

 THE HONG KONG POLYTECHNIC UNIVERSITY  
香港理工大學

 康復治療科學系  
Department of Rehabilitation Sciences

**Implementation Period: 1 July 2022 – 31 December 2023**


**Building capacity for anti-drug sector and healthcare sector in the use of different physical exercise modalities for treatment and rehabilitation**

提升及更新禁毒業界及醫療業界對於不同運動介入方法對於吸毒者在治療及康復成效的知識及技能

Reference no. BDF210023


The Hong Kong Polytechnic University





**Building capacity for anti-drug sector and healthcare sector in the use of different physical exercise modalities for treatment and rehabilitation**


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## Introduction

- **Review of Literature**
  - Drug dependent population has a desire to participate in physical exercise or physical activity (Neale, Nettleton, & Pickering, 2012)
  - Physical exercise induced neuroplasticity in the prefrontal cortex and improves executive functions and reduce compulsive behaviors in individuals prone to substance use disorders (Costa, Cabral, Hohl, & Fontes, 2019)
  - Physical exercise has significant effects on physical conditions, withdrawal symptoms, quality of life, mental disorder, and craving (Giménez-Meseguer, Tortosa-Martínez, & Cortell-Tormo, 2020; Wang, Wang, Wang, Li, & Zhou, 2014).


**Literatures support the use of physical exercise modalities for treatment & rehabilitation for drug abusers -> important to review the current situation in Hong Kong**



## Introduction

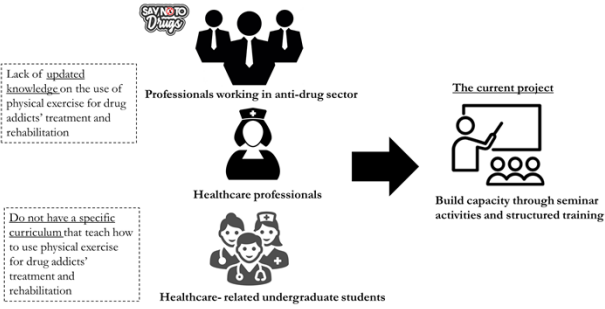
**Impression from Previous Beat Drugs Fund Projects:**

- Nearly half of the projects identified from the database used non-specific or a combination of physical exercise modalities for drug abusers
- While it is understandable that “trendy” sport/exercise was selected to help recruitment, a certain balance/consideration should also be made to the “effectiveness” of the type of exercise in helping drug abuser to achieve certain outcomes
- Most approved projects that used physical exercise intervention for treatment and rehabilitation **did not** measure the physical health change of the participants




## Introduction

- This territory-wide project aims at **building capacity** for industrial professionals, healthcare professionals, and healthcare-related undergraduate students on the use of different **physical exercise modalities** for treatment and rehabilitation for drug abusers



The diagram illustrates the project's objective. On the left, two groups are identified as having knowledge gaps: 'Professionals working in anti-drug sector' (with a 'SAY NO TO DRUGS' logo) and 'Healthcare-related undergraduate students'. Text boxes indicate they 'Lack of updated knowledge on the use of physical exercise for drug addicts' treatment and rehabilitation' and 'Do not have a specific curriculum that teach how to use physical exercise for drug addicts' treatment and rehabilitation'. An arrow points to the right, labeled 'The current project', which shows a person presenting to a group. Below this, it states 'Build capacity through seminar activities and structured training'.



