthen family relationships across generations throughout Hong Kong. These include intervention projects to enhance family and parent-child relationships; school-based projects to spread FAMILY 3Hs to hundreds of schools; and community-based projects with Social Welfare Department, Department of Health and various non-governmental organisations (NGOs) to promote 3Hs to entire district and the community. The study methods and results of these projects have been shared with the government, NGOs, and community service workers and the general public.

The seven intervention projects were:

- H.O.P.E. (Hope Oriented Parents Education for Families in Hong Kong) Project
- Harmony @ Home Project
- Effective Parenting Programme
- Happy Transition to Primary One
- Share the Care, Share the Joy
- Boosting Positive Energy Programme
- Be Healthy, So Easy: FAMILY Education Project

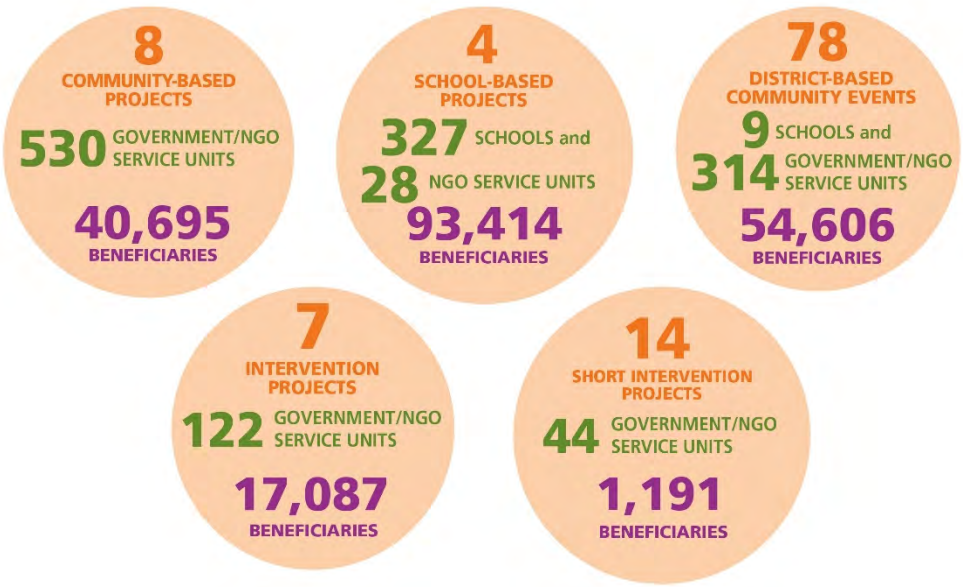
The four school-based intervention programmes were:

- FAMILY Goes Green
- 3Hs Family Drama Project
- 3Hs Family Drama Project II: Family Interactive Drama with Exercise and Fun
- More Appreciation and Less Criticism Project

The eight community-based engagement projects were:

- Happy Family Kitchen I & II Projects

- Learning Families Project
- Enhancing Family Well-being Project
- Happy Family Kitchen Movement Project
- Community Health Campaign: Fitter Families Project
- Holistic Health Family Project
- Family Holistic Health Community Promotion Project



All of the project interventions were designed using a public health framework, so they were brief, preventive, cost-effective, and targeted a large number of people at the same time. The community-science partnership between academia, government departments and NGOs also ensured that the projects were developed by practitioners who understood the needs of the Hong Kong people, delivered by key community stakeholders, and conducted with scientific rigour to generate evidence for future social health programmes and policies.

3. Health communication and public education

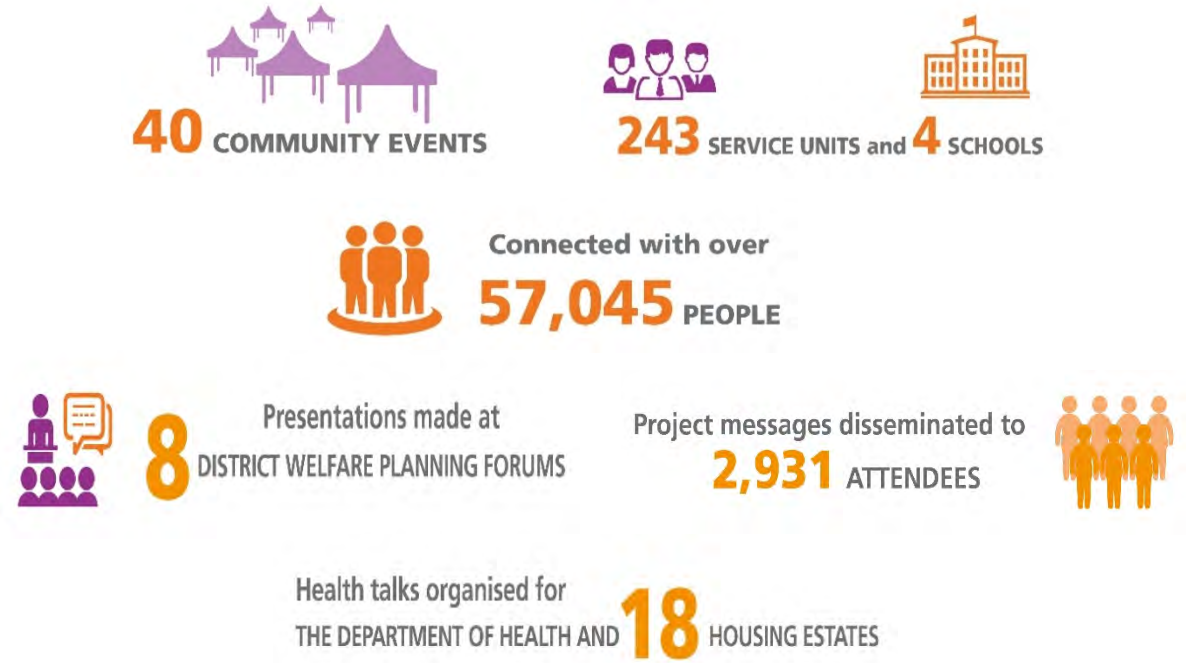
Apart from engaging different community stakeholders in various intervention projects, the key messages of the FAMILY Project were spread far and wide into the community to promote positive family values and harmonious relationships. FAMILY 3Hs and FAMILY Holistic Health messages have been disseminated to the general public through various channels to raise public awareness and create a positive environment for family participation. These have been complemented by community-based projects and community-wide events to promote FAMILY 3Hs all around Hong Kong.

Train-the-Trainer and Ambassador Programmes

From April 2015 to January 2017, a number of Train-the-Trainer and Ambassador workshops have been organised to train community leaders, teachers, social service workers and volunteers as Health Ambassadors, or health role models so that they can enjoy the benefits, then promote the benefits to others. Trained Health Ambassadors have helped with the implementation of community-based programmes, led simple physical activities to targeted audiences and promoted knowledge of healthy living to participants and the community.

Health promotion events

The FAMILY Project Team has actively co-organised and participated in various community events with social service units and community organisations, with the aim of promoting FAMILY 3Hs messages by means of exhibitions, game booths and talks, etc.



EXECUTIVE SUMMARY

Background

Social Welfare Department probation services have long been serving the Hong Kong community. Compared with the general population, probationers are associated with poorer mental (e.g., depression, lower levels of self-esteem, high level of stress) and physical health, and often experience higher levels of family conflict, and poorer quality of family relationships. Given the vulnerabilities, there is a need to strengthen and promote a healthy lifestyle and enhance individual and family well-being among them. Studies on interventions to promote their well-being and family relations with vigorous evaluation are scarce.

The Holistic Health Family Project focused on "FAMILY Holistic Health" which emphasises a comprehensive approach to improving physical, mental, and social health and well-being. This project was conducted as a pilot collaborative project with the Social Welfare Department (SWD) of Hong Kong starting from April 2015. Using positive psychology and the Social Learning Theory as the basis of design, physical activity - namely Zero-time Exercise (ZTEx) - was used as a platform to enhance participants' physical and mental health as well as family communication. Interventions were designed, delivered, and evaluated by multi-methods to promote and enhance probationer's wellbeing, as well as FAMILY health, happiness, and harmony (3Hs).

Project aims

1. To examine the effectiveness of a brief and combined intervention on probationers' physical and psychosocial well-being; and
2. To explore the outcome changes on individual well-being, physical health, behaviours on physical activity, FAMILY 3Hs, family relationship, relationship with a probation officer and satisfaction towards the programme among the probationers after the interventions.

Project summary

The Holistic Health Family Project was a pilot collaborative project with the SWD from April 2015 to March 2017. The project adopted positive psychology and ZTEx as main elements to improve the participants' and family's FAMILY 3Hs. The concept of ZTEx refers to easy, enjoyable, effective (3Es) movements or exercises that do not require extra time, money, and equipment (3 Zeros) and can be done anytime, anywhere, and by anybody (3As).

Prior to recruitment of probationers, a Train-the-Trainer Programme was first provided to 28 SWD officers from Eastern Probation and Community Service Orders Office (EPCSO) in enhancing their knowledge and self-efficacy for implementing the programme. A needs assessment (questionnaire and focus group) was completed by the officers to identify their perceived needs, feasibility, and challenges of delivering the intervention programmes. Training was provided to the officers to enhance their knowledge and self-efficacy for implementing the intervention programme. Each officer was equipped with a practice manual that provided them with the guidelines of the project as well as information on positive communication, physical activity, and ZTEx.

Participating probationers were randomly assigned to one of three groups: a brief intervention group (Group A), a combined intervention group (Group B), and a care-as-usual group (Group C), using a randomised controlled trial (RCT) design. Group C participants received regular services, whereas Groups A and B participants received the intervention immediately after pre-intervention assessments. Group B received brief intervention plus family group activities, designed and led by the officers and the FAMILY Project Team. Participants allocated to Group A received the intervention following completion of 3-month follow-up assessment.

	Probation service	Brief intervention (1 hour)	Group activity (2.5 hours)
Group A (brief intervention)	✓	✓	
Group B (combined intervention)	✓	✓	✓
Group C (care-as-usual)	✓		

To evaluate the effects of the interventions conditions, all participants were assessed by questionnaires and fitness tests at three time points: pre-intervention (T1, baseline), 1 month (T2), and 3 months after the intervention (T3). Family members (over the age of 18 years) of probationers were also invited to complete questionnaires at equivalent time points. Groups A and B participants received homework booklets to help them document their exercise goals, physical fitness assessment results, and daily ZTEx practices. Souvenir packs (handgrip, towel, and reusable bag) were given to participants after the completion of the follow-up assessment as a token of appreciation. Focus groups were conducted after 3-month follow-up to gather family, probationers, and probation officers' perspectives on the impact of the interventions.

Recruitment of participants commenced in April 2015 and completed in March 2017. A total of 559 service users and their family members joined the programme, and of which 318 participants were randomised. The intervention groups reported significant increases in their subjective happiness, use of praise and gratitude towards family members, engaging in ZTEx and family health. Both Groups A and B participants showed greater increases in moderate physical activity, expressions of praise towards family members and improved family relationships compared with Group C.

The findings showed the effectiveness of engaging family members in physical activities, and better family communication and relationships. As such, the family holistic health approach should be further developed and tested in probation services.

CHAPTER 1 INTRODUCTION

1.1 Probation system in Hong Kong

The Social Welfare Department (SWD) is responsible for services involving offenders in the community, namely for those who are put on probation and community service orders [1]. Within the Hong Kong criminal justice system, the probation model is emphasised, and the importance of rehabilitation work has remained focused on the treatment of offenders. The targets of probation are those first and second offenders whose current offences are less serious and non-violent, and the aims of the service provided are unequivocally rehabilitative.

According to the Directors of Social Welfare (1984–98, several issues), the overall objective of the probation service is to help offenders become law-abiding citizens and reintegrate them into the community. As a statutory requirement, a probation officer will endeavour to “advise, assist, and befriend” a probationer under Section 19 of the Rules of the Probation of Offenders Ordinance [2]. The probation officer provides supervision and personal guidance to probationers, aiming for reform and insight [2]. The goals of probation place a strong emphasis on offenders’ rehabilitation, and the philosophy governing probation practice is built upon “enabling offenders to reform” rather than “controlling, punishing, or monitoring” [2].

According to the SWD Review 2009-10 & 2010-11, the rate of satisfactorily closed probation cases in these two years are 84.5% and 84.9% respectively [2]. Despite the encouraging figures, there are very few indicators in terms of service effectiveness. More specifically, probation service effectiveness has always been associated with crime reduction, nonetheless, relying on one indicator seems far from adequate. There are limited studies on the effectiveness of probation services on social and behavioural changes, physical and mental health, and on service quality.

1.2 FAMILY Holistic Health

Family is an elementary building block of any society. Nonetheless, families worldwide are undergoing rapid changes together with macro, social and economic trends. Demographic shifts, economic upheavals, changing societal norms and values, both immigration across national borders and migration within nations are creating new and altered structures, processes, and relationships within families. The increasingly complex and diverse family structure is leading to a major concern in the well-being of families in Hong Kong, including their FAMILY health, happiness, and harmony (3Hs). Family health can be holistically defined and encompassed both wellness and illness variables, focusing on the interactive, developmental, functional, psychosocial, and health processes of family experience [3]. Family health is a dynamic process that maintains or changes the relative state of well-being, including elements of family systems, such as biological, psychological, spiritual, and sociocultural aspects [4]. For probationers, the impact of the offence on the family can be significant, affecting the well-being of families (including mental, social, and physical health). Reciprocally, unhealthy family environments (e.g., family disruption, high level of family conflict) place individuals at greater risk for problematic behaviours. Interventions that increase protective factors and reduce risk factors are therefore needed for service users and

their families.

1.3 Physical activity and well-being

Physical activity has been defined as “any bodily movement produced by skeletal muscles that results in energy expenditure” [5]. This definition includes all daily living activities, home and childcare, occupation, transportation, leisure, and various types of inactivity. In general, physical activity is considered an important component of well-being, and one of the numerous benefits of physical activity that has received increased attention is its moderating effect on stress [6]. It has been shown that stressful life events relate to development of psychological and physical health problems [6]. Based on the US Surgeon General’s Report [7], physical activity helps reduce feelings of anxiety, stress, moodiness, and depression and improve self-esteem [8] and psychological well-being. Similar conclusions have been reached by RJ Sonstroem and WP Morgan [9], that is, one of the most important outcomes of exercise is enhanced self-esteem. For probationers, delinquency and crime have long been reported to associate with personality dispositions [10]. Research has consistently demonstrated that low self-esteem and weak social bonds are strong predictors of both adolescent recidivism and adult criminality [11].

1.4 Theoretical framework

1.4.1 Positive psychology

Positive psychology is a science of happiness, which focuses on positive emotions and personal strengths [12]. It is used as a preventive and complementary medicine, and is a crucial component in FAMILY Holistic Health programmes. Positive psychology focuses on positive emotions and uses scientific knowledge to implement effective interventions. These interventions lead to positive attitudes, happiness, and fulfilment. Positive psychology interventions can be effective in the enhancement of subjective and psychological well-being and may help to reduce depressive symptom levels [12]. In the current study, the use of positive psychology was intended to help families to build positive attitudes towards physical activities. The intervention attempts to modify their behaviours by increasing their motivation towards improving their holistic health. It further encourages family members to work with each other to increase physical activity and enjoy the process with quick and measurable benefits. This, in turn, may lead to enhanced sustainability within and beyond the family.

Social Learning Theory

Social Learning Theory (SLT) emphasises individual, behavioural, and environmental factors that interact [13]. In the application of SLT, the individual is encouraged to observe and model the behaviours of others, increase their own capability and confidence to implement new skills, gain positive attitudes about implementing new skills, and experience support from their environment in order to use their new skills [13]. In the current study, the interventions were designed to: focus on enhancing individual personal attributes such as the participant’s knowledge, values, and behaviours related to physical activity; promote changes in behavioural attributes through goal setting; and strengthen the individual’s social bond with families, peers, and other significant adults.

1.5 Project objectives

The holistic health intervention model emphasises the interaction and integration of physical health and psychosocial health. Based on a number of theories (i.e., positive psychology and SLT), the interventions used physical activity as a platform to promote fitter and finer families, with the aim to ultimately enhance FAMILY 3Hs. In practice, we used innovative integrated positive psychology and SLT to plan brief, simple, and cost-effective interventions targeted at probationers and their families, with collaboration from experienced probation officers and stakeholders, specifically and briefly trained for the interventions. The study had the following aims and objectives:

1. To examine the effectiveness of the intervention groups (Groups A and B) on probationers' physical and psychosocial well-being; and
2. To enhance individual and family well-being among probationers, in particular, the skills and knowledge about strong communication skills, healthy family functioning, healthy interpersonal relationships, positive self-esteem, and physical activity.

1.6 Project hypotheses

The brief and combined intervention based on positive psychology, SLT, and Zero-time Exercise (ZTEx) would:

1. Improve self-efficacy and self-esteem;
2. Promote physical and psychosocial health;
3. Encourage behaviours on physical activity; and
4. Enhance family relationship.

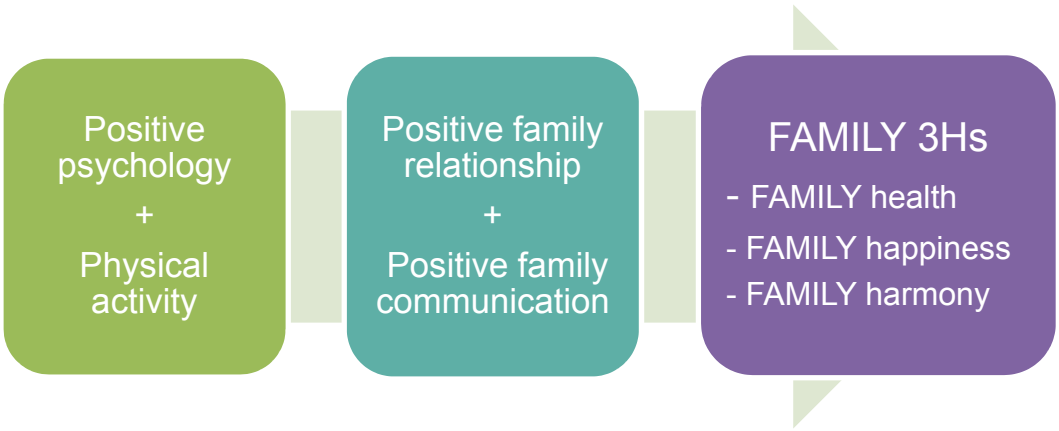
CHAPTER 2 PROJECT DESIGN AND MEHODOLOGY

The project was approved by the Institutional Review Board of The University of Hong Kong/Hospital Authority Hong Kong West Cluster (UW 15-249) and registered under ClinicalTrials.gov (NCT02770898).

2.1 Conceptual framework of intervention programme

The intervention programme adopted the positive psychology concepts of praise and gratitude, which can be easily done. In conjunction with using physical activity particularly ZTEx as an action platform, the intervention programme aimed to promote positive family relationship and family communication, and ultimately FAMILY 3Hs (Figure 2.1).

Figure 2.1 Conceptual framework of intervention programme



2.2 Study design

The study consisted of two main components: Train-the-Trainer Programme (TTT) for service providers (probation officers) and delivery of interventions to service users (probationers). Prior to recruitment of probationers, probation officers completed a needs assessment (questionnaire and focus group) to identify their perceived needs, feasibility, and challenges of delivering the intervention programmes.

The second component was designed as a randomised controlled trial (RCT), which is the best study design to evaluate effectiveness of interventions. Following eligibility assessment and written informed consent, participants were randomly assigned to either of the two intervention arms: brief intervention (Group A) and combined intervention (Group B), or one control arm: care-as-usual (CAU) (Group C) (Table 2.1).

2.2.1 Brief intervention arm (Group A)

The brief intervention (1 hour) was conducted on a one-on-one basis and consisted of three main components. First, the intervention enriched participant's knowledge, values, and behaviours related to physical activity. Second, the intervention promoted changes in behaviour by providing opportunities and experience in goal setting, skills development in physical activity and self-monitoring. Third, the brief intervention promoted family relations and well-being by encouraging individuals to share their knowledge and increase physical activities with other family members. The brief intervention was delivered by the probation officer during regular monthly supervision.

2.2.2 Combined intervention arm (Group B)

Participants allocated to the combined intervention received the individual brief intervention as in Group A and in addition participated in a one-day group activity (2.5 hours). The components of the brief intervention were reinforced with ZTEx and positive psychology in the group activity. Led by probation officers, the group activity was designed to create an environment that was supportive for physical activity through role models, peer support, and encouragement of probationers to exercise with family members (Table 2.2).

2.2.3 Care-as-usual arm (Control; Group C)

Participants allocated to CAU received their usual probation services. Participants were offered the combined intervention upon completion of 3-month follow-up assessment. Souvenir packs including logo-adorned items (i.e., handgrip, towel, and bag) were given to participants after the completion of the follow-up assessment as a token of appreciation.

2.2.4 Supporting material

2.2.4.1 Manual (Probation officers)

To complement the TTT material, a practice manual (Appendix 1) was given to each probation officer. The purpose of the manual was to reiterate the concept of positive psychology with emphasis on positive communication through expressing gratitude and appreciation. Together with the knowledge of physical activity benefits (including ZTEx) and goal setting tips, probation officers were able to deliver the intervention. It also served as a reference guide of additional information for the probation officers to turn to.

2.2.4.2 Homework booklets (Participants)

Each participant in the brief intervention group (Group A) and combined intervention group (Group B) was given a homework booklet (Appendix 2). The participants were requested to set physical activity (ZTEx) goals, fitness record (participant and their family members), and daily physical activity (ZTEx) for 4 months.

The main objectives of the homework booklet were:

1. To record daily performed physical activities and track progress over 4 months;
2. To address health information, including benefits of exercising and harmful effects of sedentary behaviours;
3. To introduce physical activity (ZTEx) routines that focus on balance, muscle endurance, and flexibility;
4. To share information of health benefits and perform ZTEx with family; and
5. To provide useful tips (e.g., positive communication, use of praise and appreciation) to enhance family relationships.

Table 2.1 RCT design

	Brief intervention (Group A)	**Combined intervention (Group B)**	**Care-as-usual (Group C)**
Baseline (T1)	Baseline questionnaire + fitness measurements	Baseline questionnaire + fitness measurements	Baseline questionnaire + fitness measurements
Intervention	Individual brief intervention	Individual brief intervention + group activity	Usual probation services
Immediate post-intervention (T1a)	/	Immediate post-intervention questionnaire (T1a)	/
1-month follow-up (T2)	T2 questionnaire + fitness measurements	T2 questionnaire + fitness measurements	T2 questionnaire + fitness measurements
3-month follow-up (T3)	T2 questionnaire + fitness measurements	T2 questionnaire + fitness measurements	T2 questionnaire + fitness measurements
Qualitative evaluation	Participant + family member focus group	Participant + family member focus group	Participant+ family member focus group

Table 2.2 Outline of group activity

1. Arrival of participants (15 minutes)
2. Baseline questionnaire and fitness assessments (30 minutes)
3. Interactive Seminar by Professor TH Lam on ZTEx and related topics (30 minutes)
4. Break (10 minutes)
5. Theme-based Interactive games for participants and their family members (45 minutes)
6. Lunch (1 hour)
7. Workshop on positive psychology (2 hours)
8. Participants sharing session (15 minutes)
9. Immediate-post questionnaire (T1a) (15 minutes)
10. Closing remarks (5 minutes)

2.3 Target population

2.3.1 Recruitment

The participants were recruited from the enrolment list of all individuals on probation services from the main and sub-office of the SWD Eastern Probation and Community Service Orders Office (SWD-PO) from April 2015 to March 2017. The recruitment was ongoing during the span of the project as new probation and community service orders were received each month.

2.3.2 Selection criteria

2.3.2.1 Selection criteria for participants

Inclusion criteria:

The participants were individuals who were in probation at the time of recruitment and aged 13 or above (parental consent was required for those under the age of 18 with 6 months of remaining term. He or she was required to have family members who are based in Hong Kong (the rationale is that one of the secondary outcome is to improve family relations). He or she was required to have reading and writing abilities for questionnaire completion.

Exclusion criteria:

Participants with active severe psychiatric issues, developmental or intellectual disabilities, and sexual offenders were excluded from the study.

2.3.2.2 Selection criteria for family members

Inclusion criteria:

Participants and their family members were invited to complete questionnaires at the same time. The family member had to be aged 18 or above. He or she was required to have reading and writing abilities for questionnaire completion.

Exclusion criteria:

Family members who had active severe psychiatric issues, developmental or intellectual disabilities, sexual offenders and aged under 18, were excluded from the study.

2.3.3 Participant consent

Participation for all components of the project was completely voluntary and participants had the right to withdraw at any time without any consequences. Written consent was required from the participants prior to the study.

2.4 RCT design

2.4.1 Randomisation

A password-protected case list was provided by a designated probation officer of the SWD-PO to the research team via e-mail at the beginning of each month. Randomisation was implemented using a list of numbers randomly generated by computer and cases were assigned sequentially to conditions according to the list. The process was performed by an independent researcher to ensure allocation concealment. The assigned list was then sent back to the SWD-PO team to proceed with the study.

Participating probation officers were given specific information on group allocation methods during the TTT. They acquired skills to independently and effectively implement corresponding interventions.

2.5 Evaluation of intervention programme

2.5.1 Participant's evaluation assessment

After eligibility assessment and written informed consent, participants were randomly assigned to either a brief intervention, combined intervention, or CAU condition. To evaluate the effects of the intervention conditions in comparison to that of CAU, participants in all conditions were assessed at three-time points, i.e. pre-intervention (T1), 1-month follow-up (T2), and 3-month follow-up (T3). An immediate post-intervention (T1a) assessment was also conducted for participants in Group B immediately following the group activity to assess programme satisfaction. All questionnaires were designed to be brief and easy to understand using simple language (Table 2.3).

Fitness assessments conducted for participants included weight and height measurements, blood pressure, single leg stance test, and 30-second chair stand test at all three time points. Qualitative evaluation of the programme was conducted using focus groups.

2.5.2 Family member's evaluation assessments

Family members (over 18 years) of all 3 groups were also invited to complete questionnaires at equivalent time points, i.e. pre-intervention (baseline, T1), post-intervention (1 month, T2), and 3-month follow-up (T3). Fitness assessments were not required for family members.

The probation officers administered the questionnaires at both SWD-PO main and sub-office, which are in Sai Wan Ho and Quarry Bay, respectively. Elderly participants received extra assistance using enlarged photocopies of the questionnaires. The questionnaires were collected on a monthly basis by the staffs from the FAMILY Project Team.

Table 2.3 Measures included in evaluation assessments

Parameters	Scales
Frequency and adequacy of family communication among family members	Family Communication Scale [14]
Self-reported family dysfunction	Family APGAR [15]
Frequency of praise, exercise, verbal, and physical appreciation	Self-perceived behaviours (Adopted from Happy Family Kitchen Movement)
Frequency of physical activity	IPAQ [16]
Subjective happiness	Subjective Happiness Scale [17]
Participants' self-reported FAMILY health, happiness, and harmony	FAMILY 3Hs (FAMILY Cohort)
Life satisfaction	Life Satisfaction Scale [18]
Depression and anxiety	Mental Health Scale [19]
Self-esteem	Rosenberg Self-esteem Scale [20]
Physical health	SF-12 [21]

2.6 Measurements

Participants were assessed based on their individual well-being and family related aspects using several parameters (Table 2.3).

Participants' individual well-being and psychosocial health were measured using the Subjective Happiness Scale, Satisfaction with Life Scale, and The Patient Health Questionnaire for Depression and Anxiety (PHQ-4), and the Rosenberg Self-esteem Scale.

Subjective Happiness. The 4-item Subjective Happiness Scale was used to measure subjective happiness [17]. Responses were given on a 7-point scale (e.g. "1=less happy", "7=more happy"), with higher total score indicating a higher level of happiness. An example of the scale is "Compared to most of my peers, I consider myself more happy". The Chinese version of the scale has been previously translated and validated in Hong Kong [22].

Satisfaction with Life. This was assessed using the 5-item Satisfaction With Life scale [23]. Responses were given on a 7-point Likert scale ("1=strongly disagree" to "7=strongly agree"), with a higher total score indicating a higher level of satisfaction with life. An example of the scale is "In most ways my life is close to my ideal".

Depression and Anxiety. The 4-item Patient Health Questionnaire (PHQ-4) was used to assess depression and anxiety. Responses were given on a scale of 0 to 3. Lower PHQ-4 scores indicate less likely to be depressed or anxious.

Self-esteem. The 10-item Rosenberg Self-esteem Scale was used to measure self-esteem [20]. Each question was score from 1 to 4. Higher scores are indicative of higher self-esteem.

Physical Activity. Two single item behavioural indicators were used to measure ZTEx. Responses were made on a scale of 0 (never) to 10 (always), with higher score indicating more ZTEx. An example is "In the past four weeks, how frequently have you done ZTEx?".

Quality of Life. The 12-item Short Form Health Survey (SF-12v2) [24] was used to assess quality of life. It consists of mental and physical quality of life. Depending on the question, responses are on a 3-point scale (e.g., 1=yes, limited a lot, 3=no, not limited at all) or a 5-point scale (e.g., 1=not at all, 5=extremely). An example question is "During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?" Mental component summary and physical component summary scores were calculated using the standard scoring algorithms, which involved weighting sums of the domain scale scores with the factor scoring coefficients, as described in the SF-12v2 manual [25]. The Chinese version of the scale has been validated in local populations [24, 26].

Family APGAR. The 5-item Family APGAR scale was used to measure functionality of the family [15]. The scale is measured using the sum of all scores from the 5 questions, each scored from 0-2. A total score of 7-10 suggests a highly functional family, score of 4-6 suggests a moderately dysfunctional family, a score of 0-3 suggests a severely dysfunctional family.

FAMILY 3Hs. Three single item indicators were used to measure family well-being, including health, happiness and harmony [27]. Responses were made on a scale of 0 (very

unhealthy/unhappy/disharmonious) to 10 (very healthy/happy/harmonious), with higher scores indicating a healthier, happier and more harmonious family. The FAMILY health question was “Do you think your family is healthy?” The FAMILY happiness question was “Do you think your family is happy?” The FAMILY harmony question was “Do you think your family is harmonious?”.

Lastly, participants were asked to evaluate their relationship with their probation officer. The score of 5 indicates very good while the score of 1 indicates very poor.

2.7 Fidelity

To ensure that the intervention programmes were delivered consistently, checklists were developed to assist the probation officers (interventionists) at all three time points. They were required to complete the fidelity checklist during the three individual brief interventions with the participant.

2.8 Data analysis

2.8.1 Quantitative analysis

Quantitative data were analysed using IBM SPSS Statistics 24.0. The demographic characteristics of the participants were described using frequencies and percentages, and the baseline scores of outcome variables were described using means and standard deviations. Pearson’s chi-square tests and independent t-tests were conducted to compare the demographic characteristics and baseline scores between the groups. To examine the effectiveness of the intervention, linear mixed models analyses were carried out to assess whether there were differences in the outcome changes between two groups. The principle of intention-to-treat analysis was adopted through imputing missing observations from lost to follow-up or decline to complete follow-up questionnaires using the baseline values (i.e., assuming no changes). Sensitivity analysis was performed by using “complete case analysis”, on participants with complete assessments at baseline, 1 month, and 3 months follow-up. An effect size (Cohen’s d) of 0.2 was considered as a small effect, 0.5 as a medium effect, and 0.8 or above as a large effect. All significance tests were 2-sided with a 5% level of significance.

2.8.2 Qualitative analysis

The focus groups discussions were tape-recorded and transcribed verbatim. Transcripts were analysed by thematic content analysis, following the guidelines recommended by Morse & Field [28]. Each transcript was analysed sentence by sentence and coded for the respondents’ meanings. Initial open coding of the data used differing codes, which were then organised into categories. Categories were later integrated into themes within and across groups. Once the categories and themes were identified, the transcripts were reviewed again to validate the thematic analysis and to ensure that all meaningful interview data have been analysed. Data comparisons within and between groups were conducted. Field notes were reviewed with the transcripts during the process. The software NVivo 11.0 (QSR International; Melbourne, VIC, Australia) was employed to assist with qualitative data administration,

including creating codes, organising and summarising data, searching for interrelationships between codes, and suggesting themes.

Data on process evaluation were collected from the process evaluation onsite observational form as well as the fidelity checklists completed by probation officers. These data were analysed with a combination of quantitative and qualitative methods. Closed-ended questions were analysed by the descriptive statistics (quantitative methods) while open-ended questions were analysed by thematic content analysis (qualitative methods).

CHAPTER 3 TRAIN-THE-TRAINER PROGRAMME

3.1 Introduction

Preventive interventions in public health have to be cost-effective, so they must be practical, brief, and easy to spread widely across the population by trained personnel in order to reach a large number of people in the community [29]. The train-the-trainer educational approach can build capacity in communities [30]. Experts train key personnel to deliver services [31], ideally in focused programmes with minimum time and cost burdens, resulting in efficient and effective utilisation of available human and community resources.

In view of enhancing the health-related knowledge and skills of the probation officers of the SWD-PO to be involved in the implementation of the Holistic Health Family Project (HHFP) and meeting the manpower needs to promote family holistic health and family well-being in the community, a Train-the-Trainer Programme (TTT) was jointly developed by the organising committee of the Holistic Health Family Project, including the representatives of the FAMILY Project Team and SWD-PO.

The training was designed to be brief so that a large number of trainees could be trained quickly to assist in developing and implementing the invention programmes for probationers within a short project duration. Two training workshops were conducted for 31 registered social workers during April 2015 to May 2015.

3.2 Objectives

- To enhance trainees' knowledge, self-efficacy, attitude, and application of the general constructs of positive psychology and ZTEx to design and implement Holistic Health interventions for probationers;
- To promote trainees' physical activity, physical fitness, and family well-being; and
- To encourage trainees to share the health information and experiences with their family members, friends and service users and influence their health behaviour.

3.3 Training design and content

3.3.1 Pre-training phase

We first conducted needs assessment on 15 April 2015 in the multifunction room of SWD-PO in Sai Wan Ho. This assessment aimed to identify the needs, resources, and feasibility of implementing and evaluating HHFP; and obtain input relevant to enhancing the acceptability and applicability of the TTT and the interventions for the probationers and their family members.

3.3.2 Training phase

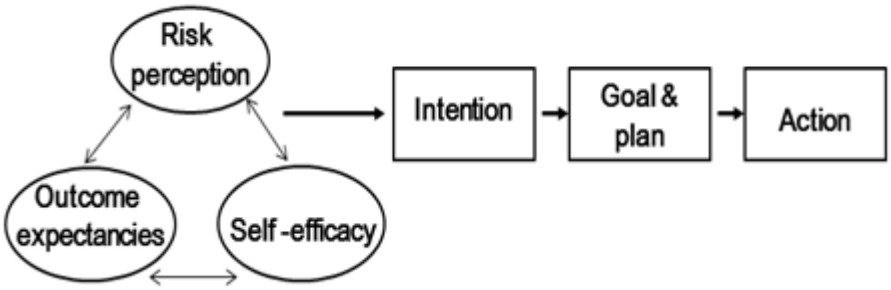
Two 2-hour session training workshops were conducted in the multifunction rooms of SWD-PO in Sai Wai Ho and Quarry Bay during April 2015 to May 2015. The multidisciplinary

research team involved consisted of academic public health professionals (a public health physician and a nurse) from the FAMILY Project Team with experiences in TTT and developing health promotion and interventions in the community, and registered social workers from the SWD who were experienced with staff in-service training. The TTT aimed to enhance not only trainees' knowledge, self-efficacy, attitude, and application of the constructs of positive psychology and ZTEx to design and implement the holistic health interventions for the probationers, but also their personal and family gains in well-being.

Session I (core session) focused on enhancing the knowledge, self-efficacy, and attitude on using holistic health interventions. The key components of HHFP and holistic health interventions were introduced, including the positive psychology theme 'Gratitude and Appreciation' [32], ZTEx, as well as personal and family well-being.

Figure 3.1 shows the framework used in the core session, guided by the Health Action Process Approach (HAPA). HAPA proposes that behaviour change is the result of motivation enhancement which increases intention, goal setting and planning, and these processes enhance intention and promote its conversion to action [33]. Our goal was to determine whether we could achieve and maintain attitude and behaviour changes over the short to medium term.

Figure 3.1 The Framework of the core session of TTT



Physical fitness assessments were conducted at the beginning of the core session, with the aim of increasing trainees' interests in their own health status and the intervention that followed. Age- and gender-specific physical fitness reference values and the clinical relevance of these values were presented and discussed with the trainees [34-39]. We also encouraged them to compare their own results with the normative data. The harmful effects of physical inactivity and obesity were highlighted.

The interventionists then introduced ZTEx, a foot-in-door approach starting from performing simple exercises while sitting, standing or waiting. Examples of different types of ZTEx such as simple stretching and movements of different body parts were demonstrated, and the trainees were asked to follow. We shared their personal experiences and the benefits of engaging in ZTEx with the trainees, emphasising "3Es" (ZTEx is easy, enjoyable, and effective) and "3As" (ZTEx can be done anytime, anywhere, and by anybody).

To induce cognitive dissonance, the interventionists (we) asked the trainees to pledge openly and loudly together that they would practise ZTEx and share this with their family members because they love them. We encouraged trainees to share their learning, engage their family members to perform ZTEx, and praise their family members for practising ZTEx, and involve their family members in their exercise action plan. We then explained that the trainees would experience cognitive dissonance if they acted contrary to their pledge.

The booster session (session II) was conducted at 1 month after the core session, which included two parts. The first part included physical fitness assessments, questionnaire reassessment, and sharing of “success stories”. It aimed to further strengthen trainees’ motivation to perform ZTEx regularly. Trainees were invited to share their experiences and discuss the barriers they faced when engaging in and introducing ZTEx to their families. We highlighted any positive changes they reported, reassured the trainees that positive changes were likely to come with engaging in ZTEx regularly, and reminded them of the negative consequences of physical inactivity. The second part of the booster session comprised a discussion regarding the logistic arrangements for the implementation and evaluation of the interventions for the probationers.

In communicating the content, open-ended questions, and diversified learning methods were used, including didactic instruction, practising together, using laser pointers for the trainees to make responses to questions on the screen, games, role plays, and group discussion.

Two research staff assessed the fidelity of the intervention separately, using a checklist on the components of the intervention outlined above to ensure the quality of training. The assessment showed that all listed objectives in the checklists for the core and booster sessions were achieved and completed within the pre-set time frame in all training sessions.

3.3.3 Post-training phase

Post-training support to trainees consisted of on-going guidance, supervision, and consultation. A practice manual was prepared for each probation officer to reiterate the concept of positive psychology with emphasis on positive communication through expressing gratitude and appreciation. The knowledge of physical activity benefits (including ZTEx) and concepts of goal setting would empower the probation officers to be able to deliver the intervention. The manual also served as a reference guide as additional information for the trainees to turn to as needed.

In addition, we conducted two one-hour consultation sessions on 2 December 2015 at the main and sub-office of SWD-PO in Sai Wan Ho and Quarry Bay. These sessions aimed to answer queries about the logistics and intervention-related issues.

3.4 Evaluation method

Both qualitative and quantitative methods were used. Self-administered questionnaires were used to assess all the outcomes at four-time points: at baseline, 1 month, 3 months, and 2 years after the core session. Physical fitness assessments were performed at baseline and 1-month follow-up. A focus group interview was conducted with 8 trainees on 29 March 2017 after finishing the interventions for the probationers.

3.4.1 Outcomes

3.4.1.1 Primary outcomes

- Knowledge, self-efficacy, attitude and application in relation to positive psychology and ZTEx on enhancing probationers' self-esteem and family well-being.

3.4.1.2 Secondary outcomes

- Practices of physical activity including ZTEx;
- Physical fitness performance;
- Engaging in ZTEx with family members;
- Family well-being; and
- Reactions to the training workshop.

