

Life College Project Final Report

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This progress report presents the project objective, a review of overseas research on drug and vocational rehabilitation, descriptive of activities of the Life College Project, and findings from personal interviews with and a survey of participants in the Project.

Project Objective

The project is to achieve the following goals:

1. To provide evidence to gauge the effectiveness of the Project for its strengthening and improvement, and the effectiveness include the following indicators
 - 1.1. Vocational engagement: work hours, job stability, earnings, work commitment
 - 1.2. Illicit drug disuse: drug free days, drug abstinence
 - 1.3. Skill: illicit drug avoidance skill or self-efficacy, vocational skill
2. To muster evidence about success factors to guide the planning and implementation of the Project and its promotion and improvement, and the success factors include
 - 2.1. Project participation: vocational training, job matching and placement, group activity
 - 2.2. Personal characteristics: age, gender, education, work experience, illicit drug use experience
 - 2.3. Group characteristics: age, gender, education, work experience, illicit drug use experience
3. To generate insights for the further development of the Project

Particularly, the two research tasks are to achieve the following sub-goals in order to achieve the overall goals

1. Literature review is to:
 - 1.1. Procure and compile succinct information about overseas experience and research findings from literature (i.e., via academic electronic databases)
 - 1.2. Suggest the implications of the information for the Project
2. Needs assessment and evaluation is to:
 - 2.1. Assess the participants' needs for services in terms of experiences and skills
 - 2.2. Evaluation the effectiveness of the Project
 - 2.3. Compare with information gathered from literature
 - 2.4. Propose ways for further development and improvement

Overseas Experience

There are long-standing and convincing arguments for the importance of employment in addiction treatment (Platt, 1995), suggesting a shift from a medicalized model to a social restorative model. The interwoven relationship between unemployment and drug abuse has attracted much scholarly attention: chronic unemployment is closely related to drug abuse (e.g., Helzer, Robins, & Davis, 1976), and drug abusers usually face higher risks of unemployment, especially chronic unemployment (e.g., Maddux & McDonald, 1973; Metzger & Platt, 1987; Silverman & Robles, 1999; Vaillant, 1988). Moreover, it is common that chronic unemployment usually leads drug abusers who have achieved abstinence to relapse to addiction (Silverman & Robles, 1999).

Therefore, considering subtle connections between employment and drug abuse, there is increasing awareness about the importance of employment and employment-based interventions in treatment of and recovery from drug abuse (Platt, 1995). Vaillant (1998) illustrated, “work provides structure to the addict’s life and structure interferes with addiction” (p.1154). It usually counts as an indispensable element for addiction treatment associated with retention in treatment or even any successful outcome such as abstinence (DeLeon, 1984; McLellan, 1983; National Institute on Drug Abuse [NIDA], 1979). Furthermore, it counts as a desired outcome of (re)socialization, allowing for integration into the “straight world” (e.g., Hall, 1984; Hubbard, Rachal, Craddock, & Cavanaugh, 1984; Simpson, 1984). As evidenced in the study by Joe, Chastain, and Simpson (1990), suggesting that by holding a job, clients may establish a legal source of income and improve self-esteem, which in turn reduce the use of illicit drugs and thus allow them to refrain from any behavioral misconduct.

Vocational rehabilitation, widely discussed in the fields of health, psychology, and social work, is generally viewed as the most effective means of refocusing drug abusers toward the world of work and, subsequently, mainstream society (Deren & Randell, 1990). It typically includes assessment of individual vocational needs, counseling, skills training, and job placement. During the past decades, a large number of interventions for facilitating the rehabilitation of drug abusers operated. These interventions fall into two main streams according to the different roles that employment played in: 1) typical employment-based interventions, and 2) therapeutic workplace intervention.

Typical Employment-Based Interventions

The typical employment-based intervention has thrived ever since the 1970s. A number of programs have attempted to provide a range of interventions including supported work programs, job seeking and placement programs, and personal competency/skills building programs (Platt, 1995). **Supported work programs** aimed to provide subsidized employment and on-site training for drug abusers with employment problems in real work setting. In the *Wildcat* experiment, the first large-scale, random-assignment, controlled study of vocational rehabilitation targeted at ex-drug addicts (primarily methadone clients) and ex-offenders in New York, over 600 clients of drug treatment enrolled in subsidized jobs. Unlike the traditional approach providing job training and placement, this project sought to restructure jobs to maximize the chance of maintaining employment in these chronically unemployed. As expected, 3 years after its onset, about one third of Wildcat workers “graduated” to nonsubsidized jobs, and most kept these jobs for at least 6 months. The longer an employee was involved in the program, the more likely the employee was to find subsequent employment (Friedman, 1978). In a like manner, the *National Supported Work Demonstration Project* provided supported work to needy people using an experimental design. Few differences in employment status, hours worked, or earnings occurred between the experimental group and control group when the supportive environments are the same during the first 18 months. A moderately strong difference, with 48% of the experimental group employed and 31.6% of the controls employed, emerged when the work expectations for the experimental group were increased with the intention to develop job skills and appropriate work habits to prepare participants to enter the job market upon completion of the project (Dickinson & Maynard, 1981). Another remarkable project is the *Manpower Demonstration Supported Work Project*. Over the 12-month assistance in finding employment, though participants in the experimental group had worked more hours than controls and had higher employment rates, differences were significant only for earlier entrants due to the lower employment rates among early controls. The arrest rates for the control group, however, were lower, methadone clients also turned out to profit more from

the program than did other drug treatment clients (Board of Directors, Manpower Demonstration Research Corporation, 1980). Taken together, these real-setting supported programs succeeded in maximizing employment chances, at least at the time of evaluation. It is noteworthy that, however, most of the intervention was allegedly questionable as being diffuse and insufficiently articulated, thus limiting the possibility of replication (Platt, 1995). Other problems such as a lack of handling of dropouts also greatly attenuate the effectiveness of the intervention (Hall, 1984).

Job-seeking and placement programs endeavored to provide drug abusers with job-seeking consultation, vocational training, as well as proper placement that facilitated the clients to achieve employment. The *Training, Rehabilitation, and Employment for Addicts in Treatment (TREAT)* program represented a major program in the field of job seeking and placement. Clients were recruited from a large multimodality program and randomly assigned to either a vocational training or control condition. The former showed a decrease in drug use and better treatment outcomes but did not differ from controls with respect to retention in treatment or criminal behavior. It was also reported that they worked full time more often and earned higher salaries but did not differ from controls in terms of the number of weeks worked. *Employment specialists* were assigned to work with methadone, residential drug-free, or outpatient projects, working either directly with clients or as staff consultants. The counselor usually “conducted a series of workshops and group sessions designed to teach reading and prepare for a general equivalency diploma, as well as job-seeking and job-holding skills” (McLellan, Arndt, Metzger, Woody, & O’Brien, 1993). No significant differences in employment appeared, although significant improvements in treatment retention and reduction in illicit drug use appeared in the experimental groups. Those employed at admission and remained employed (79%) were 6 times of those unemployed at admission and became employed (13%). The study also found that with methadone patients randomly assigned to receive various degrees of methadone services, those in the enhanced condition had improvements in employment status with the contribution of a half-time employment counselor (McLellan et al., 1993). Lastly, *JOBS for Rehabilitated Drug Abusers* was a demonstration project to obtain jobs for ex-drug abusers, provide screening and counseling to facilitate appropriate placement within these jobs, and furnish follow-up to employers and workers in terms of problems encountered. The jobs provided had a wide range to cater to the clients. Participants’ attitudes toward the job, ability to relate to co-workers, and desire to succeed were very high in comparison with other employees. Only in the areas of punctuality (20.7%) and absenteeism (34.5%) were the negative ratings for ex-abusers greater than 20%.

Personal competency/skill-building programs tried to help methadone maintenance clients seek proper jobs through improving their job-seeking and interviewing skills. Two programs are most popular, Job Seekers’ Workshop and the Employment Readiness Skill Intervention. *Job Seekers’ Workshop* aimed to increase success in obtaining employment by improving the job-seeking and interviewing skills of a sample of methadone maintenance clients seeking employment in San Francisco. It was a behaviorally based, skill-training program. Higher ratings figured in the workshop participants for job-seeking skills (Hall, Loeb, Norton, & Yang, 1977; Hall, Loeb, LeVois, & Cooper, 1981). Aimed at documenting patterns of employment among methadone clients and based on interpersonal cognitive problem-solving training, the *Employment Readiness Skill Intervention* comprised a regular methadone treatment and 10 small-group workshop sessions with particular emphases on effective coping with employment barriers (Platt, Husband, Hermalin, Cater, & Metzger, 1993; Platt & Metzger, 1987). Six months after the training, employment was more likely for those participating in the experimental condition. Taken the two programs together, it was concluded that dissemination methods involving personal contact (site visits and conferences)

produced more adoption than did the use of printed materials alone, and that residential treatment programs, in comparison with outpatient drug-free or methadone programs, were more likely to adopt the workshop (Platt, Taube, Duome, & Metzger, 1988; Sorensen et al., 1988).

