Psychological impacts of engaging in a peer-trainer role in an overdose prevention program

A thesis submitted to McGill University in partial fulfillment of the requirements for the degree of Master of Science in Psychiatry

Carley Marshall
Department of Psychiatry
McGill University, Montreal

Supervisor: Michel Perreault
Associate Professor, Department of Psychiatry, McGill University
Researcher, Douglas Mental Health University Institute
6875 LaSalle Blvd
514-761-6131 ext. 2823
michel.perreault@douglas.mcgill.ca

Table of Contents

List of Tables

Manuscript 1

Manuscript 2

List of Figures

Manuscript 1

Manuscript 2

Abstract

Background: Peer-helpers are defined as individuals with a specific problem who are involved in an intervention to help others with similar problems to their own. Peer-led programs have been implemented in a variety of areas, particularly in addiction, mental health, and HIV/AIDS. Research on peer-helpers in these domains has documented numerous psychological benefits associated with the peer-helper role. These benefits are broadly related to empowerment and recovery. Specifically, peer-helpers have reported benefits such as increased self-esteem, self-confidence, sense of responsibility, building or improving relationships, having a sense of giving back, making life changes, hope for the future, and reducing drug use. While these results have been found in the areas of addiction, mental health, and HIV/AIDS, little is known about the peer-helper role in the area of overdose prevention programs. Take-home naloxone programs (THN) represent harm reduction programs with the aim of reducing the number of deaths caused by opioid overdose. Naloxone kits and training on naloxone administration through injection are provided to opioid drug users. The availability of naloxone and the associated training allow drug users to respond in emergency overdose situations, which allows for quicker intervention since drug users often consume together and are present when an overdose occurs. **Problem:** The present problem is that there is a knowledge gap in the literature concerning the benefits and challenges associated with a peer role in overdose prevention research. A THN program, known as PROFAN (prevention and reduction of overdoses - training on, and access to, naloxone) in Montreal has implemented the use of peers training peers, also called peer-trainers. This involves first training drug users in overdose prevention, and giving them the responsibility to then deliver a training session to other users. To our knowledge, this is the first program to allow drug users to train others in overdose prevention. Therefore, the impact of this specific role of being a peer-trainer is unknown. **Research Question and Objectives:** The main research question guiding this thesis project is: what are the psychological impacts of being a peer-trainer in a THN program? The first manuscript in this thesis represents a literature review on the areas of addiction, overdose prevention, mental health, and HIV/AIDS to explore the experiences of peer-helpers in various domains of peer-led interventions. This review also helped to guide the development of the interview protocol, which was constructed for data collection and is discussed in the second manuscript. The theme of the second manuscript focuses on the personal impacts of being a peer-trainer, reporting on the qualitative interview results obtained from the six peer-trainers in the Montreal program. **Method:** The main objectives of the interviews were to explore peer-trainer experiences of 1) the overdose prevention training that they received, 2) their role as a trainer, and 3) the personal impact of taking on this role. In this thesis, psychological impact is operationalized as empowerment and recovery, as these are two broad themes that have been reported by studies on peer-helpers in the aforementioned areas. In order to capture the personal experiences of peer-trainers, the use of qualitative interviews was appropriate, as this is an exploratory study with a small number of individuals. **Results:** Interview results reveal that the six peer-trainers did in fact experience benefits related to empowerment and recovery. As well, there are a number of challenges associated with their role, suggestions to improve the program for future participants, and the desire to be more involved in the program, which suggests that the benefits they gained could be enhanced. The results support findings reported from other domains of peer-led

interventions that both the participants (those receiving the training) and peer-trainers are impacted positively by their involvement. Peer-trainers were satisfied with the overdose prevention training they received, and expressed being very proud to be the ones delivering a training session to other users. **Expected Contributions:** Knowledge about the impacts of the peer-trainer role will contribute to the development of THN programs, assuring that the program and the training it provides continues to adapt to the needs of those who use it, and may also encourage others to include peer-trainers in THN programs. This research will also allow for strategies to be put in place to optimize benefits and minimize challenges associated with the peer-trainer role, which will support their continued involvement in this specific THN program, but may also be applied to other peer-led interventions. Additionally, the findings may also serve to demonstrate that THN programs are capable of not only reducing the number of deaths by opioid overdose, but that these programs may also have wider effects on a psychological level.