3.4.2 Measurements

Trainees indicated the extent of their agreement on statements in relation to (i) apply the learning (positive psychology and ZTEx) to enhance probationers' self-esteem and family well-being; and (ii) their knowledge, self-efficacy, outcome expectancies, and plan on engaging in ZTEx (for example, "I am confident that I am able to do ZTEx regularly"). Each item was measured on a scale scoring from "1" indicating strongly disagree to "6" indicating strongly agree.

Self-reported physical activity was assessed by questions adopted and modified from the International Physical Activities Questionnaire-Chinese version (IPAQ-C) [40, 41]. We assessed sedentary behaviour by asking two questions (for example, "On a typical weekday in the last seven days, how many hours per day did you typically spend seated?"). We assessed the frequency (number of) of engaging in physical activity in the last seven days by asking five questions (for example, "In the last seven days, how many days did you perform at least 10-minute of moderate physical activities?"). Response options were from "0 day to 7 days".

Physical fitness assessments with standardised protocols were used to assess physical fitness at baseline and 1-month follow-up. Assessments included body mass index, hand grip strength measured by a dynamometer [42, 43], lower limbs strength assessed by 30-second chair stand test recording the number of stands from the chair in 30 seconds [44], and balance assessed by single leg stance test recording the time that the individual could effectively balance on one leg (for a maximum of 120 seconds) [45]. Questions about general health were asked before the physical fitness assessments.

Participants were asked to indicate their perceived health, subjective happiness and FAMILY harmony by five questions: "Do you think your family is healthy?"; "Do you think your family is happy?" and "Do you think your family is harmonious?". Each item was measured on a scale scoring from "0" indicating very unhealthy/unhappy/disharmonious to "10" indicating very healthy/happy/harmonious.

3.4.3 Statistical analysis

Repeated measures analysis of variance and Friedman test were used to compare the parametric data and non-parametric data at three time points, respectively. Paired t-test and Wilcoxon test were used to compare the continuous parametric and non-parametric data between two time points, respectively. McNemar test was used to examine the changes in categorical data between two time points. Following convention, an effect size of 0.2 to <0.5 was considered as small, 0.5 to <0.8 as medium, and 0.8 or above as large [46]. All significance tests were 2-sided with a 5% level of significance. By intention-to-treat analysis, missing data of participants who were posted out of the participating organisation, and lost to follow-up or declined to complete the questionnaire, were replaced by baseline values (i.e. assuming no changes). Sensitivity analysis was performed by using "complete-case analysis" on trainees with complete assessments at baseline, 1-month, 3-month, and 2-year follow-up.

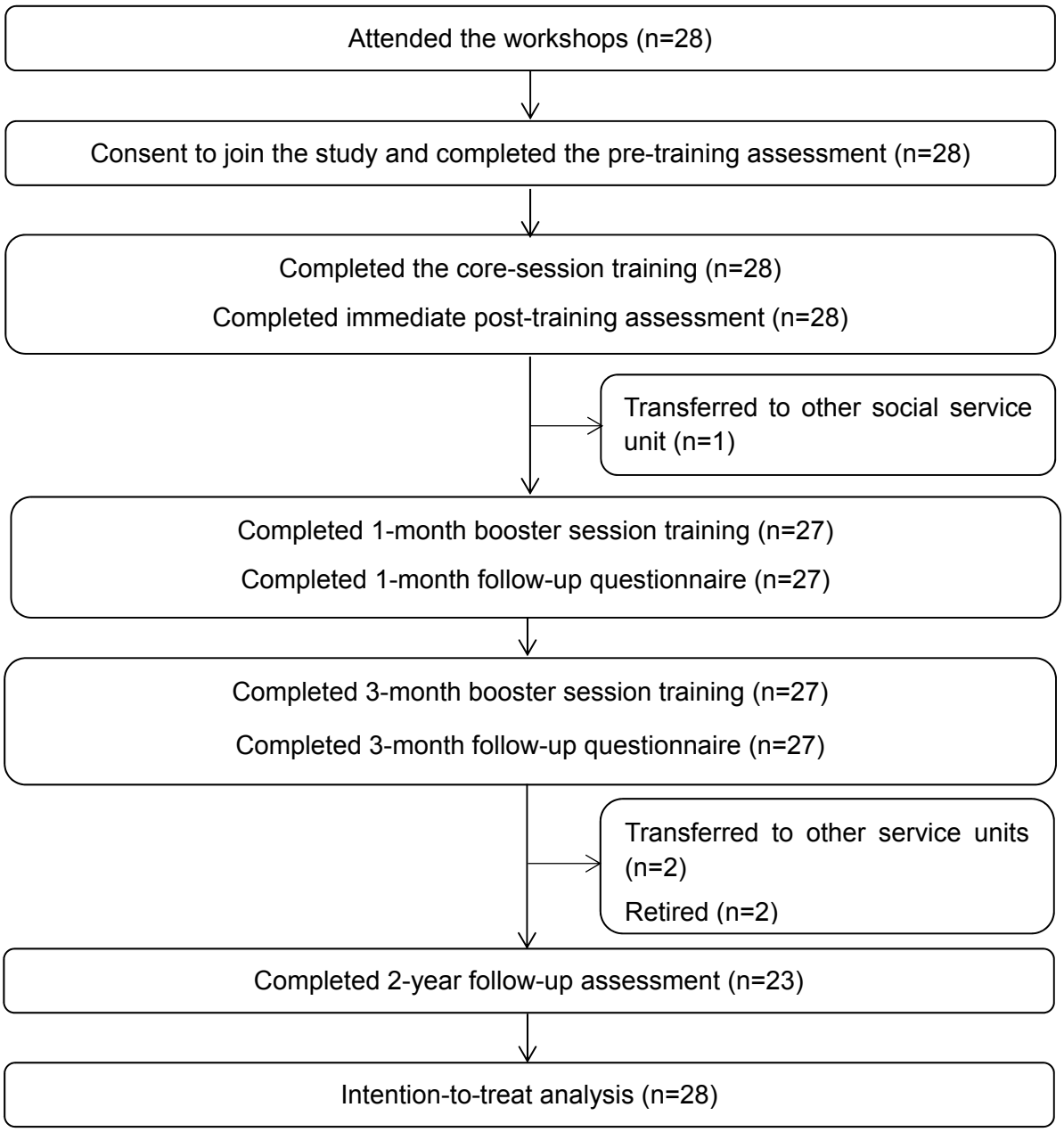
All qualitative interviews were audio-taped and transcribed verbatim in Cantonese. Two FAMILY Project Team members, one of whom attended the interviews, coded the transcripts. Transcripts were analysed by thematic content analysis, following the guidelines recommended by Morse and Field [47] and using NVivo 11.0. Mixed Method Triangulation design was used to interrelate and interpret the qualitative and quantitative data to validate the results [48].

3.5 Quantitative evaluation

3.5.1 Socio-demographic characteristics

Thirty-one officers were assigned by SWD-PO to attend the training workshops. 3 trainees did not attend the core session. 28 trainees joined the trial. 1 trainee was transferred to other social service unit before the 1-month follow-up, 2 trainees retired, and 2 were posted to other service units before the 2-year follow-up. Thus, 28 questionnaires were collected before and immediately after training, and 27 were collected at 1-month and 27 at 3-month follow-up. 23 questionnaires were collected at 2-year follow-up. 64.3% of the trainees were aged ≥40 years and 71.4 % were female (see Figure 3.2).

Figure 3.2 CONSORT flow diagram for TTT



3.6 Results

3.6.1 Knowledge, self-efficacy, attitude, and application in relation to the learning

3.6.1.1 Positive psychology in enhancing probationers' self-esteem

Table 3.1 shows significant increases in knowledge of the general concept of positive psychology immediately after core session, at 1 month, 3 months, and 2 years (ES=1.09, p<0.001; ES=1.09, p<0.001; ES=1.22, p<0.001; and ES=0.98, p<0.001, respectively). Self-efficacy for applying positive psychology constructs to enhance probationers' self-esteem significantly increased at 3 months and 2 years (ES=0.39, p=0.048 and ES=0.52, p=0.011). The attitude towards the practice of using positive psychology to enhance probationers' self-esteem significantly improved (ES=0.40, p=0.047) only at 3 months. These findings indicated the effect of the TTT with small to large effect size.

Table 3.1 Trainees' knowledge, self-efficacy, attitude, and application in relation to positive psychology in enhancing probationers' self-esteem (n=28)

						Difference between			
	Pre-training	Immediately after core session	1 month	3 months	2 years	Pre-training and immediately after core session	Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)					*p*-value/ES[c]			
Knowledge of the general concept of positive psychology[a] ###	3.61 (1.37)	4.93 (0.66)	4.71 (0.81)	4.86 (0.71)	4.86 (0.97)	<0.001***/ 1.09	<0.001***/ 1.09	<0.001***/ 1.22	<0.001***/ 0.98
Self-efficacy in relation to using positive psychology constructs to enhance probationers' self-esteem[a]	4.43 (0.69)	4.61 (0.69)	4.64 (0.87)	4.79 (0.69)	4.86 (0.80)	0.17/ 0.27	0.14/ 0.30	0.048*/ 0.39	0.011*/ 0.52
Attitude towards the practice of positive psychology to enhance probationers' self-esteem[a]	4.64 (0.68)	4.68 (0.72)	4.89 (0.88)	4.96 (0.79)	4.86 (0.76)	0.77/ 0.06	0.11/ 0.32	0.047*/ 0.40	0.21/ 0.25
Application of positive psychology to enhance probationers' self-esteem[b]	2.93 (1.18)	/	3.21 (0.92)	3.29 (1.05)	3.04 (1.07)	/	0.21/ 0.25	0.15/ 0.28	0.67/ 0.08

Repeated measures analysis of variance and paired t-test to compare the data at five time points and between two time points, respectively.
[a] 6-point Likert scale: "1=strongly disagree" to "6=strongly agree"
[b] 5-point Likert scale: "1=never" to "5=always"
Difference at five time points: ### p<0.001
Difference between two time points: * p<0.05; *** p<0.001
[c] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

3.6.1.2 Positive psychology in enhancing probationers' family well-being

Table 3.2 shows a marginally significant increase in self-efficacy for applying positive psychology constructs to enhance probationers' family well-being with small effect size only at 3 months (ES=0.36, p=0.071) and a significant increase with small effect size only at 2 years (ES=0.48, p=0.017).

The attitude towards the practice of using positive psychology to enhance probationers' family well-being marginally significantly improved with small effect size immediately after core session, at 1 month, and 2 years (ES=0.34, p=0.090; ES=0.34, p=0.083; and ES=0.36, p=0.067, respectively) and a significant increase with medium effect size only at 3 months (ES=0.56, p=0.007).

The application of positive psychology to enhance probationers' self-esteem significantly increased with medium effect size only at 3 months (ES=0.64, p=0.002), indicating the effect of TTT, and marginally significantly increased with medium effect size only at 2 years (ES=0.39, p=0.05).

Table 3.2 Trainees' knowledge, self-efficacy, attitude, and application in relation to positive psychology in enhancing probationers' family well-being (n=28)

						Difference between			
	Pre-training	Immediately after core session	1 month	3 months	2 years	Pre-training and immediately after core session	Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)					*p*-value/ES[c]			
Self-efficacy in relation to using positive psychology constructs to enhance family well-being[a] #	4.39 (0.74)	4.64 (0.73)	4.46 (0.88)	4.71 (0.71)	4.85 (0.76)	0.11/0.31	0.68/0.08	0.071†/0.36	0.017*/0.48
Attitude towards the practice of positive psychology to enhance family well-being[a] #	4.50 (0.92)	4.75 (0.75)	4.82 (0.90)	4.96 (0.79)	4.86 (0.76)	0.090†/0.34	0.083†/0.34	0.007**/0.56	0.067†/0.36
Application of positive psychology to enhance family well-being[b] ##	2.46 (1.00)	/	2.75 (0.93)	3.18 (0.98)	2.96 (1.00)	/	0.11/0.32	0.002**/0.64	0.05†/0.39

Repeated measures analysis of variance and paired t-test to compare the data at five time points and between two time points, respectively.
[a] 6-point Likert scale: "1=strongly disagree" to "6=strongly agree"
[b] 5-point Likert scale: "1=never" to "5=always"
Difference at five time points: # p<0.05; ## p<0.01
Difference between two time points: † p<0.1; * p<0.05; ** p<0.01
[c] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

3.6.1.3 ZTEx in enhancing probationers' self-esteem

Table 3.3 shows significant increases in knowledge, self-efficacy, and attitude in relation to using ZTEx to enhance probationers' self-esteem with small to medium effect size immediately after core session, at 1 month, 3 months, and 2 years (Knowledge: ES=0.55, p=0.011; ES=0.54, p=0.010; ES=0.49, p=0.016; and ES=0.69, p=0.001; self-efficacy: ES=0.63, p=0.004; ES=0.41, p=0.045; ES=0.42, p=0.041; and ES=0.65, p=0.003; and attitude: ES=0.65, p=0.003; ES=0.42, p=0.036; ES=0.46, p=0.024; and ES=0.67, p=0.003, respectively).

The application of positive psychology to enhance probationers' self-esteem significantly increased at 3 months and 2 years, indicating the effect of TTT with small to medium effect size (ES=0.39, p=0.047 and ES=0.77, p<0.001).

Table 3.3 Trainees' knowledge, self-efficacy, attitude, and application in relation to ZTEx in enhancing probationers' self-esteem (n=28)

						Difference between			
	Pre-training	Immediately after core session	1 month	3 months	2 years	Pre-training and immediately after core session	Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)					*p*-value/ES[c]			
Knowledge of the general concept of ZTEx[a] ##	4.43 (1.03)	4.93 (0.66)	4.89 (0.78)	4.96 (0.79)	5.25 (0.65)	0.011*/ 0.55	0.010**/ 0.54	<0.016*/ 0.49	0.001**/ 0.69
Self-efficacy in relation to using ZTEx to enhance probationers' self-esteem[a] ##	3.79 (1.32)	4.54 (0.79)	4.32 (0.90)	4.32 (0.86)	4.54 (0.88)	0.004**/ 0.63	0.045*/ 0.41	0.041*/ 0.42	0.003**/ 0.65
Attitude toward the practice of ZTEx to enhance probationers' self-esteem[a] #	3.86 (1.24)	4.61 (0.79)	4.43 (0.96)	4.46 (1.00)	4.4 (0.79)	0.003**/ 0.65	0.036*/ 0.42	0.024*/ 0.46	0.003**/ 0.67
Application of ZTEx to enhance probationers' self-esteem[b] #	2.07 (1.18)	/	2.25 (1.04)	2.64 (1.06)	2.86 (1.04)	/	0.52/ 0.12	0.047*/ 0.39	<0.001***/ 0.77

Repeated measures analysis of variance and paired t-test to compare the data at five time points and between two time points, respectively.
[a] 6-point Likert scale: "1=strongly disagree" to "6=strongly agree"
[b] 5-point Likert scale: "1=never" to "5=always"
Difference at five time points: # p<0.05; ## p<0.01
Difference between two time points: * p<0.05; ** p<0.01; *** p<0.001
[c] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

3.6.1.4 ZTEx in enhancing probationers' family well-being

Table 3.4 shows significant increases in self-efficacy of and attitude toward using ZTEx to enhance probationers' family well-being immediately after core session, at 1 month, 3 months and 2 years (Knowledge: ES=0.65, *p*=0.003; ES=0.44, *p*=0.033; ES=0.41, *p*=0.045; and ES=0.84, *p*<0.001 and self-efficacy: ES=0.71, *p*=0.001; ES=0.53, *p*=0.011; ES=0.51, *p*=0.011; and ES=0.74, *p*=0.001, respectively). The application of ZTEx to enhance probationers' family well-being significantly increased size at 3 months and 2 years (ES=0.64, *p*=0.002; and ES=0.58, *p*=0.001, respectively). This indicated the effect of TTT with small to large effect size.

Table 3.4 Trainees' knowledge, self-efficacy, attitude, and application in relation to positive psychology in enhancing probationers' family well-being (n=28)

						Difference between			
	Pre-training	Immediately after core session	1 month	3 months	2 years	Pre-training and immediately after core session	Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)					*p*-value/ES[c]			
Self-efficacy in relation to using ZTEx to enhance probationers' family well-being[a] #	3.71 (1.30)	4.46 (0.88)	4.25 (0.89)	4.25 (0.97)	4.71 (0.98)	0.003**/ 0.65	0.033*/ 0.44	0.045*/ 0.41	<0.001***/ 0.84
Attitude towards the practice of ZTEx to enhance probationers' family well-being[a] #	3.75 (1.17)	4.54 (0.88)	4.43 (0.92)	4.39 (1.13)	4.50 (0.92)	0.001**/ 0.71	0.011*/ 0.53	0.011*/ 0.51	0.001**/ 0.74
Application of ZTEx to enhance probationers' family well-being[b] #	1.93 (0.98)	/	2.32 (1.02)	2.75 (1.04)	2.75 (1.08)	/	0.102/ 0.31	0.002**/ 0.64	0.001**/ 0.58

Repeated measures analysis of variance and paired t-test to compare the data at five time points and between two time points, respectively.
[a] 6-point Likert scale: "1=strongly disagree" to "6=strongly agree"
[b] 5-point Likert scale: "1=never" to "5=always"
Difference at five time points: # *p*<0.05
Difference between two time points: * *p*<0.05; ** *p*<0.01; *** *p* <0.001
[c] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

3.6.1.5 Zero-time Exercise

Table 3.5 shows significant increases in planning to engage in ZTEx only at 1 month (ES=0.52, *p*=0.010) and engaging in ZTEx at 1 month, 3 months, and 2 years (ES=0.43, *p*=0.030; ES=0.52, *p*=0.011; and ES=0.45, *p*=0.025, respectively). Engaging in ZTEx with family members significantly increased only at 2 years (ES=0.51, *p*=0.013). This indicated the effect of TTT with small to medium effect size.

Table 3.5 Trainees' self-efficacy, outcome expectancies, plan, and practice in relation to ZTEx (n=28)

	Baseline	1 month	3 months	2 years	Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)				*p*-value/ES[a]		
Self-efficacy in relation to engaging in ZTEx regularly[b]	5.29 (2.51)	5.64 (2.67)	5.50 (2.47)	4.54 (1.60)	0.52/0.12	0.70/0.07	0.05[†]/-0.43
Outcome expectancies of engaging in ZTEx regularly[b]	5.21 (3.46)	5.86 (3.22)	5.43 (3.56)	4.43 (1.96)	0.39/0.17	0.76/0.06	0.18/-0.29
Plan for engaging in ZTEx regularly[b #]	4.29 (2.59)	5.79 (2.52)	5.14 (2.64)	4.18 (1.54)	0.010*/0.52	0.19/0.25	0.81/-0.05
Engaging in ZTEx[c #]	2.75 (0.93)	3.10 (0.88)	3.39 (0.98)	3.21 (0.96)	0.030*/0.43	0.011*/0.52	0.025*/0.45
Engaging in ZTEx with family members[c]	2.00 (0.77)	2.29 (0.94)	2.39 (1.20)	2.46 (0.88)	0.13/0.30	0.070[†]/0.38	0.013*/0.51

Repeated measures analysis of variance and paired t-test to compare the data at five time points and between two time points, respectively.
Difference at five time points: [#] $p<0.05$
Difference between two time points: [†] $p<0.1$; * $p<0.05$
[a] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
[b] 6-point Likert scale: "1=strongly disagree" to "6=strongly agree"
[c] 5-point Likert scale: "1=never;" to "5=always"

3.6.1.6 Physical activity

Table 3.6 shows a significantly decreased in moderate physical activity (ES=0.61, p=0.017) only at 2 years. Physical activity while seated significantly increases at 1 month, 3 months, and 2 years (ES=0.67, p<0.001; ES=0.85, p<0.001; and ES=0.74, p<0.001). Moreover, physical activity while standing significantly increased at 3 months and 2 years (ES=0.71, p<0.001 and ES=0.51, p=0.012), indicating the effect of TTT with medium to large effect size.

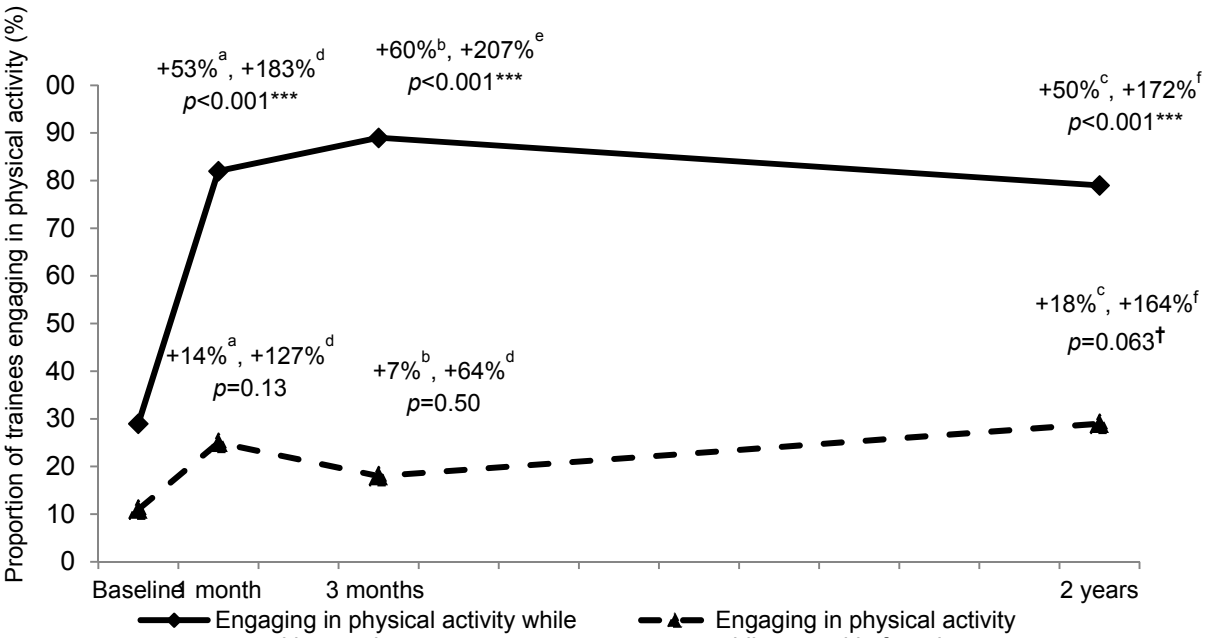
Table 3.6 Physical activity (n=28)

	Immediately after the training	1 month	3 months	2 years	Difference between		
					Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)				*p*-value/ES[a]		
In the past seven days,							
Average time spent sitting on a weekday, hour	7.55 (2.16)	7.14 (1.87)	7.11 (2.11)	7.11 (2.07)	0.18/-0.25	0.31/-0.19	0.14/-0.61
Days spent doing at least 10-minute moderate physical activity, day	2.50 (2.57)	2.43 (2.51)	2.25 (2.37)	1.57 (2.30)	0.88/-0.04	0.62/-0.12	0.017*/-0.61
Days spent doing at least 10-minute vigorous physical activity, day	0.63 (1.49)	0.93 (1.36)	1.09 (1.58)	0.70 (1.17)	0.33/0.15	0.23/0.17	0.77/0.04
Days spent engaging in physical activity while seated, day###	0.82 (1.68)	2.25 (1.82)	2.21 (1.81)	2.64 (2.36)	<0.001***/0.67	<0.001***/0.85	<0.001***/0.74
Days spent engaging in physical activity while standing, day#	1.82 (2.41)	2.68 (2.61)	2.96 (2.49)	3.11 (2.30)	0.12/0.31	0.001**/0.71	0.012*/0.51

Repeated measures analysis of variance and paired t-test to compare the data at four time points and between two time points, respectively.
Difference at four time points: # p<0.05; ### p<0.001
Difference between two time points: * p<0.05; ** p<0.01; *** p<0.001
[a] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

Figure 3.3 shows significant increases in the proportions of trainees engaging in physical activity while seated in one day or more in a week at 1 month, 3 months, and 2 years [relative increase (increased percentage divided by percentage of participation at baseline x 100%)]: 183%, p<0.001; 207%, p<0.001; and 172%, p<0.001, respectively), indicating the effect of TTT with large effect size. The proportion of trainees engaging in physical activity while seated in four days or more in a week marginally significantly increased only at 2 years (relative increase: 164%, p=0.063).

Figure 3.3 Proportion of trainees performing physical activity while seated in the last 7 days (n=28)



[a] Increased percentage points at 1-month follow-up=percentage of participation at 1-month follow-up minus percentage of participation at baseline.

[b] Increased percentage points at 3-month follow-up=percentage of participation at 3-month follow-up minus percentage of participation at baseline.

[c] Increased percentage points at 2-years follow-up=percentage of participation at 2-year follow-up minus percentage of participation at baseline.

[d] Relative increase at 1-month follow-up=Increased percentage at 1-month follow-up divided by percentage of participation at baseline x 100%.

[e] Relative increase at 3-month follow-up=Increased percentage at 3-month follow-up divided by percentage of participation at baseline x 100%.

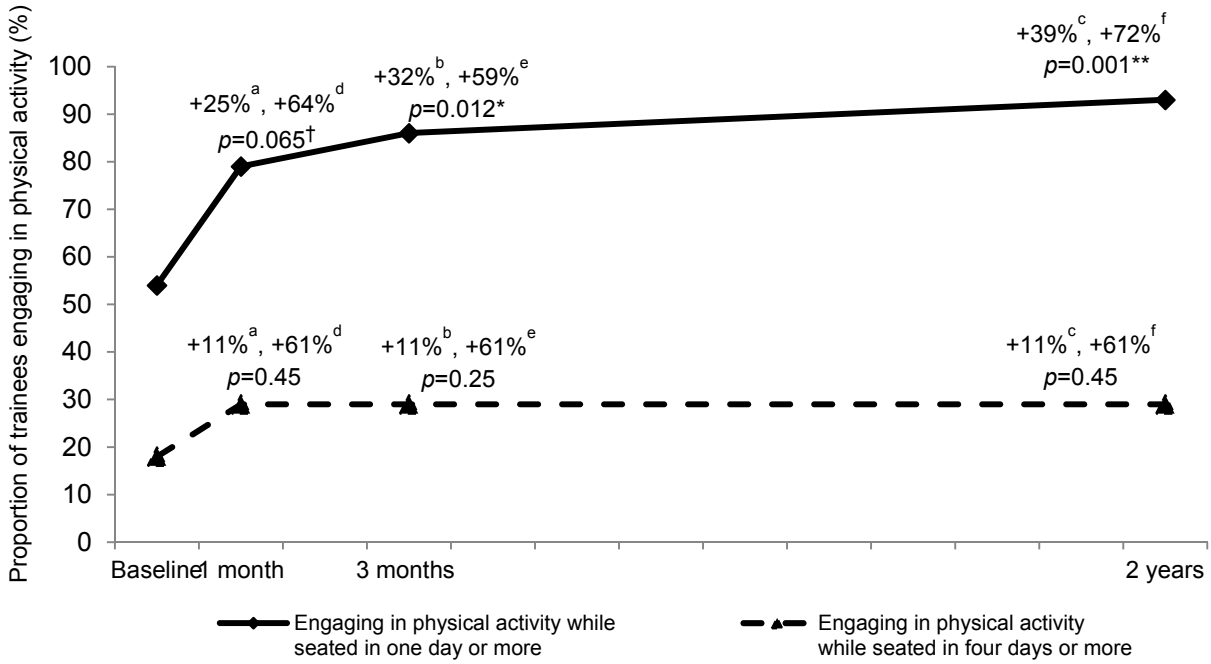
[f] Relative increase at 2-year follow-up=Increased percentage at 2-year follow-up divided by percentage of participation at baseline x 100%.

ES=effect size for percentage changes: Large=relative increase of 100% or more; medium=relative increase of 50%; small=relative increase of 25%;

p-value of McNemar's test for assessing the difference between the two time points: † p<0.10; *** p<0.001

Figure 3.4 shows significant increases in the proportions of trainees engaging in physical activity while standing in one day or more in a week at 1 month, 3 months, and 2 years (Relative increase: 64%, p=0.065; 59%, p=0.012; and 72%, p=0.001), indicating the long-term effect of the TTT with medium effect size.

Figure 3.4 Proportion of trainees performing physical activity while standing in the last 7 days (n=28)



[a] Increased percentage points at 1-month follow-up=percentage of participation at 1-month follow-up minus percentage of participation at baseline.

[b] Increased percentage points at 3-month follow-up=percentage of participation at 3-month follow-up minus percentage of participation at baseline.

[c] Increased percentage points at 2-years follow-up=percentage of participation at 2-year follow-up minus percentage of participation at baseline.

[d] Relative increase at 1-month follow-up=Increased percentage at 1-month follow-up divided by percentage of participation at baseline x 100%.

[e] Relative increase at 3-month follow-up=Increased percentage at 3-month follow-up divided by percentage of participation at baseline x 100%.

[f] Relative increase at 2-year follow-up=Increased percentage at 2-year follow-up divided by percentage of participation at baseline x 100%.

ES=effect size for percentage changes: Large=relative increase of 100% or more; medium=relative increase of 50%; small=relative increase of 25%;

p-value of McNemar's test for assessing the difference between the two time points: † p<0.10; * p<0.05; ** p<0.01

3.6.1.7 Physical fitness performance

Table 3.7 shows a significant improvement in flexibility (increase in distance reached by fingertips when bending forward in chair sit-and-reach test) (ES=0.56, p=0.008) and a marginally significantly increased in right hand grip strength (ES=0.33, p=0.098), indicating the effect of TTT with small to medium effect size.

Table 3.7 Physical fitness performance (n=28)

	Pre-training	One month	*p*-value/ES
	Mean (SD)		
Body weight (kg)	62.68 (11.12)	62.55 (11.00)	0.24/0.26
30-seconds chair stand test, no. of chair stands	26.29 (6.68)	25.81 (6.94)	0.65/0.13
Single leg stance test (0-120 seconds)	52.25 (17.23)	53.21 (13.90)	0.71/0.07
Hand grip strength - Left (kg)	27.35 (8.86)	28.08 (10.54)	0.34/0.19
Hand grip strength - Right (kg)	28.95 (9.61)	30.14 (9.83)	0.098†/0.33
Chair sit-and-reach test (cm)	1.50 (8.27)	3.95 (7.24)	0.008*/0.56

Difference between two time points: † p<0.1; * p<0.05

ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

3.6.1.8 ZTEx and family members

Table 3.8 shows significant increases in engaging in ZTEx (ES=0.44, p=0.03; ES=0.52, p=0.011; and ES=0.44, p=0.025, respectively) and discussing the ways of doing ZTEx with family members (ES=0.60, p=0.005; ES=0.82, p<0.001; and ES=0.78, p<0.001) at 1 month, 3 months, and 2 years. The effect size ranged from small to large. However, engaging in ZTEx with family members only marginally significantly increased with small effect size only at 3 months (ES=0.37, p=0.007) and significantly increased with medium effect size only at 2 years (ES=0.50, p=0.013). These findings indicated long-term effect of the TTT with small to large effect size.

Table 3.8 ZTEx and family members (n=28)

	Pre-training	1 month	3 months	2 years	Difference between		
					Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)				*p*-value/ES[a]		
In the past 4 weeks,							
Engaging in ZTEx[#]	2.75 (0.93)	3.11 (0.88)	3.29 (0.98)	3.21 (0.96)	0.03*/0.44	0.011*/0.52	0.025**/0.44
Discussing the ways of doing ZTEx with family members[##]	1.93 (0.77)	2.50 (0.92)	2.71 (1.08)	2.57 (0.92)	0.005**/0.60	<0.001***/0.82	<0.001***/0.78
Engaging in ZTEx with family members	2.0 (0.77)	2.29 (0.94)	2.39 (1.20)	2.46 (0.88)	0.133/0.30	0.07[†]/0.37	0.013*/0.50

Repeated measures analysis of variance and paired t-test to compare the data at four time points and between two time points, respectively.
Difference at five time points: [#] p<0.05; [##] p<0.01
Difference between two time points: [†] p<0.1; * p<0.05; ** p<0.01; *** p<0.001
[a] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=never" to "5=always"

3.6.1.9 Self-reported FAMILY well-being

Table 3.9 shows significant increases in self-reported FAMILY health and FAMILY harmony with small to medium effect size at 3 months and 2 years (Family health: ES=0.42, p=0.036 and ES=0.57, p=0.005; and Family health: ES=0.62, p=0.003 and ES=0.42, p=0.042, respectively) and marginally significant increase with small effect size only at 1 month (ES=0.39, p=0.050 and ES=0.38, p=0.059, respectively).

In addition, self-reported FAMILY happiness marginally significantly increased with small effect size only at 3 months (ES=0.33, p=0.096) and significantly increased with moderate effect size only at 2 years (ES=0.62, p=0.005). This indicated the effect of TTT with small to medium effect size.

Table 3.9 Family well-being (n=28)

	Pre-training	1 month	3 months	2 years	Difference between		
					Pre-training and 1 month	Pre-training and 3 months	Pre-training and 2 years
	Mean (SD)				*p*-value/ES[a]		
Self-reported FAMILY health[#]	6.86 (1.41)	7.36 (1.50)	7.43 (1.35)	7.54 (1.29)	0.050 [†]/0.39	0.036*/0.42	0.005*/0.57
Self-reported FAMILY happiness[#]	7.07 (1.66)	7.39 (1.75)	7.43 (1.69)	7.86 (1.08)	0.13/0.30	0.096[†]/0.33	0.005**/0.62
Self-reported FAMILY harmony[#]	7.36 (1.73)	7.71 (1.63)	8.11 (1.47)	8.00 (1.19)	0.059[†]/0.38	0.003*/0.62	0.042*/0.42

Repeated measures analysis of variance and paired t–test to compare the data at four-time points and between two time points, respectively.
Difference at five-time points: [#] p<0.05
Difference between two time points: [†] p<0.1; * p<0.05; ** p<0.01
[a] ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "1=strongly disagree" to "10=strongly agree"

3.6.2 Feedback on training workshops

From the on-site observation, the trainees were highly involved with active participation and enthusiasm. They enjoyed the training and appreciated the training design and content, particularly the physical fitness assessments and the ZTEx demonstration. The atmosphere of the workshops was joyful, especially when the trainees were comparing their own fitness with the normative values and performing in-class ZTEx.

Immediately following the core session, trainees rated the quality of training content as 7.8±1.3 and level of utility of the workshops rated as 7.8±1.4 on a scale of 0 to 10. 92% trainees indicated that they would recommend the programme to their friends and family.

At 2-year assessment, trainees rated the quality of training content as 7.6±1.7 units and level of utility of the workshops rated as 7.7±1.7 units on a scale of 0 to 10. Trainees also commented that the training and the HHFP positively influenced the policy development of their organisation. 92% trainees indicated that they would recommend the workshops to their friends and family. 61% and 52% trainees indicated that they would apply the general constructs of positive psychology and ZTEx in their future programmes.

3.6.3 Summary of quantitative results

Trainees indicated a high level of satisfaction with the workshops. Perceived knowledge, self-efficacy, attitude and practice towards applying the learning (Positive psychology and ZTEx) to enhance self-esteem and family well-being significantly increased with small to large effect size (ES=0.39-1.22, $p<0.05$). Trainees' reported significant increases in physical activity and ZTEx, as well as improvements in handgrip strength and flexibility with small to large effect size (ES=0.43-0.85, $p<0.05$). Increased engaging family member to perform ZTEx and improved family well-being (FAMILY 3Hs) with small to medium effect size (ES=0.42-0.62, $p<0.05$) were reported. Trainees successfully implemented interventions for about 600 probationers and their family members. The qualitative feedback corroborated and enriched the quantitative results.

These results suggested that ZTEx is an effective and innovative approach to increase physical activity and fitness performance, family communication and well-being. These activities were designed to make an easy behavioural change that can be readily integrated into daily life and shared with family members. Performing ZTEx with family members is a good family activity, which could enhance family communication and relationship.

3.7 Qualitative evaluation of TTT

3.7.1 Demographic characteristics

Eight trainees (female 88%, aged over 40 years 75%) participated in the focus group interview in April 2017. All were registered social workers.

3.7.2 Results

The main themes from the focus groups included “Impression on the training workshops”, “Project implementations” and “Programme implications”. The trainees appreciated much the continuous support from the FAMILY Project Team. They were impressed by well-organised training content, good demonstration and professional information. They gained useful knowledge, improved health awareness and self-efficacy of performing regular physical activity, increased engaging in physical activity by themselves and with family members, experienced better family relationship and well-being. They liked the handgrip souvenirs by claiming that they are good reminders for regular exercise. ZTEx is a good and effective exercise, which is easy-to-understand and -apply to daily life. Increased interaction with family and improved health awareness and behaviours were reported. The training provided good information, supports and guidance for them to implement the programmes for their participants. A good academic and community partnership was established.

Table 3.10 showed the main themes, subthemes, and categories in Chinese with translated quotations in English to preserve the intent of the speakers.