The table below categorizes abovementioned programs, including action plans, results, as well as success factors (see Table 1). Those programs that definitely focused on some target groups and considered different clients' employment needs had a higher possibility to achieve significant effects.

Table 1: **Typical Employment-based Programs for Drug Abusers (as cited in Platt, 1995)**

Programs		Concrete intervention & effects	Success factors	Author/Year
Supported work program	Wildcat experiment (4 years)	Restructure jobs to maximize in-treatment clients' employment maintenance; Assign different jobs to different groups of people	The nature of jobs: highly structured	Friedman (1978)
	National supported work demonstration project (18 months)	Provide supported work for chronically unemployed ex-addicts; Increasing work expectation such as job skills and work habits during client's participation	Increasing work expectation after the baseline phase	Dickinson & Maynard (1981)
	Manpower demonstration supported work project (12 month)	Provide supported work mainly for ex-addicts in methadone maintenance programs; Provide assistance in seeking jobs	The real-setting of supported work	Board of Directors, Manpower Demonstration Research Corporation (1980)
Job-seeking and placement program	Training, rehabilitation, and employment for addicts in treatment (TREAT) program	Provide vocational training for the addicts from different treatment program	Appropriate for methadone clients.	Bass & Woodward, 1978, cited in Hall (1984)
	Employment specialist program	Assign employment specialists to work with methadone, residential drug-free, or outpatient programs	Employment specialist provides with direct consultation.	NIDA (1982)
		Assign a half-time employment counselor to clients receiving standard/enhanced/minimum methadone services		McLellan, Arndt, Metzger, Woody, & O'Brien (1993)

Programs		Concrete intervention & effects	Success factors	Author/Year
	JOBS for rehabilitated drug abusers	Help ex-drug abusers obtain jobs; Provide screening and counseling to facilitate appropriate placement within obtained jobs; Tackle the follow-up problems	Match clients with proper placement and furnish follow-ups	Double & Koenigsberg (1977)
Personal competency skill-building program	Job seekers' workshop	Improving the job-seeking and interviewing skills of methadone maintenance clients; Behaviorally based, skill training	In-person contact; planned dissemination; residential programs	Hall et al.(1981)
	Employment readiness skill intervention	Interpersonal cognitive problem-solving training; Assist clients to identify and respond to their personal employment barriers	Equip participants with problem-solving skills	Platt et al. (1993); Platt et al.(1986); Platt et al.(1988);

Therapeutic Workplace Intervention

The outcomes of three major types of specialized vocational interventions of typical employment-based interventions are modest and few have reliably produced lasting, long-term employment gains (Magura, Staines, Blankert, & Madison, 2004; Platt, 1995). In order to improve the sustainability of intervention programs, the therapeutic workplace intervention provides a cost-effective means of arranging and maintaining reinforcement contingencies for drug abstinence while simultaneously providing valuable training and work experience (Wong & Silverman, 2007).

This approach is intensive in nature, tailored to the needs of chronically unemployed and unskilled individuals manifesting long histories of drug addiction (Silverman, 2004). As the name implies, it provides both training and employment over extended periods. However, only if drug user patients provided objective evidence of drug abstinence (e.g., drug-free urine samples) could they be hired and paid to work each weekday. This intervention consists of two phases in which participants may progress sequentially: a training phase and a working phase. Specifically, Phase 1 aims to initiate sustained abstinence, to establish needed job skills, and to promote good work habits; while in Phase 2, qualified participants enter an income-producing therapeutic workplace business under a wage-based abstinence reinforcement contingency. Running as a social business model, the therapeutic workplace usually provided computer-based or web-based data entry and word-processing work for drug abusers (Silverman & Robles, 1999).

Contingency management strategy is essential in the programs to modify troublesome behaviors and to improve the training and work performance of most participants (Wong & Silverman, 2007). It operated throughout the programs (Silverman et al., 2001; Dillion et al., 2004) and was highly effective in increasing and maintaining attendance and punctuality, promoting high rates of work productivity, and establishing job skills for employment. Under this specific intervention, clients obtained certain reinforcements, such as money, voucher, and other privileges only if they can provide objective evidence of drug abstinence, as mentioned above (e.g., drug-free urine samples). On the contrary, relapsing to drug use will lead to loss of reinforcement (Higgins et al., 1994; Silverman et al., 1996). Money or the voucher as reinforcement was escalating (Higgins, et al. 1994). At the very beginning, the value of the voucher was low, but it will gradually increase as the clients continuously provide drug-free urine samples. However, once the client provided a positive urine sample, he or she cannot receive a voucher and the value of the next voucher would return to the initial low value.

The therapeutic workplace intervention presents itself with many new characteristics. Among other things, it successfully incorporates contingency management interventions into skills training programs, thus effectively promoting sustained drug abstinence and positive work-related behaviors, such as the acquisition of job skills, consistent and reliable attendance at the workplace, and high rates of data entry productivity (e.g., Silverman et al., 1996). Special contingencies ensured behaviors and skills required in any conventional businesses, with high-magnitude and long-duration reinforcement for drug abstinence and good work behaviors, but serious substantial penalties for drug use and problematic employment behaviors (Wong & Silverman, 2007). Another noteworthy fact is that the therapeutic workplace operated as a social business that aims at both social benefit and business profit (Silverman et al., 2003). In other words, it provides work opportunities, skill-training sessions to build up clients' abilities to adjust to society and decrease the risks of relapsing to drug abuse. Meanwhile, clients' participation in employment program could also provide sustainable funding for the implementation of the therapeutic workplace intervention (Aklin et al., 2014; Knealing et al., 2006; Silverman & Robles, 1999).

The therapeutic workplace intervention was successfully applicable to a variety of

treatment programs targeted at different types of drug abusers. The table below summarized key evaluation studies and their findings (see Table 2). The first series of studies demonstrated that the therapeutic workplace intervention has a significant effect on drug abusers' *abstinence* through applying this means to different groups of drug abusers (Silverman et al., 2001; Silverman et al., 2002; Silverman et al., 2007; Silverman et al., 2007; Dunn et al., 2013). The second series of studies proved that the therapeutic workplace intervention can significantly keep clients' high *work productivity* through increasing reinforcement magnitude (Wong et al., 2003), and *consistent work attendance* through modifying the contingencies (Wong et al., 2004a, 2004b). To improve the efficiency of *skill training*, Dillon et al. (2004) omitted the basic academic skill-training program utilized in prior studies. This change not only shortened the time spent on skill training but also improved efficiency in achieving marketable job skills. Latest studies also demonstrated significant effects of the therapeutic workplace on the abstinence and training engagement for homeless alcoholics (Koffarnus et al., 2011), on adherence to depot naltrexone for unemployed opioid-dependent adults (Everly et al., 2011) and for opiate-dependent and cocaine-using injection drug users (Dunn et al., 2013).

Table 2: **Therapeutic workplace (TW) intervention**

Interventions	Objective/outcomes	Clients (N)	Duration	Success factors	Author/Year
A reinforcement-based TW	Abstinence	Pregnant & postpartum drug abuse patients (40)	6 months	Reinforcement & pregnancy leave	Silverman et al. (2001)
A reinforcement-based TW	Abstinence	heroin-and cocaine-dependent ,unemployed, treatment-resistant young mothers (40)	3 years	Reinforcement & off-site employment supervision	Silverman et al. (2002)
Reinforcement magnitude in a TW	Data-entry productivity	Unemployed methadone patients (6)	97 to 130 weeks	High-magnitude reinforcement	Wong, et al. (2003)
TW	Computer-based typing & keypad skill training outcomes	Unemployed detoxified HIV-positive injection drug users (32)	11 months	Intensive & focused training Monitoring & reinforcement	Dillion et al. (2004)
Contingency management in a TW	Reliable employment attendance	Chronically unemployed substance abusers (4)	2-4 months	Reinforcement & Penalties	Wong et al. (2004a)
Modified contingency management in TW	Consistent attendance	Therapeutic workplace participants (5)	178 weeks	Modified contingency management Personal day	Wong et al. (2004b)
Web-based TW	Abstinence, skill acquirement, financial success	Chronically unemployed adults with long histories of heroin and cocaine addiction who are at a high risk of acquiring or spreading HIV (three groups)	3-6 months	Omit basic skills training; High-quality data entry service	Silverman et al., (2005)