Abrégé

Le contexte: Les pairs-aidants sont des personnes présentant des problèmes spécifiques et une implication dans une intervention qui a pour but d'aider des gens avec des problèmes similaires aux leurs. Des programmes menés par des pairs-aidants ont été implantés dans plusieurs domaines, notamment en toxicomanie, en santé mentale et en ce qui a trait au VIH/SIDA. Des recherches sur les pairs-aidants dans ces domaines ont documenté plusieurs bénéfices psychologiques associés au rôle de pair-aidant. Ces bénéfices sont généralement liés à l'autonomisation (empowerment) et au rétablissement. Précisément, les pairs-aidants ont rapporté des bénéfices tels qu'une augmentation de l'estime de soi, de la confiance personnelle, du sens de responsabilité, de la capacité de bâtir ou d'améliorer des relations, d'avoir le sentiment de redonner, d'effectuer des changements de vie, l'espoir pour le futur et la réduction de leur consommation. Alors que des résultats concluants ont été démontrés en toxicomanie, en santé mentale et pour le traitement du VIH/SIDA, peu est connu au niveau du rôle du pair-aidant dans le secteur des programmes de prévention d'overdose. Les programmes "take-home naloxone" (THN) consistent en des programmes de réduction des méfaits qui ont pour but de réduire le nombre de décès causé par la surdose d'opioïde. Les trousses de naloxone ainsi que la formation sur l'utilisation par injection sont fournies aux usagers d'opioïdes pour leur permettre d'intervenir en cas de situation d'overdose urgente. Cela assure des interventions plus rapides étant donné que les usagers consomment souvent ensemble et qu'ils sont présents lorsqu'une overdose survient. **Problématique:** Il n'y a que très peu d'écrits scientifiques se rapportant aux benefices associés avec le rôle de pair-aidant dans les recherches sur la prévention d'overdose. Le programme de THN montréalais, PROFAN (prévention et réduction des overdoses – formation et accès à la naloxone), met de l'avant une formation par les pairs, aussi appelés pairs-formateurs. Cela implique d'abord de former des usagers de drogues en prévention d'overdose et ensuite de leur donner la responsabilité de transmettre leurs connaissances lors de sessions d'information aux autres usagers. À notre connaissance, il s'agit du premier programme permettant aux usagers de drogues de former d'autres usagers en prévention d'overdose. Par conséquent, l'impact de ce rôle spécifique de pair formateur est inconnu. **Question de Recherche et Objectifs:** La question de recherche principale guidant ce projet de thèse est: quels sont les impacts psychologiques d'être un pair-formateur dans un programme de THN? Le premier manuscrit de cette thèse représente une recension rapide ("rapid review") de la littérature dans le secteur de la toxicomanie, de la prévention d'overdose, de la santé mentale et du VIH/SIDA pour explorer les expériences de pairs-aidants dans une variété de domaines d'interventions menés par les pairs-aidants. Cette recension a aussi aidé à guider le développement du protocole d'entrevue qui fut construit pour la collection de données et est discuté dans le second manuscrit. Le thème du second manuscrit porte sur les impacts personnels d'être un pair-formateur à partir des résultats d'entrevues qualitatives administrées aux six pairs-formateurs du programme PROFAN. **Méthode:** Les principaux objectifs des entrevues étaient d'explorer les expériences des pairs-formateurs quant à: 1) la formation en prévention d'overdose qu'ils ont reçue, 2) leur rôle en tant que formateur, et 3) l'impact personnel d'avoir pris ce rôle. Dans cette thèse, l'impact psychologique est opérationnalisé comme « l'autonomisation » et le « rétablissement » puisqu'ils représentent deux thèmes permettant d'englober les résultats issus des études sur les pairs-aidants dans les milieux mentionnés ci-dessus. De manière à

saisir les expériences personnelles des pair-formateurs, l'utilisation d'entrevues qualitatives était appropriée, puisqu'il s'agit d'une étude exploratoire avec un faible nombre d'individus. **Résultats:** Les résultats d'entrevue révèlent que les six pairs-formateurs ont en fait expérimenté des bénéfices liés à l'autonomisation et au rétablissement. Par ailleurs, on note un nombre de difficultés associées avec leur rôle, dont le désir d'être plus impliqué dans le programme. Des suggestions pour améliorer le programme pour les futurs participants ont aussi été rapportées. Les conclusions rapportées dans d'autres interventions menées par des pairs-aidants que les participants (ceux recevant la formation) ainsi que les pairs-formateurs sont impactés positivement par leur implication. Les pairs-formateurs se sont avérés satisfaits de la formation de prévention d'overdose qu'ils ont reçue et ont mentionné être très fiers d'être ceux qui menaient les sessions de formation pour les autres usagers. **Contributions Anticipées:** Les notions par rapport aux impacts sur le rôle des pairs-formateurs vont contribuer au développement du programme THN assurant que le programme ainsi que la formation qui lui est associée pourra s'adapter aux besoins de ceux qui la suive, et pouvant aussi encourager d'autres responsables de programmes similaires à s'adjoindre des pairs-formateurs. Cette recherche va aussi aider à soutenir la mise en place de stratégies pour optimiser les bénéfices ainsi que de diminuer les difficultés associées au rôle de pair-formateur. Cela devrait soutenir leur implication continue dans ce programme spécifique de THN, mais pourrait aussi être appliqué à d'autres interventions menées par des pairs. De plus, les conclusions peuvent aussi servir à démontrer que les programmes THN sont en mesure de non seulement réduire le nombre de décès liés aux surdoses d'opioïdes, mais aussi d'exercer des effets bénéfiques plus larges, au niveau psychologique.

Acknowledgements

First, I would like to express my gratitude to my thesis supervisor, Michel Perreault, for his guidance, understanding, patience and support throughout my master's degree. With his supervision I have been able to expand and further develop my research and writing skills, thanks to his assistance and feedback on numerous revisions of manuscripts. I am looking forward to taking this knowledge and experience gained from working with him to the next stage of my education.