Table 3.10 Quotes from trainees (SWD officers)

Theme	Subtheme	Quotes
Impression of the training workshop	Good demonstration	“佢(林教授)個 demo 係好好嘅，…他日我哋面對我哋個…case 嗰陣時候呢都識得可以同佢（參加者）demo 吓囉，咁有個好好嘅示範作用。” (P06) “His (Prof. Lam) demonstration was good, And then another day when we face… the cases, we know how to do the demonstration to them (the participants), like this, then have a very good demonstration.” (P06) “睇書，真係唔及你哋示範做過咁深刻印象同容易做出來俾佢哋睇囉，係呀，因為睇書，可能我哋都只能夠認識到一部分，但係你自己 demonstrate 俾我哋睇，起碼我哋都知道「哦，原來係咁樣」” (P11) “We read the manual, it is not as impressive as your demonstrations to them, because we only understand a part of it from reading the manual. But when you demonstrate it to us, then at least we know, ‘Oh, it’s like this’” (P11)

Theme	Subtheme	Quotes
	Useful workshop training	***Good staff training smoothed the physical fitness assessments*** “所以我覺得個 workshop 係幾有用，我覺得嗰 2 個 workshop 幾好…同事都俾咗好多意見。” (P1) “So, I think the workshop part was very useful, I think these two workshops were very good… colleagues gave many suggestions.” (P1) “我 appreciate 有呢個 workshop Train-the-Trainer，因為…我自己比較怕羞啲呢，即係你無情情叫我…捉我做運動，真係…一個好重嘅心理嘅 barrier 來㗎…所以就我覺得有個 workshop prepare 同事呢…覺得好好…” (P1) “I appreciate the workshop for Train-the-Trainer, I am shy, it’s like if you suddenly asked me to do exercise, I really… (have) a… very strong psychological barrier, so I think having this workshop to (help) colleagues… prepare (how to help the participants do the exercise) … (I) think it’s very good…” (P1) ***Self-experience facilitating implementation*** “自己親身做過呢會覺得，真係好㗎，自己做到或者自己做唔到，咁有個體驗，如果真係我哋啲 client 傾嗰陣時呢咁同佢哋一齊做咁樣囉。” (P1) “(When) myself personally did it I would feel, (it’s) really good, I made it or not, (I) obtained an experience, and when we…talked to the clients, it’s very…down to earth to do it together with them (the participants).” (P1)
	Souvenir as reminder	“手握力嗰啲係幾好嘅，都係擺喺個 desktop 咁樣得閒郁幾吓咁樣…嗰啲 Souvenir，擺喺度就 remind 自己要做運動…” (P1) “The handgrip is very good, (I) put it on the desk and will use it when have time…the souvenirs, (when I see) they are there (on the desk), they will remind me to do exercise.” (P1) “你哋俾我哋嗰啲嘢…啞鈴，咁間唔中真係會舉下，即係見到或者諗起，就會去做多啲。” (P11) “The souvenir you gave us… the dumbbell, sometimes I would really use it, when I see it or think of it, I would do more.” (P11)

Theme	Subtheme	Quotes
Programme Implement	Reaction from participants	***Willing to help with HKU research*** “我有啲 case 呢其實佢就唔係諗個節目係咪幫到自己嘅，佢知道係幫 HKU 做問卷呢，佢又好樂意嘅，因為佢覺得做完呢份問卷係令到 HKU 成功做咗個研究，咁佢就覺得好似幫人咁樣囉…所以佢真係樂意…佢又唔覺得係研究緊自己啦，都係一個大研究來嘅，咁佢都樂意填嘅。” (P6) “Some of my cases actually didn’t think of joining this programme to help themselves, they know it’s doing questionnaires for HKU, they are very willing to do this because they thought completing this questionnaire can help HKU complete the research. Then they feel like it is helping others, so they are really willing to do it… they don’t think it’s studying themselves, but a large-scale research, so they were willing to fill it out.” (P6) “我諗其實同 HKU 一個…大學嘅學府咁樣，咁點都唔會話就咁玩吓，就算即係無論問卷又好，即係你要俾人哋做咗一啲結果，要 scientific 一啲咁樣。咁所以我哋同啲 client 講嘅時候其實佢哋都…即係都會願意多啲…咁你因為同一個學府，同一個教授，有個合作嘅伙伴關係，咁我覺得佢哋係願意做囉。” (P11) “I think HKU, as a university authority, you won’t be fooling around. No matter if it’s the questionnaires or you give out some test results, it is all scientific. So, when I talked to the clients, they were more willing to (cooperate)…And it is a collaboration with a university and a professor (leading the programme). This partnership made them (the participants) more willing to do it.” (P11) “咁我哋就好好彩遇到 HKU 啦，咁就 meet 咗我哋個 service needs， public health 呢個話題呢就係我覺得係每個市民都係有個責任去 contribute 落 public health 嘅，咁我哋啲 case 都係一個市民，。應該我哋呢個 sector 都可以幫到少少手喺個 public health 嗰度。” (P1) “We are very lucky to cooperate with HKU, and (the cooperation) meets our service needs. In terms of the topic of public health, I think each of the citizens has the responsibility to make contribution to it, particularly in our cases, they are citizens. They also need to help contribute to public health. This is what our sector can help with public health.” (P1)
		Impressive demonstration

Theme	Subtheme	Quotes
		“深印象咪教授教落地鐵站玩囉…我諗你真人示範你只可能記得嗰啲步驟囉，同埋記得開會可以踩踩腳囉…” (P3) The impressive part was when the professor went to do (ZTEx) in the MTR. I think the real life demonstration can make you remember the steps and remember to move the feet during meetings.” (P3) “有啲指引係需要嘅，因為唔熟丫嘛，唔知點搓。” (P5) It’s necessary to have some guidelines, because (we are) not familiar with it (the ZTExs), don’t really know how to do it.” (P5)
		Multiple materials support ***Booklet*** “例如有啲 case 會講話譬如啲筋好緊啊，即刻俾啲圖…咁樣拉就會好啲㗎喇…試下啦返去。即係因為本身有本手冊都可以借來用嘅，即係有啲 task 嗰啲呢，有陣時可以介紹啲 concept 俾佢哋識囉…” (P7) “For instance, if there were some cases they said they feel their bodies were very stiff, (we would) give them some pictures (and ask them to) do the stretching according to the pictures and they would feel better… (would ask them) to go home and try it. It’s because we had that booklet can be used, the one with the tasks, sometimes could (use the booklet) to introduce some (exercise) concepts for them…” (P7) “因為你有嗰啲卡仔咁我哋其實平時就係第 2 啲 case 都可以攞來俾佢睇，俾佢用…即係容易啲我哋去介紹俾人聽囉。” (P11) “Because you provided the learning cards for us and then usually we give them to the cases or other (non-programme) cases, for them to have a look and learn from them…and they also made it easier for us to introduce (the exercise) to others.” (P11) ***YouTube*** “個 YouTube 幾好囉，即係容易去…咁佢自己 search 好過我哋

Theme	Subtheme	Quotes
		講咁多。” (P11) “The YouTube video is very good, it’s like easy to… it’s better for them to search than we trying to explain too much.” P11)
		<u>Good cooperation with HKU</u> ***Appreciate the help from HKU*** “其實個場地真係好好啊，我哋好感激 HKU 俾個場地我哋啊。因為免費啦，同埋你哋嗰個 support 又好好啦，又安全，咁又方便…因為我哋都成日都要租地方搞呢啲活動，咁 HKU 嗰邊 support 到個場地係好好，好感激真係。” (P1) “ Actually, the venue is very good, we really appreciate HKU lending this venue to us, because it’s free and you provided a lot of support. It’s safe and also convenient… because we need to rent places for activities like these. Then HKU provided such a good venue for us. It is very good, we really appreciate it.” (P1) “其實你哋嘅幫忙好大…之前嗰日我哋又要 call 超級市場送貨呢，咁你哋又搵人幫我哋收啲貨啦，跟住又上去又再搬落來啦…咁我哋都知你哋好幫得手。” (P7) “Actually, you all really helped a lot… such as the day we needed to call the supermarket to deliver the programme materials. Then you found help to collect the materials and also help move them upstairs and help move down… we know you are very helpful.” (P7) “你借咗啲器材俾我哋都係…其實都係一個幫助囉，即係如果唔係，我哋 facilitate 唔到喎，你無端端又唔會買個磅返來，或者之後其實都無用㗎。” (P1) “You lent some equipment to us… actually it’s a big help, if this wasn’t the case, then we cannot facilitate it. We won’t haphazardly buy a weight scale; actually we won’t need it anymore after this programme.” P1)
	Difficulties	***<u>Follow-up</u>*** “追 form 嘅時候好辛苦囉。佢有陣時唔記得啦，咁再下個月又唔記得啦，跟住搞搞下就唔見咗添啦，唔見咗又要補啦。即係同埋啲書仔有時…佢哋有時記得帶，有時又唔記得帶，唔記得

Theme	Subtheme	Quotes
		帶都係要追到佢記得帶為止啦。” (P3) “It’s tough sometimes when doing returns to chase the forms. Sometimes they didn’t remember (to bring it), and then next month didn’t remember (to bring it back) again, and then maybe they would have lost it, and then you needed to redo the forms. And sometimes the booklets, they remembered to bring it sometimes, and then also sometimes didn’t remember it, and then we needed to keep urging them to bring it back.” (P3) ***<u>Conducting questionnaire</u>*** “我哋都有啲伯伯婆婆，佢哋真係都唔識搞呢啲嘢，有啲其實即係都要解釋佢先至明，同埋有啲字其實有陣時都幾深啊，即係我解唔到俾佢聽有啲…有啲真係好難解俾佢聽…有啲係佢唔識字你都要讀俾佢聽啊。” (P3) “We had some elderly people here, they really didn’t know how to do these forms, some of them we actually needed to explain to them before filling the form. And some wordings are a bit difficult, and we sometimes couldn’t make them understand… some were really difficult to explain… and some elderly couldn’t read and then you had to read to them.” (P3) “再加上就係有陣時佢哋嗰個 educational level 未必係咁 handle 到呢啲嘢，咁有陣時會成為一種負擔喇，填嗰個係負擔，逼佢填嗰個都係負擔…其實係有 other way round 可以有其他嘢係幫到呢啲特別唔係教育水平咁高嘅 client 呢？” (P7) “And sometimes their (the participants) educational level may not be able to do the questionnaires, so sometimes it had become a burden, in terms of filling it (questionnaire) and “forcing” them to fill it was another burden… actually (are there) any other ways could also help with clients with less education?” (P7)
	Suggestions	“我覺得如果他日如果要搵一啲 sample，其實我覺得喺 family services centre 嗰度可能會更加好。因為家庭服務中心裡面其實我哋都有好多 case，咁而佢哋亦都有好多 family 嘅問題我哋幫佢要處理吓嘅時候…咁我覺得（如果搵嗰度）係更加 effective 囉。”P6) “I think if in the future you need samples like this, actually it’s better to cooperate with family services centre. Because we have many cases are from family services centre, and they

Theme	Subtheme	Quotes
		also have many family-related issues that we need to help them deal with… So I think (if cooperate) with them will be more effective." (P6)
Programme implications	Behaviour changes among trainees	***Increased risk perception*** "其實係好㗎（柔軟度測試）因為基本上我哋有時都未留意到身體嘅柔軟度係對身體嘅健康係一個好重要嘅指標來嘅…" (P1) "(The flexibility test) actually is good, because basically we sometimes were unaware of the body flexibility which is a very important indicator to health…" (P1) "我最記得嗰啲測試嗰啲囉，知道自己 BMI 超標囉，好緊要。" (P5) "I remember the most was that test, knowing my own BMI is exceeding (the standard range), it's very important." (P5) ***Increased health awareness*** "概念同埋意識係多咗嘅，我諗啱啱聽完或者去完呢次活動之後係會多少少嘅，即係行為上面，可能真係坐車唔坐呀，企一陣呀，企嘅時候又即係接觸吓單腳呀，即係都會有嘅。" (P7) "(The awareness of) the concepts (of doing exercise) is better, much better… I think just after listening or after the programme, have changed some, in terms of the behaviours, maybe really do not sit down when they are taking transport, try to stand for a while, and try single leg stance when standing, I mean they have done this." (P7) "就係因為上完呢個堂係會鼓勵自己話咁呀持續多少少喇…即係之前可能就係…隨便玩，咁而家就係有意識地玩咁樣囉…" (P6) "Because of the session, I would really encourage myself to persist to do it for a little bit more… and before was like… haphazardly having fun, but now is more like doing it intentionally…" (P6) ***Increases self-efficacy in doing exercise*** "我自己就覺得最大印象就係工作坊講咗 1 句，就係其實譬如話單腳企咁樣啦，其實平時呢成日都有藉口呀俾自己，我要去練 gym 呀，我要去邊度做運動呀，要落街，要著運動衫呀又點點

Theme	Subtheme	Quotes
		點，其實唔使㗎，喺屋企單腳企好簡單已經可以做到運動喇，正如嗰陣時話，你可能單腳企已經做到，真係返屋企咁樣試下，真係做到嘅，咁即係多咗做運動囉其實都好簡單…” (P8) “The most impressive thing was that message I obtained from the workshop, that was saying (just doing) single leg stance (is exercise). Actually, usually I used to make excuses (not to do exercise), (such as) I need to go to gym, where can I do exercise, I need to go down to the streets, need to change to sports wears and so on, actually it’s not. It’s really like what you taught me at that time, you do single leg standing is already (a kind of) workout, (so I) really tried to do it when I came back home, and really made it. It’s like it’s easy to do more exercise.” (P8) ***<u>More of doing ZTEx in daily life</u>*** “以前唔知呢樣係咩啦，咁學咗之後就喺 office 嘅時間，間中啦，尤其是如果咁啱有 case 來，我都會有啲時候係我自己同啲 case 做，即係可能度嗰啲，咁我會同佢一齊做囉，咁係嗰段時間…嗰段時間多啲 case 來，咁就會做多啲囉…” (P5) “I didn’t know what’s this (ZTEx), now after learnt it, during office hours, especially when the client came, sometimes I would do it together with the client, maybe something that can be measured (the handgrips), I would do it together with the case, so during that time…if there were more cases I would do more…” (P5) “自身上…多咗提自己，拉吓喇…拉吓膊頭。” (P4) “For myself… (I think the change is) I have reminded myself (to do more exercise…) do more stretching, stretch the shoulders.” (P4) “都係同屋企人多咗呀，同埋同朋友都會教佢哋做吓呢啲「零時間運動」，都會間唔中做下。” (P8) “I did more (ZTEx) with family, and will teach friends to do the ZTEx, and (we would) do it sometimes.” (P8) “都有做開呢類嘅運動嘅不嬲，不過想就聽完之後呢，就覺得「零時間運動」都鼓勵做嗰啲…即係好簡單嗰啲嘅運動咁樣，咁我覺得係好嘅，因為一起碼係好簡單丫嘛，好簡單就譬如話踩單車，臨瞓會踩下單車。” (P5) “I did some exercises before, but after the workshop, I

Theme	Subtheme	Quotes
		realised: ZTEx encourages me to do some very simple exercises. I think it's very good, because at least it's very easy, such as the cycling in the air, (I would) do it before sleep." (P5)
	Inspiration for future work	***Inspired for future programme*** "同事參加咗 HKU 嗰個活動之後佢哋信心係大咗…即係今年我哋個 business plan 佢哋計劃呢都係好多係 outdoor。咁運動嘅元素我見佢哋計劃嗰時係有加落去嘅…" (P1) "It has increased the colleagues' confidence (in organising events) …the business plan for this year they have planned many outdoor activities. And the exercise element is also put in our plan…" (P1) ***Better relationship with client*** "我自己就覺得呢…因為我哋嘅 case 係嚴肅啲嘅，我哋同佢做緊輔導啊…叫佢唔好再犯事啊，咁但係我又覺得唔係完全矛盾嘅。其實我覺得反而係好嘅，用呢個方法去打開一個話題呢，佢無諗過原來一個感化主任唔係淨係鬧我哋喎，唔係淨係 check 我唔準時或者咩嘢喎…原來都會整體關心我同屋企人，咁其實反而係多咗…即係佢會信任我哋啊，覺得我哋原來真係愛錫佢哋，我哋唔係淨係好 powerful 去鬧佢哋囉，所以其實係同我哋關係都係好㗎…我覺得好咗㗎。" (P8) "I think… because our cases are serious, we need to do counselling with them… to ask them not to offend the law, but I also think it's not entirely conflicting. Actually, I think it's good. Using this topic to open the conversation, (made them feel) the probation officer is not only checking on me… but really care about me and my family as a whole, and this actually made it… it's like they trust us more, feel we are really loving them, we are not using the authority to scold them, so I think the relationship (between the officer and the clients) has become better… I think it's better." (P8)
	For participants	***Increased health awareness*** "因為…其實犯罪…內裡就係有壓力，咁壓力反映出來又可能係啲痛症啊嗰啲囉。咁所以即係過完個活動其實就…即都多咗 awareness 喺呢方面咁咪會同佢講下囉，咁有啲無「零時間運動」（認識）嘅咁咪 show 嗰啲嘢俾佢睇，咪叫佢上 YouTube

Theme	Subtheme	Quotes
		啊咁樣囉。即係佢自己好似可以就掌握到少少，即係咁起碼佢明白自己有一個嘅 control 喺度可以去做多少少嘅。” (P2) “Because actually the offenders they have pressure inside (psychologically), and the stress leads to somatic pains or something. So, after this programme, (we would) talk about awareness (of doing exercise) with them, will show topics related or to people who didn’t know ZTEx, asked them to watch YouTube. And then themselves could know more (about health knowledge), at least they would realise that they have a bit more ability to self-control and to do a little bit more exercise.” (P2) ***<u>Increase confidence to continue the programme</u>*** “我覺得同時嗰啲嘅嘢…即係會令佢即刻就覺得可能嗰吓又平靜咗，或者玩音樂可能好簡單搖兩吓，大家一齊做一啲嘅嘢已經開心咗，咁佢就會有多啲信心去入呢個計劃去做多啲。” (P2) “I think at the same time the stuff (exercise)… would make them (the offenders) calm, or do some movements when playing music, do things with others would be very happy already, and then they would have more confidence to continue in the programme.” (P2) ***<u>Personal happiness</u>*** “令到成個除咗真係 physically 嘅 health…係囉有得食啦都係開心嘅，有得去 HKU 行吓啦我諗對大部分人來講都係一啲新嘅體驗來嘅。” (P7) “(The programme) made it besides the physical health, they had fun when eating and had the opportunity to visit HKU. It’s a new experience to most (participants).” (P7) “佢哋覺得喺個學院入面行吓都覺得好似開心啲。” (P3) “They (the participants) felt very happy to walk around in the university.” (P3) “即係嗰個活動，好窩心。同埋有嗰個送祝福(遊戲)啦，嗰啲又係好開心，因為帶返啲童真俾我哋啲 case，因為平時見佢哋係好大壓力啊，咁呢類嘅活動佢哋好開心，即係好多同事祝福你啊，但係有少少發洩啊又有開心咁樣。好多 family 嗰啲 feedback，好記得參加過呢啲家庭活動。” (P1) “The activities were very heart-warming. And that giving

Theme	Subtheme	Quotes
		blessings game , that (made them) very happy, because it brought back some childhood innocence to the clients, because usually we can see them they have a lot of pressure, but this kind of activity made them very happy, it's like many colleagues blessing you, they got some emotional relieve and also felt happy. And many families gave feedbacks that they remembered very well that they had participated in these family activities." (P1) ***<u>Better family relationship</u>*** ***Spent more time with family*** "我估佢哋應該都好耐無試過一齊有咁嘅活動喇。咁佢 feedback 其實係開心嘅…咁都聽返佢講其實佢同老公其實會一齊都做啲運動，因為份問卷係老公填…即係家人嗰部分。" (P6) "I guess they haven't had such activities together for a long time. And (according to) their feedback they have had fun (during the activities)… and I have heard she said she did the exercise with her husband together, because her husband filled in the questionnaire… that's the family part." (P6) "其實啲家庭呢啲家長係好高級嘅 CEO 來嘅，有啲來呢朝頭早啱啱喺上海飛返來都要同個仔做呢樣咁樣嘅…揸住個乒乓波咁一齊行，佢哋好開心因為未曾試過個仔可以同佢咁揸住個乒乓波望住咁樣行啦，我諗佢成世人都未曾同個仔咁 close㗎，佢就好 appreciate 咁樣。" (P1) "Actually, some of these parents were very senior CEOs, a parent just came back from Shanghai and came to join this activity with the son… holding the ping-pong ball and play it with the son. They had a great time because he had never tried to play ping-pong before with his son and looked at each other, I guess in his whole life he never had been so close to the son, and then he appreciated very much." (P1) ***<u>More family communication</u>*** "我哋可能就係話「跟住個圖你就咁樣去做喇…平時喺屋企坐下睇電視就踩下單車啦」，可能就真係未必咁入腦啊，同埋返到屋企未必會再同屋企人講。咁你參加活動可能屋企人都會一齊去，咁就變咗家人都知道發生緊咩事，咁會有個話題去傾返。" (P11) "Maybe if we told them to follow the instructions on the picture… and regularly do some seated cycling when

Theme	Subtheme	Quotes
		watching TV at home, maybe they won't really take it by heart, and won't really tell the family. But when you go with the family and participate in the activities then the whole family will know what's happening, and then will have a topic to talk about." (P11)

3.8 Discussion and conclusion

- Trainees benefited from the TTT. In general, they showed:
- High acceptability of the TTT;
- Improved knowledge, self-efficacy, attitude, and practice in relation to ZTEx;
- Increased physical activity, physical fitness performance and family well-being;
- Increased engaging family member to perform ZTEx; and
- Enhanced trainees' health knowledge and skills of conducting interventions for their service users.

We have (i) designed brief three-phase evidence-based evidence generating TTT with theoretical conceptual model and innovation to meet the needs of the services; (ii) implemented our programmes with guidelines and provided post-training support; and (iii) systematically evaluated them with model-based approach, and quantitative and qualitative methods.

Trainees indicated that the training was easy-to-understand and comprehensive. The TTT not only helped their work, but also improved their health behaviour and benefited family well-being. Trainees also successfully designed and implemented interventions for about 600 probationers and their family members. The qualitative feedbacks corroborated and enriched the quantitative results, with touching and enlightening messages.

There were several limitations in our study. First, because validated questionnaires were not available, we developed our outcome-based questionnaire to assess the changes in trainees. We measured perceptions and not actual knowledge and skills. Perceived knowledge and skills, may not reflect actual knowledge and skills acquired and can be influenced by the individual's personality, self-perception [49], and may be under- or over-estimated depending upon numerous factors in play at the time when completing the questionnaire. In addition, social desirability bias might have exaggerated the positive findings. We did get indirect information about actual knowledge and skills by examining the trainees' proposals, the design and content of the programs and the delivery process, which fulfilled our requirement. Objective measures or tests/examinations of specific knowledge and skills, and a control group of trainees who do not receive the program would provide stronger evidence in future studies. Our sample size was small, and the workers we included might not be representative of their profession across other agencies. Replications with more workers and in other contexts are needed. We cannot be certain about which of our strategies resulted in effective learning. Elucidation of the active ingredients of an intervention and the mediation components that are responsible for change, typically are undertaken after an intervention is proven to be effective. Examination of the effective components of our training strategies would be a future direction for research, and may allow refinement of the program for broader dissemination. Using a control group would be desirable.

Our evidence-based and evidence generating TTT has offered practical examples of the well-structured development and model based evaluation of capacity building programmes, which should be helpful to others seeking to develop such programmes in diverse

communities. Our work has a laid good foundation for deeper collaboration between social service organisations and academics in advocating the fusion of the “Best Science” with “Best Practice”, and empowered social and related service organisations to integrate scientific practices into their existing and future programmes, and policy formulation.

CHAPTER 4 QUANTITATIVE RESULTS

4.1 Participant's results

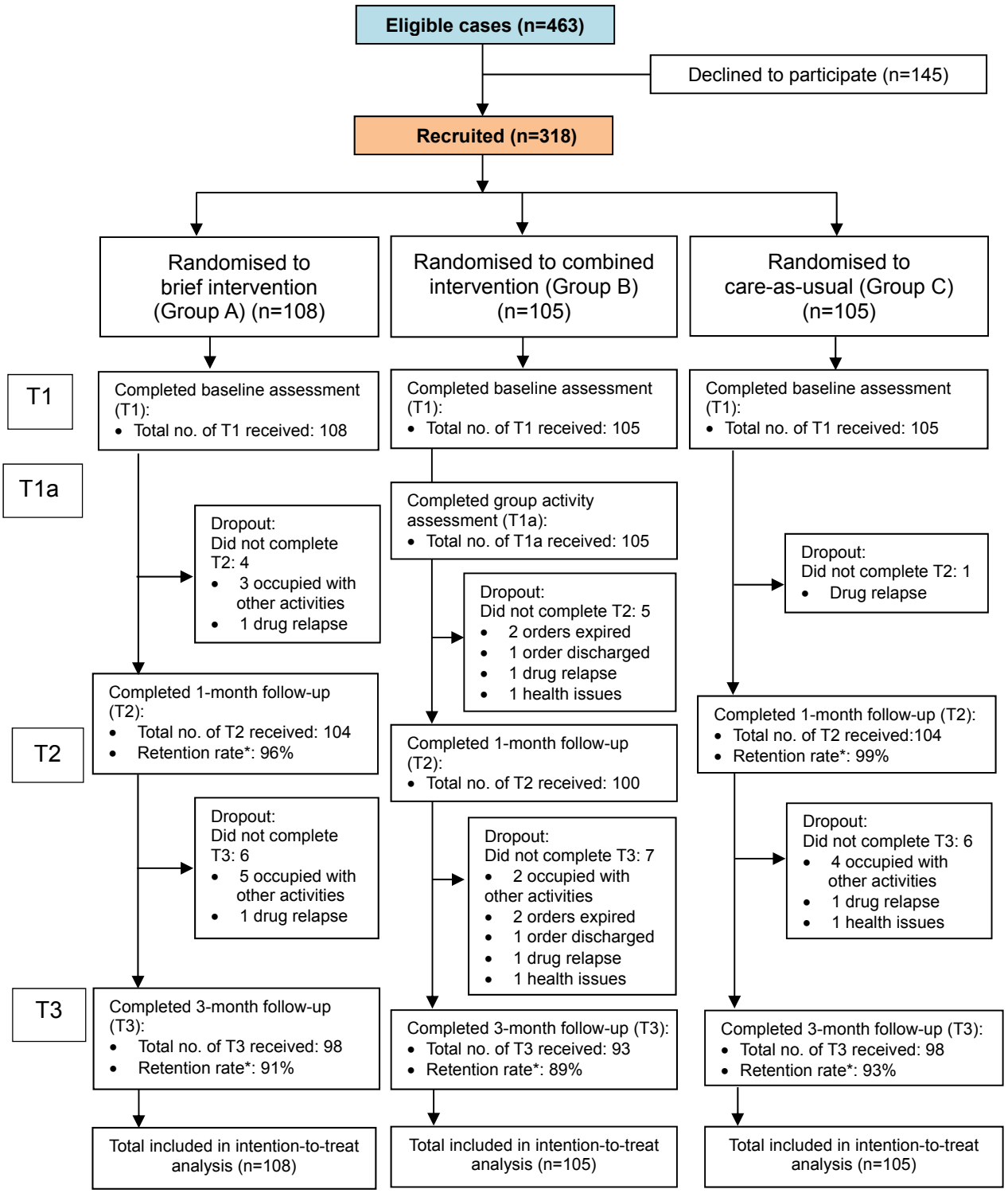
4.1.1 Baseline demographic characteristics

Table 4.1 Baseline demographic characteristics of probationers (n=318)

Characteristics	Group A Brief (n=108)	Group B Combined (n=105)	Group C Control (n=105)	*p*-value[a]
	n (%)	n (%)	n (%)	
Sex				
Male	52 (48.1)	53 (50.5)	58 (55.2)	0.57
Female	56 (51.9)	52 (49.5)	47 (44.8)	
Age group (years)				
12-19	13 (12.0)	13 (12.4)	24 (22.9)	0.30
20-39	52 (48.1)	52 (49.5)	46 (43.8)	
40-59	33 (30.6)	29 (27.6)	23 (21.9)	
≥60	10 (9.3)	11 (10.5)	12 (11.4)	
Marital status[b]				
Not married	49 (45.4)	57 (54.3)	62 (59.0)	0.41
Married	42 (38.9)	30 (28.6)	34 (32.4)	
Widowed/divorced/ separated	13 (12.0)	15 (14.3)	9 (8.6)	
Education[c]				
Primary and below level	14 (13.0)	15 (14.3)	12 (11.4)	0.78
Secondary level	70 (64.8)	65 (61.9)	74 (70.5)	
Post-secondary or above level	22 (20.4)	24 (22.9)	18 (17.1)	
Employment status[d]				
Student	6 (5.6)	5 (4.8)	15 (14.3)	0.16
Employed	66 (61.1)	69 (65.7)	66 (62.9)	
Unemployed/retired	9 (8.3)	10 (9.5)	10 (9.5)	
Homemaker	16 (14.8)	18 (17.1)	10 (9.5)	

[a] *p*-value for the difference among 3 groups at baseline
[b] 7 missing value, n=311; [c] 4 missing value, n=314; [d] 18 missing value, n=300

Figure 4.1 CONSORT flow diagram for probationers



Note: *retention rate, % based on denominator of the number of individuals who received pre-intervention assessment.

4.1.2 Baseline comparison of programme outcome measures

Table 4.2 shows at baseline, all programme outcome measures of the participants of all three groups (Groups A, B, and C) were quite similar.

Table 4.2 Baseline comparison of programme outcome measures

	Group A Brief n=108	Group B Combined n=105	Group C Control n=105	*p*-value[a]
	Mean (SD)	Mean (SD)	Mean (SD)	
Moderate exercise (0-7 days)	2.51 (2.59)	1.87 (2.10)	2.17 (2.48)	0.19
Vigorous exercise (0-7)	1.40 (1.89)	1.03 (1.49)	1.25 (1.86)	0.36
ZTE while sitting (0-7 days)	2.40 (2.63)	1.99 (2.61)	1.75 (2.39)	0.20
ZTE while standing (0-7 days)	2.40 (2.66)	2.02 (2.61)	2.01 (2.45)	0.47
ZTE while walking (0-7 days)	2.38 (2.61)	1.86 (2.46)	2.01 (2.55)	0.36
Subjective happiness (4-28)	17.71 (4.13)	17.64 (4.78)	17.04 (4.71)	0.51
Life satisfaction (5-35)	21.93 (7.11)	21.58 (6.66)	20.82 (7.36)	0.52
Depression (0-6)	1.33 (1.42)	1.48 (1.56)	1.30 (1.43)	0.63
Anxiety (0-6)	1.61 (1.60)	1.51 (1.69)	1.18 (1.39)	0.11
Self-esteem (10-40)	27.05 (3.52)	27.73 (4.06)	27.21 (4.62)	0.45
Physical quality of life (0-100)	47.53 (8.55)	46.25 (8.91)	47.40 (8.62)	0.51
Mental quality of life (0-100)	44.11 (8.47)	44.76 (8.87)	44.30 (9.91)	0.87
FAMILY health (0-10)	6.86 (2.45)	6.76 (2.27)	6.94 (2.18)	0.86
FAMILY happiness (0-10)	6.92 (2.46)	6.87 (2.22)	7.12 (2.26)	0.72
FAMILY harmony (0-10)	7.08 (2.55)	7.11 (2.32)	7.18 (2.33)	0.96
Family APGAR (0-10)	6.49 (2.55)	6.25 (2.50)	6.25 (2.41)	0.73
ZTEx with family (1-5)	1.79 (1.01)	1.81 (0.92)	1.70 (0.88)	0.69
Praise family (1-5)	2.31 (1.00)	2.56 (1.06)	2.37 (1.01)	0.18
Express appreciation (verbal) (1-5)	2.94 (1.10)	2.92 (1.05)	2.89 (1.09)	0.92
Express appreciation (action) (1-5)	3.13 (1.11)	2.99 (1.09)	2.90 (1.02)	0.28
Relationship with probation officer (1-5)	4.30 (0.67)	4.34 (0.66)	4.32 (0.68)	0.94

[a] *p*-value for difference among 3 groups at baseline

4.1.3 Changes in outcomes by time and group

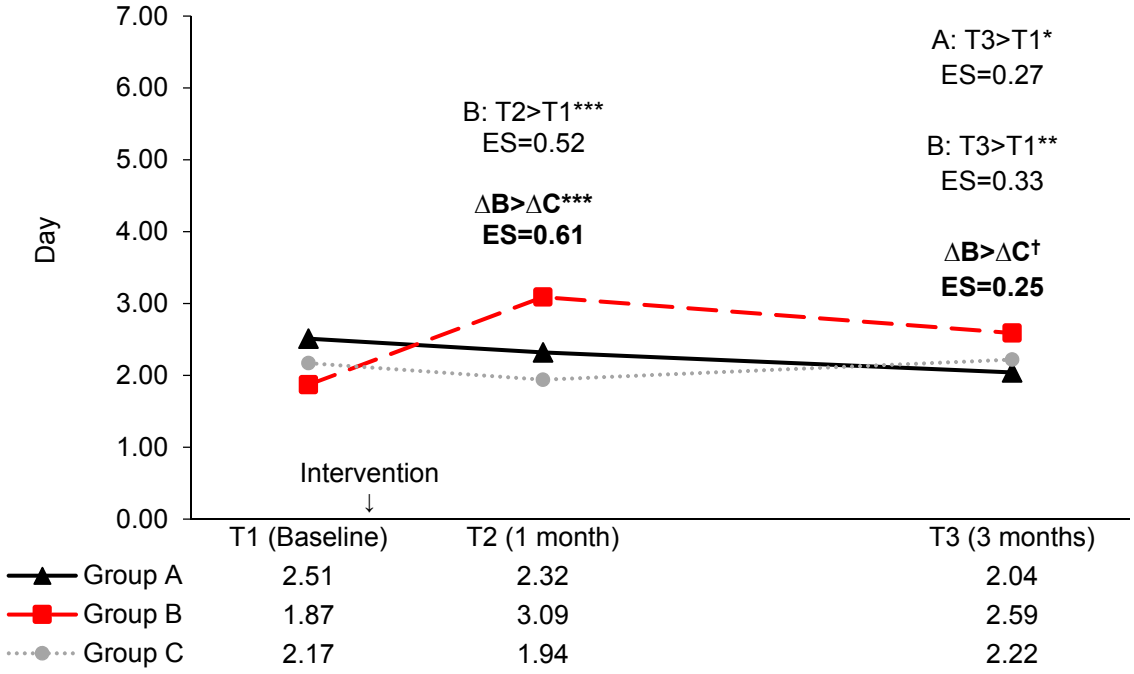
4.1.3.1 Physical activity

Moderate physical activity

Figure 4.2 shows significant increases in moderate physical activity in brief intervention group (Group A) only at 3 months with small effect size (ES=0.27, p=0.048) and in the combined intervention group (Group B) at 1 month and 3 months with small to medium effect size (ES=0.52, p<0.001 and ES=0.33, p=0.022, respectively).

The increases in moderate physical activity were significantly greater at 1 month with medium effect size (ES=0.61, p<0.001) and marginally significantly greater at 3 months with small effect size (ES=0.25, p=0.071) in Group B than care-as-usual group (Group C). This showed suggestive evidence on the effectiveness of the combined intervention.

Figure 4.2 Moderate physical activity (0-7 days)



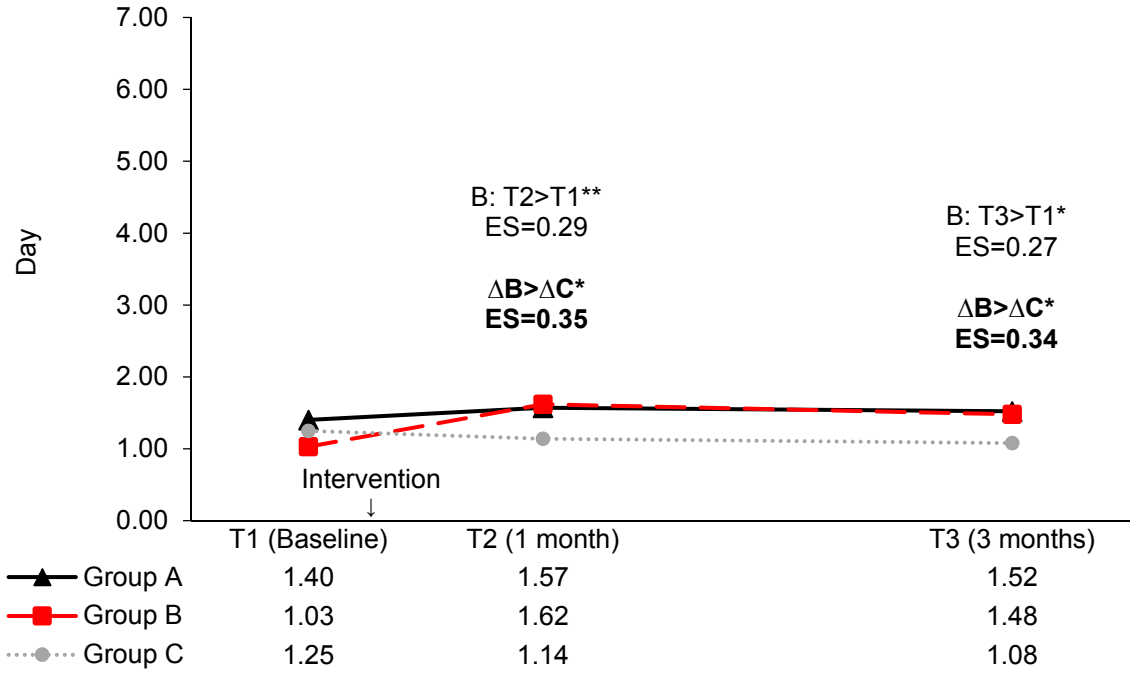
† p<0.1; * p<0.05; ** p<0.01; *** p<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

Vigorous physical activity

Figure 4.3 shows that Group B had significant increases in vigorous physical activity at 1 month and 3 months with small effect size (ES=0.29, *p*=0.007 and ES=0.27, *p*=0.011, respectively).

The increases in vigorous physical activity were significantly greater at 1 month and 3 months in Group B than Group C with small effect size (ES=0.35, *p*=0.012 and ES=0.34, *p*=0.015, respectively). This showed the effectiveness of the combined intervention in promoting vigorous physical activity.

Figure 4.3 Vigorous physical activity (0-7 days)



* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

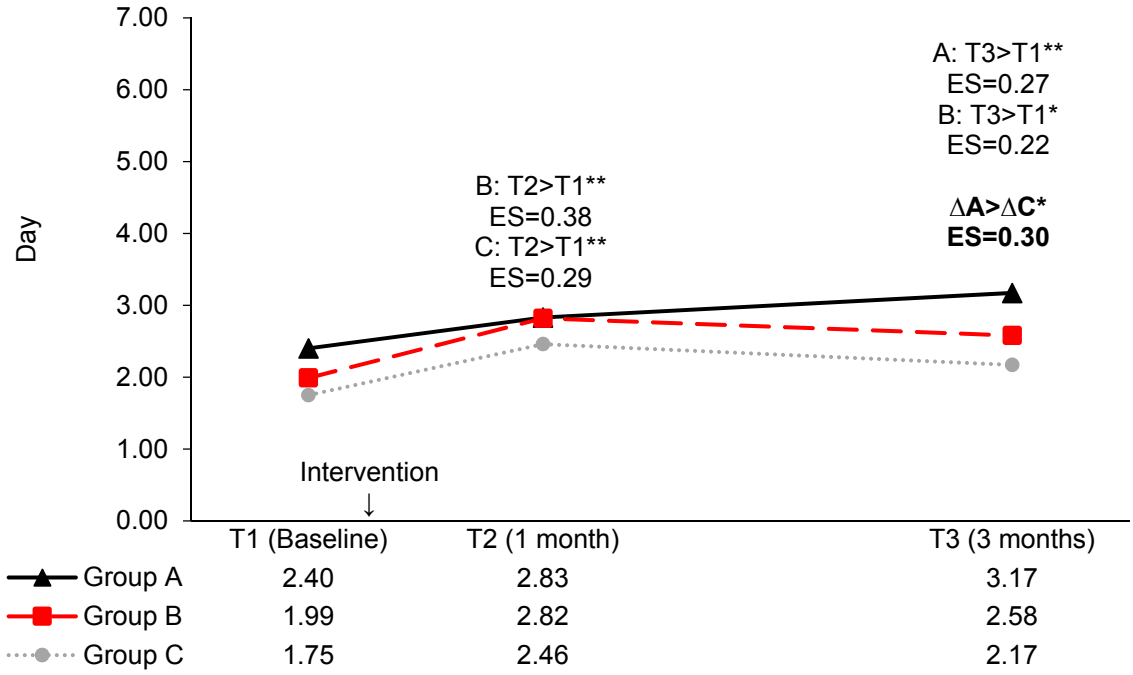
Zero-time Exercise

ZTEX while sitting

Figure 4.4 shows that Group B had significant increases in ZTEx while sitting frequency in Group B at 1 month and 3 months with small effect size (ES=0.38, *p*=0.006 and ES=0.22, *p*=0.040, respectively), whereas Group A showed a significant increase only at 3 months with small effect size (ES=0.27, *p*=0.008).

The increases in ZTEx while sitting were significantly greater at 3 months in Group A than Group C with small effect size (ES=0.30, *p*=0.031). This showed effectiveness of brief intervention on a longer term.