## Introduction

- Main project activities:
  - Establish **interdisciplinary scientific committee** to **synthesize updated scientific evidence** on the use of physical exercise modalities for treatment and rehabilitation for drug abusers
  - Organize online seminars** for industrial professionals, healthcare professionals, and healthcare-related undergraduate students



## Inter-disciplinary scholars



**Dr Janet Lok Chun Lee**  
Principle investigator  
Specialty: Physical activity



**Dr Grace Wing Yan Au**  
Co-investigator  
Specialty: Sociology



**Dr Tai Wa Liu**  
Co-investigator  
Specialty: Nursing




**Dr. Chad Chan Wing Nga**  
Co-investigator  
Specialty: Physiotherapy



**Dr Wei Xia**  
Co-investigator  
Specialty: Nursing



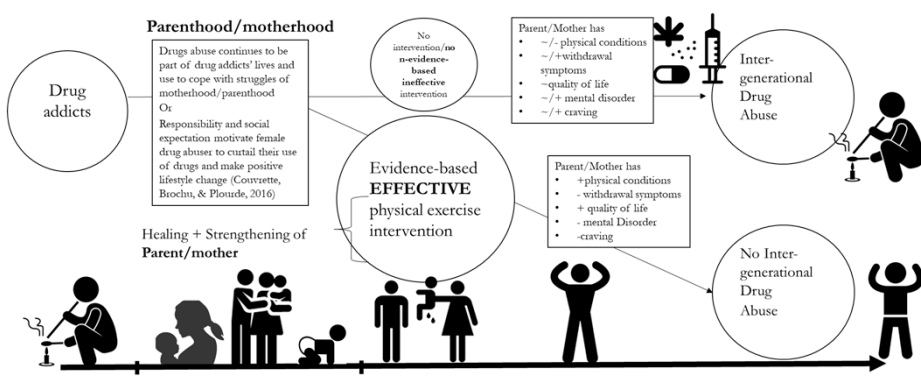
**Dr Jieling Chen**  
Co-investigator  
Specialty: Physiotherapy



## Project Impact

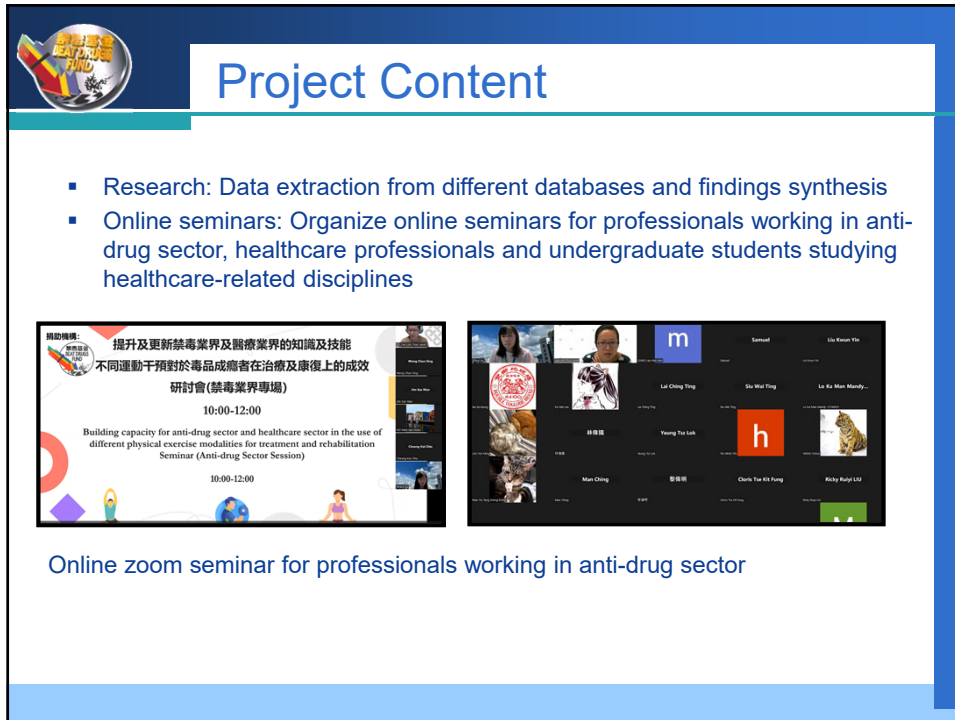
**Focus of the synthesis of scientific evidence:**