Interventions	Objective/outcomes	Clients (N)	Duration	Success factors	Author/Year
Employment-based reinforcement	Cocaine abstinence	Cocaine injection drug users (56)	68 weeks	High-magnitude & long-duration abstinence reinforcement	Silverman et al. (2007)
TW	Economic cost of TW	Methadone maintenance clients (122)	22 weeks	Social business model	Knealing et al. (2008)
TW	Abstinence Training engagement	Chronically unemployed, homeless, alcohol-dependent adults (124)	28 weeks	Reinforcement	Koffarnus, Wong et al. (2011)
TW	Adherence to depot naltrexone	Opioid dependence (35)	26 weeks	Employment-based contingency management	Everly et al. (2011)
TW	Adherence to oral naltrexone	Opiate dependence (67)	26 weeks	Employment-based contingency management	Dunn et al., (2013)
TW	Long-term outcomes in abstinence and employment	Pregnant and postpartum women in methadone treatment (40)	Eight-year	reinforcement Social business model	Aklin, Wong et al. (2014)

Overall

Whereas chronic unemployment is common among drug misusers and is related to continued drug use, poor treatment outcomes, and even criminal activity (Platt, 1995), employment has been recognized as a reasonable measure of treatment success as well as an essential factor for patients' social rehabilitation. This review covers two major employment-based vocational training approaches, i.e., the typical employment-based intervention and therapeutic workplace intervention.

The first intervention approach includes supported work programs, job-seeking and placement programs, as well as personal competency/skills building programs (Platt, 1995). Varying in level of intensity, these specialized vocational interventions aimed to promote employment gains. Specifically, **supported work programs** aimed to provide subsidized employment and on-site training for drug abusers with employment problems in real work settings. **Job-seeking and placement programs** endeavored to provide drug abusers with job-seeking consultation, vocational training, and proper placement to facilitate the clients to achieve employment. **Personal competency/skill-building programs** tried to help methadone maintenance clients seek proper jobs through improving their job-seeking and interviewing skills. In general, those interventions are rather innovative in integrating vocational training with rehabilitation, or (re)socialization of drug abusers, given that initially employment services do not generally appear to be readily available to clients of addiction treatment programs. Common to the interventions is their focus on employment, with due consideration of assessment of individual vocational needs, counseling, skills training, and job placement. The conclusion is that the real-setting practice and support increases employment chances. Treatment services that are highly structured, matching with clients' needs, as well as involves employment specialists tended to predict higher employment rates. Other strategies and techniques are also introduced and contributed to the programs, including in-person contact, planned dissemination, gradually increasing work expectation, furnishing follow-ups, as well as training for coping skills (e.g., Platt et al., 1993; Platt & Metzger, 1987; Platt et al., 1988).

The sustainability of those **typical employment-based interventions** has always been doubted (Dickinson & Maynard, 1981; Friedman, 1980, as cited in Silverman & Robles, 1999). It is possible that there is a lack of enough motivations or restrictions for clients to stay in the program. In addition, wages obtained from supported work may induce clients to buy more drugs (Dickinson & Maynard, 1981; Friedman, 1980, as cited in Silverman & Robles, 1999). **Therapeutic workplace intervention** served to address this drawback. This integrated intervention incorporated targeted abstinence reinforcement contingencies into an employment setting. The employment gain virtually served to reinforce drug abstinence and positive working behaviors. A close monitoring of clients' participation in the workplace as well as work productivity mirrors their on-the-job work performance under extended training and employment conditions. Contingency management interventions could be an effective strategy to improve the long-term employment outcomes of chronically unemployed drug users (Wong & Silverman, 2004; Silverman et al., 2002). Particularly, it is viable to promote consistent attendance and high rates of productivity and establish job skills for employment. Conclusions are as follows: (1) voucher-based reinforcement, preferably substantial in amount, could promote sustained attendance (Silverman et al., 1996). (2) An additional contingency that imposed a substantial and immediate financial consequence for arriving late and failing to complete work shifts was necessary to ensure punctuality and reliable attendance (Wong, Dillon, Sheppard, Sylvest, & Silverman, 2004). (3) Increasing the magnitude of voucher reinforcement is desirable to improve work productivity particularly among those less productive individuals (Wong et al., 2003). (4) Computer-based training programs remain as the most reliable way to improve job skills such as fundamental typing

and keypad skills (Silverman et al., 2005). In all, essential to the therapeutic workplace intervention is the development of behavioral patterns conducive to successful employment.

Apart from the success factors within each set of intervention respectively, there are some other elements worth special attention. First, a work history, especially within the previous 5 years, was responsible for finding a job, regardless of the condition to which the individual had been exposed (Hall, Loeb, LeVois, & Cooper, 1981; Marsh & Simpson, 1986). Second, female participants were less successful in achieving and maintaining a job (e.g., Anglin, Hser, & McGlothlin, 1987). Third, race also plays a role over the course of vocational rehabilitation. African Americans are more likely to get help more from the employment readiness intervention than from their Caucasian counterparts (e.g., Metzger, Platt, Zanis, & Fureman, 1992).

Notwithstanding its effectiveness in drug abuse treatment, it is noteworthy that certain challenges still exist in the vocational rehabilitation that undermines its reliability and generalizability. First, what is absent from the employment literature is a comprehensive theory that can drive research (Platt, 1995). Theories such as behavior therapy, behavior analysis, and interpersonal cognitive problem-solving theory are useful in designing training programs. However, given the multiplicity of the variables affecting employment and the complexity of employment behavior itself, theoretical schemas specific to employment and related issues are anticipated to “sufficiently address societal attitudes, the job market, and other factors that complicate the training and employment of this population” (Platt, 1995, p.428).

Second, as a critical channel for social (re)adjustment of drug misusers, more diversified vocational training and treatment modalities are required. For instance, the training programs currently available in the therapeutic workplace are largely limited to teaching typing and keypad entry skills. Further development of new curricula is desirable to train other types of job skills that could help the unskilled drug user become more marketable for a broader range of jobs (e.g., medical transcriptionists, administrative assistants, and telemarketers) (Wong & Silverman, 2007).

Third, it is also of great concern how to keep the economic cost low and financial capacity strong for the therapeutic workplace intervention (Silverman et al., 2005; Silverman et al., 2007). Knealing and colleagues (2008) assessed the economic cost of the therapeutic workplace using the Drug Abuse Treatment Cost Analysis Program (DATCAP) and found that the therapeutic workplace became cost saving when combined with methadone maintenance treatment. Future programs will determine the right balance of the various contingencies to maximize the overall success in sustaining abstinence and establishing job skills and other work-related behaviors (Wong & Silverman, 2007).

Fourth, unproductive behaviors are detectable, such as sleeping at work, talking loudly in the workplace, and using vulgar language toward the staff and other participants. It has imposed negative effects on work productivity, and restricted clients’ opportunities of getting employed (Carpenedo et al., 2007). Further research is required to introduce creative contingency management strategies to address those work demeanor problems.

Fifth, the significance of psychopathology merits attention. As revealed by past studies, there is a high prevalence of personality disorders, affective disorders, and anxiety disorders among drug abuse clients (e.g., Havassy & Wasserman, 1992). It would be conducive to identify the spectrum of interventions for drug misusers with psychiatric disorders and differing levels of impairment (Platt, 1995).

Moreover, structural factors, to name a few, race, gender, economic climate, and the willingness of employers are pertinent. Employer support services count as one promising vehicle to encourage employers to hire and train drug misusers (Friedman, 1978).

Furthermore, holistic evaluation of rehabilitative programs is much in need, not only

in its early stages, but also later in the post-treatment career (Platt, 1995). It would be more appropriate to assess the attainment and maintenance of employment outside a sheltered setting where participants fully exercise their personal agency. In the evaluation research, alternative methods such as narrative study would be useful to probe participants' life experiences.

Life College Project Activities

The Life College Project, in integrating vocational enhancement and drug rehabilitation, offered the 18 major activities for youth participants to participate.