Figure 4.4 ZTEx while sitting (0-7 days)



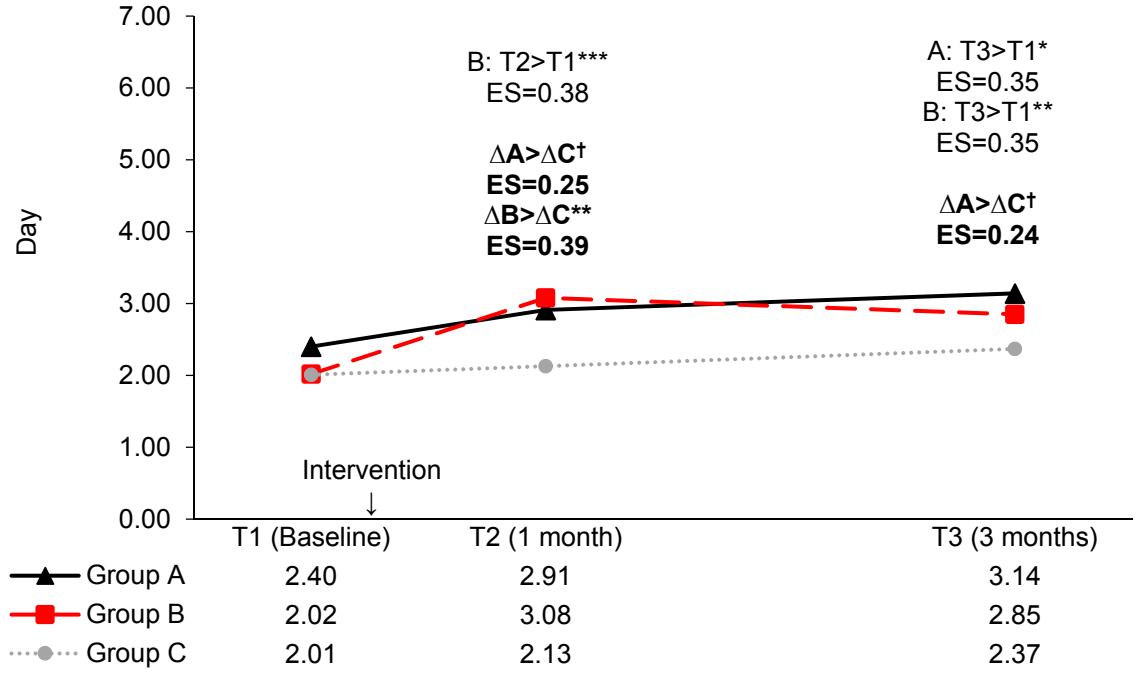
* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

ZTEx while standing

Figure 4.5 shows that Group B had significant increases in ZTEx while standing frequency at 1 month and 3 months with small effect size (ES=0.38, p<0.001 and ES=0.35, p=0.001, respectively). Group A showed a significant increase only at 3 months with small effect size (ES=0.35, p=0.015).

The increases in ZTEx while standing were marginally significantly greater at both 1 month and 3 months with small effect size in Group A than Group C (ES=0.25, p<0.1 and ES=0.24, p<0.1, respectively). The increase in Group B was significantly greater only at 1 month with small effect size than Group C (ES=0.39, p=0.005), showing short-term effectiveness of the combined intervention.

Figure 4.5 ZTEx while standing (0-7 days)



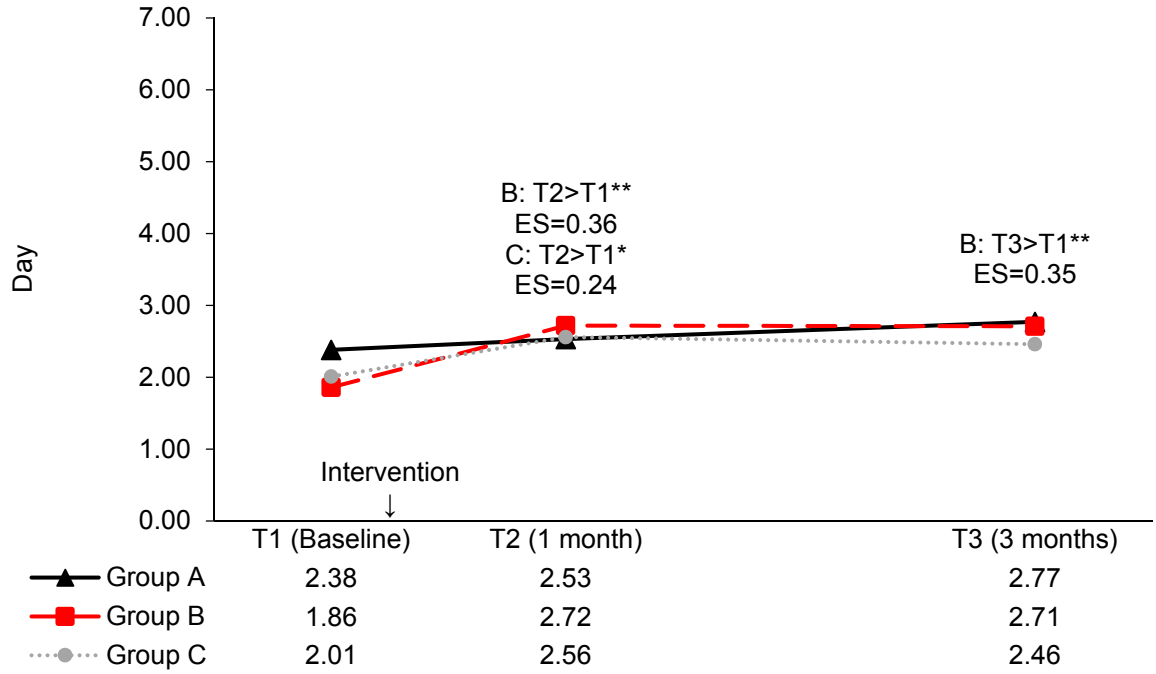
† p<0.1; * p<0.05; ** p<0.01; *** p<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

ZTEx while walking

Figure 4.6 shows significant increases in ZTEx while walking in Group B at both 1 month and 3 months with small effect size (ES=0.36, *p*=0.001 and ES=0.35, *p*=0.001, respectively) while Group C had significant increase only at 1 month (ES=0.24, *p*=0.022).

The changes between Groups A and C as well as between Groups B and C showed no significant differences at 1 month and 3 months.

Figure 4.6 ZTEx while walking (0-7 days)



* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

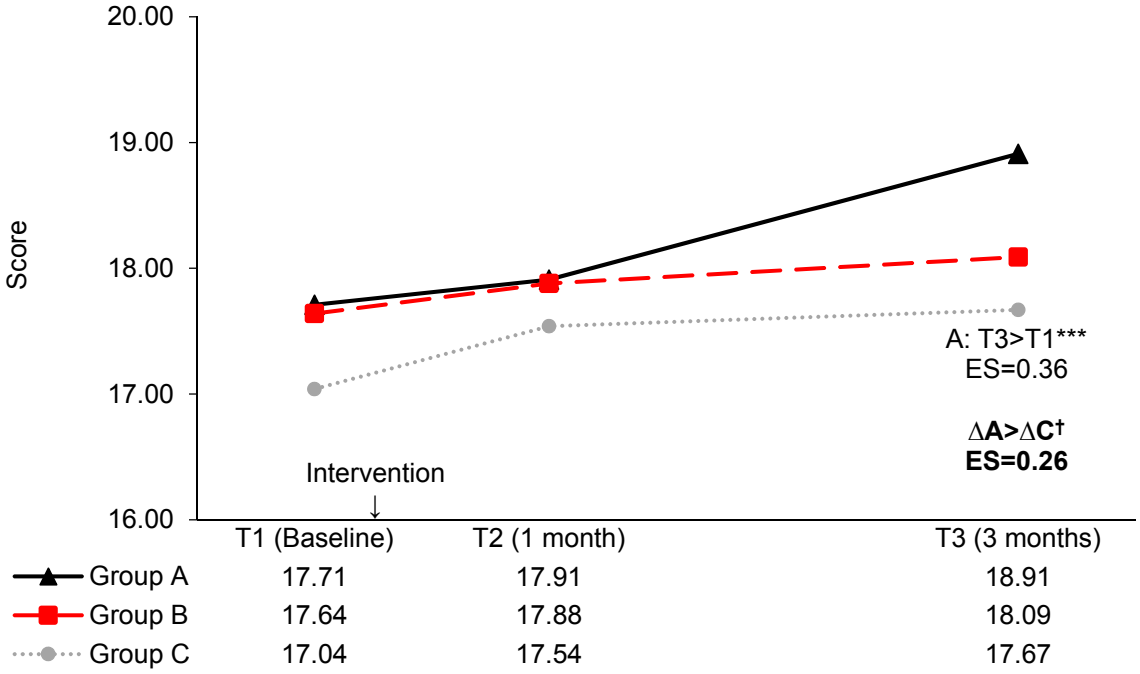
4.1.3.2 Personal wellbeing

Subjective happiness

Figure 4.7 shows significant improvements in subjective happiness in Group A only at 1 month (ES=0.36, p<0.001). No significant changes in subjective happiness were observed in Group B at both follow-up time points.

The improvement of subjective happiness was marginally significantly higher in Group A than Group C at 1 month (ES=0.26, p=0.059). This showed suggestive evidence of the effectiveness of brief intervention.

Figure 4.7 Subjective Happiness Scale (0-28)



	T1 (Baseline)	T2 (1 month)	T3 (3 months)
Group A	17.71	17.91	18.91
Group B	17.64	17.88	18.09
Group C	17.04	17.54	17.67

† p<0.1; *** p<0.001

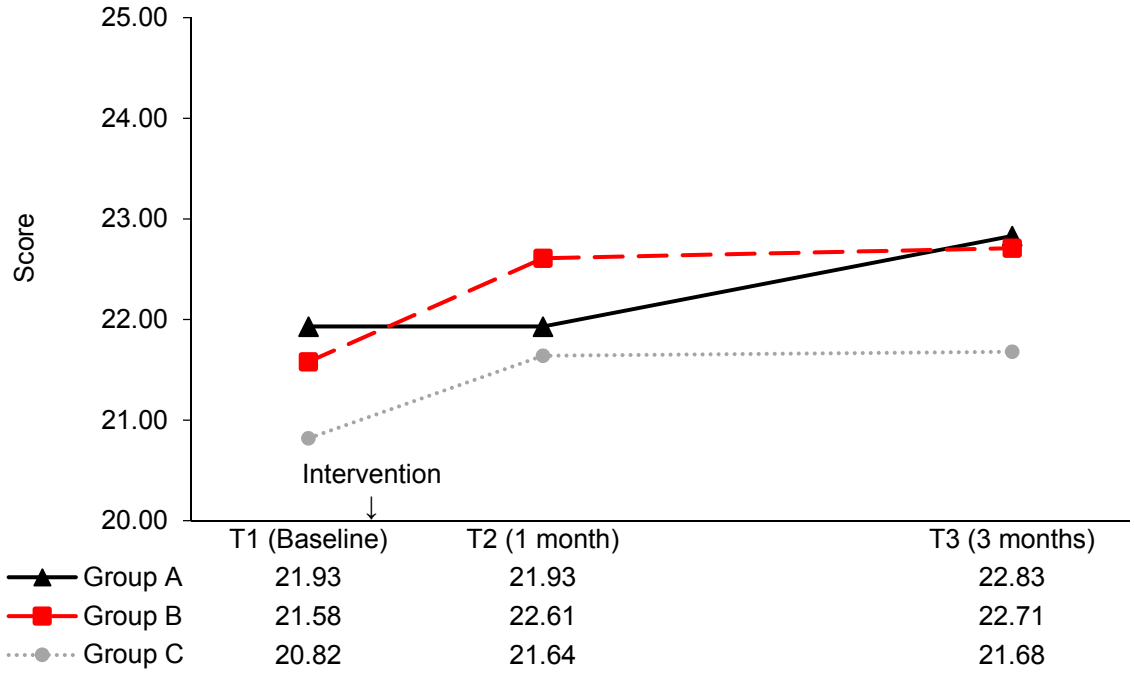
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

Higher score=higher level of happiness

Life satisfaction

Figure 4.8 shows no significant difference for improvements in life satisfaction between Groups A and C as well as Groups B and C at both follow-up time points.

Figure 4.8 Life Satisfaction Scale (5-35)



ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

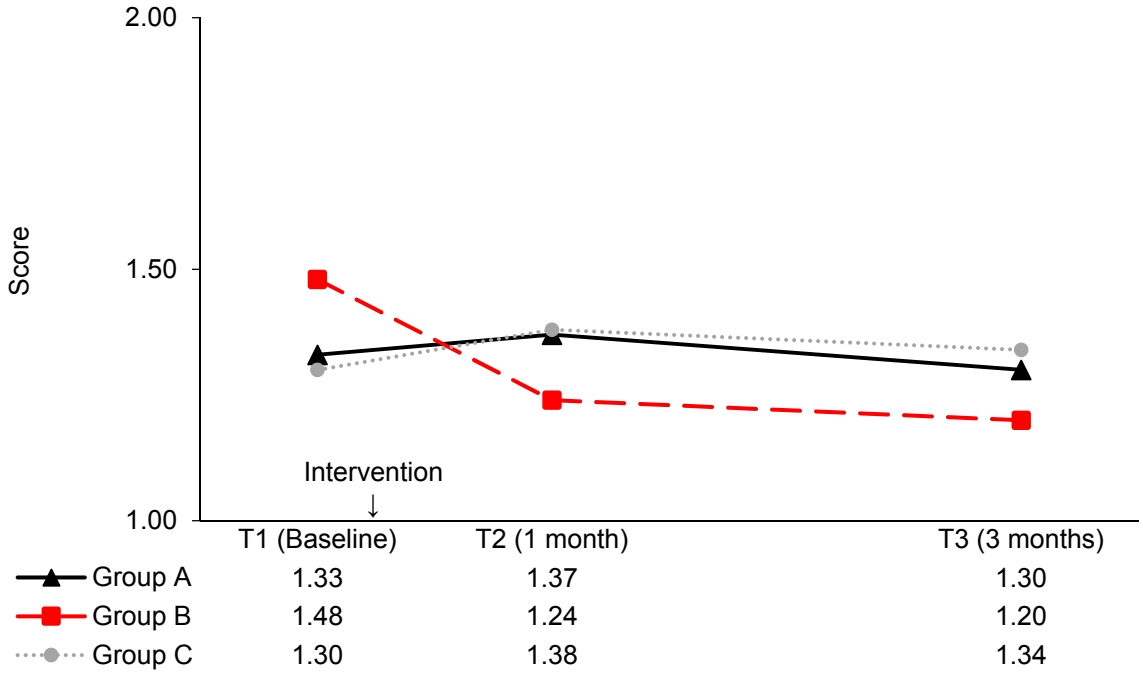
Higher total score=higher level of satisfaction with life

Depression and anxiety

Depression component

Figure 4.9 shows no significant difference for improvements in depression scores between Groups A and C as well as Groups B and C at both follow-up time points.

Figure 4.9 Depression component of PHQ-4 (0-6)



ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

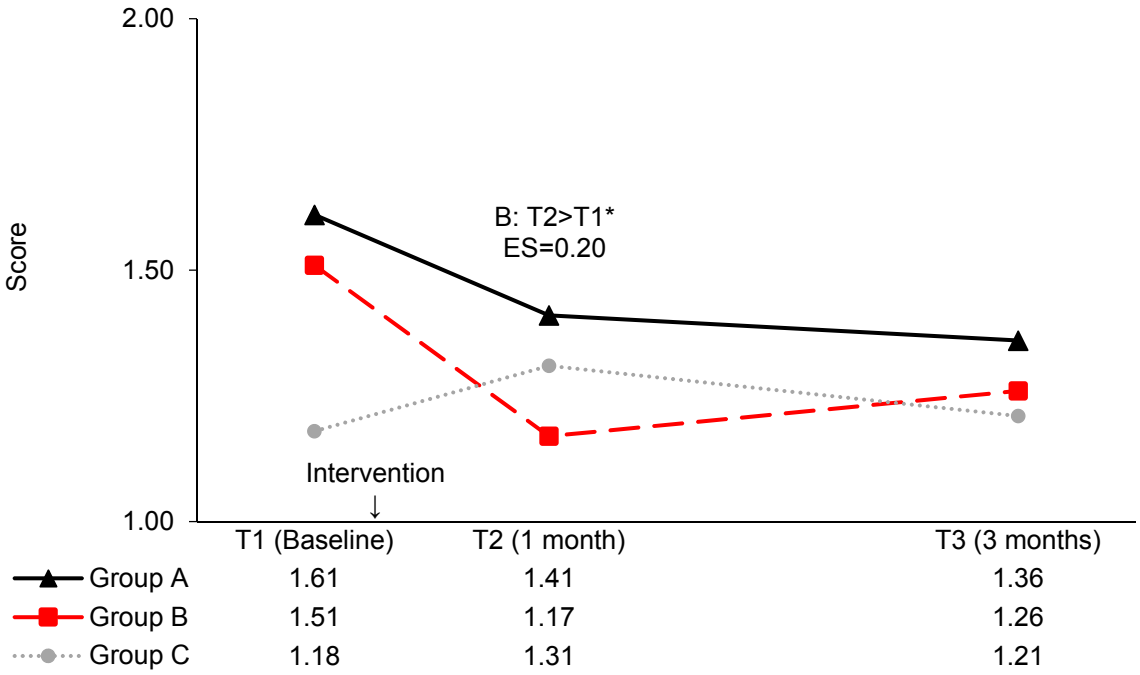
Lower score=less likely to be depressed

Anxiety component

Figure 4.10 shows anxiety scores were significantly decreased in Group B at 1 month with small effect size (ES=0.20, *p*=0.045), but this change was not sustained at 3 months.

The decreases in anxiety scores between Groups A and C as well as Groups B and C showed no significant difference in the changes.

Figure 4.10 Anxiety component of PHQ-4 (0-6)



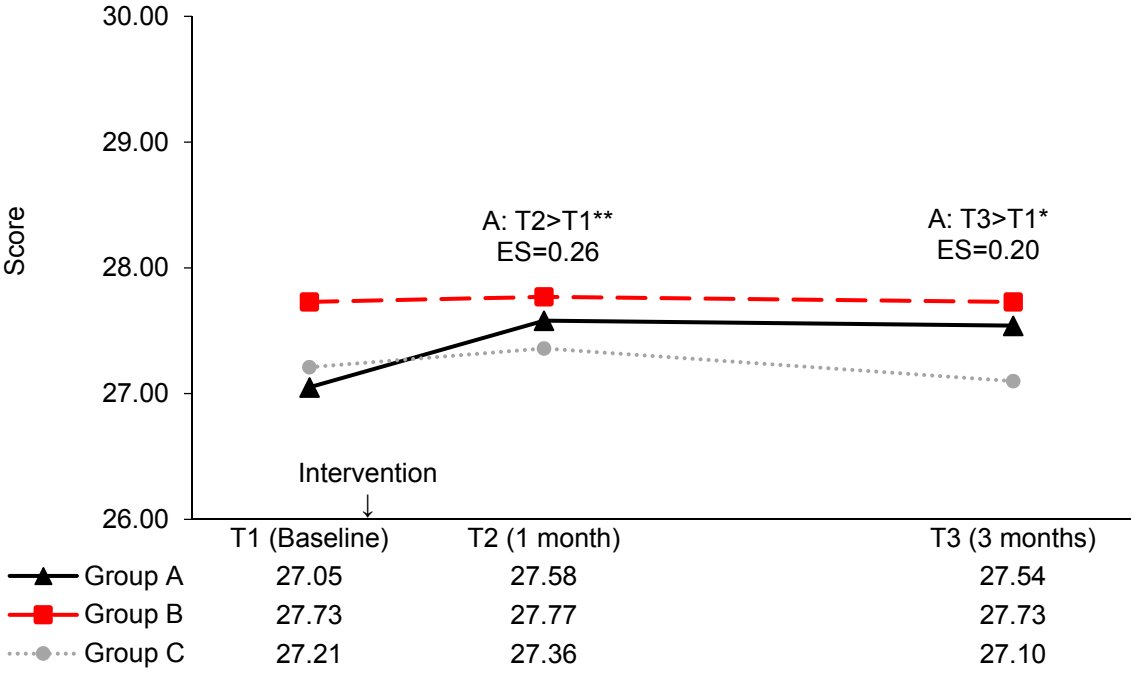
* *p*<0.05
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
Lower score=less likely to be anxious

Self-esteem

Figure 4.11 shows that a significant, albeit small increase in self-esteem was observed at 1 month and 3 months in Group A when compared to baseline (ES=0.26, *p*=0.008 and ES=0.20, *p*=0.045, respectively).

No significant difference for improvement in self-esteem score between Groups B and C as well as Groups B and C were observed at 1 month or 3 months.

Figure 4.11 Rosenberg Self-esteem Scale (10-40)



	T1 (Baseline)	T2 (1 month)	T3 (3 months)
Group A	27.05	27.58	27.54
Group B	27.73	27.77	27.73
Group C	27.21	27.36	27.10

* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
Higher score=higher self-esteem

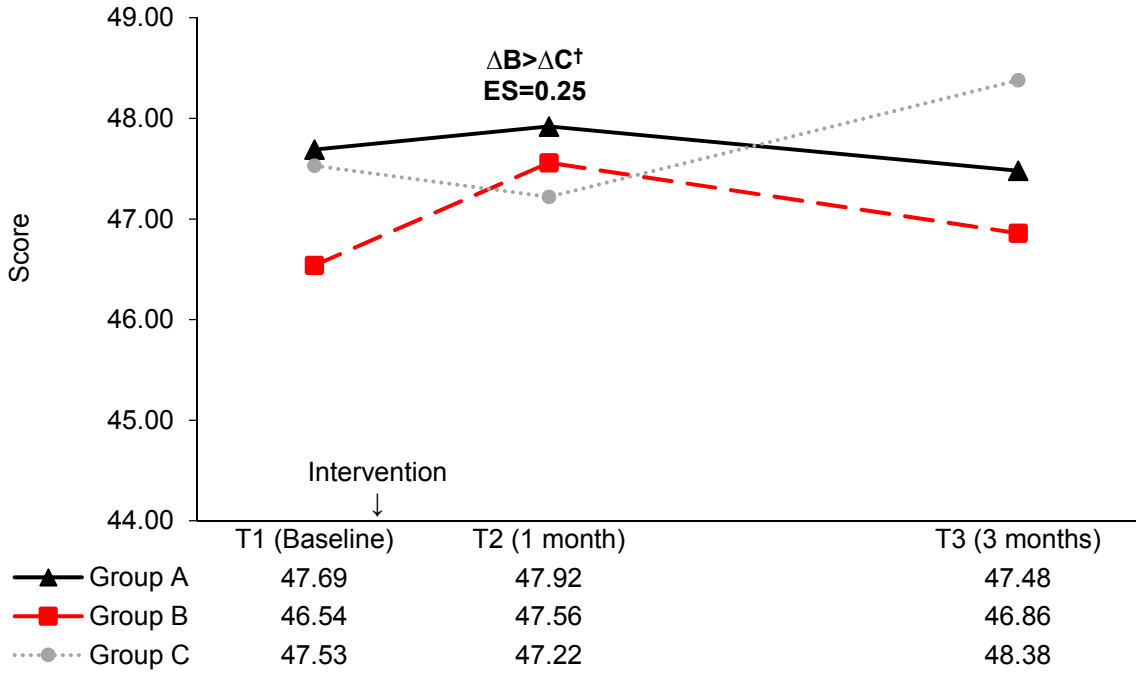
Quality of life

Physical quality of life

Figure 4.12 shows marginally significant increase in physical composite score in Group B than that in Group C at 1 month with small effect size (ES=0.25, *p*=0.075), however this difference was not sustained at 3 months.

No significant change between Groups A and C were observed.

Figure 4.12 Physical quality of life (0-100)



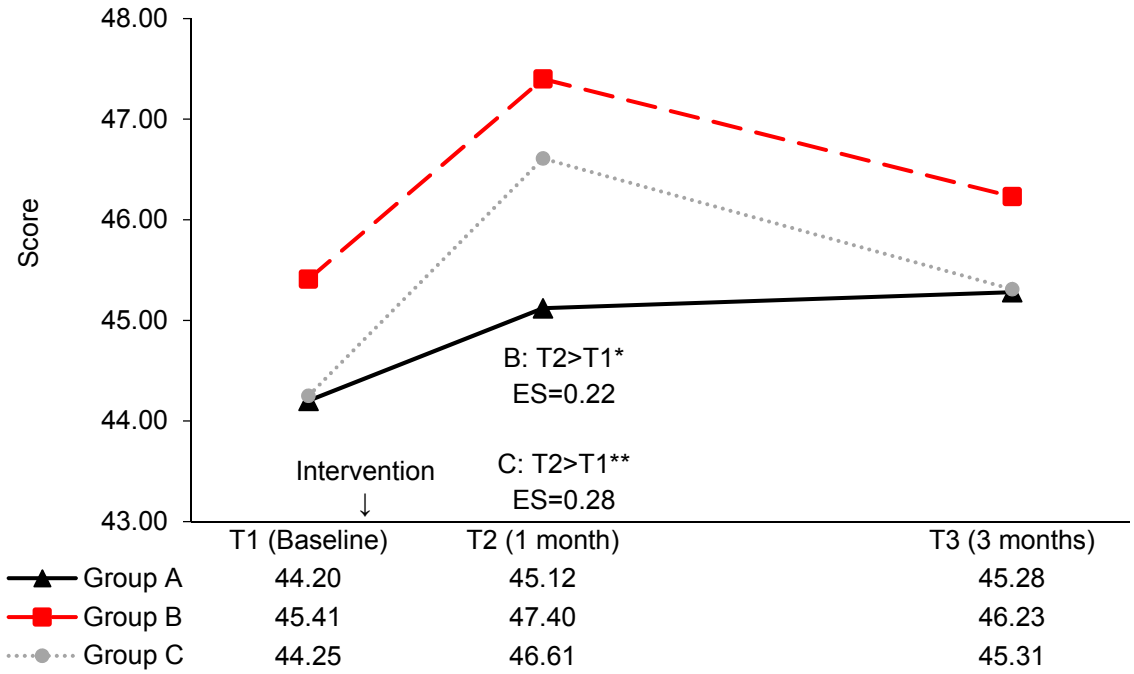
† *p*<0.1
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

Mental quality of life

Figure 4.13 shows an improvement in mental composite scores in the both Group B and Group C at 1 month with small effect size (ES=0.22, *p*=0.021 and ES=0.28, *p*=0.004).

No significant difference in the changes between Groups A and C as well as Groups B and C were observed.

Figure 4.13 Mental quality of life (0-100)



	T1 (Baseline)	T2 (1 month)	T3 (3 months)
Group A	44.20	45.12	45.28
Group B	45.41	47.40	46.23
Group C	44.25	46.61	45.31

* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

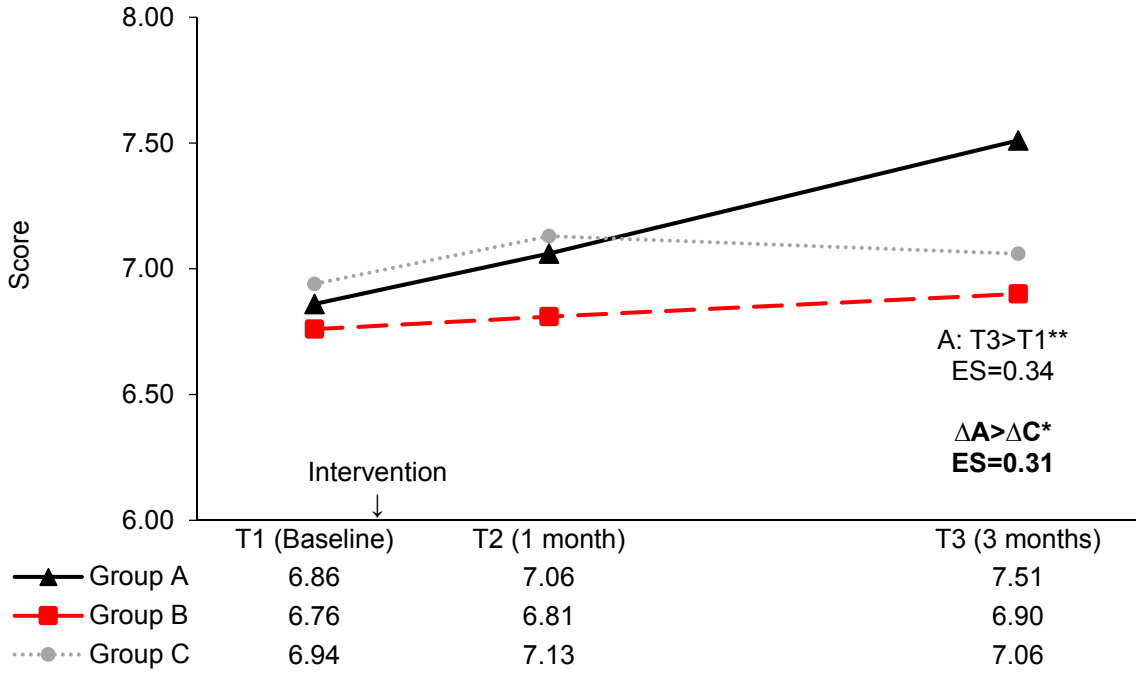
4.1.3.3 Family relationship and the 3Hs

Self-reported FAMILY health

Figure 4.14 shows a significant increase in self-reported FAMILY health in Group A only at 3 months compared to baseline values (ES=0.34, *p*=0.001).

The increase in Group A was significantly greater than that in Group C, showing long term effectiveness of brief intervention with small effect size (ES=0.31, *p*=0.024).

Figure 4.14 Self-reported FAMILY health (0-10)



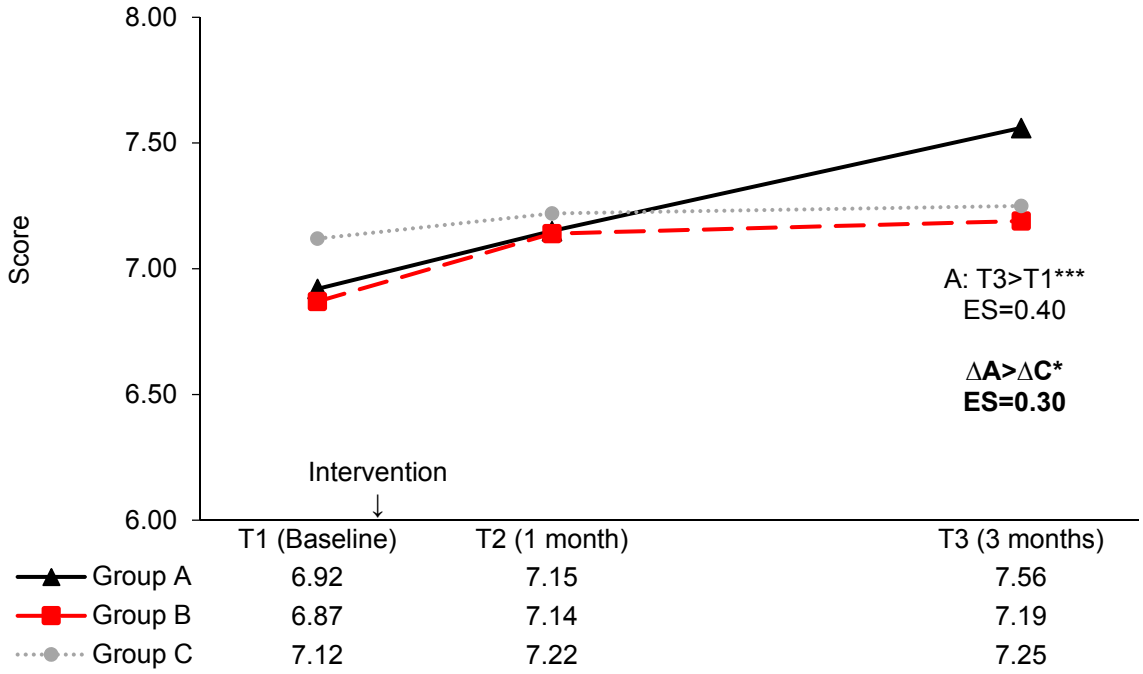
	T1 (Baseline)	T2 (1 month)	T3 (3 months)
Group A	6.86	7.06	7.51
Group B	6.76	6.81	6.90
Group C	6.94	7.13	7.06

* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0=very unhealthy" to "10=very healthy"

Self-reported FAMILY happiness

Figure 4.15 shows a significant increase in self-reported FAMILY happiness at 3 months in Group A (ES=0.40, p<0.001). The increase in self-reported FAMILY happiness score was significant greater in Group A than that in Group C only at 3 months, showing long term effectiveness of brief intervention with small effect size (ES=0.30, p=0.032).

Figure 4.15 Self-reported FAMILY happiness (0-10)

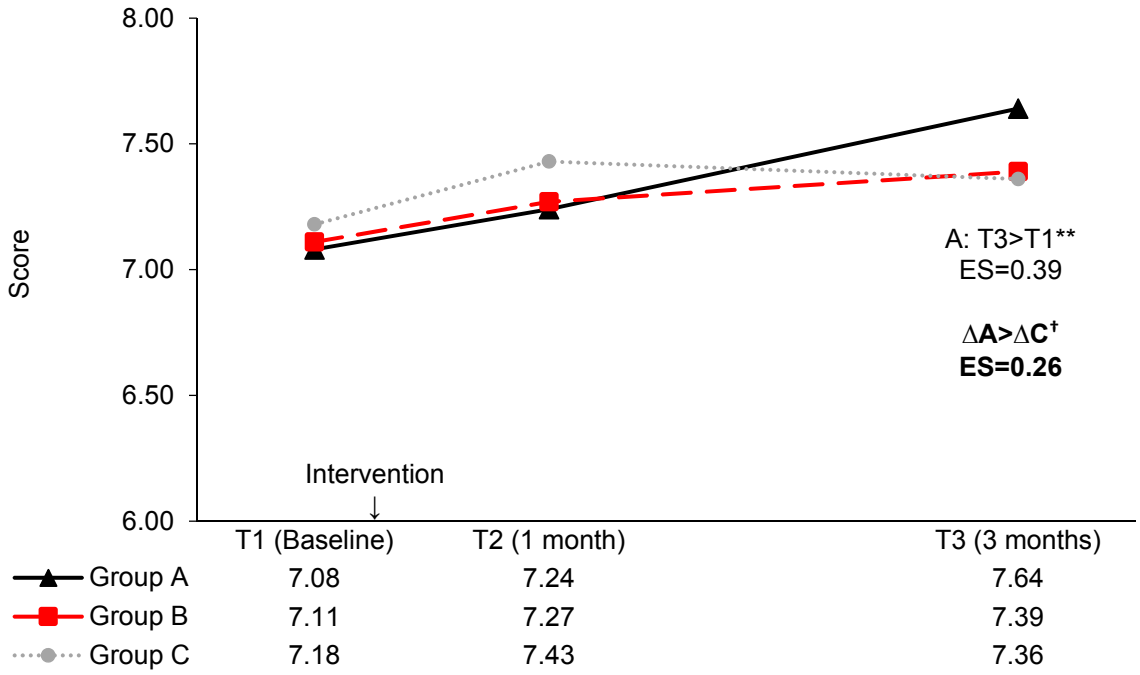


* p<0.05; *** p<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0=very unhappy" to "10=very unhappy"

Self-reported FAMILY harmony

Figure 4.16 shows a significant improvement in self-reported FAMILY harmony in Group A at 3 months with small effect size (ES=0.39, *p*=0.001). The improvement in self-reported FAMILY harmony was marginally significant greater in Group A than that in Group C at 3 months only (ES=0.26, *p*=0.061), indicating a suggestive evidence on the effectiveness of brief intervention.

Figure 4.16 Self-reported FAMILY harmony (0-10)



	T1 (Baseline)	T2 (1 month)	T3 (3 months)
Group A	7.08	7.24	7.64
Group B	7.11	7.27	7.39
Group C	7.18	7.43	7.36

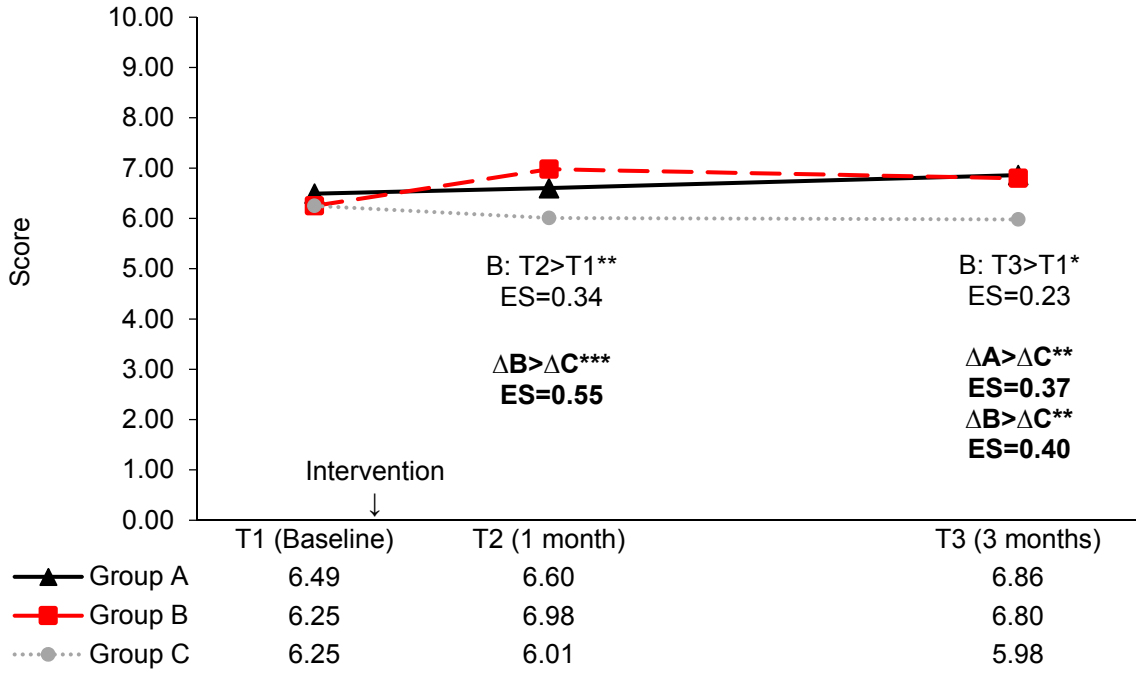
† *p*<0.1; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0=very disharmonious" to "10=very harmonious"

Family APGAR

Figure 4.17 shows significant improvements in mean family APGAR score in Group B at both 1 month and 3 months (ES=0.34, *p*=0.001 and ES=0.23, *p*=0.020, respectively).

The increases of family APGAR score were significantly greater in Group A than Group C only at 3 months (ES=0.37, *p*=0.008) and in Group B than Group C at both 1 month and 3 months (ES=0.55, *p*<0.001 and ES=0.40, *p*=0.004, respectively). These showed the effectiveness of brief and combined interventions with small to medium effect size.

Figure 4.17 Family APGAR (0-10)



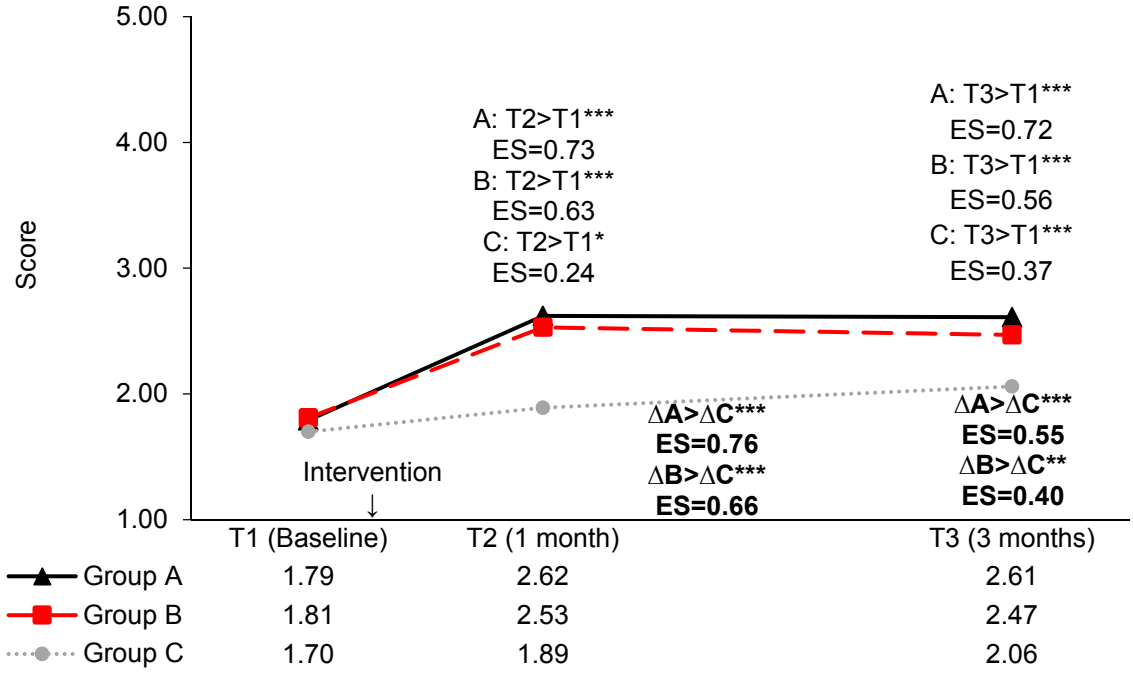
* *p*<0.05; ** *p*<0.01; *** *p*<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0-3=severely dysfunctional" to "7-10=highly functional"

ZTEx with family

Figure 4.18 shows significant increases in performing in ZTEx with family members in all three groups at 1 month and 3 months with small to medium effect size (Group A: ES=0.72-0.73, p<0.001; Group B: ES=0.56-0.63, p<0.001; and Group C: ES=0.24-0.37, p=0.018).