- **20's to 30's young adult group** -- highest uptake of drug use
- **Female (mother) drug abusers** -- inadequate support may cause intergenerational vicious cycle



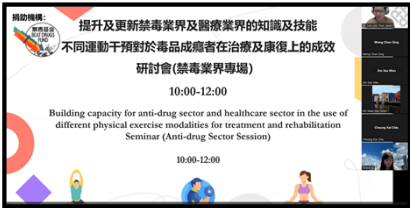
The diagram illustrates a cycle of drug abuse. On the left, a circle labeled 'Drug addicts' points to a box 'Parenthood/motherhood' which contains text about drug abuse in addicts' lives and the role of mothers. This leads to a central circle 'Evidence-based EFFECTIVE physical exercise intervention'. From this central point, two paths emerge: one leading to a box 'Parent/Mother has' with negative outcomes (physical conditions, withdrawal symptoms, quality of life, mental disorder, craving) which leads to a circle 'Inter-generational Drug Abuse' with an icon of a person smoking; the other path leads to a box 'Parent/Mother has' with positive outcomes (physical conditions, withdrawal symptoms, quality of life, mental disorder, craving) which leads to a circle 'No Inter-generational Drug Abuse' with an icon of a person celebrating. A bottom row of icons shows a person smoking, a family, and a person celebrating.

20 Parenthood/motherhood 30

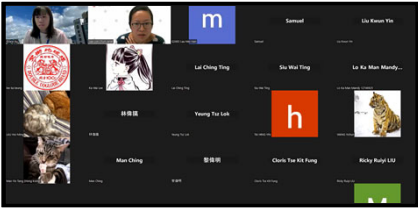


## Project Content

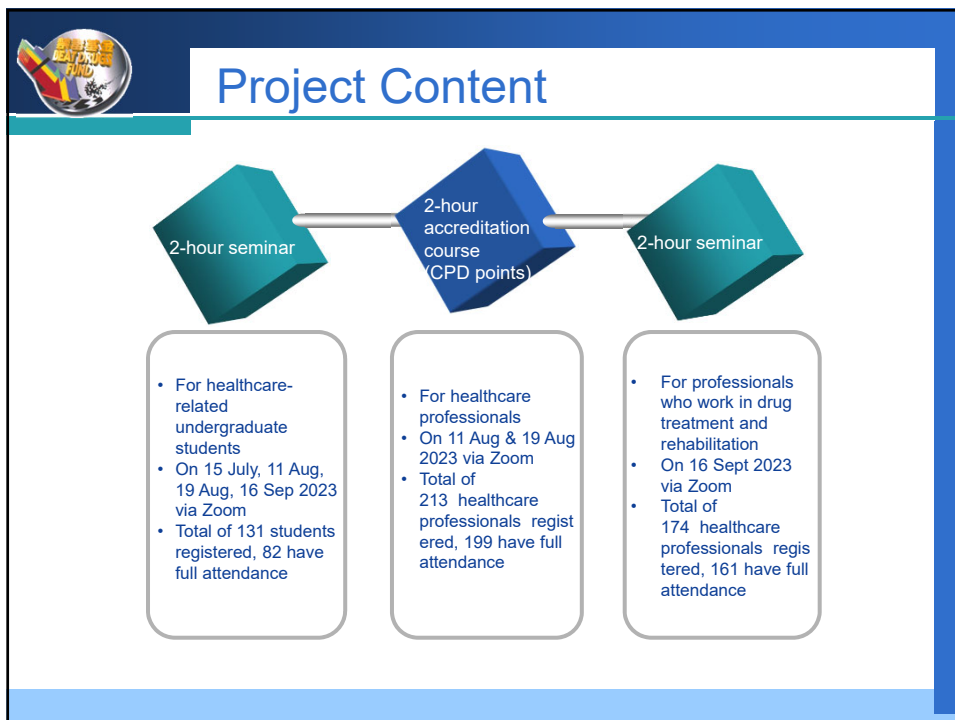
- Research: Data extraction from different databases and findings synthesis
- Online seminars: Organize online seminars for professionals working in anti-drug sector, healthcare professionals and undergraduate students studying healthcare-related disciplines