1. Training course: Overseas research has shown the contributions of training courses to skills to resist drugs, engagement in drug treatment, avoidance of drug abuse, victimization (Dakof et al., 2003; Murray & Graves, 2013; Rosenbaum & Hanson, 1988).
2. Day camp: Overseas research has shown the contributions of day camps to the youth's exploration, friendship skill, friend making, independence, leadership, peer relationship, positive identity, positive value, self-esteem, and social comfort (Henderson et al., 2007; Thurber et al., 2006).
3. Job attachment: Overseas research has shown the contribution of job attachment to employment (Gordon & James-Burdamy, 2002).
4. Trade understanding: Overseas research has found the contribution of trade understanding to job performance (Schmitt & Chan, 1998).
5. Volunteering: Overseas research has found the contributions of volunteering to the drug abuser's recovery, rehabilitation, and desistance, and the reduction of arrest (Farrall et al., 2014; Uggen & Jenikula, 1999). Moreover, the research has shown that volunteering generally contributes to the youth's identity achievement, self-efficacy, career decidedness, intrinsic work motivation, prosocial norm endorsement, social responsibility, emotional regulation, and maintenance of positive social relationships (Astin & Sax, 1998; Hansen et al., 2003; Johnson et al., 1998; Lakin & Mahoney, 2006; Larson et al., 2006; Taylor & Pancer, 2007). Meanwhile, volunteering has appeared to reduce the youth's drug abuse (Youniss et al., 1999).
6. Experience sharing: Overseas research has found the contribution of mentors' experience sharing to the drug abuser's recovery and reduction of drug abuse (Harris, 2014; LoSciuto & Hilbert, 1999).
7. Emotion understanding: Overseas research has shown the contributions of emotion understanding to the reduction of drug abuse, victimization, and family violence (Linehan et al., 1999; Murray & Graves, 2013).
8. Agency visit: Overseas research has found the contributions of agency visits to the youth's citizenship (Finkel & Ernst, 2005).
9. Basic vocational training: Overseas research has noted the contributions of vocational training to recovery and the reduction of crime such as theft (Jarjoura 1996; Shepard & Reif 2004). Importantly, an existing review has extolled the particular effectiveness of vocational training for the older man (Sherman et al., 1998).
10. Drug understanding: Overseas research has noted the contributions of drug understanding to the reduction of violence (Pogrebin et al., 2006).
11. Physical and mental health maintenance: Overseas research has recorded the contributions of physical or mental health to engagement in drug treatment and the reduction of drug abuse, violence (Harris et al., 2002; Mulder et al. 2009; Tewolde et al. 2006).
12. Risk management: Overseas research has documented the contributions of risk management to academic achievement and the reduction of drug abuse, theft, externalizing problems, and crime in general (Baron & Forde, 2007; Johnson et al., 2006;

- Krebs & Steffey, 2005; Lengua, 2002; McCarthy et al., 2004; Matsueda et al., 2006).
13. Anti-drug enhancement at work: Overseas research has revealed the contributions of risk management to anti-drug enhancement at work to the reduction of risk behavior (Coviello et al., 2009).
 14. Work stress coping: Overseas research has revealed the contributions of work stress coping to job performance, job satisfaction, success, and the reduction of depression, burnout (Aryee et al., 1999; Brown et al., 2005; Cicognani et al., 2009; Grebner et al. 2004; Greenglass & Burke 2002; Julkunen 2001).
 15. Anti-drug encouragement training: Overseas research has found the contributions of anti-drug effort to the reduction of drug abuse (Hides et al., 2010a; Sobell et al., 2009).
 16. Communication ability training: Overseas research has indicated the contributions of communication ability or its promotion to the reduction of drug abuse (Okwunnabua & Duryea, 1998).
 17. Mutual support: Overseas research has unfolded the contributions of mutual support to recovery and reduction of drug abuse, and gambling (Ellis et al., 2004; Hay, 1998; McKay & Weiss, 2001; Morgenstein et al., 2003; Robson et al. 2002).
 18. Anti-drug promotion: Overseas research has unfolded the contributions of anti-drug promotion or prevention to the reduction of drug abuse and other risk behaviors (Coviello et al. 2009; LoSciuto & Hilbert, 1999; Okwunnabua & Duryea, 1998).

The Life College Project also activates the following activities by the youth:

1. Exercising: Overseas research has found the contributions of exercising to health and the reduction of substance abuse, depression and victimization in the youth (Baron, 2007; McNeil et al., 1991; Mechanic & Hansell, 1987; Schreck & Fisher, 2004).ction of substance abuse, depression and victimization in the youth (Baron, 2007; McNeil et al., 1991; Mechanic & Hansell, 1987; Schreck & Fisher, 2004).
2. Risk assessment: Overseas research has found the positive effects of risk assessment on the addict's drug abuse (Traube et al. 2012).
3. Job eligibility understanding: Overseas research has found the contribution of job knowledge to the youth's career decision and academic persistence (Betz et al., 1996; Swanson & Parcover, 1998).

The Life College Project also aims to raise the youth's aspirations in the following:

1. Training: Overseas research has found the contribution of training aspiration to the youth's reduction of substance abuse, gang association, and crime in general (Carvajal et al., 2004; Cook & Moore, 2001; Dehejia et al., 2009; Hill et al., 1999; Mason & Windle, 2002; Triplett & Jarjoura, 1997; Wadsworth, 2000).
2. Personal growth activity: Overseas research has found the contribution of personal growth to the youth's reduction of drug abuse and crime in general (LoSciuto & Hilbert, 1999; Wagener et al. 2003).

The Life College Project has three major expected outcomes:

1. Drug abuse and its risk: Overseas research has found the addict's drug abuse to reduce due to participation in drug and vocational rehabilitation intervention (LoSciuto & Hilbert, 1999; Magura & Rosenblum, 1993). The research has also found the reduction due to volunteering (Youniss et al., 1999), coping (McKay and Weiss, 2001), mutual help (McKay & Weiss, 2001), and personal growth (Ellis et al., 2004; Okwunnabua & Duryea, 1999).
2. Health: Overseas research has indicated that the youth's health deteriorates due to drug abuse (Hansell & White, 1981). In contrast, the research has found that the youth's health is better due to exercising (Mechanic & Hansell, 1987), planning and decision making

(Scales et al., 2000), receiving social support (Glendinning et al., 2003; Tolsheim & Wold, 2001), or attending youth programs (Scales et al., 2000).

Findings about the Life College Project

Findings about the Project comprised those from personal interviews, a self-report questionnaire survey, and outcome assessment conducted by Project personnel. The personal interviews collected qualitative data from nine personal interviews, three focus groups consisting of 14 youth participants, and the survey collected quantitative data 249 youth participants. Meanwhile, all youth participants provided information on outcome assessment.

Personal Interviews

Nine youth participants in the Project each participated in three rounds of interview from May 2015 to May 2016. The first round represented baseline interviews and the second and third rounds indicated follow-up interviews. In each of the interview, the participants mainly mentioned the helpfulness of the Project in facilitating their desistance from drug abuse, commitment to vocations, and reintegration into society, in response to some semi-structured interview questions.

Baseline

At the baseline, participants indicated that participation in Project activities helped them desist from drug abuse, commit to work, and reintegrate into the community especially during the activities.

Desistance from Drug Abuse

Youth participants noted the helpfulness of the Project in facilitating their resistance to and desistance from drug abuse. The facilitation emerged from distraction, knowledge dissemination, value clarification, stress relief and other practices of counseling, support from peers and social workers, and engagement in employment and other healthy involvements obtained from participation in the activities of the Project. Consequently, the youth participants became knowledgeable, capable, thoughtful, confident, and motivated for withdrawal from drug abuse. Interviewees provided the following remarks about their desistance from drug abuse.

I have clear thinking about how to stop taking drugs... I know how to quit drug abuse... I know that I cannot work if I take drugs. (Interviewee 1)

After participating in the activities, because of encouragement from social workers and group members, and because I do not want to make others disappointed, I improve my motivation in reducing the abuse of drugs. I have taken action for drug treatment, for example, reminding myself to abuse less and spend more time at home. I also decide to have a weekly urine test and I hope to speed up my drug rehabilitation pace. (Interviewee 1)

I do not want to take drugs again. I understand that recidivism will be costly, because now my relationship with my family has already a big improvement... I previously succeeded in quitting drug abuse. I have so much confidence in myself and want to test my ability. (Interviewee 2)

I have promised my family that I will not take it again... I would remember the hardship for drug addiction and would not let myself take it again. (Interviewee 2)

Participating in project activities has increased my determination for keeping my resistance to drugs... Participating in different activities and letting myself become busy can also reduce the chance of recidivism. (Interviewee 2)

When facing problems, I would talk to the social worker immediately. Besides, I shall share her difficulties within group activities. These can remind me not to play too hard, not to be addicted to drugs. Otherwise, I would be late and feeling tired, and would thus hurt animals in pet grooming. (Interviewee 3)