The increases in performing ZTEx with family members were greater in Group A than Group C (ES=0.76, p<0.001 and ES=0.55, p<0.001, respectively) and in Group B than Group C (ES=0.66, p<0.001 and ES=0.40, p=0.004, respectively) at both 1 month and 3 months. These showed the effectiveness of brief and combined interventions with small to medium effect size.

Figure 4.18 Frequency of ZTEx performed with family members in the past 4 weeks (1-5)



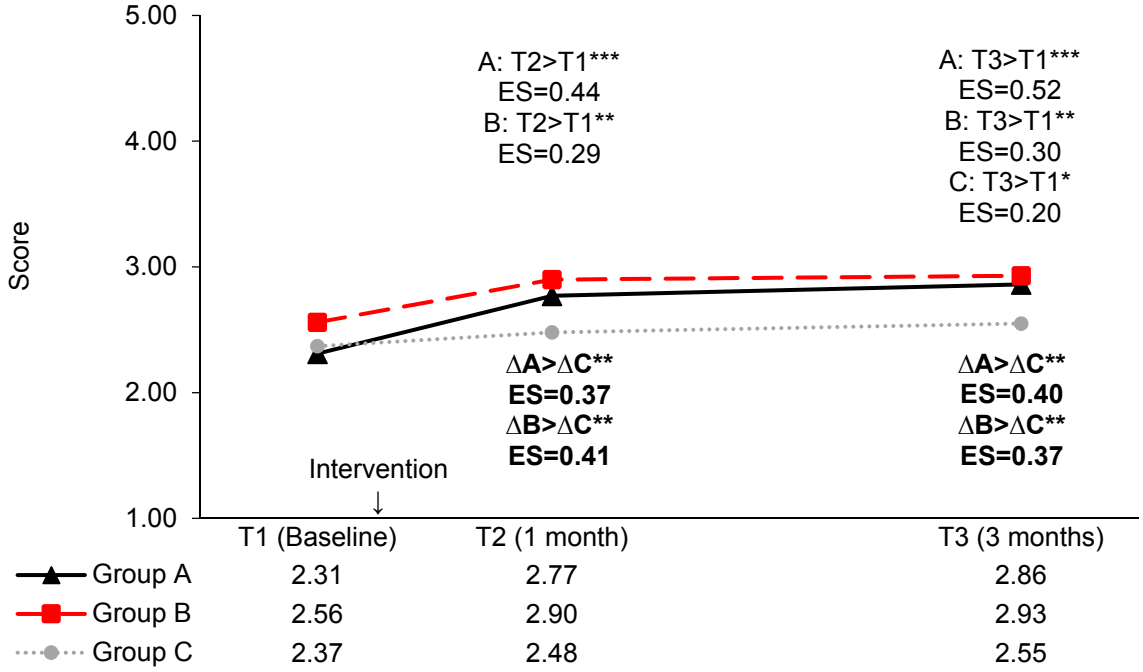
* p<0.05; ** p<0.01; *** p<0.001
ES=effect size (Cohen's d): small=0.20, medium=0.50 and large=0.80
5-point Likert scale: "1=never" to "5=always"

Frequency of praises towards family member(s)

Figure 4.19 shows significantly greater increases in frequency of praising family members in Groups A and B at 1 month and 3 months (Group A: ES=0.44, p<0.001; ES=0.52, p<0.001 and Group B: ES=0.29, p<0.004; ES=0.30, p=0.003, respectively). Group C showed a significant increase only at 3 months (ES=0.20, p=0.048). The effect size ranged from small to medium.

The increases in praising family members were greater in Group A than Group C (ES=0.37, p=0.007 and ES=0.40, p=0.004, respectively) and in Group B than Group C (ES=0.41, p=0.003 and ES=0.37, p=0.008, respectively) at both 1 month and 3 months. These showed the effectiveness of brief and combined interventions with small effect size.

Figure 4.19 Frequency of praising family member(s) while doing physical activity in past 4 weeks (1-5)



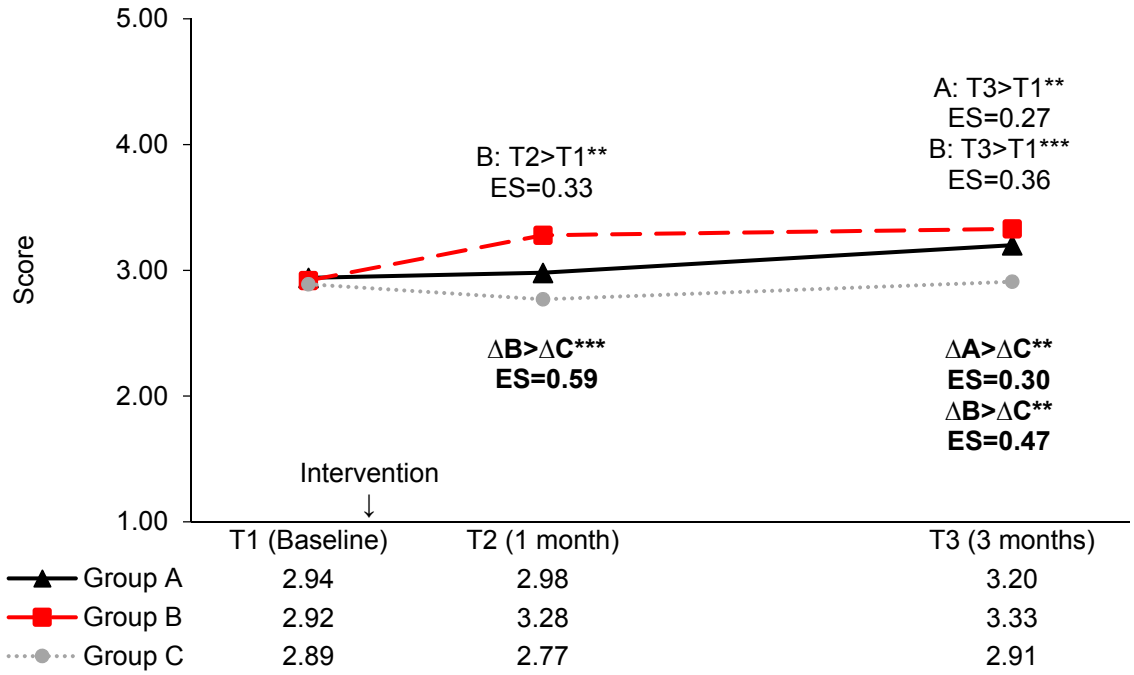
* p<0.05; ** p<0.01; *** p<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=never" to "5=always"

Expressing appreciation through verbal means

Figure 4.20 shows significantly greater increases in expression of appreciation through verbal means in Group A at 3 months (ES=0.27, *p*=0.007) and in Group B at 1 month and 3 months (ES=0.33, *p*=0.001 and ES=0.36, *p*<0.001, respectively). The effect size was small.

The increases in expressing appreciation were significantly greater in Group A than Group C only at 3 months (ES=0.30, *p*=0.029) and in Group B than Group C at 1 month and 3 months (ES=0.59, *p*<0.001 and ES=0.47, *p*=0.001, respectively). These showed the effectiveness of brief and combined interventions with small to medium effect size.

Figure 4.20 Frequency of expressing appreciation to family member(s) through verbal means in past 4 weeks (1-5)



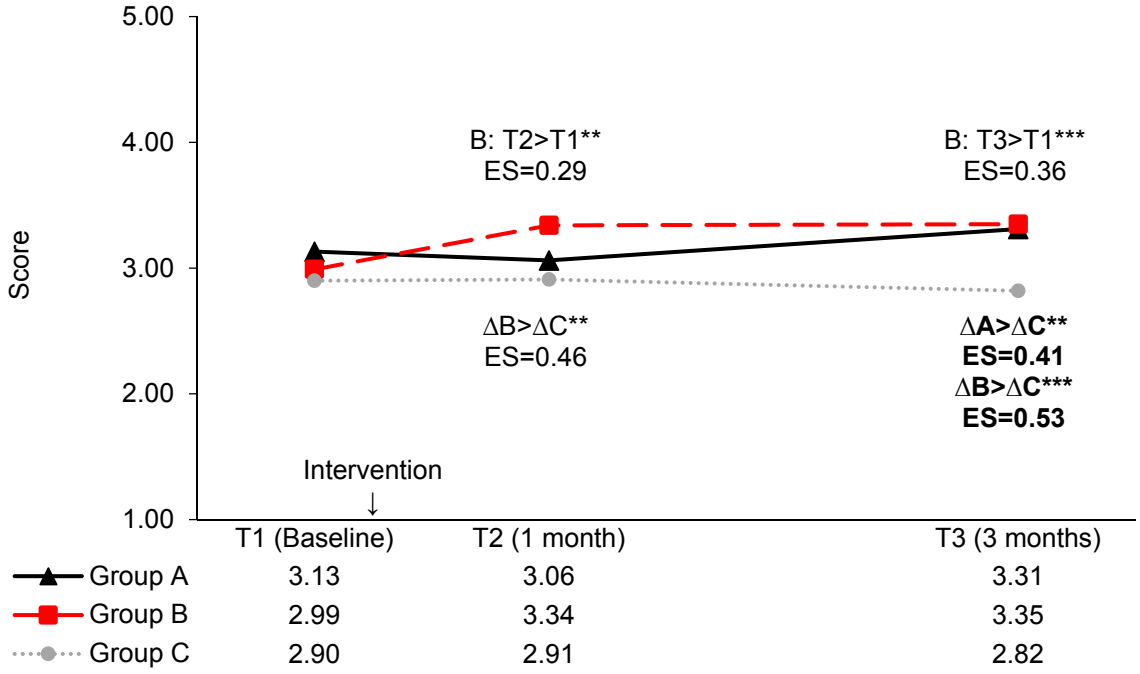
** *p*<0.01; *** *p*<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=never" to "5=always"

Expressing appreciation through action

Figure 4.21 shows significant increases in the scores of expressing appreciation through action at 1 month and 3 months in Group B when compared with baseline values (ES=0.29, *p*=0.004 and ES=0.36, *p*=0.002).

Group B had significantly greater increases at both 1 month and 3 months than in Group C (ES=0.46, *p*=0.001 and ES=0.53, *p*<0.001, respectively). The increase in expressing appreciation was significantly greater in Group A than Group C only at 3 months (ES=0.41, *p*=0.003). These showed the effectiveness of brief and combined interventions with small to medium effect size.

Figure 4.21 Frequency of expressing appreciation to family member(s) through actions in past 4 weeks (1-5)



** *p*<0.01; *** *p*<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=never" to "5=always"

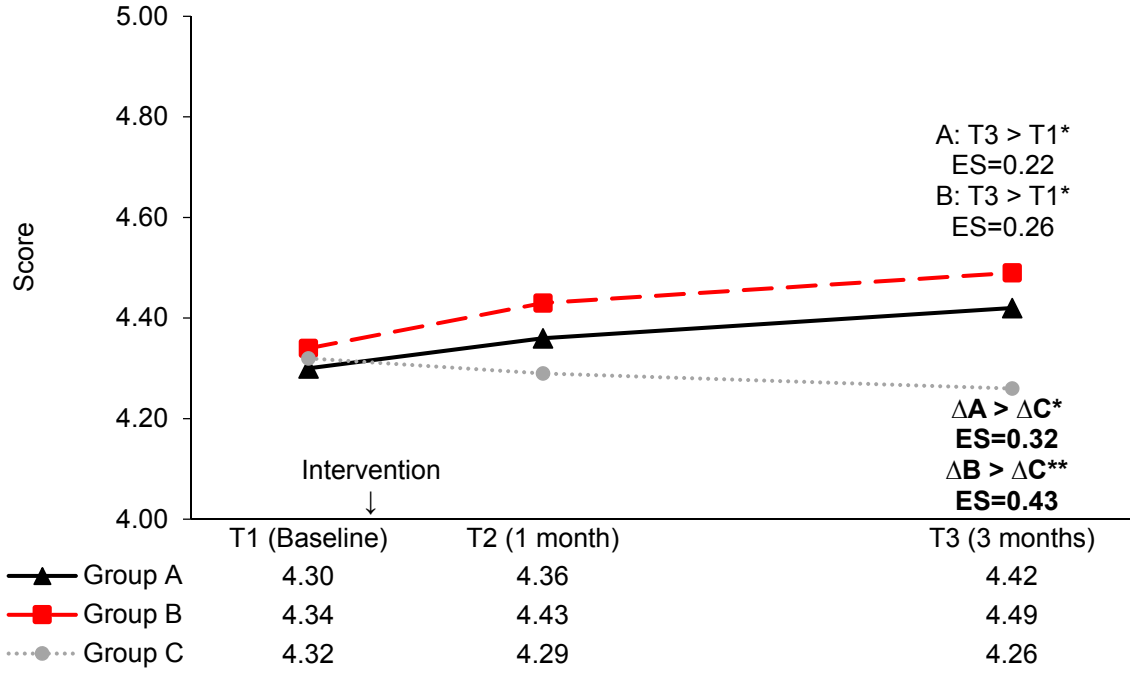
4.1.3.4 Probation service

Relationship with probation officer

Figure 4.22 indicates that both Group A and Group B showed significantly greater improvements in their relationship with the probation officer only at 3 months (ES=0.22, *p*=0.028 and ES=0.26, *p*=0.011, respectively).

The improvement in relationship with the probation officer was significantly greater in both Groups A and B than those in Group C at 3 months (ES=0.32, *p*=0.022 and ES=0.43, *p*=0.002, respectively).

Figure 4.22 Relationship with probation officer (1-5)



* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=very poor" to "5=very good"

4.2 Family member's results

4.2.1 Demographic characteristics

Demographic characteristics show most participating family members were aged 40-59 (46%) and female (60%) (Table 4.3). Majority of the family members had up to secondary level education (57%) and were employed (61%). Most of the family members who participated in the programme had spousal relationships with the probationers (36%). The baseline characteristics of family members in all 3 groups were quite similar.

Table 4.3 Demographic characteristics of family members (n=241)

Characteristics	Group A Brief n=90 n (%)	Group B Combined n=83 n (%)	Group C Control n=68 n (%)	*p*-value[a]
Sex				
Male	40 (44.4)	33 (39.8)	24 (35.3)	0.51
Female	50 (55.6)	50 (60.2)	44 (64.7)	
Age group (years)				
12-19	4 (4.4)	5 (6.0)	5 (7.4)	0.66
20-39	27 (30.0)	22 (26.5)	22 (32.4)	
40-59	46 (51.1)	36 (43.4)	30 (44.1)	
≥60	13 (14.4)	20 (24.1)	11 (16.2)	
Education[b]				
Primary and below level	16 (18.8)	16 (19.8)	14 (20.9)	0.58
Secondary level	54 (63.5)	44 (54.3)	35 (52.2)	
College or above level	15 (17.6)	21 (25.9)	18 (26.9)	
Employment status[c]				
Student	7 (8.5)	6 (7.9)	8 (11.8)	0.64
Employed	52 (63.4)	43 (56.6)	42 (61.8)	
Unemployed/retired	11 (13.4)	15 (19.7)	6 (8.8)	
Homemaker	12 (14.6)	12 (15.8)	12 (17.6)	
Relationship with probationer[d]				
Spouse	29 (34.1)	28 (35.9)	25 (37.3)	0.67
Parent/grandparent	23 (27.1)	23 (29.5)	23 (34.3)	
Children/grandchildren	24 (28.2)	19 (24.4)	9 (13.4)	
Sibling	7 (8.2)	5 (6.4)	7 (10.4)	
Other	2 (2.4)	3 (3.8)	3 (4.5)	

[a] *p*-value for the significance of difference among 3 groups at baseline
[b] 8 missing value, n=233; [c] 15 missing value, n=226; [d] 11 missing value, n=230

4.2.2 Baseline comparison of programme outcome measures

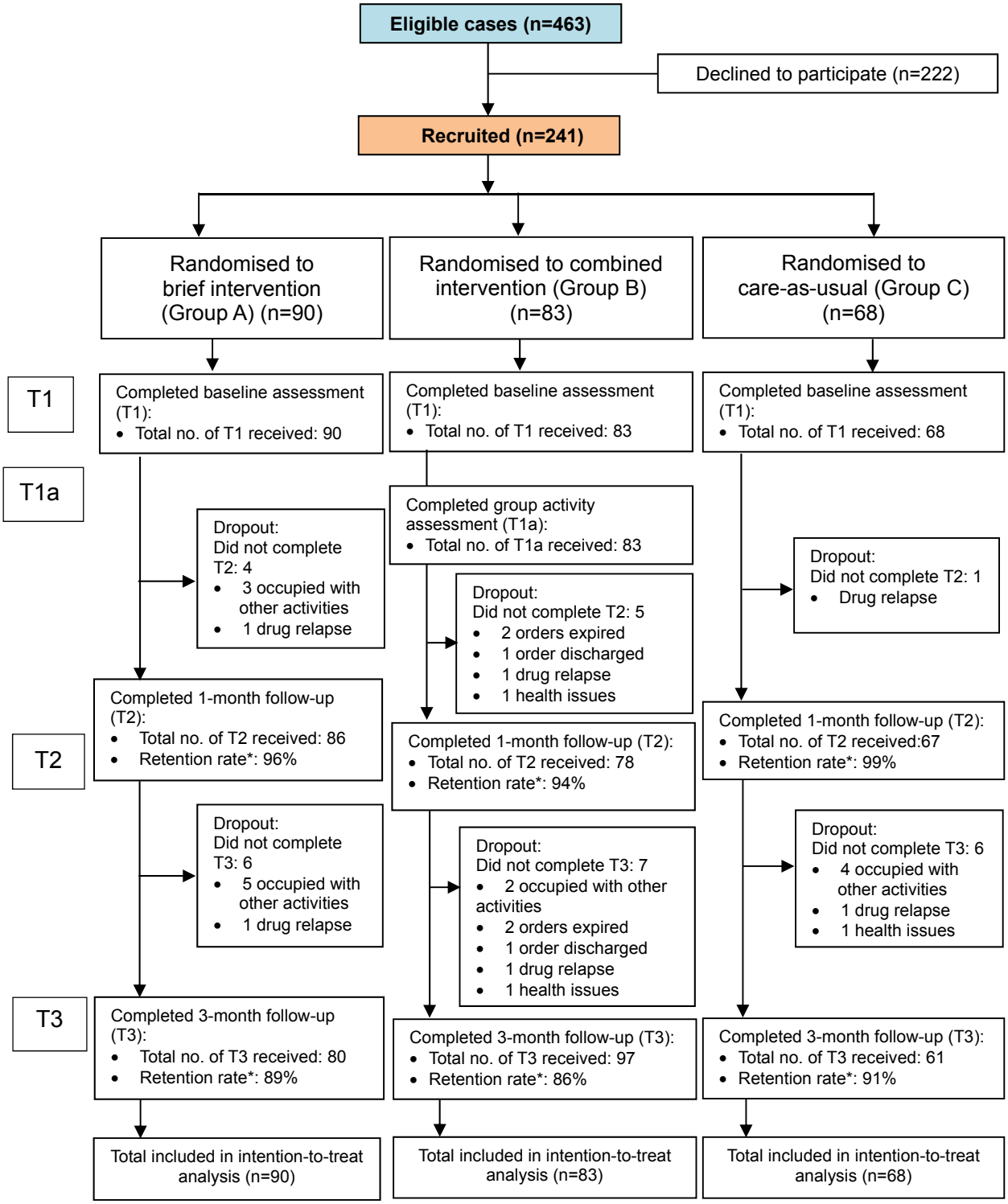
As shown in Table 4.4, participants did not differ significantly in almost all programme outcome measures at baseline.

Table 4.4 Baseline comparison of programme outcome measures

	Group A Brief (n=90)	Group B Combined (n=83)	Group C Control (n=68)	*p*-value[a]
	Mean (SD)			
Moderate exercise (0-7 days)	1.77 (2.09)	2.28 (2.32)	2.10 (2.27)	0.36
Vigorous exercise (0-7 days)	1.13 (1.47)	1.21 (1.66)	0.85 (1.45)	0.38
ZTE while sitting (0-7 days)	2.52 (2.42)	2.83 (2.59)	2.41 (2.31)	0.59
ZTE while standing (0-7 days)	2.35 (2.45)	2.71 (2.61)	2.38 (2.42)	0.63
ZTE while walking (0-7 days)	2.38 (2.53)	2.50 (2.56)	3.03 (2.74)	0.32
Subjective happiness (4-28)	18.08 (3.93)	18.23 (3.87)	18.71 (4.30)	0.62
FAMILY health (0-10)	6.91 (2.19)	6.89 (2.07)	6.61 (2.44)	0.66
FAMILY happy (0-10)	6.95 (2.16)	7.04 (2.00)	7.05 (2.06)	0.95
FAMILY harmony (0-10)	7.20 (2.20)	7.21 (2.24)	7.03 (2.44)	0.87
Family APGAR (0-10)	6.34 (2.45)	6.41 (2.04)	6.53 (2.68)	0.88
ZTEx with family (1-5)	2.21 (0.94)	1.80 (0.95)	1.79 (0.74)	0.003**
Praise family (1-5)	2.77 (0.95)	2.83 (1.08)	2.46 (0.97)	0.06
Express appreciation (verbal) (1-5)	3.06 (1.05)	3.08 (0.98)	3.01 (1.04)	0.92
Express appreciation (action) (1-5)	3.24 (0.99)	3.11 (1.00)	3.13 (1.13)	0.66

[a] *p*-value for the significance of difference among 3 groups at baseline: ** $p<0.01$

Figure 4.23 CONSORT flow diagram for family members



Note: *retention rate, % based on denominator of the nvumber of individuals who received pre-intervention assessment

4.2.3 Changes in outcomes by time and group

4.2.3.1 Physical activity

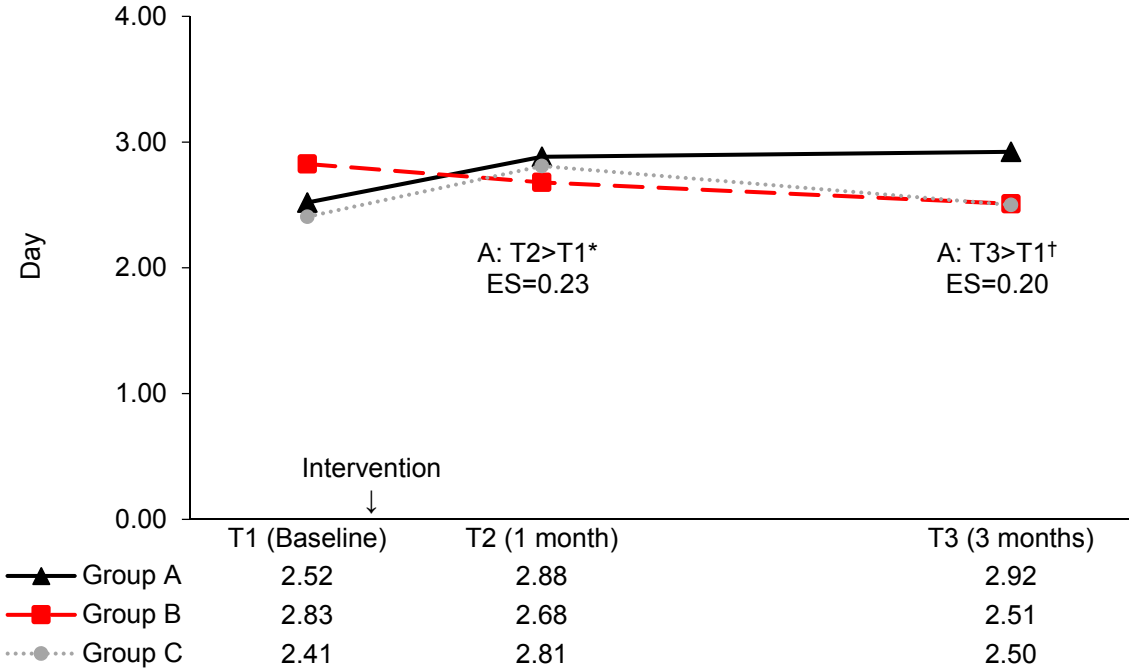
Zero-time Exercise

ZTEx while sitting

Figure 4.24 shows a significant increase in frequency of ZTEx while sitting at 1 month (ES=0.23, *p*=0.044) and a marginally significant increase at 3 months (ES=0.20, *p*=0.078) only in Group A.

No significant difference in the changes between Groups A and C as well as Groups B and C were observed.

Figure 4.24 ZTEx while sitting (0-7 days)



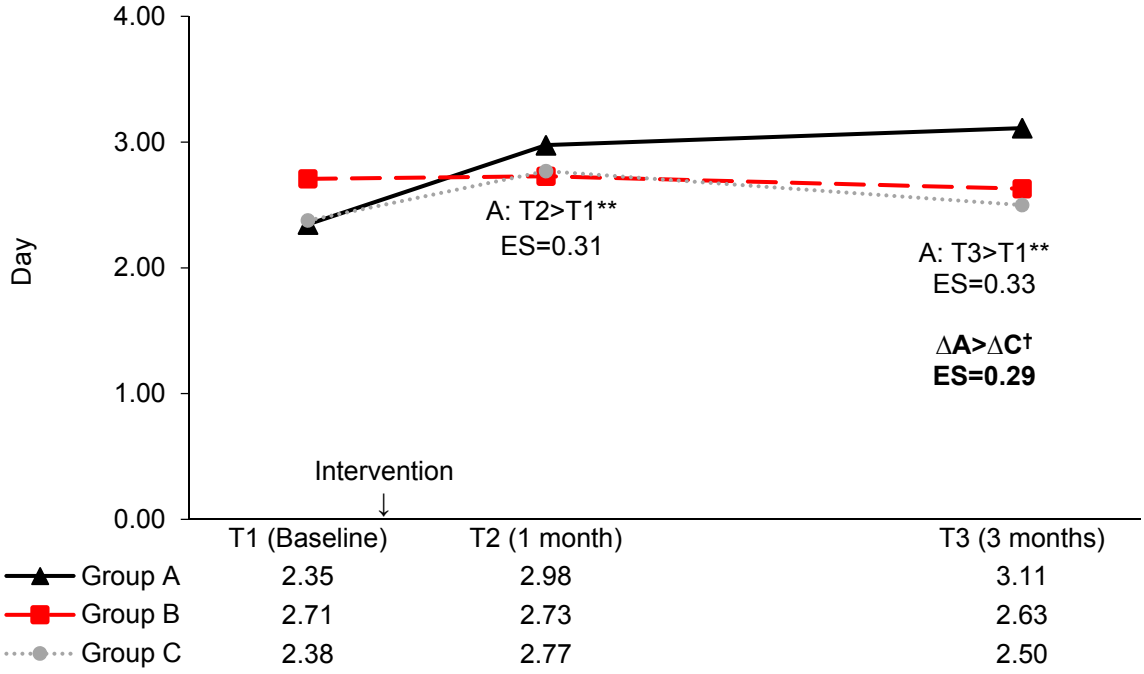
† *p*<0.1; * *p*<0.05
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

ZTEx while standing

Figure 4.25 shows significant increases in ZTEx at both 1 month and 3 months in Group A (ES=0.31, *p*=0.007 and ES=0.33, *p*=0.004, respectively).

A marginally significantly greater increase only at 3 months was observed in Group A compared with Group C (ES=0.29, *p*=0.078), showing suggestive evidence of the effectiveness of brief intervention.

Figure 4.25 ZTEx while standing (0-7 days)



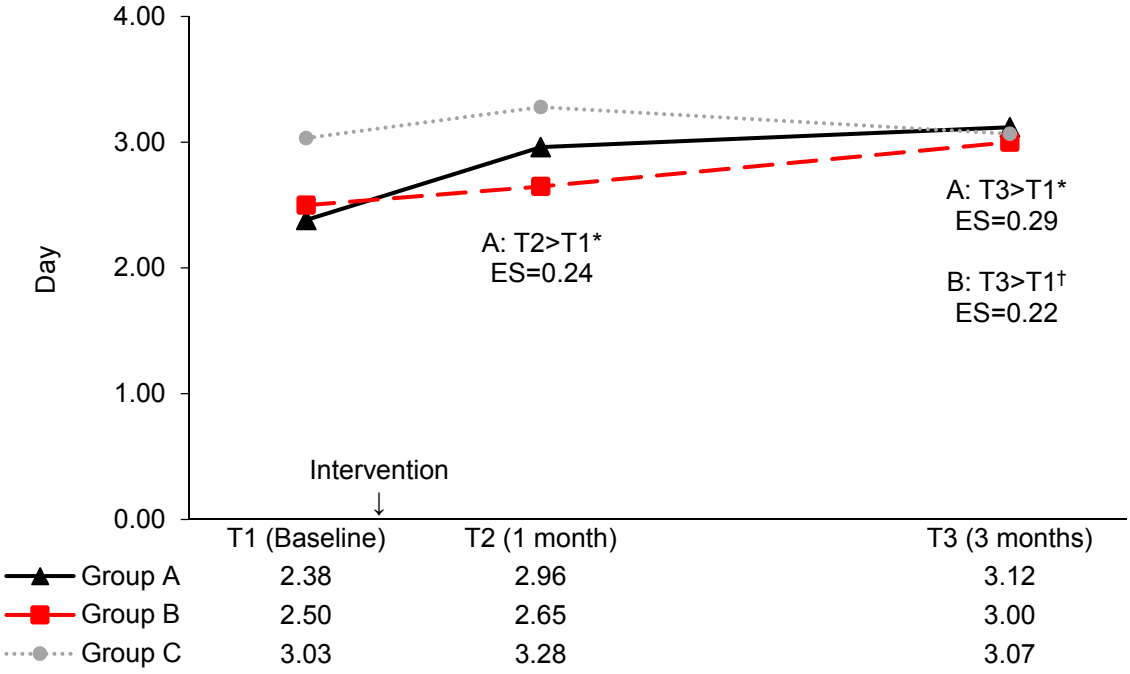
† *p*<0.1; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

ZTEx while walking

Figure 4.26 shows significant increases in ZTEx in Group A at both 1 month and 3 months (ES=0.24, *p*=0.036 and ES=0.29, *p*=0.015, respectively) and a marginally significant increase in Group B only at 3 months (ES=0.22, *p*=0.065). The effect size was small.

No significant difference in the changes between Groups A and C as well as Groups B and C were observed.

Figure 4.26 ZTEx while walking (0-7 days)



† *p*<0.1; * *p*<0.05
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80

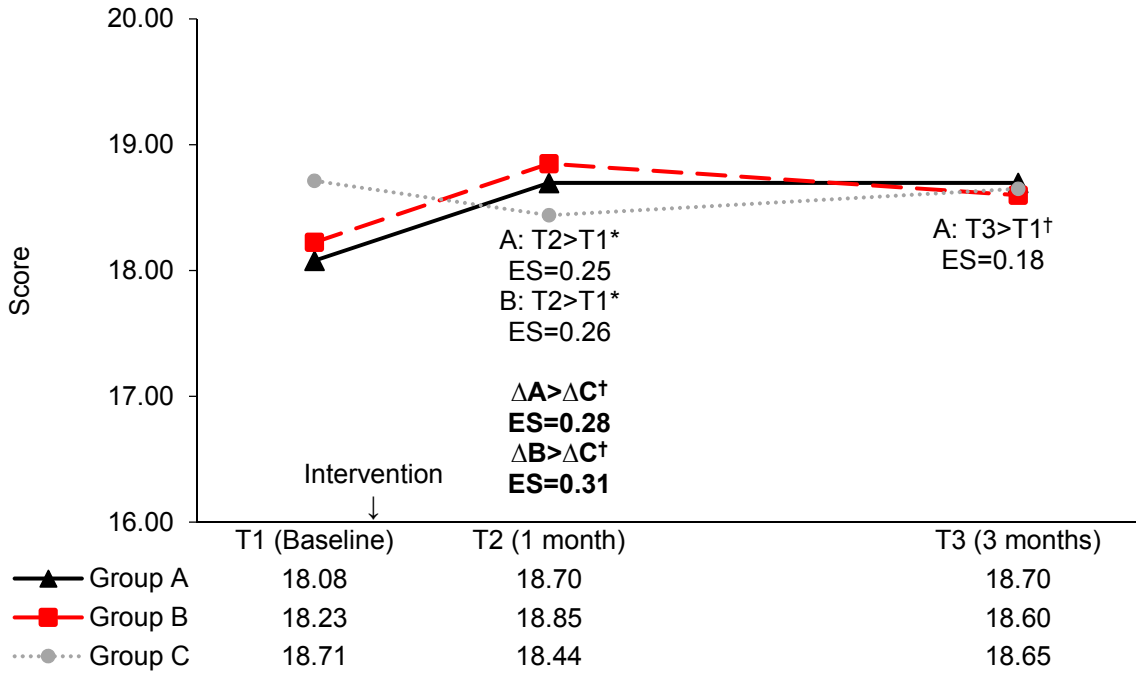
4.2.3.2 Personal wellbeing

Subjective happiness

Figure 4.27 shows significant improvements in subjective happiness in Groups A and B at 1 month (Group A: ES=0.25, p=0.020 and Group B: ES=0.26, p=0.023) and a marginally significant increase in Group A only at 3 months (ES=0.18, p=0.093). The effect size was small.

Moreover, marginally significantly greater increases were observed in both Group A and B than in Group C only at 1 month (ES=0.28, p=0.080 and ES=0.31, p=0.063, respectively). This showed suggestive evidence of the effectiveness of brief and combined interventions.

Figure 4.27 Subjective Happiness Scale (4-28)



† p<0.1; * p<0.05
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
Higher score=higher level of happiness

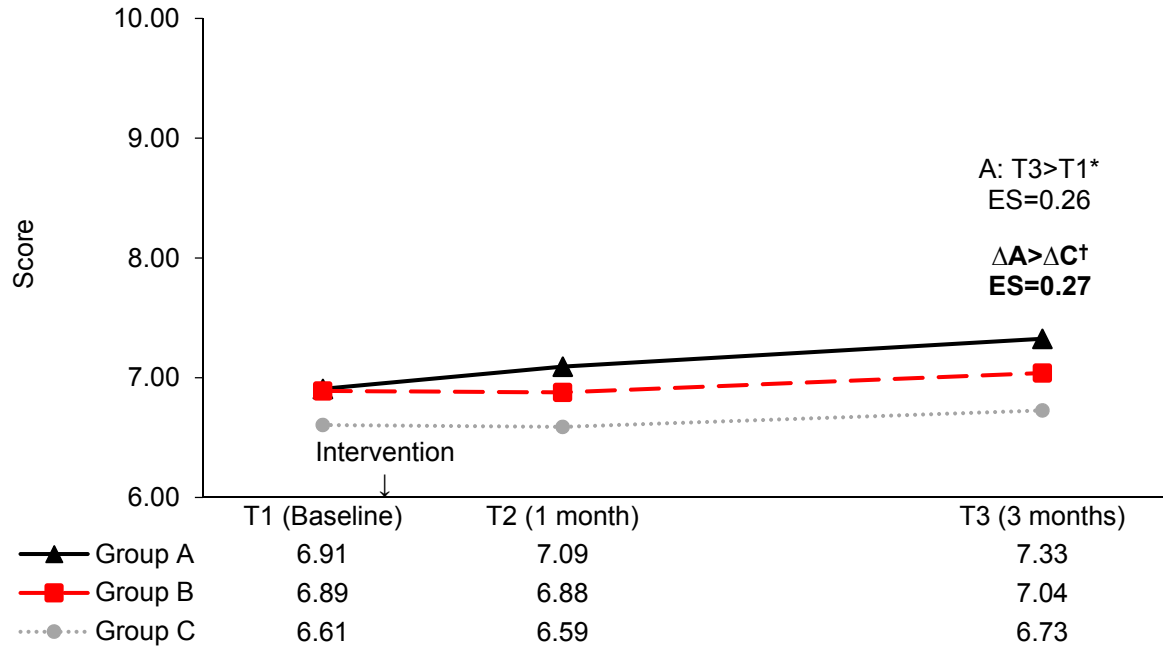
4.2.3.3 Family relationship and the 3Hs

Self-reported FAMILY health

Figure 4.28 shows a significant improvement in self-reported FAMILY health in Group A only at 3 months with small effect size (ES=0.26, *p*=0.020).

Additionally, Group A showed a marginally significant greater improvement in self-reported FAMILY health only at 3 months than in Group C (ES=0.27, *p*=0.098). This showed suggestive evidence of the effectiveness of brief intervention.

Figure 4.28 FAMILY health (0-10)



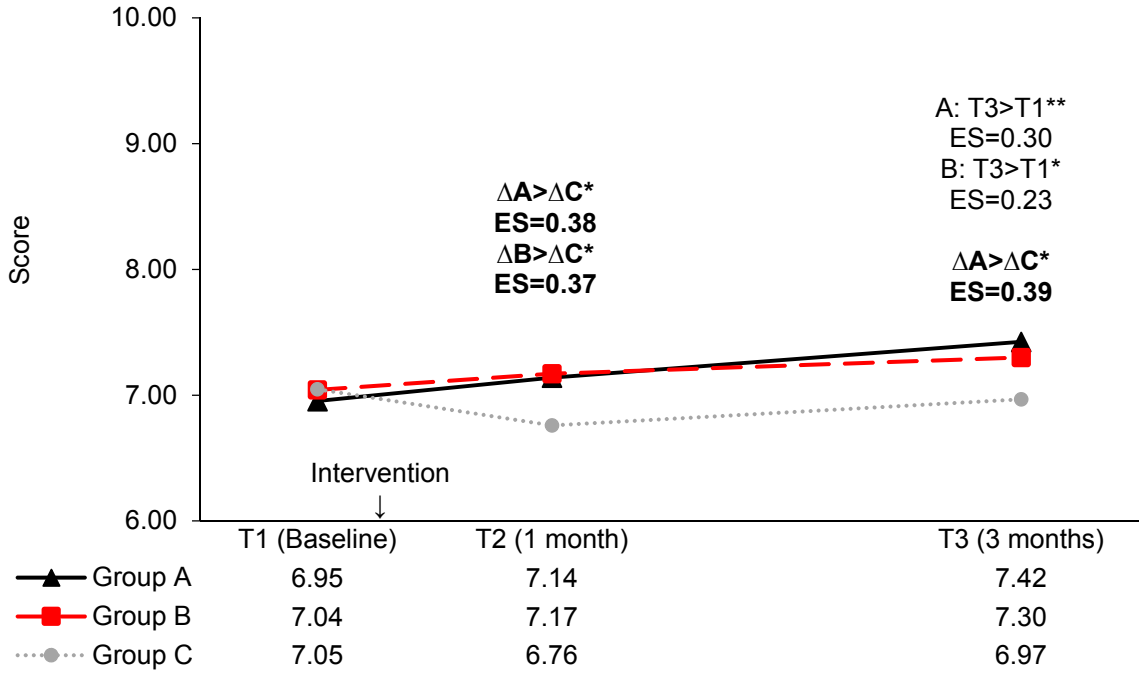
† *p*<0.1; * *p*<0.05
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0=very unhealthy" to "10=very healthy"

Self-reported FAMILY happiness

Figure 4.29 shows that both Groups A and B had significantly greater improvement in self-reported FAMILY happiness only at 3 months (ES=0.30, *p*=0.002 and ES=0.23, *p*=0.038, respectively).