Building capacity for anti-drug sector and healthcare sector in the use of different physical exercise modalities for treatment and rehabilitation Seminar (Anti-drug Sector Session) 10:00-12:00



Online zoom seminar for professionals working in anti-drug sector



## Project Content




2-hour seminar — 2-hour accreditation course (CPD points) — 2-hour seminar

- For healthcare-related undergraduate students
- On 15 July, 11 Aug, 19 Aug, 16 Sep 2023 via Zoom
- Total of 131 students registered, 82 have full attendance


- For healthcare professionals
- On 11 Aug & 19 Aug 2023 via Zoom
- Total of 213 healthcare professionals registered, 199 have full attendance

- For professionals who work in drug treatment and rehabilitation
- On 16 Sept 2023 via Zoom
- Total of 174 healthcare professionals registered, 161 have full attendance




## Output and Outcome Evaluation

- Evaluation methods
  - Attendance
  - Pre and Post Questionnaire
- Output and outcome benchmarks
- Evaluation results




## Output Evaluation

	Expected Result	Achieved Result	Remark
<b>Output Indicator 1</b>	<ul style="list-style-type: none"> <li>• Provide a 2-hour seminar for 80 professionals who work in drug treatment &amp; rehabilitation</li> <li>• 56 participants have full attendance</li> </ul>	>100% Total of 174 healthcare professionals registered, 161 have full attendance	N/A




## Output Evaluation

	Expected Result	Achieved Result	Remark
<b>Output Indicator 2</b>	<ul style="list-style-type: none"> <li>Provide 2 sessions of 2-hour accreditation course for 100 healthcare professionals</li> <li>70 participants have full attendance</li> </ul>	>100% Total of 213 healthcare professionals registered, 199 have full attendance	N/A




## Output Evaluation

	Expected Result	Achieved Result	Remark
<b>Output Indicator 3</b>	<ul style="list-style-type: none"> <li>Provide a 2-hour seminar for 100 healthcare-related undergraduate students</li> <li>70 participants have full attendance</li> </ul>	>100% Total of 131 students registered, 82 have full attendance	N/A




## Outcome Evaluation

	Expected Result	Achieved Result	Remark
<b>Outcome Indicator 1</b>	70% of participants gain knowledge about the use of physical exercise modalities for drug dependent group	80.7% of participants gained knowledge about the use of physical exercise modalities for drug dependent group	N/A
<b>Outcome Indicator 2</b>	70% of participants gain knowledge about the use of physical exercise modalities for drug dependent group	78.4% of participants gained knowledge about the use of physical exercise modalities for drug dependent group	N/A
<b>Outcome Indicator 3</b>	70% of participants gain knowledge about the use of physical exercise modalities for drug dependent group	74.4% of participants gained knowledge about the use of physical exercise modalities for drug dependent group	N/A




## Experience Gained

- Reason behind success
  - PI work as project staff
  - Strong support from Department of Rehabilitation Sciences, PolyU
  - Network from co-investigator
- Reason behind underachievement of target
  - N/A
- Lesson learnt
  - N/A



## Other Findings/Project Impact

- Meetings with
  - The Society For the Aid and Rehabilitation of Drug Abusers
  - SideBySide
  - Correctional Services Department
  
- Invitation from SidebySide
  - Training for their colleagues



## Conclusion

- Conclusion
  - Three NGOs which have been using physical exercise as treatment and rehabilitation modality showed interest in future collaborative work
- Suggestions
  - NGOs apply funding and collaborate with academics for evidence-based practice in the future
- Way forward
  - Application of updated findings from scientific literature to inform practice in Hong Kong