I want to go to voluntary drug treatment. Now I have no wish to take drugs, and this is different from before... Now I shall think about the harm of taking drugs... I have put drug-abusing friends in the blacklist... If I want to give up drugs, I can achieve... I have confidence in myself. (Interviewee 3)

Participating in Project activities has greatly reduced my chance and time for taking drugs when participating in activities. It can let me not think about drugs temporarily. Reminders from the social worker and members have also increased my motivation to reduce drug abuse. (Interviewee 4)

In the past, I was a person who would not like to express the negative emotion or tell my feeling to others. Through the sharing within group activities, I found the release of stress after sharing. Although it may not solve the problem, after sharing with others, I can obtain support from others, and this can help me calm down and make it possible that I can reduce drug abuse, without relying on drugs when I am depressed. (Interviewee 4)

Participating in the activities of the Project can reduce my chance and time for taking drugs. Although I cannot be 100% sure that I can block the temptation and risks of drugs, meeting social workers and team members can indirectly remind me not to take drugs. There was one time that I was able to refuse drugs supplied by my colleagues directly, which was the time that I joined the activity before work. I heard from a groupmate that I was not able to take good care of my daughter after taking drugs in one session in the group. As I hoped that I could provide company to my daughter, my motivation and ability to take action to quit drug taking improved. (Interviewee 5)

The Project helped me understand that drug abuse was a habit and in life that I could have other activities that could replace it. Besides this, every time after having a sharing at school lets me share my experience with others, I feel that it not only can help others, but also can remind me of making up my mind to quit drug abuse. (Interviewee 6)

I will not return to the days taking methamphetamine, without work, and just taking drugs for the whole day. The most important factor helping quitting drug abuse is depending on oneself. (Interviewee 9)

Vocational Commitment

Youth participants found the Project to be helpful in upgrading their knowledge, skills, effort, satisfaction, and commitment regarding employment and vocations. This help stemmed from training courses and activities related to employment provided by the Project. Interviewees provided the following remarks about their vocational commitment.

Through the activities of the Project, I know more about my character and start to think about what type of trade into which I can fit. I start to try something that I have not done, such as sport shoes selling. I hope that I can finally have my own sport shoes shop. (Interviewee 1)

Participating in the make-up course lets me obtain skills and helps me become someone who can make a living by the skills... I once thought about developing my career in beauty and make-up. Through this Project, I have improved my confidence, and I think that I can make other participants believe in my ability. I have the direction for employment and am now planning to be devoted to this industry as a professional cosmetician. (Interviewee 2)

Before participating in Project activities, I did not have any skill and ability and did not have work, and I still took taking drugs at the time I joined the activity. Now, I have successfully had stable employment. (Interviewee 3)

Reintegration

Youth participants indicated their gain from the Project in reintegration into society. The gain stemmed from social involvement facilitated and generalized by social activities in the Project. Interviewees provided the following remarks about their reintegration into society.

After participating in the peer-counselor group, through sharing with others and listening to other people's experience, I can see things other than myself. I have a difference in my thinking and become positive. (Interviewee 1)

After participating in the peer-counselor group, through sharing with others and hearing the experiences of others, it can let me see things besides me. My idea is different and becomes positive. When I go to school share my experience, I receive greeting cards from classmates and encouragement. I can feel my progress by others' support. I like this feeling and find a strong sense of mission as a peer counselor. (Interviewee 5)

The Project activities help me express myself more, and I learn to appreciate the kindness of others and myself. At the same time, the activities help me get to know more friends and develop healthy interpersonal relationships. (Interviewee 8)

Follow-up

At the follow-up, participants recalled that participation in Project activities helped them desist from drug abuse, commit to work, and reintegrate into the community especially during the activities. Particularly, they attributed the help to the participation.

Desistance from Drug Abuse

Youth participants noted that many activities of the Project were helpful to their desistance from drug abuse. Some reasons for the helpfulness to the desistance resided in the massiveness, engagement, distraction, and provision of new ideas, roles, skills, and friends to facilitate their vocational commitment. Particularly, their roles of speakers against drug abuse urged them to set a model for others and thus consolidated their desistance. Details about the helpfulness are in the following self-descriptions of the participants.

Because I hosted an anti-drug seminar, I needed to make myself more scrupulous (and

thus desisting from drug abuse). (Interviewee 2)

Because taking the beautifying course was not easy. I worried very much about I would abort the course. However, because I had set the goal to compel myself to complete the course, I succeeded. Desistance from drug abuse is the same. It needs inculcating myself to participate in activities, remind myself not taking drugs. (Interviewee 3)

During the class, I gradually reminded myself not taking drugs again. Afterward, I did not take drugs. I keep not taking drugs now. (Interviewee 3)

During the class, other members shared their situations, pasts, and progress. This made me have the ability to desist from drug abuse. (Interviewee 3).

As work motivation increased, it helped desistance from drug abuse. (Interviewee 3)

The class could help me “play” less, not touching drugs. (Interviewee 4)

In the peer-counseling group, I felt that members could help each other. In addition, I went to hospital to detoxify for two weeks. The effect was greater. (Interviewee 6)

Being inside a group of newly known members, participating in group activities together, being able to discuss drugs, family, affection freely, and helping each other were very helpful to desistance from drug abuse. (Interviewee 6)

In a sharing session, a student adventitiously and directly asked me why I took drugs even such a dire situation. I felt shocked and ironical, and more reflective for desisting from drug abuse. (Interviewee 6)

Because massive training and activities was a challenge to me, I was compelled to have a larger number of new ideas. At least, I would found that I had abilities and endurance to desist from drug abuse. (Interviewee 7)

During the group activities of peer counseling, I would respect other members and group rules, and try my best to depart from drugs during participating in the activities. It seemed to offer an additional reason for desist from drug abuse. (Interviewee 7)

During the process of participation in activity, I could reduce drug taking and avoided to think about those worries. (Interviewee 8)

Vocational Commitment

Project activities, particularly training classes, were helpful to strengthen the participants' vocational commitment. The helpfulness rested on skill enhancement and thus confidence and interest in certain vocations. Notably, the activities gave the participants a sense of success to further their vocational engagement. The following illustrate the helpfulness based on the participants' self-reflection.

Now, I can begin to work steadily once again. This is associated with the job attachment of the Project. (Interviewee 1)

The activities of the Project is very helpful to my vocational orientation. At least it

makes me take the start, knowing the ability that I did not know in the past. (Interviewee 3)

The activities of the Project could shorten the distance between work and me. When I saw members, particularly those who had more serious drug abuse problems than mine trying their best in their work, I have some drive, (Interviewee 4)

During class, teachers would praise, appreciate, and encourage classmates, raising my self-esteem and self-confidence in vocation. (Interviewee 5)

Acting as a speaker in the seminar could help me make up my mind. Some of the queries could give me some new views about drug abuse. (Interviewee 5)

I could learn more skills about cosmetics. After completing the cosmetics class, I find myself to have interest in cosmetics. I wish to develop within this trade. (Interviewee 8)

After training, I am always confident in kitchen work and establish it as my career. Moreover, I performed the best in class. It further raise my confidence. (Interviewee 9)

Reintegration

The participants related their reintegration with the activities of the Project. Remarkably, the reintegration evolved from knowing and helping among each other of the participants. The participants turned out to have highest trust in their fellow members.

The most impressive is that activity of the Project mentioned before. That is, an activity about life and death. I feel that having new friends with similar age and background in the activity of Caritas can have some positive impacts. The atmosphere of mutual support was more intense than that found in other places. (Interviewee 2)

The most impressive was members' inviting me to attend other activities after an activity of the Project. This made me feel the love. (Interviewee 5)

Because I have disconnected with old friends, members known in the activities of the Project are important to me. (Interviewee 5)

The greatest reward is some newly known members. We have interaction and sharing, being able to bring me some new discoveries. (Interviewee 7)

Focus Groups

Three focus groups involved 14 youth participants to elicit their ideas about needs for vocational training, drug rehabilitation, and others. One focus group consisted of participants in their late twenties, and the other two groups comprised teenage participants. The participants, regardless of their age, revealed the needs commonly as follows.

Need for vocational training

Youth participants in the focus groups justified their need for vocational training with their low levels of education and work experience and the importance of learning about job skills to avoid being lost. They admitted that the importance rested on the reception of a certification for the training to help their employment. They expressed the need for the training to suit their interests and daily life, have a sense of newness, and hold an interesting

and delightful atmosphere. Moreover, they demanded the training course to last for three months more and more intensive to ensure their learning and help them to leave their present life. Specifically, they demanded to two or three times of training in a week to occupy more of their free time. Meanwhile, they disliked to have pressure and assessment in the training. They also maintained a need for subsidies to job attachment as an incentive for their participation and cover travel expenses.