Group A had significantly greater increases in self-reported FAMILY happiness at both 1 month and 3 months than in Group C (ES=0.38, *p*=0.021 and ES=0.39, *p*=0.016, respectively). The increase was significantly greater in Group B than Group C only at 3 months (ES=0.37, *p*=0.025). These showed the effectiveness of brief and combined interventions with small effect size.

Figure 4.29 Self-reported FAMILY happiness (0-10)



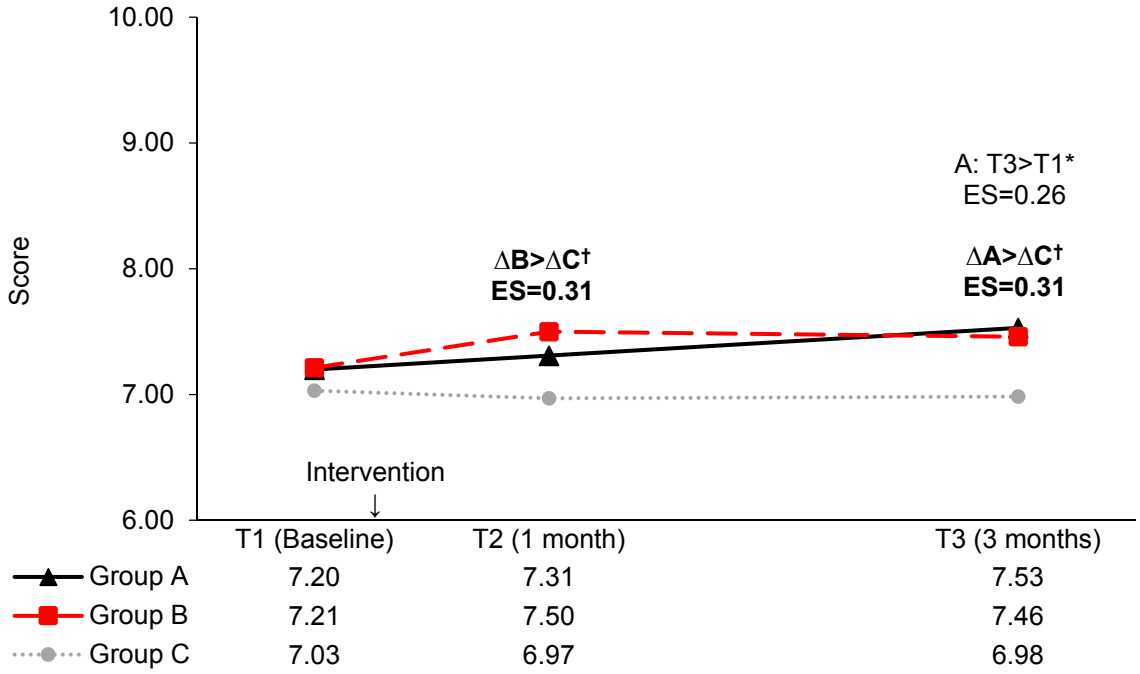
* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0=very unhappy" to "10=very happy"

Self-reported FAMILY harmony

Figure 4.30 shows a significant improvement in self-reported FAMILY harmony only at 3 months in Group A with small effect size (ES=0.26, *p*=0.019).

The increases in self-reported FAMILY harmony was marginally significantly greater in Groups B than in Group C only at 1 month (ES=0.31, *p*=0.061). Similarly, Group A showed a marginal significantly greater increase than Group C only at 3 months (ES=0.31, *p*=0.055). Both showed suggestive evidence of effectiveness of the brief and combined interventions.

Figure 4.30 Self-reported FAMILY harmony (0-10)



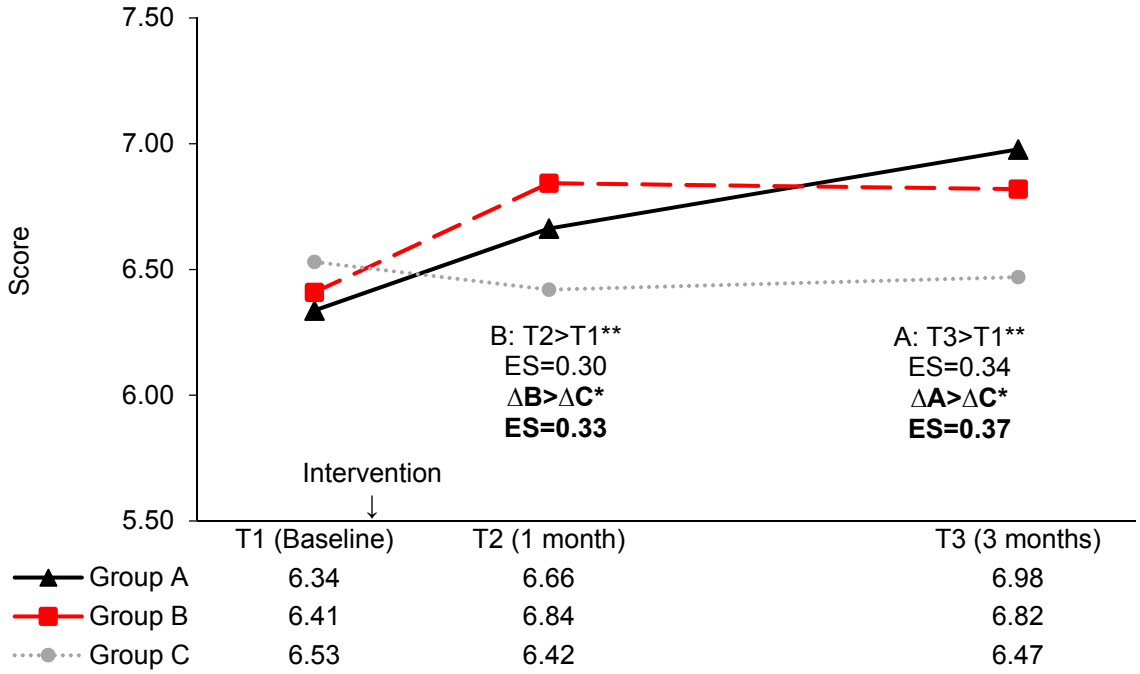
† *p*<0.1; * *p*<0.05
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0=very disharmonious" to "10=very harmonious"

Family APGAR

Figure 4.31 shows significant increase in family APGAR scores in Group B only at 1 month (ES=0.30, *p*=0.007), while a significant increase was observed only at 3 months in Group A (ES=0.34, *p*=0.003).

The improvement in family APGAR scores was significantly greater only at 1 month in Group B than in Group C (ES=0.33, *p*=0.044). Similarly, Group A only had significantly greater improvement in family APGAR scores than Group C at 3 months (ES=0.37, *p*=0.023). Both showed suggestive evidence of effectiveness of the brief and combined interventions.

Figure 4.31 Family APGAR (0-10)

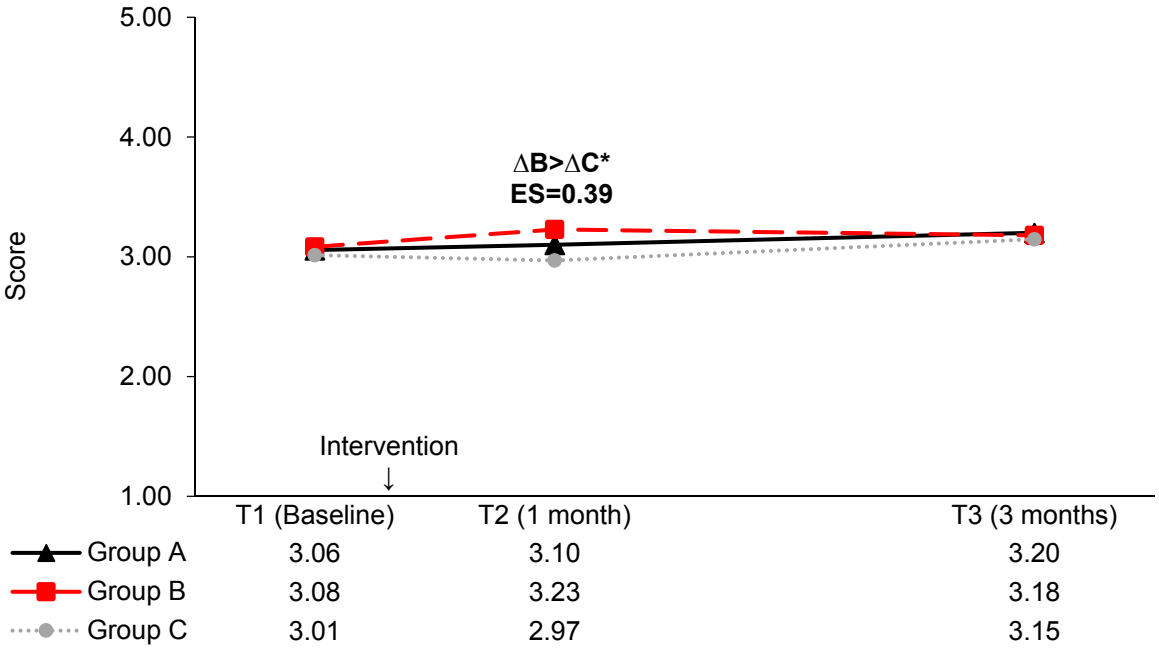


* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
11-point Likert scale: "0-3=severely dysfunctional" to "7-10=highly functional"

Expressing appreciation through verbal means

Figure 4.32 shows a significantly greater improvement in frequency of appreciation through verbal means only at 1 month in Group B when compared with Group C, showing a short-term effectiveness in combined intervention with small effect size (ES=0.39, *p*=0.020).

Figure 4.32 Frequency of expressing appreciation towards family member(s) through verbal means in the past 4 weeks (1-5)



	T1 (Baseline)	T2 (1 month)	T3 (3 months)
Group A	3.06	3.10	3.20
Group B	3.08	3.23	3.18
Group C	3.01	2.97	3.15

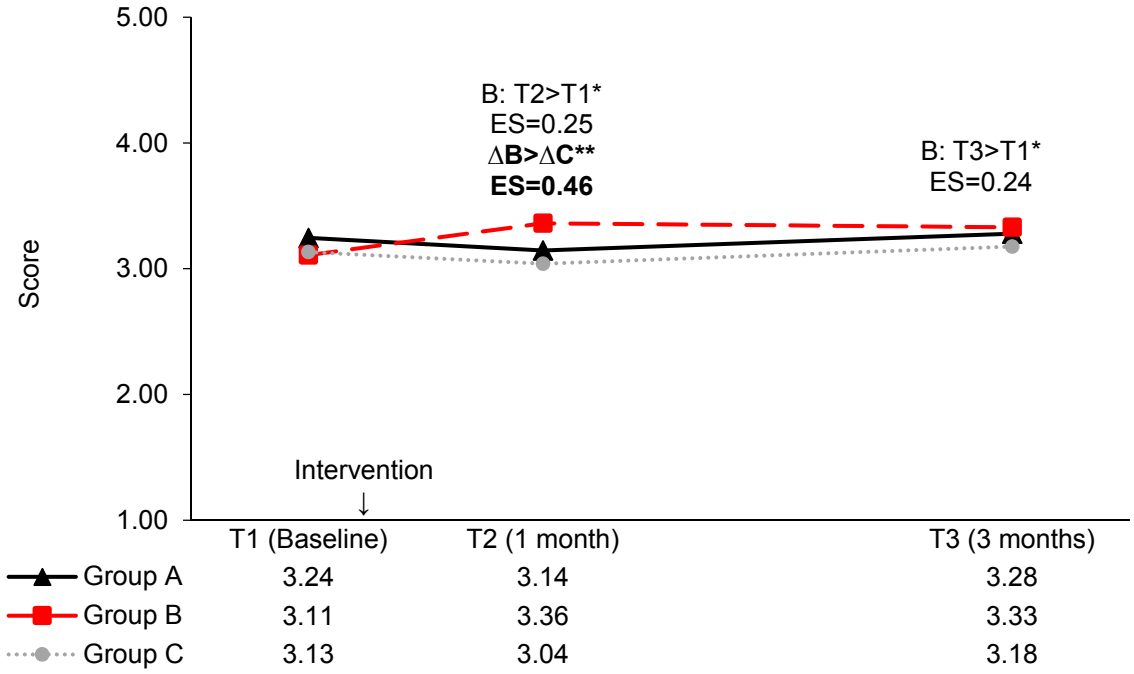
* $p<0.05$
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=never" to "5=always"

Expressing appreciation through action

Figure 4.33 shows significant increases in expressing appreciation at 1 month and 3 months in Group B with small effect size (ES=0.25, *p*=0.025 and ES=0.24, *p*=0.031, respectively).

The increase in expressing appreciation was significantly greater only at 1 month in Group B than in Group C, showing short-term effectiveness of combined intervention with small effect size (ES=0.46, *p*=0.006).

Figure 4.33 Frequency of expressing appreciation towards family member(s) through actions in the past 4 weeks (1-5)



	T1 (Baseline)	T2 (1 month)	T3 (3 months)
Group A	3.24	3.14	3.28
Group B	3.11	3.36	3.33
Group C	3.13	3.04	3.18

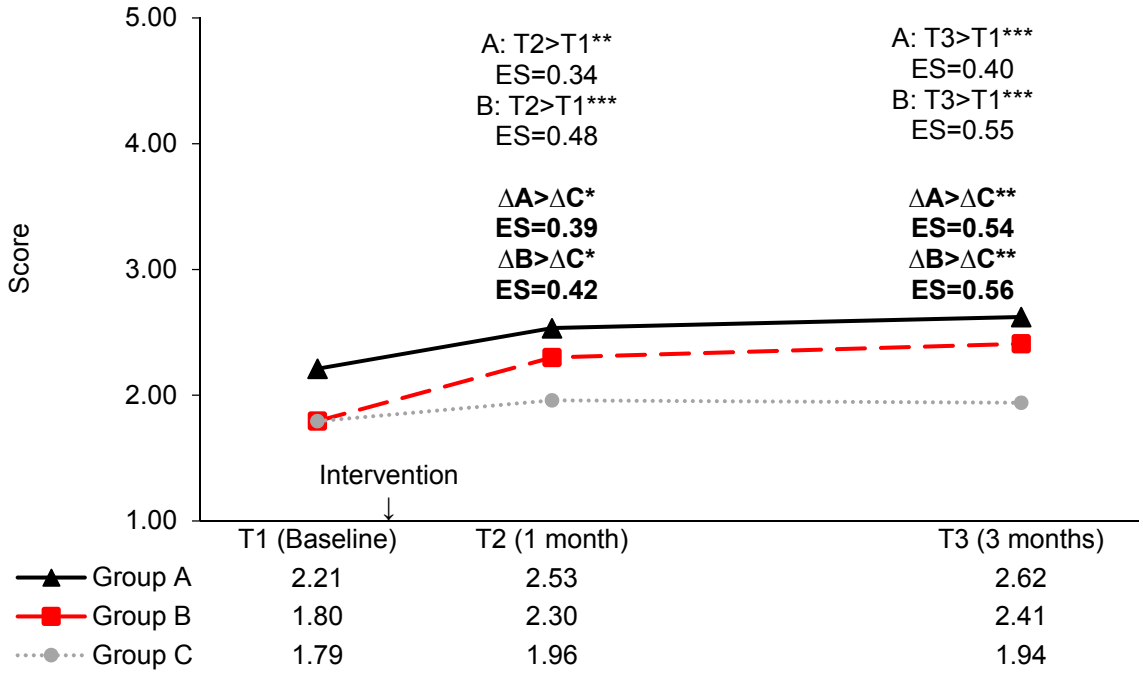
* *p*<0.05; ** *p*<0.01
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=never" to "5=always"

ZTEx with family

Figure 4.34 shows significant increases in performing ZTEx with family in Groups A and B at 1 month and 3 months with small and medium effect size (Group A: ES=0.34, p=0.002; ES=0.40, p<0.001 and Group B: ES=0.48, p<0.001; ES=0.55, p<0.001, respectively).

The increases in ZTEx with family at 1 month and 3 months were significantly greater in Group A than Group C (ES=0.39, p=0.018 and ES=0.54, p=0.001, respectively) and in Group B than Group C (ES=0.42, p=0.011 and ES=0.56, p=0.001, respectively). These showed the effectiveness of both brief and combined interventions with small to medium effect size.

Figure 4.34 Frequency of ZTEx performed with family members in the past 4 weeks (1-5)



* p<0.05; ** p<0.01; *** p<0.001
ES=effect size (Cohen's d): small=0.20; medium=0.50; large=0.80
5-point Likert scale: "1=never" to "5=always"

4.3 Summary of quantitative results

Overall, the quantitative results of the Holistic Health Family Project suggested the intervention was feasible and effective in improving the participants' individual well-being, physical and mental health, and family relations.

Participants in both intervention groups performed more moderate and vigorous physical activity as well as ZTEx at 1 month and 3 months. In particular, ZTEx while sitting and standing were performed more in both Groups A and B compared to Group C (ES=0.30-0.39, $p<0.05$), indicating that the interventions were effective in encouraging physical activity behaviours.

Both Groups A and B had significantly greater increases with medium effect size in performing ZTEx with family members at both 1 month and 3 months when compared with Group C (ES=0.40-0.76, $p<0.01$). In addition, both Groups A and B also showed significantly greater increases in frequency of praises towards family members (ES=0.37-0.41, $p<0.01$) and expressing appreciation through both verbal means and action at (ES=0.30-0.59, $p<0.01$) than those in Group C at 3 months with small to medium effect size.

In terms of family relations, Group A showed significant improvements in terms of FAMILY 3Hs at 1 month and 3 months than in Group C with small effect size (ES=0.30-0.40, $p<0.05$). Based on Family APGAR scores, participants indicated significant improvements in family function at 3 months in both Groups A and B when compared to Group C (ES=0.30-0.31, $p<0.05$).

Participants' family members reported increases in engaging in ZTEx and improvements in their family relations in particular expressing appreciation with similar effects.

Lastly, the brief and combined interventions showed effectiveness in improving the relationship with probation officers in both Groups A and B at 3 months (ES=0.32-0.43, $p<0.05$).

In all, the results provided strong evidence that ZTEx was an effective and innovative approach to increase physical activity performance, ZTEx, and family involvement in ZTEx. These activities were designed to offer an easy behavioural change that can be readily integrated into daily life and introduced to family members.

CHAPTER 5 QUALITATIVE RESULTS

5.1 Introduction and objectives

After the completion of the whole Holistic Health Family Project, focus group discussions were conducted with programme participants and their family members as well as probation officers from SWD-PO. The objective of the discussions was to gather the opinions and experiences related to the project from various perspectives. The specific objectives are listed below.

Participant focus group discussions:

- To examine whether the intervention programme improved FAMILY 3Hs, individual well-being, physical activity behaviours, and family relations; and
- To explore the efficacy of the probationer's workbook as supporting materials; and
  To gather comments on the existing probation service.

Family member focus group discussions:

- To examine whether the intervention programme improved FAMILY 3Hs; and
- To gather comments on the existing probation service.

5.2 Methods

5.2.1 Data collection

The participants and their family members were invited to attend their corresponding focus group discussion about 1 month after the last intervention session (3 months after baseline). Focus group participant recruitment was organised according to each intervention group. A total of 6 focus groups (Group A participants, Group A family members, Group B participants, Group B family members, Group C participants, and Group C family members) were successfully conducted on 12 March 2017 at The University of Hong Kong.

Participation was entirely voluntary. As there was an overwhelming response to participate in the focus groups, recruitment was based on a first-come, first-served basis. Written consent and a brief questionnaire on demographics were collected from each participant and family member prior to the discussion. All personal information collected was kept confidential and was used for research purposes only. The discussions and interviews were semi-structured. An open-ended interview guide based on the aims of the project was provided to the moderator of each group.

All group discussions lasted for approximately 60 minutes. Each focus group discussion was managed by a panel of at least 1 moderator and 2 note-takers from FAMILY Project Team. The focus groups were all conducted in Cantonese. A souvenir package that included a stress ball was given to each participant of the programme participants and family members' focus group discussions.

The inclusion criteria were as follows:

- Participants and family members who completed questionnaires at all three time points (baseline, 1 month post-intervention, and 3 months post-intervention); and
- Able to understand Cantonese and the content and conversation during the focus group discussion.

5.2.2 Data analysis

The focus groups discussions were tape-recorded and transcribed verbatim. Transcripts were analysed by thematic content analysis, following the guidelines recommended by Morse & Field [28]. Each transcript was analysed sentence by sentence and coded for the respondents' meanings. Initial open coding of the data used differing codes, which were then organised into categories. Categories were later integrated into themes within and across groups. Once the categories and themes were identified, the transcripts were reviewed again to validate the thematic analysis and to ensure that all meaningful interview data have been analysed. Data comparisons within and between groups were conducted. Field notes were reviewed with the transcripts during the process. The software NVivo 11.0 (QSR International; Melbourne, VIC, Australia) were used to assist qualitative data administration, including creating codes, organising and summarising data, searching for interrelationships between codes, and suggesting themes.

5.3 Results and discussion

5.3.1 Composition of focus groups

A total of 37 focus group participants were interviewed, including 24 participants and 13 family members. Details of group composition are shown in Table 5.1. There was one group for each intervention group.

Table 5.1 Composition of focus groups

Group ID	Group nature	Intervention	No. of participants
AP	Participants	Brief intervention	5
AF	Family members	Brief intervention	3
BP	Participants	Combined intervention	6
BF	Family members	Combined intervention	2
CP	Participants	Care-as-usual	13
CF	Family members	Care-as-usual	8

5.3.2 Focus group participants' sample characteristics

Table 5.2 shows that half of the focus group participants were female (50%), nearly half were 20-39 years (46%) and most were born locally in Hong Kong (79.2%). About two-thirds of them were employed (60.8%) and had secondary education (66.7%). The participants were mostly first time offenders (79.2%) and 58.3% had less than half a year probation terms remaining.

Table 5.2 Demographic characteristics of focus group participants (n=24)

Characteristics	n	(%)
Sex		
Male	12	(50)
Female	12	(50)
Age group (years)		
12-19	2	(8)
20-39	11	(46)
40-59	9	(38)
≥60	2	(8)
Place of birth		
Hong Kong	19	(79.2)
Guangzhou	2	(8.3)
Other provinces in China	3	(12.5)
Education		
Primary level	1	(4.2)
Secondary level	16	(66.7)
Post-secondary or above level	7	(29.2)
Employment status[a]		
Student	4	(17.3)
Employed	14	(60.8)
Unemployed/retired	1	(4.3)
Homemaker	4	(17.3)
Number of probation offences		
First time	19	(79.2)
Second time	3	(12.5)
Third time	1	(4.2)
Fourth time	1	(4.2)
Duration since commencement of probation terms (years)		
Less than ½	6	(25)

Characteristics	n	(%)
½-1	12	(50)
1-1½	4	(16.7)
1 ½-2	1	(4.2)
2-2 ½	1	(4.2)
Remaining duration of probation terms (years)		
Less than ½	14	(58.3)
½-1	5	(20.8)
1-1½	4	(16.7)
1 ½-2	1	(4.2)

[a] 1 missing value, n=23

5.3.3 Qualitative findings from participants' focus groups

Table 5.3 shows the main themes, subthemes, and categories in Chinese with translated quotations in English to preserve the intent of the speakers.

Table 5.3 Qualitative findings from participants' focus groups

Comments on programme

Theme	Subtheme	Quotes
Impressions towards project Behavioural changes	Overall impressions	***More opportunities to communicate with family*** "如果你兩個屋企人一齊參加嘅話，咁起碼你嗰段時間都會接觸到…會講多啲嘢。" (兼職人士，男，35-39 歲，APP2) "If you joined with your family member, then at least during that time there will be interactions… (you) will talk more." (Part-time employee, male, 35-39 yr, APP2) "傾多咗偈。" (全職人士，男，60-64 歲，APP3) "There's more conversation." (Full-time employee, male, 60-64 yr, APP3) "傾多兩句咁囉。" (全職學生，男，15-17 歲，APP4) "We talk a bit more." (Full-time student, male, 15-17 yr, APP4) ***Needs clearer explanation of programme details*** "我都係覺得可能一開始嘅時候，可能講解多少少。因為你一開始嘅時候，淨係話有個 programme 叫人參加咁。跟住就測試

Theme	Subtheme	Quotes
		跟住就填問卷，咁就完嘞。” (全職人士，男，60-64 歲，APP3) “I still think there could be a bit more explanation at the beginning. Since in the beginning, you only told people to join the programme. Then did the tests and filled in questionnaires, and that’s it.” (Full-time employee, male, 60-64 yr, APP3) “其實佢淨係叫我去到嘅時候就…叫我單腳企呀，度咗啲嘢呀，同埋叫我做問卷。咁其實佢係無…即係無講清（楚）。我都係覺得可能一開始嘅時候，可能講解多少少。” (兼職人士，男，35-39 歲，APP2) “When I arrived she only told me… to do single leg stance, take measurements, and fill in questionnaires. So actually, she didn’t… didn’t explain clearly. I still think at the beginning, there can be a bit more explanations.” (Part-time employee, male, 35-39 yr, APP2) “一開始就無講下話「零時間運動」係…例如…我見佢有 YouTube 又有片睇，但佢都無 show 過俾我睇。” (全職學生，女，18-19 歲，APP1) “At the beginning, nothing was mentioned about ZTEx… for example… I saw there were YouTube videos, but she (social work officer) never showed me.” (Full-time student, female, 18-19 yr, APP1) ***<u>Take home message</u>*** “有總好過無，起碼有啲嘢（「零時間運動」）可以拎返屋企做囉。” (兼職人士，男，35-39 歲，APP2) “It’s better than nothing, at least there’s something to take home to do (ZTEx).” (Part-time employee, male, 35-39 yr, APP2)
	Expectations from programme	***<u>Fitness</u>*** “佢（母親）唔係做好長嘅時間啦，咁未必話會每日做嘅咁，健康嗰度我就覺得無差嗰上一次咁樣我就已經覺得係唔錯…因為咁我都後生過佢咁所以…希望佢嗰個評分或者個數字唔好同我差太遠囉。” (全職人士，女，20-24 歲，BPP5) “She (mother) can’t do it for too long, and doesn’t do it daily. For health, I think as long as it’s not worse than last time then I think it’s not bad… since I am younger than her… so I hope her score or number won’t be too different from (worse than) mine.” (Full-time employee, female, 20-24 yr, BPP5)

Theme	Subtheme	Quotes
		Relationship within family “都唔知咁樣算唔算期望呢…即係同屋企人比較會增進啲感情咁樣囉，關係好啲。” (家庭主婦，女，45-49 歲，BPP7) “I don’t know if these are considered expectations… like could enhance feelings and have better relationships with family members.” (Housewife, female, 45-49 yr, BPP7)
	Personal changes	***More motivated*** “最大嘅改變係…做嘢嗰方面啊自己嘅毅力係大咗，上進心高咗。” (家庭主婦，女，65 歲或以上，CPP4) “The biggest change is… greater determination in doing my job… has more aspiration to advance.” (Housewife, female, 65 yr or above, CPP4) “以往…就一般囉，反正有時做嘢做完就算數啦，就無話會要求再自己好啲咁囉。” (全職學生，女，20-24 歲，CPP3) “It was pretty average before. Sometimes I just complete the work without requesting myself to do better.” (Full-time student, female, 20-24 yr, CPP3) “你會想多啲囉，想多啲積極啲囉個人。” (待業/退休，男，55-59 歲，CPP2) “You will think more, to become a more motivated person.” (Unemployed/retired, male, 55-59 yr, CPP2) “咁你做完運動之後你精神係好咗㗎呢個係，你自己身體嗰邊有進展，咁你自己嘅想法啊，做法啊你就會落力咗。” (家庭主婦，女，65 歲或以上，CPP4) “You’ll become more alert (have better spirts) after exercising. You have improvements in physical health. Then you will put in more effort into what you think and do.” (Housewife, female, 65 yr or above, CPP4) ***Increased happiness*** “開心咗囉。唔開心嘅時候，我就好似諗啲開心嘢囉。” (家庭主婦，女，55-59 歲，BPP6) “Became happier. When I am not happy, I will think about

Theme	Subtheme	Quotes
		happy things." (Housewife, female, 55-59 yr, BPP6) ***Improvement in physical health*** "健康…唔駛講啦…一定健康咗啦…好過唔郁呀。" (家庭主婦，女，45-49 歲，BPP7) "Health… is a must… I have become healthier for sure… it's better than not moving. (Housewife, female, 45-49 yr, BPP7) "有好多嘅…健康嘅話會好咗嘅…因為運動同健康點都係有直接關係。" (全職學生，男，20-24 歲，BPP3) "There's a lot…health-wise is better…because exercise and health have a direct relationship." (Full-time student, male, 20-24 yr, BPP3) "其實都有嘅，譬如有陣時可能工作企得耐咗，咁你自然就會即係可能有啲腳攰嘅話你會自然郁多幾吓囉，令到自己會舒服啲囉。" (全職學生，女，20-24 歲，CPP3) "There is (improvement) actually. For example, when you are standing for too long at work and your legs get tired. It becomes natural to move your legs more to make yourself feel more comfortable." (Full-time student, female, 20-24 yr, CPP3) "一做嘅時候就比較困難嘅，就懶得郁嘅，但係郁得咁上下呢就可以做長啲時間。咁慢慢就變咗可以半個鐘頭甚至九個字都得嘅，郁親對個身體都好啲囉。" (待業/退休，男，55-59 歲，CPP2) "It's rather difficult when (I) do it, too lazy to move, but when I move around a bit more, then I can do it for longer and gradually it becomes 30 minutes, or even 45 minutes. Moving around is better for the body." (Unemployed/retired, male, 55-59 yr, CPP2) "經過呢次嘅感化活動之後呢，自己喺各方面都得到一定嘅提高囉，特別你話做嗰啲「零時間運動」啊，對各方面啊，自己身體呢，精神方面呢進展咗。" (家庭主婦，女，65 歲或以上，CPP4) "After this probation activity, I have definite improvements in all aspects, especially in ZTEx. All aspects have improvements including my own physical and mental health." (Housewife, female, 65 yr or above, CPP4) ***Adopted healthy lifestyle***

Theme	Subtheme	Quotes
		“多咗時間做運動囉，因為平時工作，抽半個鐘都難嘅做運動，抽一個鐘更加無可能，咁呀變咗原來運動可以係日常任何時間任何地點，anywhere anytime。” (全職人士，男，30-34 歲，CPP6) “I find more time to do exercise. It is difficult to set aside half an hour to do exercise because of work. It is even more impossible to set aside an hour. Turns out there are exercises that you can do anytime and anywhere on a daily basis.” (Full-time employee, male, 30-34 yr, CPP6) “最鍾意啊，其實我自己本身做，每日都會做啲花時間嘅運動嘅，但係如果「零時間運動」呢，其實都好嘅，因爲呢有時喺公司呢，隻腳收埋喺枱底都可以做下運動，偷雞，除咗話原來做啲花時間運動呢，平時得閒啊，可以都抽啲時間，隻手做緊…打緊電腦望緊電腦之餘啊都可以，隻腳都可以郁下，因爲我哋坐得 office 太多呢，個腰骨都會好攰吓嘅，咁如果可以喺枱底郁下呢其實都好好嘅。” (全職人士，男，30-34 歲，CPP6) “My favourite...well actually I spend time each day to exercise. But ZTEx is pretty good because you can secretly do leg exercises under your desk at work. If you are free then you can move your legs around, when you are typing and looking at the computer. Because we sit too much in the office, so our back is quite tired. If we can move (our legs) under the desk, then it’s very good.” (Full-time employee, male, 30-34 yr, CPP6)
	Family communication	***<u>Increase communication in family</u>*** “我唔知道咁樣係咪進步咗囉，但我覺得係良好㗎。因為點解呢，譬如做運動嗰時做得唔係咁好…喂喂喂喂…你唔好扶住呀，咁佢又會觀察下我，我又會觀察佢有邊度做得唔妥咁樣囉…我覺得係…都係叫溝通囉。” (家庭主婦，女，45-49 歲，BPP7) “I don’t know if this is considered an improvement, but I think it’s quite good. The reason is if we don’t do well during exercise (ZTEx)… “hey hey hey hey… don’t hold on (to the support)… then they will observe me and I will observe them to see if they are doing it properly… I think this is… also communication.” (Housewife, female, 45-49 yr, BPP7) “可能你同屋企人會多咗一個話題溝通啦…可能平時你唔會同屋企人傾運動呢樣嘢嘅…咁有呢個運動，有呢個活動之後嘅話你會同屋企人多咗個話題溝通囉。” (全職學生，男，20-24 歲，

Theme	Subtheme	Quotes
		BPP3) “Maybe you and your family will have an additional topic to talk about. Maybe normally you won’t discuss about exercise with family members…but after this exercise and activity, you will have an additional topic to talk about with your family members.” (Full-time student, male, 20-24 yr, BPP3) “多啲傾偈囉，做下運動嗰陣時。” (全職人士，女，20-24 歲，CPP1) “(We) talk more, while exercising.” (Full-time employee, female, 20-24 yr, CPP1) ***<u>More praise from family members</u>*** “嗰啲人（屋企人）有讚賞我…話乖咗。” (家庭主婦， 女，45-49 歲，BPP7) “Those people (family members) praised me… said I am more well-behaved.” (Housewife, female, 45-49 yr, BPP7)
	Family relationship	***<u>Improved family relationship</u>*** “大家一齊做…因為我爹哋媽咪會少啲…機會做運動…咁有呢個機會…就拉埋佢哋一齊做運動囉。” (全職學生，男，20-24 歲，BPP3) “We all do it (ZTEx) together… my parents had less opportunities to do exercise… now that we have this opportunity (ZTEx)… I will ask them to join in and exercise.” (Full-time student, male, 20-24 yr, BPP3) “我自從參加咗呢個「零時間運動」，我同個仔嘅關係好咗好多，因為我做運動嗰時佢又好好奇啊，又一齊做。” (家庭主婦，女，40-44 歲，CPP11) “Ever since I joined this “ZTEx” (activity), my relationship with my son has improved a lot because he is curious when I exercise and then he joins in.” (Housewife, female, 40-44 yr, CPP11) “我話不如拖埋地啦，咁佢又幫我拖埋地啊，佢拖完地先做功課啊，咁關係好咗好多囉。佢會幫我手做吓家務囉，咁啊做家務其實都係一種「零時間運動」，唔一定係做坐喺度做運動。” (待業/退休，男，55-59 歲，CPP2) “I said to wipe the floors. Then he helps me wipe first then finishes his homework. The relationship has improved a lot.

Theme	Subtheme	Quotes
		He helps me with the house chores. Actually, house chores are a type of ZTEx, it's not just confined to the sitting type of ZTEx." (Unemployed/retired, male, 55-59 yr, CPP2) "好啲囉，無咁生疏咁囉，都係多啲講嘢。" (家庭主婦，女，40-44 歲，CPP11) "It's better, not so distant. (We) talk more." (Housewife, female, 40-44 yr, CPP11)
	FAMILY health	"因為我一路做運動嘅時候，我個老公好支持我，播啲音樂俾我聽，我自己鍾意聽音樂，播俾我聽，一路聽音樂一路喺騎樓曬住太陽做運動，我一個禮拜可以瘦兩、三磅，我覺得自己身體好咗好多，同埋個人開心咗好多，呢個活動真係幫助咗我好多，同埋我唔會再諗其他啲唔好嘅嘢去做囉。" (家庭主婦，女，40-44 歲，CPP11) "My husband is very supportive when I exercise. He will play music for me. I like to listen to music, so I listen to music while I exercise on the balcony under the sun. I can lose 2 to 3 pounds a week. I think my physical health has gotten a lot better and I feel happier. This activity has helped me a lot and I don't think about doing the negative things anymore." (Housewife, female, 40-44 yr, CPP11)
	FAMILY happiness	"譬如單腳嗰陣時…咁做得好嘅…咁大家互相讚賞…有笑容啊…我又覺得開心咗囉…溝通又好咗咁囉。" (家庭主婦，女，45-49 歲，BPP7) "For example when we do single leg stance… if we do it well… then we all praise each other… there are smiles. I think we are happier… and communication improved." (Housewife, female, 45-49 yr, BPP7) "咁大家會…有啲笑…好開心囉。" (家庭主婦，女，45-49 歲，BPP7) "We all laugh sometimes… it is really happy." (Housewife, female, 45-49 yr, BPP7) "單腳企多啲囉因為…好似大家好開心。" (家庭主婦，女，55-59 歲，BPP6) "I do single leg stance more because… we all seem to be very happy." (Housewife, female, 55-59 yr, BPP6) "多啲留喺屋企做「零時間運動」，令到我個時間好 occupy，好有充滿生活嘅氣氛，好開心啦。" (家庭主婦，女，40-44 歲，

Theme	Subtheme	Quotes
		CPP11) “I stay at home more often to do ZTEx. It makes me feel more occupied with my time. I feel more lively and happy.” (Housewife, female, 40-44 yr, CPP11) “我同我家人上次呢我記得有個活動係用啲氣球呢同埋攞啲報紙抓住個波拋返過嗰邊對面組嘅。嗰個活動令到我同我家人拋得好高興啊，係令到我哋好興奮好開心，睇下邊組係會贏，其實我哋嗰組贏咗好開心。” (全職人士，男 45-49 歲，CPP9) “I remember the last group activity I went to with my family. There were balloons and we used crumpled newspaper to catch the balloons and throw them to the opposing team. My family and I were so happy throwing the balloons during this activity. It made us very excited and happy. Actually, our team won, so happy.” (Full-time employee, male, 45-49 yr, CPP9)
	FAMILY harmony	“譬如我做得唔啱嘅，佢會話俾我聽，糾正我嘛…咁我咪覺得佢好關心我囉。” (家庭主婦，女，45-49 歲，BPP7) “If I do it (ZTEx) incorrectly, he (son) will tell me, correct me… then I will think he cares a lot about me.” (Housewife, female, 45-49 yr, BPP7) “一齊做到（運動）就和諧咗嘅應該。” (全職人士，男，40-44 歲，BPP4) “If we can do it (exercise) together, then it should be more harmonious.” (Full-time employee, male, 40-44 yr, BPP4) “大家好融洽囉，一個老公啊煮飯，我就去買餸，個仔又掃地，一家人好合作囉，個屋企就唔會話咁多重嘅家務一個人做晒囉，咁大家分擔吓，就大家就分工合作，大家好開心囉。” (家庭主婦，女，40-44 歲，CPP11) “We are very harmonious. My husband cooks while I buy food and my son wipes the floor. We are very cooperative as a family. We don’t make one person do all the heavy house chores. We share the responsibilities and divide the workload. We are very happy.” (Housewife, female, 40-44 yr, CPP11)
ZTEx	Impressions on ZTEx	***New insight*** “我覺得即係都市人好忙啦…咁如果有一個渠道俾你知道原來做呢個運動其實係唔需要限你啲咩時間地點呀…咁你係呢個渠道就可以知道可以對自己嘅健康呀，或者係同屋企人一齊做

Theme	Subtheme	Quotes
		都可以…即係變咗你同屋企人…可能未必會溝通嘅時候，但係你可以同佢一齊做運動，唔一定要講嘢嘅…咁可能大家一齊有一樣嘢係一齊做咁都會對個家庭健康都有影響嘅。” (全職人士，女，20-24 歲，BPP5) “I think the urban dwellers are very busy… if there’s way to let them know there’s an exercise which does not require extra time or specific location… and through this way you know it (ZTEx) improves your health, or you can do it (ZTEx) with your family. Maybe you don’t have time to communicate with your family but you can do exercises together, you don’t need to talk… then maybe doing one thing together as a family will be beneficial to family health.” (Full-time employee, female, 20-24 yr, BPP5) ***<u>Increased knowledge</u>*** “識多咗些少（零時間）運動囉。” (全職學生，女，18-19 歲，APP1) “Learned a little more about ZTEx.” (Full-time student, female, 18-19 yr, APP1) “原來咁樣坐喺度都可以咁樣郁下郁下都可以咁樣做運動啊，即係意思…企喺度囉，郁下郁下都係做運動囉。” (全職人士，女，40-44 歲，CPP5) “Turns out moving moving while sitting is exercising. This means, standing and moving moving is exercising as well.” (Full-time employee, female, 40-44 yr, CPP5) “自己喺運動呢方面呢就加深咗嘅，做多咗，即係自己可以話利用…即係得閒唔一定抽好多時間出來做囉都可以增長自己嘅運動量。” (家庭主婦，女，65 歲或以上，CPP4) “I have a deeper understanding of exercise. I do it (exercise) more often now. So even if I don’t have time, I don’t have to take a lot of time out of my day to do exercise and I can still increase my required amount of physical activity.” (Housewife, female, 65 yr or above, CPP4)
	Reasons for doing ZTEx	***<u>Simple and easy</u>*** “你坐喺度嗰陣有時會無嘢做咁樣…其實做吓呢啲運動都…唔會佔咗你額外嘅時間嘅…可以同步進行…可以睇電視又得。” (全職學生，男，20-24 歲，BPP3) “When you are sitting around doing nothing…actually doing this type of exercise (ZTEx) will not take up any additional

Theme	Subtheme	Quotes
		time. It can be done simultaneously…you can so while watch TV too." (Full-time student, male, 20-24 yr, BPP3) "唔會好大壓力囉，你唔會話一定要去完成佢呀…跑步跑半個鐘。" (全職人士，男，40-44 歲，BPP4) "It's not too much pressure…you don't feel like you need to complete it…unlike running for half an hour." (Full-time employee, male, 40-44 yr, BPP4) "起碼一啲唔會特登做運動嘅人咪有機會…容易啲去 achieve 囉。" (全職人士，女，40-44 歲，BPP2) "At least it is an opportunity for those who won't intentionally do exercise…it's easier to." (Full-time employee, female, 40-44 yr, BPP2) "叫做係郁咗…好過完全唔做運動。" (全職人士，男，40-44 歲，BPP4) "At least it's some sort of movement…better than no exercise at all." (Full-time employee, male, 40-44 yr, BPP4) ***No extra time needed*** "唔駛點特別抽時間做嘅運動。可能坐緊嘅時候郁下隻腳呀。" (兼職人士，男，35-39 歲，APP2) "Don't need to intentionally spend time to do exercise. Maybe just move your leg when sitting." (Part-time employee, male, 35-39 yr, APP2) "唔係成日咁多時間做呢…可以拉下隻腳嘅筋囉…同埋有時候可能企得多呢，隻腳都會攰咁樣拉下都唔錯。" (全職人士，女，20-24 歲，BPP5) "Don't always have so much time to do it (exercise)… can stretch out your legs… sometimes when you stand for too long… your legs will get tired so stretching them is not bad." (Full-time employee, female, 20-24 yr, BPP5) "（我）有陣時無聊嗰陣時都做下。" (全職學生，女，18-19 歲，APP1) "I sometimes do it when I am bored." (Full-time student, female, 18-19 yr, APP1) ***Beneficial***

Theme	Subtheme	Quotes
		“我覺得（做完）道氣好啲囉。” (全職學生，女，18-19 歲，APP1) “My breathing feels better after doing it (ZTEx).” (Full-time student, female, 18-19 yr, APP1)
Participant’s Workbook	Design	***Acted as a reminder*** “會提到你囉…你會不斷咁提自己…呀要填返呢個咁要填你就會做。” (全職學生，男，20-24 歲，BPP3) “It (workbook) will remind you…you will constantly remind yourself. Need to complete the (workbook) so you would do it (exercise).” (Full-time student, male, 20-24 yr, BPP3) “你見到咁多日都無填過哦咁即係要填喇。” (全職人士，男，40-44 歲，BPP4) When you see so many days with no filling (of the workbook) done, then you know you need to fill them. (Full-time employee, male, 40-44 yr, BPP4) “啲資料都好好嘅，睇嗰陣時可以提醒吓你，啊，可以做呢樣都 ok 喎。” (家庭主婦，女，65 歲或以上，CPP4) “The information is very good. It (workbook) reminds you when you see it. I can do this, so it’s okay.” (Housewife, female, 65 yr or above, CPP4) “跟進囉幫手，令到自己唔會唔記得咗呢樣嘢囉。” (全職人士，男，30-34 歲，CPP6) “It (workbook) helps with follow-up which makes myself not to forget about this task.” (Full-time employee, male, 30-34 yr, CPP6) “睇返記錄冊原來有圖片並茂，教你做返嗰個你唔記得咗嘅動作，真係幾好提示囉。” (全職人士，男，45-49 歲，CPP9) “Turns out the workbook has pictures included. It can teach you the movements that you have forgotten how to do. It really is a good reminder.” (Full-time employee, male, 45-49 yr, CPP9) ***Record to see improvements*** “其實都係嗰個月曆…上一次做係幾時呀…有幾耐無做過呀…睇吓上一次做到幾耐咁。” (全職人士，女，20-24 歲，BPP5)

Theme	Subtheme	Quotes
		It's actually the calendar… see when was the last time you have done it… how long since you haven't done it… see the duration (of the exercise) done for last time." (Full-time employee, 20-24 yr, BPP5) "俾自己好似有個促進作用咁囉,自己認為今日又完咗一日自己有咩進步。" (家庭主婦，女，65 歲或以上，CPP4) "If has an encouragement purpose, allowing myself to document the improvements I am making." (Housewife, female, 65 yr or above, CPP4) ***Goal setting purpose*** "有時會 match 返，睇返原來上次我係咁多嘅，今次我可能有個目標可以突破我要做耐啲咁樣。" (全職人士，男，30-34 歲，CPP6) "Sometimes I will try to match it (record), then see what my record was last time. This time I will set a goal that will exceed the previous duration." (Full-time employee, male, 30-34 yr, CPP6)
	Content	***Easy to understand*** "有啲圖片啊有啲字啊，好簡單嘅字句啊，可以好容易咁重溫嗰個動作同埋啲…可以做返囉，幾好囉。" (全職人士，男，45-49 歲，CPP9) "There are pictures and words, very simple sentences. It is easy to review the movements and repeat them. It's quite good." (Full-time employee, male, 45-49 yr, CPP9) "我又覺得好清楚呀…介紹點樣做呀，佢有圖片…點樣坐呀。" (家庭主婦，女，45-49 歲，BPP7) "I think it's really clear… with introductions on how to do (ZTEx). It (workbook) has pictures… like how to sit." (Housewife, female, 45-49 yr, BPP7) ***Sufficient information*** "內容都 ok 嘅，嗰度就無乜特別，即係充足。" (全職人士，男，30-34 歲，CPP6) "The content is okay, there's nothing special. It's sufficient." (Full-time employee, male, 30-34 yr, CPP6)

Theme	Subtheme	Quotes
		“記錄冊啲資料好豐富，亦都每日 mark 住嗰個亦都好有用。” (不詳，女，35-39 歲，CPP7) “The workbook has rich content. It is useful to record down it (the exercise done) daily.” (Unknown, female, 35-39 yr, CPP7)
Souvenirs	Overall	***Acted as motivation*** “For 一啲平時唔郁嘅人嚟講係…有舊嘢你會有個推動力。” (全職人士，男，40-44 歲，BPP4) “For those who don’t regularly exercise…the thing (souvenir) acts as a motivation.” (Full-time employee, male, 40-44 yr, BPP4) ***Did not put into use*** “應該都無用過。” (兼職人士，男， 35-39 歲，APP2) “Don’t think it has been used.” (Part-time employee, male, 35-39 yr, APP2) “擠咗喺度，無擺埋咗，仲擠咗喺個袋度，同埋個水壺。” (全職學生，女，18-19 歲，APP1) “It is just left there, not put aside; it is still in the bag, along with the water bottle.” (Full-time student, female, 18-19 yr, APP1) ***Difficulty using handgrip*** “我屋企人就用到，我就用唔到…我嘅隻（手）唔夠力呀…好難呀。” (家庭主婦，女，45-49 歲，BPP7) “My family use it, but I can’t…my hands are not strong enough…it’s very difficult.” (Housewife, female, 45-49 yr, BPP7) “有，不過唔夠力。” (全職人士，女，20-24 歲，BPP5) “Yes, but not enough strength.” (Full-time employee, female, 20-24 yr, BPP5) “其實我覺得係有嘅…係我自己就做唔到啫，但我先生就做到。” (家庭主婦，女，45-49 歲，BPP7) “Actually, I think it is (difficult). I can’t do it (handgrip), but my husband can.” (Housewife, female, 45-49 yr, BPP7)
Questionnaire	Content	***Current questions are vague***

Theme	Subtheme	Quotes
		“問卷嗰啲（問題）好廣泛㗎喎…好空泛。” (全職學生，女，18-19 歲，APP1) “The questions in the questionnaires are very wide-ranging… very vague.” (Full-time student, female, 18-19 yr, APP1) “問卷都 ok 嘅，啲問題有啲…有啲空，都係有啲空泛。” (兼職人士，男，35-39 歲，APP2) “The questionnaires are ok. Some questions are a bit… a bit… vague.” (Part-time employee, male, 35-39 yr, APP2) ***<u>Difficult to correctly reflect situation</u>*** “每一日抽幾多時間同屋企人傾偈呀。譬如我今日一個鐘唔定，聽日又話唔定大家嗌交唔出聲，後日話唔定傾兩個字偈，第三日一個早起身返工一個晏起身返見唔到。咁廣泛…好難界定。” (全職學生，女，18-19 歲，APP1) “How much time do you spend talking to family members? For example, maybe it’s one hour today, maybe we get into an argument tomorrow and don’t speak to one another, and then we talk for 10 minutes the next day. On the third day, one gets up early to go to work, the other wakes up later for work, and we don’t see each other. It’s quite wide-ranging making it difficult to determine.” (Full-time student, female, 18-19 yr, APP1)
Suggestions	ZTEx	***<u>More promotion needed</u>*** “我覺得宣傳好緊要囉，好多人唔知嘅，好現實講，唔知道「零時間運動」呢。” (全職人士，男，30-34 歲，CPP6) “I think it is important to publicise. Honestly, a lot of people do not know about this, don’t know about ZTEx.” (Full-time employee, male, 30-34 yr, CPP6) “我又覺得呢啲運動係好好嘅，都要俾啲老人家知個運動，對佢哋身體有益嘅，譬如老人家鍾意去啲公園嘅地方啊，或者多啲宣傳俾老人家知呢，等佢哋知道有時喺屋企煮飯又好，拖地又好，可以 for 佢地身體健康嘅多方面囉。” (不詳，女，35-39 歲，CPP7) “I think this exercise (ZTEx) is very good. The elderly must know about this exercise because it is beneficial to their physical health. For example, the elderly like to go to places like the park, and then publicising more towards the elderly. Let them know that sometimes when they are cooking at home or wiping the floors, it is beneficial for their physical

Theme	Subtheme	Quotes
		health in many aspects." (Unknown, female, 35-39 yr, CPP7) "「零時間運動」如果係話真係推出去等…多啲人去了解到啊咁會唔會有啲運動比賽呢？因為嗰日啲人好積極㗎嘛，一話有比賽，大家好雀躍咁樣，咁會唔會有呢啲定期 follow-up 咁做返個比賽都幾得意。" (全職人士，男，30-34 歲，CPP6) "If ZTEx is widely promoted, then more people will try to figure out would there be such competitions? Because on that day, people were very enthusiastic. Once a competition was mentioned, everyone was excited and joyful. Maybe there can be periodic follow-ups with a competition, which will be quite interesting." (Full-time employee, male, 30-34 yr, CPP6) ***<u>Safety precautions</u>*** "同埋真係唔好話叫自己發明啲動作囉，因為如果自己發明動作呢，會唔會話仲整親呢，我覺得系統化啲，即係做嗰啲研究下依個動作，對任何人都係合適嘅，又或者對咩人合適，咁跟住系統化啲，有一套嘅動作係平時做得嘅，因為個原意係非常之好，但喺有啲細節真係要留意下囉。" (不詳，女，35-39 歲，CPP7) "Don't encourage others to invent their own movements because we can get hurt from our own invented movements. I think it should be more systematic. Some research can be done on a particular movement, maybe it is suitable for everyone or maybe it is only appropriate for a certain group. There should be a set of movements that can be done regularly. The original idea is very good but there are some minor details that need attention." (Unknown, female, 35-39 yr, CPP7)
	Participant's Workbook	***<u>Food label</u>*** "如果好似人哋上網嗰啲，會唔會有個食物指標咁樣…幾多個卡路里呀咁樣。" (家庭主婦，女，45-49 歲，BPP7) "May be similar to those online… the ones with a food label… like how many calories." (Housewife, female, 45-49 yr, BPP7) ***<u>Different levels of difficulty</u>*** "如果可以出啲比較上形式深少少呀。可能有少少帶氧嘅運動咁…會好啲囉。" (全職人士，女，40-44 歲，BPP2)

Theme	Subtheme	Quotes
		“If possible, try to make ones that are a bit more difficult. Maybe the addition of some aerobic exercises will be better.” (Full-time employee, female, 40-44 yr, BPP2) ***Simplify content material*** “簡單啲囉，好似好多字咁樣，唔係咁想睇嘅嘛。” (家庭主婦，女，40-44 歲，CPP11) “More simple. There seems to be a lot of words. Don’t want to read so much.” (Housewife, female, 40-44 yr, CPP11) ***Safety precautions*** “第時可以喺個小冊子嗰度教人哋做嗰啲運動嘅時候呢，最好就講一聲，譬如即係你某個地方，譬如頸椎有事啊，或者手腳有事呢就點樣避免呢種動作咁樣。或者係，好似單腳企咁樣呢，咁嗰陣時我企到成 2、3 個字都得嘅，咁後尾隻腳有事呢，個物理治療師同我講唔好單腳企超過 30 秒，如果有少少註明會清楚啲會好啲。” (全職人士，女，20-24 歲，CPP1) “It is better to note in the workbook, for instance, if you have neck problems or other problems with your extremities, then you should avoid these movements. Like single leg stance, sometimes I can do it for 10 to 15 minutes, but later on I had problems with my leg and the physiotherapist told me not to stand for over 30 seconds. It will be better if there is a clearer precaution.” (Full-time employee, female, 20-24 yr, CPP1)
	Questionnaire	***Change to more concise questions*** “（問題）簡短啲囉。” (全職學生，男，15-17 歲，APP4) “Questions can be more concise.” (Full-time student, male, 15-17 yr, APP4) ***Simplify content*** “精簡啲會好啲。” (全職人士，男，40-44 歲，BPP4) “More concise will be better.” (Full-time employee, male, 40-44 yr, BPP4) ***Repetitive questions*** “有啲…問題如果唔重複就可能好啲。” (全職人士，男，40-44 歲，BPP4)

Theme	Subtheme	Quotes
		“Some… questions… if they’re not repetitive then it would be better.” (Full-time employee, male, 40-44 yr, BPP4) “填過三次…三次嘅內容都係一樣嘅…即係有時其實差…差唔多資料，都係同番上次一樣。” (全職人士，女，40-44 歲，BPP2) “Filled in (questionnaire) three times…the content is the same for all three times…sometimes it is similar information, same as last time.” (Full-time employee, female, 40-44 yr, BPP2)

Comments on probation services

Theme	Subtheme	Quotes
General impression	Changed opinion of probation services	“自從接受咗感化令之後，感化官都對我有少少改觀，因為我本身都唔係好鍾意感化官嘅，咁但係喺感化令呢段期間佢都好 take care 我，就好關心我哋屋企嘅近況囉。” (全職學生，女，20-24 歲，CPP3) “Ever since having the probation order, the probation officer has changed the impression on me a little. I originally did not like the probation officer, but during this probation period, she really took care of me and really cared about my family’s situation.” (Full-time student, female, 20-24 yr, CPP3) “我諗就同我之前嘅 expectation 有啲唔同啦，好似頭先嗰位朋友咁講，即係之前係比較有壓力嘅，咁啊但喺來咗之後就發覺啊，即係姑娘好好啦，同時其實佢安排俾我哋嘅活動好多都係…我諗從我哋嘅生活各方面入手，就包括可能健康呀…家庭關係呀…我諗就真係切切實實咁樣去幫到我哋實在嘅問題囉，令到我哋好正面自己。” (全職人士，男，30-34 歲，CPP6) “I think it (probation service) was different from what I expected. Like what our friend said earlier, there was some pressure before. But, later realises that the probation officer is very kind and the activities she arranges are targeted at various aspects of our daily life, such as health, family relationships. I think she practically helps us on our real problems.” (Full-time employee, male, 30-34 yr, CPP6) “整體感化服務我發覺社署啲姑娘呢，好熱心同埋好關心…每次見面嘅時候，都係佢除咗即係問你近況呀，可能又關心你啲身體，即係好似朋友咁樣去傾下偈囉，就即係比之前想像之中就輕鬆啲囉，亦都即係搞好多呢啲活動去幫我哋，即係我覺得都…即係比起我以前想像中係好好多。” (全職人士，男，45-49 歲，CPP9) “The probation officers from SWD are very passionate and very caring. Every time we meet, aside from asking about my recent situations, could care about your body, talk like friends, much more relaxed than what I anticipated before, and organised many such activities to help us. I feel… much better than I imagined.” (Full-time employee, male, 45-49 yr, CPP9)
	Probation officers are caring and encouraging	“感化官好關心我囉。有咩需要嘅時候會幫手囉，都係好似屋企人咁樣囉。” (全職人士，女，40-44 歲，BPP2) “The probation officer really cares about me. She will help

Theme	Subtheme	Quotes
		me when I need, kind of like a family member." (Full-time employee, female, 40-44 yr, BPP2) "每一個月都會去見面一次嘅…感化官嘅…咁即係會講吓…最近有啲咩擔心呀，或者係搵工嘅時候會唔會覺得好似好緊張呀…咁佢都會…有啲好正面嘅…嘅感覺呀話俾你知咁…其實唔會話搵唔到工作嘅…係俾啲信心自己囉。" (全職人士，女，20-24 歲，BPP5) "I meet with the probation officer each month… to talk about… what's worrying me lately, or whether I feel anxious or not while job seeking… He (probation officer) will… in a very positive way… tell you… you will find a job… give yourself some confidence." (Full-time employee, 20-24 yr, BPP5) "感化主任都好關心我哋同埋啲屋企人嘅近況，即係都好開心。除咗我哋之餘呢，佢仲會鼓勵我哋自己做運動啦，同埋家人…同埋家人一齊做運動。" (全職人士，女，45-49 歲，CPP8) "The probation officers really care about us and my family's recent situations, very happy. She would…aside from us, She would encourage us to do exercise and family…do exercise with family members." (Full-time employee, female, 45-49 yr, CPP8)
Positive feedback on probation service	A good platform for participants to share personal feelings	"感化官呢方面就非常之好啦，有時好似朋友咁傾下偈，同埋有啲疑難啊，或者有啲唔係好明白嘅嘢啊，即係佢又唔係教你咁，佢直頭好似朋友咁樣同你傾偈，同埋佢好體恤我哋，感情都好好。" (待業/退休，男，55-59 歲，CPP2) "The probation officer is extremely good in this aspect. Sometimes we talk like friends and when I encounter problems or I have something I don't quite understand, he (probation officer) doesn't exactly teach you what to do but he talks to you like a friend. He understands us a lot, we have very good relationship." (Unemployed/retired, male, 55-59 yr, CPP2) "佢係我傾訴對象。" (全職人士，女，20-24 歲，CPP1) "She is the one I talk to and share my feelings." (Full-time employee, female, 20-24 yr, CPP1)
	Got advice from probation officer (for both participants and	"我都好感恩囉，咁我個感化主任都好好嘅。X 姑娘係用另外一個角度去睇…雖然係感化令啦，但喺我都得著咗好多嘢囉，睇到好多嘅愛，大家一齊幫助咁樣囉。" (不詳，女，35-39

Theme	Subtheme	Quotes
	family member)	歲，CPP7) “I am very grateful because my probation officer is really kind. Ms. X uses a different perspective to look at situations. Although it is a probation order, but I think I have gained a lot. I see a lot of love and all come together to help.” (Unknown, female, 35-39 yr, CPP7) “我應該好多謝 X 姑娘個感化官呢…佢係側邊一路安慰我…佢好關心我㗎…佢話你即係無辦法改變人哋…即係改變自己囉。” (家庭主婦，女，55-59 歲，BPP6) “I should be really thankful to Ms. X, the probation officer. She has been comforting me along the way… she really cares about me a lot. She said you can’t change others, but you can change yourself.” (Housewife, female, 55-59 yr, BPP6) “有時同感化官傾偈…我塞住咗…有啲嘢好似諗唔通…佢都係講俾我聽點做，教我點做，咁但係你又覺得咦係喎，點解我唔…我試下咁啦…又行得通喎。” (家庭主婦，女，45-49 歲，BPP7) “Sometimes when I talk to the probation officer… I am stuck… I can’t think things through… she (probation officer) will talk to me what to do, teach me how to do. Then you realise, ‘that’s right, why don’t I try… then it works’.” (Housewife, female, 45-49 yr, BPP7) “幾好呀，正面呀。譬如我有啲嘢諗唔通，見面嗰陣時呢…講出來咁佢會俾啲意見教我點樣做咁。” (家庭主婦，女，45-49 歲，BPP7) “Pretty good, it’s positive. For example, if I can’t think something through, during our meeting, she (probation officer) will give me advice on what to.” (Housewife, female, 45-49 yr, BPP7)
Relationship with probation officer	Trustful relationship with probation officer	“多一個人同你分享生活嘅嘢都好好多嘅…即係可能有啲事你覺得好細微或者唔想同屋企人講呀。未必去到需要吓吓都要 share 嘅時後候咁…身邊都多一個人可以去講嘅時候…只不過係抒發一下個人感受呢。咁可能個人會無咁低落呀…或者係會無咁多嘢諗囉。” (全職人士，女，20-24 歲，BPP5) “It is much better to have an extra person that you can share the things in your daily life… maybe there are matters you think are minor or don’t want to talk to family members. When it’s not necessary to share everything all the time… you can talk to that extra person around you… to express your own feelings. Then perhaps you won’t feel

Theme	Subtheme	Quotes
		so low…or you won't think too much." (Full-time employee, female, 20-24 yr, BPP5)
Constraints	Arrangement	***Dependent on own schedule*** "最緊要自己抽到時間（去參加）。" (全職學生，女，18-19 歲，APP1) "Most importantly is being able to take time out (to join)." (Full-time student, female, 18-19 yr, APP1) "我太太今日都同我來㗎，我叫佢唔好來之嘛，費事佢特登請假。" (全職人士，男，60-64 歲，APP3) "My wife came with me today. I told her not to come, so she didn't need to specially take a day off work." (Full-time employee, male, 60-64 yr, APP3)

Comments on group activity (Combined intervention arm only)

Theme	Subtheme	Quotes
Overall impression	Towards interventionist	“我諗如果第一次佢無來到的話，我就難啲同佢分享，始終要感受過，林教授嗰一日佢幽默嗰方面就更加容易帶動囉。” (全職人士，男，30-34 歲，CPP6) “I think if she didn’t come the first time, then it would be more difficult to share with her. She needs to be there to feel it. It was easier to motivate people by Professor Lam’s humourous aspects.” (Full-time employee, male, 30-34 yr, CPP6) “最鍾意嘅環節都係教授講嗰啲運動囉，咁就佢其實俾我哋認識到更加多唔同種類嘅運動，可能你平時你只不過係可能會郁郁下隻腳啊，咁但係你唔會真係知道你會踩空氣單車嗰啲囉，佢未講嘢之前可能未必會認識到呢啲囉。” (全職學生，女，20-24 歲，CPP3) “My favourite section was the exercises (ZTEx) that professor introduced. This allows us to learn more various types of exercise. Maybe normally you only move your legs a bit, but you don’t know about seated cycling. You probably don’t know about them (ZTEx) before he talks about them.” (Full-time student, female, 20-24 yr, CPP3) “因爲我自己條腰唔舒服，我成日會諗起林教授…即係教我咁樣咁樣，搞到我…依家我個坐姿都正咗囉。” (不詳，女，35-39 歲，CPP7) “Because my waist does not feel well, so I always think of what Professor Lam taught. It made me… my sitting posture is straighter now.” (Unknown, female, 35-39 yr, CPP7) ***Acted as motivation*** “我諗無嗰個嘅講座去做嘅…做嘅 foundation 我諗未必有咁嘅興趣去做囉。咁變咗形成我哋兩個都…都好積極去做呢個運動。” (全職人士，男，30-34 歲，CPP6) “I think without the group activity acting as a foundation, I may not be as interested in trying it (ZTEx). So, it made both of us really enthusiastic in during the exercise (ZTEx).” (Full-time employee, male, 30-34 yr, CPP6)

Theme	Subtheme	Quotes
Setting and content	Relaxing ambience	“咁我都…我太太都幾…覺得 ok 啦，因為先頭諗住唔係咁嘅，無咁輕鬆嘅，咁後尾上次去過沙宣道呢又發覺都幾…好似一個…即係點樣講啊，個活動係幾無壓力，幾 ok。” (待業/退休，男，55-59 歲，CPP2) “Well I… my wife… both think it’s okay. We didn’t think it would be so relaxing. Last time when we went to Sassoon Road and realised… how should I put it…the group activity was quite pressure-free. It was quite ok.” (Unemployed/retired, male, 55-59 yr, CPP2) “佢（林教授）教你做啲動作啊，佢本身啲動靜有時都幾…幾搞笑嘅，同埋真係好輕鬆。” (不詳，女，35-39 歲，CPP7) “He (Professor Lam) teaches you the movements. His own gestures are…quite funny and really relaxing.” (Unknown, female, 35-39 yr, CPP7)
	Innovative activities	“個講座本身都好有趣啦，有啲集體活動同埋你加咗一啲外來嘅元素，譬如話啲音樂治療啊，我之前完全無接觸過，都係覺得好新奇。” (不詳，女，35-39 歲，CPP7) “The lecture was very interesting. There were some group activities and some extra elements. For instance, the music therapy, I never contacted with it before, so I felt it very new and special.” (Unknown, female, 35-39 yr, CPP7) “譬如好似上一次探訪…我哋去香港仔…係嗰啲係弱智小朋友。覺得嗰度好開心囉。小朋友好開心，好似大家都好開心，又好似覺得自己好似做返啲啱嘅嘢囉。” (家庭主婦，女，45-49 歲，BPP7) “For example, like one of the visits last time… we went to Aberdeen… there were children with mental disabilities. I felt in that place (group activity centre) I was very happy. The children were very happy… we were all very happy. I felt like I am doing something right again.” (Housewife, female, 45-49 yr, BPP7)
Constraints	Difficult for family members to arrange	“都係返工嘅問題囉，一啲係返工啦，有啲係屋企湊小朋友咁囉，無辦法囉。” (家庭主婦，女，65 歲或以上，CPP4) “It’s problems with work schedule. Some need to work, some need to stay home and take care of the children. So, there’s nothing we can do.” (Housewife, female, 65 yr or above, CPP4)

Theme	Subtheme	Quotes
		“因為佢返酒店啊，請唔到假。” (全職人士，女，40-44 歲，CPP5) “Because he works in a hotel, so he can’t take days off.” (Full-time employee, female, 40-44 yr, CPP5)
Suggestions	Activity content	“整蛋糕啊或者整啲餅啊，好快熟嗰啲啊，大家整吓嘢食開心吓好玩吓囉。” (家庭主婦，女，40-44 歲，CPP11) “Bake cakes or cookies, those are easy to make. We can all prepare them and eat them together. Fun and happy.” (Housewife, female, 40-44 yr, CPP11) “大致上都，一般都咁樣 ok，如果你話大家能夠多啲聽吓教授指點吓，或者大家分享吓更加好啲囉。” (家庭主婦，女，65 歲或以上，CPP4) “In general, it’s okay. If we can have more opportunities to listen to what professor says or more sharing sessions will be even better.” (Housewife, female, 65 yr or above, CPP4)

5.3.3.1 Conclusions

The participants were highly appreciative of the probation services and the support and care from the probation officers provided throughout the course of the probation order. They enjoyed the activities, learnt a lot with the family members, and did ZTEx together, leading to better communication and family relationships, many messages were very touching and encouraging. Widespread promotion of ZTEx to the general public was recommended by the participants.

5.3.4 Focus group family members' characteristics

Table 5.4 shows that about half of focus group family members were female (53.8%) and majority were aged 40 to 59 (61.5%). Most were employed (69%) and had primary education level (75%). About one-third family members were either spouses/partners or mothers of the participants.

Table 5.4 Demographic characteristics of focus group family members (n=13)

Characteristics	n	(%)
Sex		
Male	6	(46.2)
Female	7	(53.8)
Age group (years)		
12-19	1	(7.7)
20-39	2	(15.3)
40-59	8	(61.5)
≥60	2	(15.4)
Education[a]		
Primary level	9	(75)
Secondary level	1	(8.3)
Post-secondary or above level	2	(16.7)
Employment status		
Student	1	(7.7)
Employed	9	(69)
Unemployed/retired	1	(7.7)
Homemaker	1	(7.7)
Others	1	(7.7)
Relationship with probationer		
Spouse/partner	4	(30.8)
Child	1	(7.7)
Mother	4	(30.8)
Father	2	(15.4)
Siblings	2	(15.4)

[a] 1 missing, n=12

5.3.5 Qualitative findings from family members' focus groups

Table 5.5 Qualitative findings from family members' focus groups

Comments on general impression of the programme

Theme	Subtheme	Quotes
Behavioural changes	Personal changes	***Change in attitude*** "（佢哋）有啲內疚感，所以佢哋都，都盡量做好啲啦。以前佢…你講左一句第二句再講「你唔好講啦」，依家就唔會啦。" (父親，50-54 歲，BFP1) "They do have a sense of guilt, so they will try to do better. In the past, they… you said one sentence and then the second sentence and they asked you stop talking. Now would not." (Father, 50-54 yr, BFP1) "我諗佢參加咗活動呢，以後係有改變好多嘅。不論外表呀，身心呀，同埋佢心理上面喇，都係肯多說話，多溝通，嗰方面去發展呀。我覺得…佢係改良咗好多。" (伴侶，男，50-54 歲，CFP2) "I think he changed a lot after joining the programme. Not only his appearance and mentality has changed, he is more willing to talk and communicate, to develop accordingly. I think he has changed a lot for the better." (Partner, male, 50-54 yr, CFP2) "性格同埋習慣都改變咗…性格比較…平穩咗好多喇已經，無以前咁…唔會好暴躁。習慣都轉咗…可能少咗出去…去夜街呀…多啲係屋企。咁但依家就…平和好多囉，起碼…可能佢唔開心嘅時候，可能佢自己又上網搵下，又或者…其實佢都向宗教嗰方面去尋求嘅…一啲緩助嘅，咁我覺得呢個係好咗。" (伴侶，男，55-59 歲，CFP5) "His personality and habits have changed. His personality is more stable and not so compulsive as before. His habits changed as well, he stays at home and doesn't go out late as much. He's just more peaceful now. At least when he is unhappy, he will go online or seek religious help. I think to find some help is an improvement." (Partner, male, 55-59 yr, CFP5) "以往裡面，佢覺得自己嘅能力好強嘅。屋企人…你地都…年紀大嘞，你唔識我諗乜嘢。件事件之後佢會知道…佢重新整理

Theme	Subtheme	Quotes
		佢自己諗…佢覺得屋企人係重要嘅，因為有咩事…都係support…支持佢…咁佢變咗個人謙虛啲，會多野講咗。” (母親，65 歲或以上，CFP7) “He used to think he has strong capabilities and family members are too old and don’t understand what he thinks. After the incident, he realises and re-organises his thoughts. He feels that family members are important. Because no matter what happens, we will support him. So, he has become a more humble person and would talk more.” (Mother, 65 yr or above, CFP7) ***<u>Willing to make positive changes and comply</u>*** “即係（接受感化之後呢）俾佢知道咗咩係錯，接受懲罰，個人呢改變呢係會驚，就唔會咁放膽去成日唔返屋企…起碼監管到自己。即係最大嘅問題係自己自律。到時到侯會識返屋企。同埋係受感化嘅時侯佢真係唔敢行差踏錯。呢樣係真㗎。” (母親，40-44 歲，AFP1) “That is, (after receiving probation service) he knows what is wrong and has received punishment. He was scared by the change and dare not to stay out late always and don’t come home…. At least, he can self-monitor. The biggest problem is self-regulation. He knows he has to go home at the night time and plus he really dares not to misbehave during probation. That’s true.” (Mother, 40-44 yr, AFP1) “即係可能由出事到依家都係一個過程。要學習，即係做錯事要承擔。咁佢依家我都見到佢慢慢改善緊。” (母親，60-64 歲，AFP2) “Perhaps it is a process right from the beginning of the incident to now. (He) has to learn, to take the responsibility for his wrong-doing. I can see that he is making improvements gradually.” (Mother, 60-64 yr, AFP2) “咁我係睇得出佢係驚嘅，即佢可能…會知道呢件事嘅嚴重性，唔會再去犯咁。” (姊姊，20-24 歲，AFP3) “I see that he is scared. May be… he knows the severity of the incident, so he dares not to offend again.” (Sister, 20-24 yr, AFP3)

Theme	Subtheme	Quotes
		Willing to share, listen and understand family member's concern "你如果之前無參加感化呢，同佢講真係，你…你話佢一句，佢鬧返你十句。真係，真係佢唔會聽你講嘢㗎。即係叫佢瞓覺啦，「我鍾意幾時瞓咪幾時瞓囉，關你咩事」。佢即係會講呢啲嘢囉。即係接受咗感化之後呢，完全唔會同我哋講呢啲嘢囉…即係個人會尊重我哋喇…之前點同佢傾偈，佢都聽唔入耳…經過呢件事之後呢，就知道我哋係緊張佢。返到屋企，禮貌方面呢，改變好大。" (母親，40-44 歲，AFP1) "If (he) didn't receive probation service, difficult to talk to him… You said one sentence to him, he scolded you ten sentences. He wouldn't listen to you. Say like asking him to sleep… 'I will sleep whenever I want, that's none of your business'. He would say such thing. But after receiving probation service, he won't say any of this. He will respect us. I'd talked to him before, but he wouldn't listen. After this incident, he knows we care about him. When he comes home, he has improved a lot in terms of politeness." (Mother, 40-44 yr, AFP1) "可能因為呢件事之後佢知道屋企人其實都好 support 佢。佢明白我哋都好關心佢，所以有陣時佢有啲心事嘅時候，就會同我哋溝通多咗。即係會講俾我哋聽咁。" (姊姊，20-24 歲，AFP3) "Perhaps he knows that family members are all very supportive. He understands we care about him very much. So he has talked to us more when he has something on his mind, and tells us." (Sister, 20-24 yr, AFP3) "佢會返到來分享咗先。" (兄長，30-34 歲，CFP3) "She will share first when she comes back." (Brother, 30-34 yr, CFP3) ***Adopted healthy lifestyle*** "而家其實都會一齊出去做多咗運動嘅。" (父親，50-54 歲，BFP1) "Actually we go out to do more exercise together now." (Father, 50-54 yr, BFP1)

Theme	Subtheme	Quotes
		“因為阿仔…我覺得佢依家就，比較熱心去跑步…平時見佢都係好積極去練跑，每日都去跑步，一放學返來呢就換衫去跑步，跑完步晚黑就跟住有時去…去打下波。” (母親，40-44 歲，AFP1) “Because my son… is more passionate for running now. He is highly proactive to practice daily. He gets change and goes to run right after coming home from school. He sometimes plays ball games afterwards at night.” (Mother, 40-44 yr, AFP1)
		“因為有呢個活動，反而我覺得佢係主動咗落街做運動。係呀，因為以前好多時叫佢，佢都唔係咁主動。但依家佢就因為幫我係 home office 呢，佢做到咁上下就話俾我聽，我落街行下啦。咁我又覺得，佢起碼著重咗運動…咁亦都令到佢…即係注意健康…” (母親，60-64 歲，AFP2) “I feel like he has been more proactive to go out to exercise because of this programme. In the past, I often asked him but he was rather passive. But now, because he works and helps me from home, after working for some time, he tells me he will have a walk on the street… I feel… at least, he concerns more about exercise so this makes him pay attention to health.” (Mother, 60-64 yr, AFP2)
		“最明顯嘅改變係佢作息時間改咗。可能未發生呢件事嘅時候，夜晚就會出街喇，朝早瞓覺。但係呢件事之後呢，完全改變咗。係朝早就可能出去做嘢呀，咁夜晚嘅時候就真係攞來瞓覺呀。咁同平時做嘅嘢都健康咗好多囉。即係可能之前會成日飲酒呀，咁但係依家就唔會囉…少咗囉，唔係話唔會嘅。” (姊姊，20-24 歲，AFP3) “The most obvious change is his daily routine. Perhaps before this incident, he went out at night and slept in the morning. Yet, this has been completely changed after the incident. He now works in day time and sleeps at night. And… he has become healthier, for instance, he drank alcohol frequently in the past, but he has stopped… drinks less now, still does though.” (Sister, 20-24 yr, AFP3)
		“特別嘅感受…都算有個推動到我哋去參加呢個活動…就好似…剛才我哋一開始嘗試話去郁手郁腳，做下少少運動…都有個效應嘅能力囉，都睇到佢哋多咗做運動。” (兒子，15-17 歲，

Theme	Subtheme	Quotes
		CFP1) “Had a special feeling that motivated us to join this group activity. Like… earlier we were moving our arms and legs at the beginning and doing a bit of exercise. The effect (of the group activity) can be seen, they exercise more.” (Son, 15-17 yr, CFP1)
	Family communication	***<u>Increase communication in family</u>*** “講多咗嘢嘅，咁之後返到屋企大家都會，真係會講多咗嘢。” (父親，50-54 歲，BFP2) “Talk more… afterwards we all would talk more, really would talk more.” (Father, 50-54 yr, BFP2) “多咗啲溝通囉，講下運動囉。” (母親，55-59 歲，CFP4) “More communication; (we) talk about exercises.” (Mother, 55-59 yr, CFP4) “都係多啲（溝通）…了解下因為多啲人見下又好啲嘅…逼埋係屋企又係…好似我對你，你對我，無咩傾…有時講得多都…（感嘆）如果你多啲節目呢，傾下偈呀，或者大家舒暢下呢就好啲嘅。” (伴侶，男，55-59 歲，CFP5) “There is more communication. Understand better because seeing more other people is better…Better than being squeezed at home with just me to you, you to me, noting to talk about. Sometimes I talk too much… (sigh). If you have more group activities that allow more communication, it is good and makes everyone feel more comfortable.” (Partner, male, 55-59 yr, CFP5) “有啲野一齊做，多啲溝通咁樣囉。” (伴侶，女，45-49 歲，CFP8) “(We) do some things together, there’s more communication this way.” (Partner, Female, 45-49 yr, CFP8) “以前佢唔係好肯點同我講說話。有啲咩，做啲咩，我直頭唔知佢做啲咩…行轉背先應下…佢參加咗活動之後就多溝通，同埋佢講出想點樣呀，同埋點樣活動呀咁樣。以前直頭電視佢呆睇呀，或者我同佢講野，佢又完全唔多點樣睬我咁樣。近來就