Need to stop drug abuse

Youth participants in the focus groups expressed the need to have activities to displace their involvement in drug abuse and good feelings to prevent them from drug abuse. That is, they needed a good atmosphere in training and group activity in order to feel good.

Other needs

Youth participants in the focus groups indicated their needs to interact with group members who did not take drugs and feel a promising prospect. For the need for social interaction, they recognized the problem of immersion in the private space and the need to get out from the space to obtain a greater volume of positive energy from others. They also expressed the need for the absence of discrimination in the group activity. Regarding the prospect, they needed to know about opportunities after the training and ways to enter employment. That was because they felt gloomy and the time of boredom.

Survey

The two-wave survey collected quantitative data covering youth participants' participation in Project activities, other activities, aid reception, aspirations, drug abuse and its risk, health, and background characteristics. Accordingly, an initial (Wave 1) survey assessed youths' conditions during their early involvement in the Project and a follow-up (Wave 2) survey one year later tracked their conditions after joining the Project. The two-wave survey enables the prediction of Wave 2 factors by Wave 1 factors in the same participants. For the ease of interpretation and comparison, most of the information, except background information, applied a 0-100 scale in scoring, such as 0 representing the lowest level and 100 representing the highest level. A basic concern was the comparison of the information between receiving and not receiving social worker help from the Project. In addition, linear regression analysis served to examine the impacts of participation in Project activities and receiving help from the Project on drug abuse and health. The analysis controlled for basic and significant predictors to distill the net effects of all the predictors.

General Profile

The survey collected quantitative data from 249 youth participants in the Life College Project. Their average age was 20.9 years (see Table 3). Among them, 67.8% were female and 32.2% were male.

Project participation in the past month, overall significantly increased from Wave 1 ($M = 12.5$) to Wave 2 ($M = 40.3$). All participation items manifested significant increases from Wave 1 to Wave 2. Notably, participation in the training course showed the greatest increase ($M = 9.2$ in Wave 1 to 64.0 in Wave 2).

Table 3: Means by social worker help in the previous month ($N = 249$)

Variable	Wave 1	Wave 2		All
Project participation in the past month	12.5	40.3	***	29.2
Training course	9.2	64.0	***	42.2
Day camp	5.8	21.5	***	15.2

Variable	Wave 1	Wave 2		All
Job attachment	6.6	36.3	***	24.4
Trade understanding	10.4	44.9	***	31.1
Volunteering	12.4	35.7	***	26.3
Experience sharing	9.3	30.4	***	22.0
Emotion understanding	9.6	37.9	***	26.6
Agency visit	7.2	20.7	***	15.3
Basic vocational training	7.9	46.0	***	30.8
Drug understanding	12.2	41.1	***	29.5
Physical and mental health maintenance	17.4	49.3	***	36.5
Risk management	5.6	35.1	***	23.3
Anti-drug enhancement at work	6.3	37.2	***	24.8
Work stress coping	6.6	36.2	***	24.3
Anti-drug encouragement training	8.1	36.3	***	25.0
Communication ability training	9.6	41.1	***	28.5
Mutual support	9.3	42.8	***	29.4
Anti-drug promotion	4.4	33.3	***	21.8
No difficulty	80.5	83.6		82.4
Activity in the past month	17.4	44.6	***	33.8
Exercising	28.5	48.5	***	40.5
Risk assessment	11.4	39.9	***	28.6
Job eligibility understanding	12.2	45.5	***	32.2
Aid received in the past month	35.4	54.9	***	47.1
Social worker	41.5	65.5	***	55.9
Family	36.8	55.6	***	48.1
Friend	40.1	59.5	***	51.7
Job referral	5.3	31.0	***	20.7
Job attachment or work	5.6	34.3	***	22.8
Others' help	83.1	83.4	***	83.3
Aspiration (need) in the past month	49.8	64.3	***	58.5
Training	53.5	65.7	***	60.8
Personal growth activity	46.0	63.0	***	56.2
Drug abuse	41.8	41.1	***	41.5
Drug abuse variety in the past month	31.1	6.7	***	16.1
Drug abuse risk	44.5	35.0	***	38.7
Times	66.2	65.6		65.8
Coping difficulty	42.4	32.1	***	36.1
Drug abuse craving	46.1	33.2	***	38.2
Relapse risk	46.0	33.7	***	38.5
Drug abuse importance	30.8	20.0	**	24.1
Drug irresistibility	35.6	25.4	**	29.3
Health	52.7	52.8		52.8
Romantic pleasantness	55.2	55.2		55.2
Acquiescence	30.6	48.9	***	41.6
No service in the past semi-year	18.3	18.5		18.4
Outreaching social work	67.1	66.7		66.9
Drug counseling	9.8	9.9		9.8
Residential treatment	1.2	1.2		1.2
School social work	6.7	6.2		6.4
Youth center	7.3	8.0		7.7

Variable	Wave 1	Wave 2		All
Correctional/probation	4.9	4.9		4.9
Family center	3.7	3.7		3.7
Months served in the past semi-year	4.3	4.3		4.3
Living alone	3.0	3.1		3.1
Father	49.4	50.0		49.7
Mother	64.0	64.2		64.1
Elder sibling	30.5	30.2		30.4
Younger sibling	24.4	24.1		24.2
Partner	19.5	19.8		19.6
Another relative	14.7	14.9		14.8
Friend	4.3	4.3		4.3
Domestic worker	1.8	1.9		1.8
Father as an employee	54.9	55.6		55.2
Father as an employer	9.8	9.9		9.8
Father self-employed	2.4	2.5		2.5
Father not employed	9.8	9.9		9.8
Father absent	23.2	22.2		22.7
Mother as an employee	63.2	63.4		63.3
Mother as an employer	3.1	3.1		3.1
Mother self-employed	1.8	1.9		1.9
Mother not employed	23.9	24.2		24.1
Mother absent	8.0	7.5		7.7
Residency	19.7	19.8		19.7
Education	9.2	9.2		9.2
Income	6520.5	6508.2		6514.4
Friend abusing drugs	96.3	96.3		96.3
Friend abusing drugs and arrested	84.8	84.6		84.7
Age	20.9	20.9		20.9
Female	67.9	67.7		67.8
Course	5.8	61.5	***	40.0
Job attachment	3.2	56.3	***	35.7
Volunteering	9.0	47.0	***	32.3
Activity 4	4.5	33.6	***	22.3
Activity 5	1.3	25.1	***	15.9
Activity 6	0.0	0.0		0.0
Job stability, recent month	32.2	72.3	***	52.3
Monthly wage, recent month	4203.4	7291.0	***	5747.2
Working days, recent month	10.0	15.0	***	12.5
Job seeking planning, recent month	24.9	77.4	***	51.1
Increase in vocational skill	100.0	100.0		100.0

Significant difference: * $p < .05$. ** $p < .01$. *** $p < .001$.

Activity in the past month, overall, displayed a significant increase from Wave 1 ($M = 17.4$, see Table 3) to Wave 2 ($M = 44.6$). All activity items exhibited significant increases. Notably, job eligibility understanding showed the greatest increase ($M = 12.2$ in Wave 1 to 45.5 in Wave 2).

Aid received in the past month, overall, showed a significant increase from Wave 1 ($M = 35.4$, see Table 3) to Wave 2 ($M = 54.9$). All aid items displayed significant increases from Wave 1 to Wave 2.

Aspiration or need in the past month, overall, exhibited a significant increase from Wave 1 ($M = 49.8$, see Table 3) to Wave 2 ($M = 64.3$) than for personal growth activity ($M = 63.0$). They showed that the average youth had a rather high need for the service and skill enhancement in terms of personal growth. All the overall and specific aspirations maintained a significant positive association with receiving social worker help.

Vocational skill increase happened in all the youths (100.0%, see Table 3). Job stability and job seeking planning happened in 32.8% and 25.3% of the youths respectively. The youths had an average of 10.1 working days and monthly wages of \$4,229.9 in the recent month.

Drug abuse showed a significant decline from Wave 1 ($M = 41.8$, see Table 3) to Wave 2 ($M = 41.1$). In the recent month of the survey, drug abuse variety displayed a significant decline from Wave 1 ($M = 31.1$) to Wave 2 ($M = 6.7$). Drug abuse risk, which was a composite of six items, manifested a significant decline from Wave 1 ($M = 44.5$) to Wave 2 ($M = 35.0$).

Health and romantic pleasantness did not exhibit significant decreases from Wave 1 ($M = 52.7$ & 55.2 , see Table 3) to Wave 2 ($M = 52.8$ & 55.2).