Theme	Subtheme	Quotes
		多咗說話，同埋肯同我對答嗰啲囉…咁睇到電視新聞發生嘅時事呀佢都會…講出佢個睇法咁樣。” (伴侶，男，50-54 歲，CFP2) “He was not too willing to talk to me before. I had no idea about what he was up to, just responded a bit while turning his back. He communicates more and says what he wishes, and about the activity after joining the group activity. Previously, he watched the TV like a fool. Recently, he speaks more.” (Partner, male, 50-54 yr, CFP2) ***<u>More effective communication within family</u>*** “其實都正面咗…係呀，因為最起碼一樣嘢，（佢）以前即同屋企人無溝通，我哋亦都唔識點樣同佢去溝通。真係㗎…所以變咗好似大家喺屋企大家無嘢講。即見佢曳呀嘛，即見到佢呢控制唔到自己情緒，即…即刻走去鬧佢…咁依家呢就同我哋講呢就，個啲呀…我哋都識得諗呀即係…唔可以鬧佢，只係講一兩句佢明嘅。” (母親，40-44 歲，AFP1) “It becomes positive actually… there is at least one thing. (He) didn’t communicate with us in the past and we didn’t know how to communicate with him as well. Literally…. So, we didn’t have any conversation. I couldn’t control my emotions whenever he misbehaved, I scolded him right away. But now, we know how to think. We can’t scold him… rather we should talk to him with a few sentences that he understands.” (Mother, 40-44 yr, AFP1) “我覺得佢同我哋屋企人溝通多咗。（我地）知道佢嘅嘢時候又知道佢有啲咩困難。咁令到我哋幫到佢囉。唔會再好似之前咁完全唔知佢咩事呀咁樣。” (姊姊，20-24 歲，AFP3) “I feel like he has more communication with family members. (We) know how to help and (we) know more about his difficulties. This can enable us to help him. Unlike before, we didn’t know anything about him.” (Sister, 20-24 yr, AFP3)
	Family relationship	***<u>Improved family relationship</u>*** “我反而覺得呢，關係好咗好多。我哋以前係搵食，依家都係，但以前就疏於照顧啦應該咁講。講真啦，依家就算無時間，都要搵啲時間（傾偈）。” (父親，50-54 歲，BFP1)

Theme	Subtheme	Quotes
		"I actually think our (family) relationship has got much better. We were focused on working before. It's the same now, or I should say, we neglected to care (for each other) before. Seriously, even if (we) don't have time now, we will make time to chat." (Father, 50-54 yr, BFP1) "至緊要你唔好去埋怨，等佢自己又覺得內疚，令到佢又自己感覺做錯野，咁我哋又無去責備，你多啲關心好過責備好多。" (父親，50-54 歲，BFP1) "It's important not to complain. Let him feel guilty and he will feel like he has done something wrong. Then we do not blame. Your caring is much better than blaming." (Father, 50-54 yr, BFP1) "佢有時做緊運動嘅時候佢都會叫埋我一齊做。感覺就係…會好啲…唔會自己一個人做，咁一齊做就好似有個伴。" (伴侶，男，55-59 歲，CFP5) "Sometimes when he is doing exercise, he will ask me to join. It's like having a companion, you are not doing it alone. Like having a partner when do together." (Partner, male, 55-59 yr, CFP5) "其實主要轉變就係，睇電視嗰陣一齊做運動。溝通多咗囉，玩下咁樣囉，唔係齋睇電視無野講。" (伴侶，女，45-49 歲, CFP8) "The major change is doing (Zero-time) exercises while watching TV, (we) communicate and play around more. It's no longer just watching TV with no talking." (Partner, female, 45-49 yr, CFP8)
	FAMILY health	"多做運動一定有。點都好過無呀。" (父親，50-54 歲，BFP2) "(We) definitely did more exercise. It's better than nothing." (Father, 50-54 yr, BFP2) "健康同和諧好明顯有改變…。" (姊姊，20-24 歲，AFP3) "Health and harmony have an obvious change." (Sister, 20-24 yr, AFP3) ***Spent quality time with family members***

Theme	Subtheme	Quotes
		“依家跑步變為，我呢我都鍾意咗。即係我有時得閒喇…禮拜都會同佢由西環跑到中環。證明佢都帶動到我。” (母親，40-44 歲，AFP1) “I liked running eventually now. When I am free, I will run with him from Sai Wan to Central on weekends. This proves that he has motivated me.” (Mother, 40-44 yr, AFP1) “咁其實我自己反而呢有啲活動我一定陪埋佢去。” (母親，60-64 歲，AFP2) “Indeed, I definitely go with him to these activities.” (Mother, 60-64 yr, AFP2) “我都會同佢（細佬）出去做運動都多咗。以前係幾乎係零，無嘅。咁唔只做運動啦有陣時佢見我…上 yoga 班…咁佢就會話…佢會有興趣囉。” (姊姊，20-24 歲，AFP3) “I exercise with him (my younger brother) more frequently, which had never happened before. Not only exercising, when he sees me going to yoga class, he would say he is also interested.” (Sister, 20-24 yr, AFP3)
	FAMILY happiness	“開心咗。” (母親，40-44 歲，AFP1) “Became happier.” (Mother, 40-44 yr, AFP1)
	FAMILY harmony	“佢係知道你哋真係關心佢嘅，佢自己做錯野啦，反而…以前好似日日見到，有少少仇家咁樣嘅。” (父親，50-54 歲，BFP1) “Since they have done something wrong, they know you truly care about them. Compared to before, when we saw each other every day, we seemed a bit like enemies.” (Father, 50-54 yr, BFP1) “其實係帶動番個溝通出來啦。倒翻轉個活動，不如你講下，我哋又做返啲乜野。咁大家嗰個…相處更加和諧。” (兄長，30-34 歲，CFP3) “It’s to bring back more communication. Flip the group activity around, so you say, we also do something back. Then we are together more harmoniously.” (Brother, 30-34 yr, CFP3)

Theme	Subtheme	Quotes
		“我諗呢個活動係好鼓勵到嘅，咁家庭方面…互動呀…係好多方面…大家去了解健康呀…同埋生理同心理上面都健康咗。” (伴侶，男，50-54 歲, CFP2) “I think this activity is very encouraging. The interaction within family has many aspects. When everyone is more health conscious, they become physically and psychologically healthier.” (Partner, male, 50-54 yr, CFP2) “相處呀…說話呀…同埋呀…佢啲運動係可以調劑到嗰…脾性。佢就唔會成日去諗住…唔會歪埋一歪埋一邊囉。咁人與人相處就會見面多講說話呀，就唔會話咁…諗埋側埋一面。” (伴侶，男，50-54 歲，CFP2) “Getting together, talking, and exercising can help to adjust his temperament. She would not think one-sided all day. Then people get together and talk more…would not think one-sided.” (Partner, male, 50-54 yr, CFP2) “起碼和諧呢方面（改善咗）啦…起碼（佢）返來會同我哋傾吓偈呀，會同阿妹玩呀…以前叫佢同阿妹玩個啲呢…佢就「行開啦，好煩呀，你唔好走來煩我啦！」即係會講呢啲嘢囉。但依家呢阿妹去同佢玩…依家返到來（妹妹）即刻叫哥哥，一放學就「哥哥你返來啦？」有麵包攞麵包俾佢食。” (母親，40-44 歲，AFP1) “At least family harmony has improved… at least he will chat with us when he comes home and will play with his sister…. In the past, he used to ask his sister to go away, ‘(You are) so annoying and don’t bother me’. He said such thing. Now, he will play with her. She will say ‘Brother, you are home’ and give him some bread to eat.” (Mother, 40-44 yr, AFP1) “佢同細佬嘅關係就好咗啲嘅，因為依家呢件事，即係以前呢，細佬就少關心佢嘅，兩個呢一齊就有少少格格不入，不過依家…我就覺得佢哋兩兄長係好咗啲嘅…就如果細佬都有嘢要幫手呀，咁呀哥又好主動去幫佢，咁呀，幫完，呀細佬又好 appreciate。” (母親，60-64 歲，AFP2) “The relationship with his younger brother has improved because of this incident. Before, his young brother cared little about him. They were a bit segregated… but it has improved now… like if his brother needs help, he will take the initiative to help and his brother will appreciate him in

Theme	Subtheme	Quotes
		return." (Mother, 60-64 yr, AFP2) "健康同和諧好明顯有改變…。" (姊姊，20-24 歲，AFP3) "Health and harmony have an obvious change." (Sister, 20-24 yr, AFP3)
ZTEx	Impression on ZTEx	***As a family activity*** "咁啲「零時間運動」就係，相對就係，係屋企囉。好似親子活動咁。" (父親，50-54 歲，BFP2) "In comparison, ZTEx (can be done) at home. (They are) like promoting parent-child relationship activities." (Father, 50-54 yr, BFP2) "可以同埋屋企（人）一齊做，咁我覺得幾好。" (伴侶， 男，55-59 歲，CFP5) "I think it's quite good because (I) can do it together with my family." (Partner, male, 55-59 yr, CFP5) ***Simple and easy*** "輕簡啲嘅運動咪…都係好嘅。" (父親，50-54 歲，BFP2) "These are lightweight exercises… it's good." (Father, 50-54 yr, BFP2) "搞啲運動都…係日常生活中都用到。" (伴侶，女，45-49 歲，CFP8) "These exercises can be used in (our) daily living." (Partner, female, 45-49 yr, CFP8) "佢不嬲都踩踩腳嘅成日都做呢個運動囉。我成日都話唔好做，唔好郁。但原來都可以係運動來嘅，咁呀由佢做囉。" (母親，55-59 歲，CFP4)

Theme	Subtheme	Quotes
		"I always say don't do it (shaking the legs or fidgeting), but turns out it's an exercise. So, I let him do it now." (Mother, 55-59 yr, CFP4) "都好嘅，隨時隨地都做得，原來平時啲，好自然嘅動作都係其實運動來嘅。" (母親，55-59 歲，CFP4) "It's good, you can do it anytime and anywhere. The natural movements you do daily are actually exercises." (Mother, 55-59 yr, CFP4) ***Suitable for everyone*** "我覺得呢個「零時間運動」啱老幼，年長同埋小朋友。" (父親，50-54 歲，BFP2) "I think ZTEx is suitable for the young and old, the elderly, and children." (Father, 50-54 yr, BFP2) "成日坐係寫字樓呢都會唔係好郁嘅…咁就知道原來坐係到都可以做到好多運動。" (母親，55-59 歲，CFP4) "I don't move a lot when sitting in the office…so now I know I can do many exercises while sitting." (Mother, 55-59 yr, CFP4) "呢個運動（「零時間運動」）呢幾好嘅。因為對於關節呀，同埋你年紀大咗個人呢就會好啲嘅…郁下伸下。" (伴侶，男，55-59 歲，CFP5) "This exercise (ZTEx) is quite good. It's good for the older people to… move and stretch." (Partner, male, 55-59 yr, CFP5) "本身個運動設計…比較啱可能我哋啲在職人士呀，或者年紀大一啲呀，咁可能個成效就大一啲囉。" (伴侶，女，45-49 歲，CFP8) "The design of (Zero-time) exercise is more suitable for the working people or the elderly. The effect could be greater." (Partner, female, 45-49 yr, CFP8)

Theme	Subtheme	Quotes
	Doubts about ZTEx	***Does not believe ZTEx is a better alternative*** “如果係咁呢，我不如出去，跑步啊，或者踩單車呢，仲好過做呢啲（「零時間運動」），呢啲如果係屋企呢，我估無乜人會同屋企人做呢啲喎。” (父親，50-54 歲，BFP1) “Why don’t I go out and jog or ride the bike? It’s better than this (ZTEx). I don’t think a lot of people would do this (ZTEx) with family members at home.” (Father, 50-54 yr, BFP1) ***Does not think ZTEx can improve family relationship*** “如果真係想認真話，將屋企人個關係搞好呢個運動…我估呢…唔係好得。” (父親，50-54 歲，BFP2) “If (you) seriously want to improve family relationships using this exercise… I think…it won’t work.” (Father, 50-54 yr, BFP2)
Suggestions	ZTEx	“可能之後可能設計唔同 level 嘅運動，可能多啲…唔同年紀，或者後生啲又可以，即你自己選擇去適合你嘅運動。” (伴侶，女，45-49 歲，CFP8) “Maybe there can be different levels of ZTEx, where you can choose which one is most suited.” (Partner, female, 45-49 yr, CFP8)

Comments on probation services

Theme	Subtheme	Quotes
General impression	Learning opportunity	"對之前發生嘅事一定係正面嘅，咁都多個機會俾佢反省返自己嘅。對我屋企人來講，咁佢都係一個好…有用嘅…服務嚟嘅。" (父親，50-54 歲，BFP2) "Compared to what happened before, it is definitely positive. It's an extra opportunity for him to reflect. For my family member, it's (probation service) a useful service." (Father, 50-54 yr, BFP2) "我覺得社會係幫咗好多…會 support 好多。只係覺得佢終於明白到原來一個人，做錯咗事…唔係佢會牽連到好多人力物力，同埋傷咗好多…人嘅心。咁佢明白咗呢樣野係重要。" (母親，65 歲或以上，CFP7) "I think the society has provided a lot of help and support. I think he (probationer) finally understands that when someone commits a crime, it will affect many and hurt a lot of people's feelings. It's important that he understands." (Mother, 65 yr or above, CFP7) "我諗呢個…有嘅…好大嘅教訓囉。因為佢會覺得，呀原來佢牽連都好廣嘅，唔單止佢自己…將來個…如果處理得唔好…將來前途喇，對屋企人嘅影響喇，社會裡面點睇呀。佢亦都知道…原來大家…都好想佢好嘅。因為做咁多野，大家都想佢改過呀、重生呀、上路…上向前行呀…呢樣野係最深刻。" (母親，65 歲或以上，CFP7) "I think this is a really big lesson. He will understand that not only he is affected. If the situation is not handled well, it will affect his future, his family, and how the society views him. We all just want him to change and move forward…this is the most profound." (Mother, 65 yr or above, CFP7)
Positive feedback on probation services	As a platform	***To share personal feelings*** "主要就係等佢（我個仔） 每個月見下姑娘傾下，咁又等佢可以講下佢自己啲嘢。咁佢都會同我講，但係我都想佢同其他人講…即多個人可以同佢（我個仔）share 返…係嘞，見多啲人，咁始終都係一個好處來嘅…即佢都會將佢唔開心呀，或者佢有困難之處話俾…多俾一個人聽，咁都係一件好事。" (母親，60-64 歲，AFP2) "The main thing is to let him (my son) meet the probation officer monthly, so he could share his experience. Although

Theme	Subtheme	Quotes
		he would tell me, I hope he can share it with others… it would be an advantage if he could meet more people and share his feelings and difficulties with others." (Mother, 60-64 yr, AFP2) "因為佢個性格都係比較要面啲。咁如果有家人在場，佢就真係未必會同個感化官溝通自己內心世界嘅嘢呀，或者真實嘅嘢呀，佢未必會講出來囉，如果有屋企人喺度嘅話。咁…我覺得…佢自己去見佢反而可能會分享多啲唔會同我哋講嘅嘢。" (姊姊，20-24 歲，AFP3) "Because he (my brother) is rather face-saving. So, he might not express his inner thought, or tell the truth to probation officer if family members were present. So… I think... if he met probation officer alone, he would share more." (Sister, 20-24 yr, AFP3) ***<u>Facilitate family communication</u>*** "多咗個橋樑啦，即係有位專業人士，大家三方坐低傾偈。" (父親，50-54 歲，BFP2) "The professional (probation officer) is like an extra bridge so the three of us can sit down and chat." (Father, 50-54 yr, BFP2)
	Got advice from probation officer (for both participants and family member)	"咁都知嗰時感化官同佢傾嗰陣時呢，即係俾個正確（觀念） 俾佢呀。因為佢唔知道對人有禮貌嗰啲係正確嘅…跟住感化官即係講啲…譬如講啲 case 俾佢聽呀，個嚴重（性） 係點樣，咁佢自己咁大個仔，跟住慢慢慢慢…個思想會諗。" (母親，40-44 歲，AFP1) "I knew that the probation officer had educated him (my son) in probation meeting. Because he (my son) didn't know about good manners… the probation officer then showed him examples and its consequences. So, he could… reflect." (Mother, 40-44 yr, AFP1) "即如果依家見咗感化官之後呢，佢哋會教我哋係點樣同佢溝通呀，因為佢始終都係細呀咁樣。即有另一種方法囉，即教我哋唔好吓吓走去鬧佢。" (母親，40-44 歲，AFP1) "After the probation meeting, we learnt the way of communication from probation officer. After all, he (my son) is still young. There is another way (of coaching), instead of

Theme	Subtheme	Quotes
		punishing him immediately." (Mother, 40-44 yr, AFP1) "可能感化官都會同佢講啲同類型嘅 case 個嚴重性係去到邊度呀，去警誡佢真係唔好再犯呢件事。" (姊姊，20-24 歲，AFP3) "Perhaps probation officer had talked him through the severity of similar case and stopped him reoffending." (Sister, 20-24 yr, AFP3)
Relationship with probation officer	Trustful relationship with probation officer	"感化官平時都有打電話同我溝通。即係問佢呢段時間有乜嘢…問題出現呀或者有咩改善呀咁，都係傾下佢日常生活囉…咁我咪同感化官講囉，感化官就問就可能同佢傾偈因咩事呀咁樣。" (母親，40-44 歲，AFP1) "Probation officer and I usually talk over the phone. He asks about my son's daily life, like any difficulties or improvement he has recently. I will tell him and he will talk to my son." (Mother, 40-44 yr, AFP1) "如果譬如遇到有啲乜嘢姑娘聽咗嘅，需要屋企人幫忙嘅。其實我好…就覺得…佢哋應該就會搵我哋囉。" (母親，60-64 歲，AFP2) "For instance, when the social worker officer revealed something that needs our help, I think she would contact us." (Mother, 60-64 yr, AFP2)
Suggestions	More activities	***Boost participants' social confidence and strengthen social relationship*** "咁就期望如果有啲活動可以令到佢個人際關係擴闊就最好。因為佢都係較為一個內向嘅，一路都係。咁變咗依家又唔駛返工，即係無機會返工，咁又見唔到啲同事啦…所以如果係有機會可以係 grouping 班年輕人咁呀，等佢人際關係好啲。" (母親，60-64 歲，AFP2) "I hope there would be more outdoor activities that can strengthen his social relationship. Because he is comparatively passive. Plus, he is unemployed currently, so he doesn't have a chance to meet colleagues. Thus, if there was a chance that can gather young people, it might help." (Mother, 60-64 yr, AFP2) "我覺得可以…叫佢參加多啲義工嘅活動。因為我覺得義工嘅活動可以令到佢建立佢自己喺呢個社會嘅價值啦，令佢諗得多啲同埋去幫助下人嘅時候，佢個自信心會大啲囉，唔會成日覺

Theme	Subtheme	Quotes
		得自己好似無用咁樣囉。” (姊姊，20-24 歲，AFP3) “I think… (we) can ask him to participate more volunteer activities. Because volunteer work might help him develop his own world view and value. Also, it helps boost his confidence whenever he helps others so he won’t see himself as useless.” (Sister, 20-24 yr, AFP3) ***<u>Help participants to find their life goal and interest</u>*** “其實好想阿仔搵到自己嘅目標。我成日問佢，你自己嘅目標係咩，佢話唔知喎。佢成日都話唔知…咁我目前睇到佢有興趣就係跑步，去打籃球，就係咁。” (母親，40-44 歲，AFP1) “I really hope my son can find his life goal. I always ask him ‘what is your life goal?’ and he said, ‘I don’t know’. He always said that. I guess... he is interested in running and playing basketball at the moment.” (Mother, 40-44 yr, AFP1) “會想有啲活動可以令佢自己建立啲興趣。因為佢無特定鍾意嘅嘢去做，咁好多時佢會覺得好無聊咁樣。咁如果有啲活動可以建立到佢自己嘅興趣嘅話，咁佢空餘嘅時間可以有嘢做會令到佢個人開心多啲。” (姊姊，20-24 歲，AFP3) “I would like to have some activities that can help develop his interest. He feels bored most of the time because he doesn’t have any specific activities. Thus, if he can find his interest, he can have fun.” (Sister, 20-24 yr, AFP3)
Constraint	Arrangement	***<u>Time constraint on meeting with probation officer</u>*** “見感化主任個時間係 office hour。咁其實對一個受感化嘅人呢，如果真係想搵工做，其實係一個困難之處，因為要喺 office hour 咁然後又要請假…去見感化官，就俾人炒咗魷魚。” (母親，60-64 歲，AFP2) “(He) meets with the probation officer during office hour. This is indeed a difficulty for an offender who is actively seeking for a job Because he had to take leave to meet probation officer and he was fired.” (Mother, 60-64 yr, AFP2)

Comments on group activity (Cominbed intervention arm only)

Theme	Subtheme	Quotes
Overall impression	Positive feedback	“暫時來講比我印象係有組織囉…唔錯嘅。” (兒子，15-17 歲，CFP1) “My impression (of the programme) right now is it’s organised…not bad.” (Son, 15-17 yr, CFP1) “幾正面。” (母親，55-59 歲，CFP4) “(The programme is) quite positive.” (Mother, 55-59 yr, CFP4)
	Increased interaction between family members	“我覺得呢啲活動都係正面嘅…同家人之間有個互動。” (母親，65 歲或以上，CFP7) “I think this activity is positive since it is interactive with family.” (Mother, 65 yr or above, CFP7) “我覺得係社署裡面係一齊共同有一啲活動係感化雙方，一齊參與呢，咁係好事來。你無論搞咩活動都好…係有一啲咁嘅活動係好事。” (母親，65 歲或以上，CFP7) “I think the group activities that SWD provide is to influence both parties. Any kind of group activities is a good thing.” (Mother, 65 yr or above, CFP7)
	Helped boost participant’s confidence	“大家會溝通多咗，咁其實我自己都覺得都有啲成功感。因為都畫得到，我唔識畫畫，咁係呢方面，其實佢會搵到佢個個…自己識嘅野去教番我。佢個個自信心會影響到，咁我覺得呢方面幾好，搵到一啲佢有信心嘅野出來。” (伴侶，男，55-59 歲，CFP5) “There’s more communication between us. I think I feel a sense of accomplishment too. I don’t know how to draw but I was able to do it as well. This helps him find something he knows to teach me. This affects his confidence. I think it’s helpful to find something he has confidence in doing.” (Partner, male, 55-59 yr, CFP5)
Settings and content		“好似上次玩嗰啲扔紙仔…個個人參與呢，就好似投入啲喇，大家玩得開心啲囉，因為全人類都參與。” (母親，55-59 歲，CFP4) “Like last time when we were tossing the paper balls, everyone seemed to be involved. We all had fun because everyone participated.” (Mother, 55-59 yr, CFP4) “好似上次咁，你話由一個好簡單嘅圖案，點樣透過你個思考…靜態嘅慢慢將你個思維投入咗係個線條裡面。原

Theme	Subtheme	Quotes
		來咁樣，可以畫出個咁靚嘅圖案喎，咁呢樣野，係好嘅。咁可能你帶多啲呢啲野，係將佢個 focus 有啲…可能太動嘞，個人太躁喇，將佢 calm down 番。” (母親，65 歲或以上，CFP7) “Maybe he’s too active or impatient, so these activities allow him to focus and calm down. Maybe you can bring in similar things (group activities), allowing him to focus and calm down because he’s too impulsive and active.” (Mother, 65 yr or above, CFP7) “最深刻係音樂治療喇。上一課講嗰啲音樂治療喇，譬如…冥想呀…聽嗰啲音樂，感受到嗰種氣氛呀，播一啲音樂呀，去 feel 下去泰國嘅旅遊呀咁樣，去播啲音樂出來，等你感覺呀，會感應到不同嘅環境音樂治療幫到嘅。等你…心靈…同埋你身體嘅器官你都會 feel 到嘅。” (伴侶，男，50-54 歲，CFP2) “The most memorable (group activity) is music therapy. For example, listening to music while meditating. It felt like going to Thailand for vacation while they played the music. Your soul and body can feel its effect.” (Partner, male, 50-54 yr, CFP2)
Expectations from group activity	Interaction within family	“都係係希望透過多啲嘅活動喇，去帶動返家人同埋…個關係。” (兄長，30-34 歲，CFP3) “I just hope our family relationship will improve through joining more (group) activities.” (Brother, 30-34 yr, CFP3) “最大期望緊係想個互動性會更加強…因為普通家人相處可能…特別係出咗來做野嘅。咁其實基本上，往後嘅相處都係多數係屋企人食飯 就係最珍貴。 咁呢另類嘅活動，係嘞， 就可以…我會自己覺得去…用另一個角度去觀察嗰個小朋友究竟…一個成長， 究竟佢有無啲咩唔同。” (兄長，30-34 歲，CFP3) “My biggest expectation is hoping there will be more interaction opportunities. It’s difficult to get together in a normal household when everyone is working. So, I think these group activities allow you to see your child’s growth in another perspective.” (Brother, 30-34 yr, CFP3)
Constraints	Difficult to arrange schedule	“每個家庭啲作息時間都唔同喎，返工呀，樣樣野，假期。” (母親，55-59 歲，CFP4) “Each family’s work and rest time are different, like work, other activities, and days off.” (Mother, 55-59 yr, CFP4)

5.3.5.1 Conclusions

Family members of the service users provided positive comments towards the probation service and the intervention programme. They believed the probation service was a useful resource in guiding the probationers back on track. After joining the intervention programmes, the family members observed familial changes including improved family relationship and increased communication between themselves and the participant. As recommended by family members, future group activities can be led by service users to help boost their self-esteem.

CHAPTER 6 DISCUSSION AND CONCLUSION

6.1 Summary and discussion

The Holistic Health Family Project was a pilot project that was first of its kind to collaborate with the SWD Probation and Community Service Orders Office. In particular, the project generated new evidence to support the effectiveness of the intervention programmes developed in accordance with the concepts of positive psychology and the SLT. The intervention groups were supplemented with a workbook for improving family relationship and encouraging daily ZTEx practices. Led by probation officers, the group activity had created an environment that was supportive for physical activity through role models, peer support, and encouragement of families to exercise and communicate with the probationers. The design, implementation, and evaluation of this project has provided strong evidence of effectiveness and can serve as a reference for future projects.

Evaluation of the TTT has provided insightful feedback from quantitative and qualitative results. Trainees indicated that the training was easy-to-understand and comprehensive. The TTT not only helped their work, but also improved their health behaviour and benefited family well-being. Trainees also successfully designed and implemented the intervention trial for about 600 probationers and their family members.

The results from quantitative assessments reflected an increase in moderate and vigorous physical activity performance over time in intervention groups. In particular, participants expressed an increased frequency of ZTEx performance with family over the course of 3 months. The assessments also revealed that participants praised and expressed appreciation to their family more often. These findings suggest ZTEx can provide a shared platform for participants and their family members to exercise together which in turn create opportunities for more communication and quality time together. As a result, family relationship and FAMILY 3Hs have shown improvements over time. The brief intervention group showed increases in self-esteem over the course of 3 months. This suggests that the intervention programme was effective in improving the participants' self-esteem. Overall, the intervention programmes did not affect self-perceived physical health although self-perceived mental health and subjective happiness improved over time.

The results from the qualitative focus groups supported the findings from the quantitative assessments. Through the focus group interviews, participants indicated that the intervention programme was well-organised and executed. The participant's workbook acted as a reminder to perform ZTEx regularly. In particular, participants in the combined intervention group commented the group activity created a rare opportunity for themselves and their family members to interact together. The ZTEx demonstration by Professor T.H. Lam during the group activity left a deep impression on the participants and their family members. The experiences encouraged the participants to practice ZTEx at home and helped with the sustainability of such physical activity behaviour. Many messages were touching, encouraging, and useful for future programmes. It is also worthy to note that the participants suggested such group activity to be open to the public and that the concept of ZTEx should be widely disseminated and implemented across the community to benefit more individuals.

In summary, The Holistic Health Family Project with rigorous evaluation using a care-as-usual group had provided strong evidence on feasibility and effectiveness of the interventions. Positive feedback and scientific outcome measures confirmed the successful implementation of the project. Future improvements in the implementation of such projects and population groups and in the sustainability of the project effect are warranted.

6.2 Strengths and limitations

6.2.1 Strengths

The intervention programmes were designed with the suggestions and concerns received from the probation officers' needs assessment to maximise the suitability, feasibility, and sustainability of programme for the targeted population. Moreover, the intervention programmes were brief but supported by concepts and theories that have been widely accepted by researchers with good evidence.

A RCT, which is the best trial design for evaluating effectiveness, was carried out in this project using two intervention groups and a control group for generating the strongest scientific evidence. Validated questionnaire scales were used as available to allow for higher validity of what they purport to measure. The study had high retention rates because participants could be requested to complete the questionnaire voluntarily during the mandatory monthly reporting to the probation office.

Training programmes and post-training support were provided to officers and workers of SWD to equip them with knowledge and skills in implementing the intervention programmes. The trained officers also were benefited particularly by ZTEx. They were given the flexibility of how to present the intervention materials and a supporting manual to guide them through positive psychology concepts.

Both quantitative and qualitative methods were used and the results were consistent and robust. As not all outcomes were different between intervention groups and the control group, social desirability bias was unlikely to be substantial.

The results from The Holistic Health Family Project using brief intervention and ZTEx have provided invaluable experiences and strong evidence for policy makers, community leaders, and stakeholders to use and further develop such low cost and simple interventions for other participants in the community.

6.2.2 Limitations

The study had several limitations. Despite the best effort to verify that the intervention sessions adhered to project aims and positive psychology theme, it was difficult to conduct quality control using standard criteria for the delivery of each of the brief intervention session as this was done on an individual face-to-face basis. Also, recruitment took longer than expected due to the strict inclusion criteria. As the present study did not have a long follow-up, future programs can include more and longer follow-ups to evaluate the long-term effect of the intervention. Finally, as the interventions were very brief, the effect size of some outcomes was small. Booster sessions could be added to increase the effect size and evaluated vigorously.

6.3 Implications and suggestions for future planning

Developing new interventions in probation service and evaluating the effectiveness vigorously is useful for generating new evidence and experiences for service improvement and better outcomes for probationers and their families. As studies and evidence are scarce, the successful intervention and very positive results of the present project using the randomised controlled trial with 3 arms to test two different interventions versus a control group show that the best science from the academia can be integrated with the best practice of the social service workers to generate the best evidence. Using ZTEx and the family approach with family participation can make the design and implementation of the interventions easier and more enjoyable for all, and can enhance FAMILY 3Hs through improving family relationship and communication. Physical activity and family exercising together is a useful and welcome approach to both service providers and service users and their family members. These can be easily integrated with positive psychology interventions (such as more praise and appreciation) in the intervention activities.

The FAMILY Project Team has been advocating and implementing the concept of “Best Science and Best Practice”. Although this was a pilot project, the study was designed based on theoretical and scientific framework, substantial literature reviews, and past experience from other FAMILY projects with invaluable input from the social service partners. The project has provided insights and evidence that the deep collaboration between social service organisations together with academic researchers to design and test new service models can be fruitful, enjoyable, and mutually beneficial to both sides, and to ultimately benefit the service users and their families, and to the wider community.

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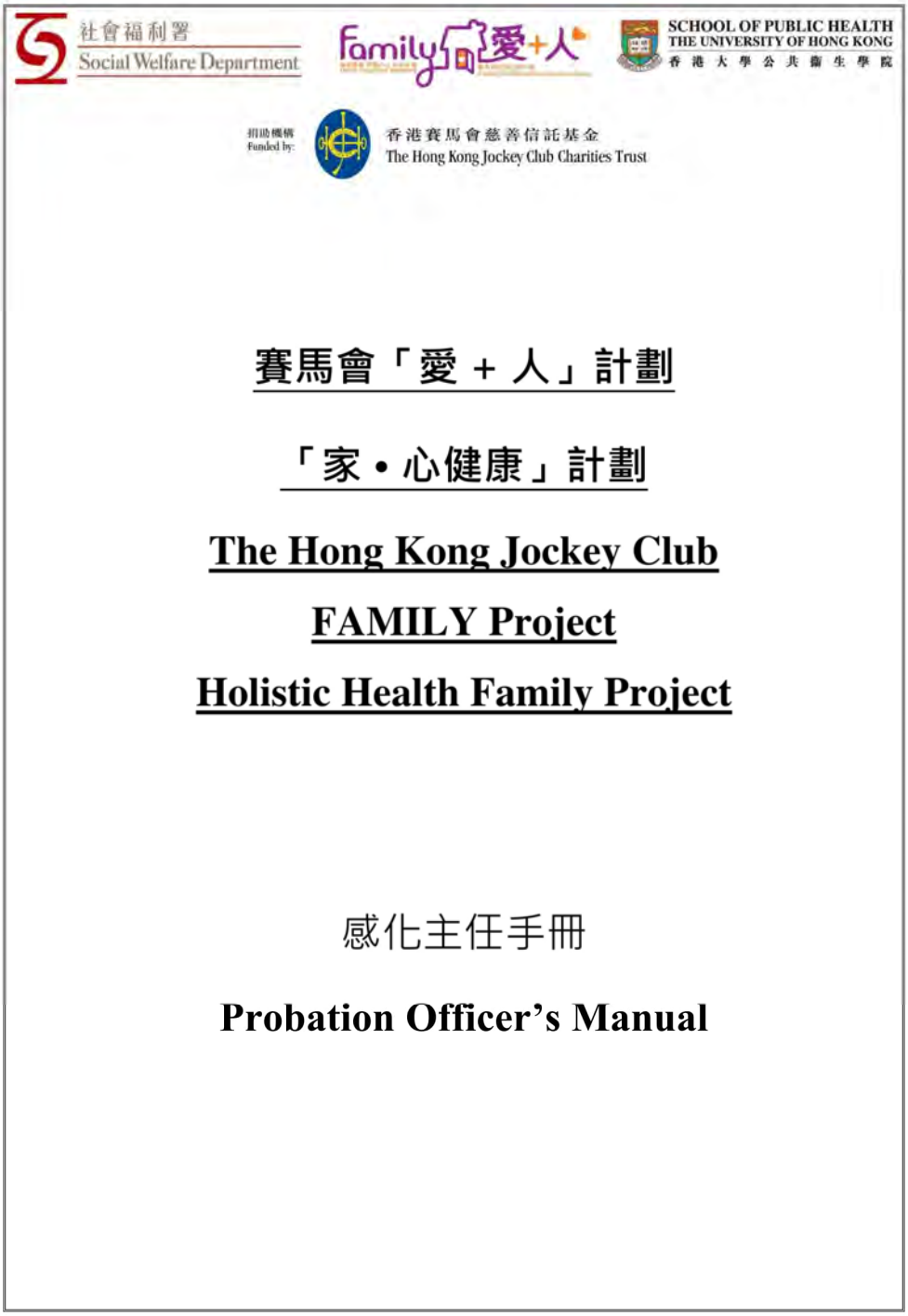
APPENDICES

Appendix 1

Practice manual for probation officers


社會福利署
Social Welfare Department
Family 愛+人
SCHOOL OF PUBLIC HEALTH
THE UNIVERSITY OF HONG KONG
香港大學公共衞生學院
捐助機構
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香港賽馬會慈善信託基金
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The Hong Kong Jockey Club

FAMILY Project

Holistic Health Family Project

感化主任手冊

Probation Officer's Manual

Appendix 2

Homework booklet for probationers

Appendix 3

Publications

Chan SS, Viswanath K, Au DW, Ma C, Lam W, Fielding R, Leung G, Lam T-H: Hong Kong Chinese community leaders' perspectives on family health, happiness and harmony: a qualitative study. Health education research 2011, *26*(4):664-674.

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Appendix 4

Recognition in the Avant Garde Positive Psychology Clinical Intervention Challenge

Appendix 5

Dr. Lai Yuen Kwan Agnes' Doctor of Philosophy thesis

Train-the-Trainer Programmes for Community-based Intervention Projects to Enhance Family Well-being in Hong Kong

By

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A thesis submitted in partial fulfilment of the requirements for
the Degree of Doctor of Philosophy
at The University of Hong Kong

Appendix 6

Conference presentations

Lam TH, Leung C, Wan ANT, Soong CSS, Wang C, Chan SSC. Strengthening family relationship to increase family health, happiness and harmony: findings from a Community-based Participatory Research (CBPR) project under FAMILY: A Jockey Club Initiative for a Harmonious Society Project in Hong Kong. 6th Global Conference of the Alliance for Healthy Cities, Hong Kong, October 29 – November 1, 2014.

Lam TH, Mui M, Wan ANT, Soong CSS, Wang C, Chan SSC. Happy Family Kitchen II, a Community-based Participatory Research (CBPR) to enhance family health, happiness and harmony in Hong Kong: A cluster randomized controlled trial under FAMILY: A Jockey Club Initiative for a Harmonious Society Project. 6th Global Conference of the Alliance for Healthy Cities, Hong Kong, October 29 – November 1, 2014.

Wang X, Wang MP, Lam TH, Viswanath K, Chan SSC. Physically active adults reported higher levels of family health, happiness and harmony: findings from the Hong Kong Family and Health Information and Trends Survey (FHInTs) under FAMILY: A Jockey Club Initiative for a Harmonious Society Project. 6th Global Conference of the Alliance for Healthy Cities, Hong Kong, October 29 – November 1, 2014.

Lam TH, Chen J, Wang MP, Wang X, Soong CSS, Wan ANT, Chan SSC. Secondhand smoke exposure and health-related quality of life in never smokers: The Hong Kong Jockey Club FAMILY Project. 16th World Conference on Tobacco or health - Tobacco and Non-communicable disease, Abu Dhabi, United Arab Emirates, March 17-21, 2015.

Chan BHY, Pang H, Yuan BY, Li TK, Leung GM, Ni MY. A randomised factorial design to examine the effect of requesting Hong Kong identity card (HKID) numbers and participation incentive on participant's consent to health record linkage: evidence from the FAMILY Cohort. Annual Scientific Meeting, Hong Kong College of Community Medicine, Hong Kong, September 19, 2015.

Ni MY, Li T, Yu NX, Pang H, Chan BHY, Leung GM, Stewart SM. Normative data and psychometric properties of the Connor-Davidson Resilience Scale (CD-RISC) and the abbreviated version (CD-RISC2) among the general population in Hong Kong. Annual Scientific Meeting, Hong Kong College of Community Medicine, Hong Kong, September 19, 2015.

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Lam TH, Chan BHY, Yuan B, Ni MY. Smoking and family harmony in Hong Kong Chinese: evidence from the FAMILY Cohort, Society for Research on Nicotine and Tobacco Annual Meeting 2016, United States, March 2-5, 2016.

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Lam TH. Zero-time Exercise (ZTEx): Enjoyable, easy and effective — an innovative concept to promote exercise for anybody, anytime and anywhere: A new initiative from the Hong Kong Jockey Club FAMILY Project, The XIII International Congress on Obesity, United Kingdom, May 1-4, 2016.

Lam TH, Chan BHY, Li TK, Ni MY. Change in body mass index (BMI) among Chinese in a general population: the FAMILY Cohort, The XIII International Congress on Obesity (ICO), Vancouver, Canada, May 1-4, 2016.

Lam TH, Chen S, Wan ANT. Zero-time Exercise, a new approach to promote physical activity — Hong Kong FAMILY Project: A Jockey Club Initiative for a Harmonious Society, The XIII International Congress on Obesity, United Kingdom, May 1-4, 2016.

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Lai A, Wan A, Lam TH. FAMILY Project: Training workshops for lay health promoters to implement a community-based intervention program, 215t Research Postgraduate Symposium, Hong Kong, December 1-2, 2016.

Lam TH, Wang MP, Shen C, Wan A, Chan SS. Pattern of health app use and associated sociodemographic factors in Hong Kong smokers - findings from FAMILY Project, Annual Meeting on The Society for Research on Nicotine & Tobacco, Florence, Italy, March 8-11, 2017.

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Lai A, Wan A, Lam TH. Hong Kong Jockey Club FAMILY Project: A 15-min Zero Time Exercise intervention to enhance well-being in older people, 12th International Symposium on Healthy Aging “Wellness and Longevity: From Science to Service”, Hong Kong, March 11-12, 2017.

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