Among the services engaged in the past semi-year, the outreaching social work service was much more likely (66.9%, see Table 3) than were the others. The drug counseling service was the next likely (9.8%).

The youth, on average, had received 4.3 months of services in the past semi-year (see Table 3). Among the living arrangements, living with the mother (64.1%) and father (49.7%) were more likely than were the others. The father and the mother were more likely to be an employee (55.2% & 63.3%) than to be in another position. Residency in Hong Kong, on average, was 19.7 years. Education, on average, was 9.2 years (with 1 for Grade 1 and so on). The average income was \$6,514.4 per month.

In sum, project participation, activity, receiving aid, and aspiration in the recent month of the survey showed significant growth from Wave 1 to Wave 2. This showed increased engagement in the Project. Moreover, vocational engagement in terms of job stability, wages, working hours, and job seeking planning showed significant increases from Wave 1 to Wave 2. Conversely, drug abuse and its risk displayed significant declines from Wave 1 to Wave 2. This indicated the effectiveness of the Project in countering drug abuse and fostering vocational engagement.

Need and Activity Structure

Need transpired in the expectation or aspiration for training and personal growth activity as reported by the youth participant. Such need was distinguishable from activity that they initiated, as demonstrated in factor analysis. Accordingly, the two-factor varimax-rotated solution of factor analysis showed that training expected and personal growth activity expected loaded distinctly highly on one factor, whereas exercising, risk assessment, and job eligibility loaded distinctively substantially on another factor (see Table 4). These loading verified the convergence within each factor and discrimination between the two factors. That is, need and activity were distinctively valid descriptions.

Table 4: Factor loadings on need and activity

Item	Need	Activity
Training expected	.903	.016
Personal growth activity expected	.910	.030
Exercising	-.084	.350
Risk assessment	.085	.629
Job eligibility understanding	.100	.650

Project Effects

Project effectiveness primarily happened in the promotion of the youth's disuse of illicit drugs, and vocational engagement. What is more, additional signs of effectiveness happened in the promotion of the youth's health in order to fulfill the youth's developmental needs and capability for drug rehabilitation and vocational engagement.

On drug abuse in the month before Wave 2 survey, project participation in the month before Wave 1 survey did not show a significant negative effect ($\beta = .092$, see Column 2 in Table 5). Project participation in the month before Wave 2 survey did not reveal a significant negative effect. Nevertheless, service duration in the Project manifested a negative but insignificant effect ($\beta = -.063$, see Column 3 in Table 5). This showed a tendency of the Project to prevent drug abuse. Rather, drug abuse reported in Wave 1 survey was a significant predictor ($\beta = .372$, see Column 2 in Table 5).

Table 5: Standardized effects on Wave 2 drug abuse during the recent month

Predictor	(1)	(2)	(3)
Female	.030	-.064	-.046
Age	.217**	.055	.045
Education	.005	.036	.040
Acquiescence	-.100	-.104	-.005
Project participation, Wave 1		.092	.084
Activity, Wave 1		.096	.097
Aid received, Wave 1		-.067	-.036
Aspiration, Wave 1		.340	.371
Drug abuse, Wave 1		.124	.130*
Recent drug abuse, Wave 1		.372***	.360***
Drug abuse risk, Wave 1		.083	.089
Health, Wave 1		-.150	-.123
Romantic pleasantness, Wave 1		-.090	-.083
Acquiescence, Wave 1		-.330	-.358
Job stability, Wave 1		-.113	-.109
Working days, Wave 1		.090	.099
Wage, Wave 1		-.046	-.068
Job seeking planning, Wave 1		-.040	-.052
Service duration			-.063
Project participation, Wave 2			.007
Activity, Wave 2			.013
Aid received, Wave 2			-.097
Aspiration, Wave 2			-.063
R^2	.065	.278	.287

Note. (1) background predictors; (2) Wave 1 predictors added; (3) Wave 2 predictors added
 # $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

On drug abuse risk at Wave 2, the youth's reception of aid in the month before Wave 1 survey manifested a negative significant effect ($\beta = -.125$, see Table 6). That is, aid received earlier tended to reduce drug abuse risk. In addition, project participation in the month before Wave 2 survey indicated a negative but insignificant effect on drug abuse risk. This effect seemed to show the effectiveness of the Project in reducing drug abuse risk. Meanwhile, drug abuse and drug abuse risk at Wave 1 were significantly predictive of drug abuse risk at Wave 2.

Table 6: Standardized effects on Wave 2 drug abuse risk

Predictor	(1)	(2)	(3)
Female	-.025	.003	.016
Age	.150*	-.001	-.014
Education	-.133*	-.115*	-.104
Acquiescence	-.019	-.064	.159
Project participation, Wave 1		.117	.150
Activity, Wave 1		.062	.041
Aid received, Wave 1		-.125#	-.122
Aspiration, Wave 1		.085	.150
Drug abuse, Wave 1		.134*	.135*
Recent drug abuse, Wave 1		.085	.078
Drug abuse risk, Wave 1		.444*	.454***
Health, Wave 1		-.125	-.079
Romantic pleasantness, Wave 1		-.016	.004
Acquiescence, Wave 1		-.087	-.149
Job stability, Wave 1		.007	.019
Working days, Wave 1		.049	.063
Wage, Wave 1		.013	-.015
Job seeking planning, Wave 1		.061	.025
Service duration			-.067
Project participation, Wave 2			-.275
Activity, Wave 2			.168
Aid received, Wave 2			.006
Aspiration, Wave 2			-.149
R^2	.032	.336	.350

Note. (1) background predictors; (2) Wave 1 predictors added; (3) Wave 2 predictors added
 # $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

On job stability in the month before Wave 2 survey as an indicator of vocational engagement, project participation in the month before Wave 2 survey indicated a significant positive effect ($\beta = .300$, see Column 3 in Table 7). In addition, service duration in the Project indicated a significant positive effect on the job stability ($\beta = .169$, see Column 3 in Table 7). These effects implied the effectiveness of the Project in sustaining job stability. However, aid received in the month before Wave 2 survey showed a significant negative effect ($\beta = -.196$, see Column 3 in Table 7). Besides, education, romantic pleasantness, wages, and job seeking planning during Wave 1 displayed significant positive effects on job stability at Wave 2. Conversely, drug abuse at Wave 1 sent a negative effect on job stability at Wave 2.

Table 7: Standardized effects on Wave 2 job stability in the recent month

Predictor	(1)	(2)	(3)
Female	-.002	-.073	-.046
Age	.112	.109	.135*
Education	.182**	.131*	.113
Acquiescence	.107	.092	.032
Project participation, Wave 1		-.261	-.259
Activity, Wave 1		-.047	-.047
Aid received, Wave 1		-.072	-.038

Predictor	(1)	(2)	(3)
Aspiration, Wave 1		-.311	-.241
Drug abuse, Wave 1		-.097	-.113#
Recent drug abuse, Wave 1		-.134*	-.121#
Drug abuse risk, Wave 1		-.053	-.075
Health, Wave 1		.009	-.055
Romantic pleasantness, Wave 1		.293**	.273*
Acquiescence, Wave 1		.450	.373
Job stability, Wave 1		.091	.028
Working days, Wave 1		-.039	-.072
Wage, Wave 1		.237#	.306*
Job seeking planning, Wave 1		.169*	.225**
Service duration			.169**
Project participation, Wave 2			.300#
Activity, Wave 2			-.095
Aid received, Wave 2			-.196*
Aspiration, Wave 2			.010
R^2	.063	.259	.300

Note. (1) background predictors; (2) Wave 1 predictors added; (3) Wave 2 predictors added
$p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

On the number of working days in the month before Wave 2 survey as another indicator of vocational engagement, project participation in the month before Wave 2 survey unfolded a positive but insignificant effect ($\beta = .216$, see Column 3 in Table 8). This showed a tendency for the effectiveness of the Project in promoting vocational engagement. Besides, age, education, romantic pleasantness, the number of working days, and job seeking planning during Wave 1 were significantly predictive of the number of working days during Wave 2.

Table 8: Standardized effects on Wave 2 working days in the recent month

Predictor	(1)	(2)	(3)
Female	.115	-.033	-.025
Age	.210**	.156*	.168**
Education	.209**	.187**	.175**
Acquiescence	.154*	.117*	.118
Project participation, Wave 1		-.127	-.138
Activity, Wave 1		-.049	-.034
Aid received, Wave 1		-.075	-.053
Aspiration, Wave 1		-.287	-.263
Drug abuse, Wave 1		-.021	-.025
Recent drug abuse, Wave 1		-.029	-.027
Drug abuse risk, Wave 1		.002	-.013
Health, Wave 1		.025	.000
Romantic pleasantness, Wave 1		.184#	.184#
Acquiescence, Wave 1		.370	.347
Job stability, Wave 1		-.047	-.084
Working days, Wave 1		.610***	.587***
Wage, Wave 1		-.159	-.115
Job seeking planning, Wave 1		.086	.123#
Service duration			.088

Predictor	(1)	(2)	(3)
Project participation, Wave 2			.216
Activity, Wave 2			-.138
Aid received, Wave 2			-.136
Aspiration, Wave 2			.001
R^2	.149	.369	.388

Note. (1) background predictors; (2) Wave 1 predictors added; (3) Wave 2 predictors added
$p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

On the amount of monthly wages in the month before Wave 2 survey as another indicator of vocational engagement, project participation in the month before Wave 2 survey unfolded a significant positive effect ($\beta = .379$, see Column 3 in Table 9). In addition, service duration exhibited a significant positive effect on the amount ($\beta = .100$, see Column 3 in Table 9). These effects testified the effectiveness of the Project in promoting vocational engagement. Besides, age, education, romantic pleasantness, job seeking planning, and the amount of monthly wages during Wave 1 were significant predictive of the amount of monthly wages during Wave 2.

Table 9: Standardized effects on Wave 2 wages in the recent month

Predictor	(1)	(2)	(3)
Female	.034	-.029	-.018
Age	.259***	.165*	.181**
Education	.152*	.101*	.090
Acquiescence	.180**	.144*	-.056
Project participation, Wave 1		-.036	-.046
Activity, Wave 1		.045	.062
Aid received, Wave 1		-.132	-.116
Aspiration, Wave 1		-.097	-.040
Drug abuse, Wave 1		.021	.008
Recent drug abuse, Wave 1		-.055	-.041
Drug abuse risk, Wave 1		.018	.011
Health, Wave 1		-.009	-.096
Romantic pleasantness, Wave 1		.181#	.141
Acquiescence, Wave 1		.104	.033
Job stability, Wave 1		-.157	-.199*
Working days, Wave 1		.163	.144
Wage, Wave 1		.375**	.429**
Job seeking planning, Wave 1		.142*	.185**
Service duration			.100#
Project participation, Wave 2			.379*
Activity, Wave 2			-.153
Aid received, Wave 2			-.018
Aspiration, Wave 2			.000
R^2	.135	.358	.387

Note. (1) background predictors; (2) Wave 1 predictors added; (3) Wave 2 predictors added
$p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

On job seeking planning in the month before Wave 2 survey as another indicator of vocational engagement, project participation in the month before Wave 2 survey revealed a

significant positive effect ($\beta = .357$, see Column 3 in Table 10). This effect illustrated the effectiveness of the Project in promoting vocational engagement. However, aid received during Wave 1 and activity during Wave 2 manifested significant negative effects on job seeking planning at Wave 2. Besides, romantic pleasantness, job stability, and job seeking planning during Wave 1 were significant predictive of the amount of monthly wages during Wave 2.

Table 10: Standardized effects on Wave 2 job seeking planning in the recent month

Predictor	(1)	(2)	(3)
Female	.010	-.031	-.052
Age	-.108	-.112	-.113
Education	.123	.104	.099
Acquiescence	.195**	.144*	-.042
Project participation, Wave 1		.046	.000
Activity, Wave 1		-.102	-.056
Aid received, Wave 1		-.158*	-.158
Aspiration, Wave 1		-.229	-.277
Drug abuse, Wave 1		-.012	-.007
Recent drug abuse, Wave 1		-.101	-.103
Drug abuse risk, Wave 1		.024	.023
Health, Wave 1		-.011	-.050
Romantic pleasantness, Wave 1		.196#	.181
Acquiescence, Wave 1		.373	.418
Job stability, Wave 1		.285**	.278**
Working days, Wave 1		.125	.115
Wage, Wave 1		-.193	-.169
Job seeking planning, Wave 1		.195**	.223**
Service duration			.001
Project participation, Wave 2			.357#
Activity, Wave 2			-.284*
Aid received, Wave 2			.044
Aspiration, Wave 2			.058
R^2	.063	.235	.258

Note. (1) background predictors; (2) Wave 1 predictors added; (3) Wave 2 predictors added
 # $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

In sum, participation in Project activities upheld positive effects on vocational engagement in terms of job stability, the number of working days, the amount of wages, and job seeking planning. Moreover, the participation manifested a negative effect on drug abuse risk. Besides, service duration in the Project maintained positive effects on job stability and the amount the monthly wages. The service duration also tended to reduce drug abuse. These effects buttressed the effectiveness of the Project in drug and vocational rehabilitation.

Outcome Assessment

Besides the survey, Project personnel conducted outcome assessments to show the attainment of planned outcomes regarding vocational engagement, illicit drug disuse, and skill.

On vocational engagement, participation in Project activities in the past month offered statistical significant improvement in participant's employment readiness (see Table 11). That is, 78.8% of participants showed improvement in employment readiness.

Table 11: Significant standardized effects on current romantic pleasantness

Outcome indicator	Target	No. of respondents	Outcome
Improvement in employability among young drug abusers	70% of participants show improvement in employment readiness (or statistical significant improvement in participant's employment readiness)	245	78.8% showing an improvement in employment readiness Overall, statistically significant improvement in employability

On illicit drug disuse, participation in Project activities in the past month offered statistically significant improvement in reduction in drug use among young drug abusers (see Table 12). Accordingly, 89.5% of the participants reported reduction in drug use frequency over the past 30 days. Moreover, 51.8% of participants abstained from drugs for 30 days after the completion of the drug rehabilitation stage.

Table 12: Illicit drug disuse assessment

Outcome indicator	Target	No. of respondents	Outcome
Reduction in drug use among young drug abusers	70% of participants report a reduction in drug use frequency over the past 30 days (or statistically significant reduction in participant's drug use frequency)	247	89.5% reporting a reduction in drug use frequency over the past 30 days Overall, statistically significant reduction in drug use frequency
Other outcome indicator (A): One-month continual abstinence rate of participants who complete drug rehabilitation stage	N.A.	247	51.8% of participants abstained from drug for 30 days after completion of drug rehabilitation stage

On drug avoidance skill, participation in Project activities in the past month offered statistically significant improvement in young drug abusers' resilience against drug use (see Table 13). Statistically significant improvement in drug avoidance self-efficacy appeared, including (a) coping skills (57.3%); (b) reduction in drug desire (58.3%); (c) reduction in relapse risk (55.7%); (d) increase in importance to remain drug free (53.1%); and (e) increase in chance of resisting drug (52.6%). Trained peer drug educators showed statistically significant improvement in drug avoidance self-efficacy as indicated by the paired *t*-test ($p < 0.05$). Additionally, the anti-drug attitude of young people (56.4% of participants) who attended the school talk or small group sharing sessions on drug prevention improved, as indicated by the paired *t*-test ($p < 0.05$).

Table 13: Drug avoidance skill assessment

Outcome indicator	Target	No. of respondents	Outcome
Increase in drug resilience	70% of participants show a sustained increase in drug resilience during the past 6 months (or significant improvement found using paired t-test)	192	57.3% showing an improvement in coping skill 58.3% showing a reduction in drug desire 55.7% showing a reduction in relapse risk 53.1% showing an increase in importance to remain drug free 52.6% showing an increase in the chance of resisting drugs Overall, statistically significant increase in drug resilience
Other outcome indicator (B): Improvement in the anti-drug attitude of young people who attend the school talk or small group sharing sessions on drug prevention	N.A.	651	56.4% showing an improvement in the anti-drug attitude Overall, statistically significant improvement in the anti-drug attitude

Conclusion

The Life College Project mirrors many effective features of overseas projects examined and demonstrates its success. Those effective features of overseas projects include supported work, job seeking and placement, personal competency/skill building, and therapeutic workplaces. These features pervade various activities of the Life College Project, including its training courses, job attachment, communication ability training. The features are responsible for the desistance of drug abuse, vocational commitment, and reintegration into society of youth participants in the Project. Crucially, statistical analysis of survey data reveals the significant contributions of participation in Project activities and service duration in the Project on the drug risk prevention and vocational engagement. Particularly, participation in the Project improve the youth's vocational engagement in terms of job stability, working days, wages, and job seeking planning, and drug risk prevention and its efficacy. Essentially, increases in vocational engagement and decreases in drug abuse and its risk are evident from the first year to the second year in the Project. Such benefits of the Project are justifiable with reference to the participants' self-reflection about the acquisition of new ideas, skills, and friendships from the Project.

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