Additionally, I would like to thank a few others for their essential roles in this project, particularly Leonie Archambault for her involvement in the data collection, and Diana Milton for her helpful insights, project coordination and submission of ethics addendums. I would also like to thank the members of my thesis committee for their support, Dr. Thomas Brown and Dr. Myra Piat.

Finally, I am deeply appreciative of having the love and encouragement of my family and friends in pursuing my dreams. I am extremely grateful for my parents, who have supported my educational goals in many ways, as well as my brother and extended family. Last but not least, I have to thank my special boyfriend who has supported me and my dreams unconditionally.

Contribution of Authors

This thesis is comprised of two manuscripts, the first being a rapid review of the literature on peer-helpers and the psychological impacts of this role. This manuscript was co-authored by myself, a member of my thesis committee, Dr. Myra Piat, and my thesis supervisor, Dr. Michel Perreault. I was responsible for conducting the literature review, reading and summarizing the results, and writing all the sections of the manuscript. Dr. Perreault and Dr. Piat both contributed significantly to multiple revisions of the paper, providing feedback that helped to improve the organization and argument of the paper.

The second manuscript consists of the results from the qualitative interviews with six peer-trainers in a Montreal overdose prevention program. As first author, I was responsible for developing the interview protocol based on the literature, data collection, content analysis, writing the manuscript, editing multiple revisions, as well as journal and reviewer selection for submission of the manuscripts. Dr. Perreault played an essential role in guiding the development of the interview questions, provided valuable direction in terms of analyzing the data, and offered feedback on revisions of the manuscript. Léonie Archambault also provided helpful comments on the interview protocol, participated in pre-testing the protocol, and participated in data collection. Diana Milton was responsible for coordination of the larger evaluation project, reviewed revisions of the manuscript and thesis, and submitted ethics addendums.

Introduction

Peer-helpers play an important role in interventions, as they help others experiencing similar problems and are integral to the success of the program. Peer-helpers have been involved in the areas of addiction, such as Alcoholics Anonymous, mental health, and HIV/AIDS programs. Research on peer-helpers in these domains have explored and documented numerous psychological benefits experienced by peers through their role helping others. These benefits are broadly categorized and operationalized using two broad themes: empowerment and recovery. Examples of specific psychological benefits reported by peer-helpers include increased self-esteem, confidence, greater sense of responsibility, greater connectedness with others, better medication adherence, decreased drug use, reduction of psychiatric symptoms, and feeling more personally empowered (Bastardo & Kimberlin, 2000; Broadhead et al., 2002; Bracke, Christiaens & Verhaeghe, 2008; Corrigan, 2006; Marino, Simoni, & Silverstein, 2007; Mowbray, Moxley & Collins, 1998; Pallaveshi, Balachandra, Subramanian, & Rudnick, 2014; Resnick & Rosenheck, 2008; Salzer & Sheer, 2002). Peer-helpers are often involved in another type of intervention as well, known as take-home naloxone (THN), which represents a harm reduction strategy to reduce the number of opioid overdoses and deaths caused by overdose. THN programs train drug users to become peer-helpers: individuals who are trained to recognize the signs of an overdose, and respond in emergency overdose situations by administering naloxone. No studies to date have investigated the psychological benefits or challenges that are experienced through being a peer-helper in a THN program, however, it is useful to know what drug users gain from their training and from taking on the peer role and how it impacts their lives. Furthermore, the psychological impact of being a peer-trainer in a THN program has been unexplored as

well. Peer-training is a recent implementation that involves first training drug users in overdose prevention, and then affording them the responsibility of delivering a training session to other users. Therefore, the peer-trainer role differs from that of the peer-helper because they take on more responsibility and a different level of leadership. While research on peer-helpers in mental health and HIV/AIDS programs have reported a psychological impact associated with the peer-helper role, research on THN programs has primarily focused on demonstrating program feasibility and has not considered the personal experiences of peer-trainers or peer-helpers. Understanding the psychological benefits and challenges of being a peer-trainer is important in order to detect unmet needs, to contribute to program and training development, and to identify whether THN programs may have psychological effects which may lead to individuals decreasing their drug use or risky behaviours, in addition to its purpose as an overdose prevention program. The first manuscript in this thesis represents a rapid review of the literature to identify the psychological impacts of being a peer-helper in various domains of peer-led interventions. The second manuscript presents data on qualitative interviews that were conducted with six peer-trainers of a THN program in Montreal.

References

Bastardo, Y. M., & Kimberlin, C. L. (2000). Relationship between quality of life, social support and disease-related factors in HIV-infected persons in Venezuela. *AIDS Care, 12*(5), 673-684.

Bracke, P., Christiaens, W., & Verhaeghe, M. (2008). Self-esteem, self-efficacy, and the balance of peer support among persons with chronic mental health problems. *Journal of Applied Social Psychology*, *38*(2), 436-459.

Broadhead, R. S., Heckathorn, D. D., Altice, F. L., van Hulst, Y., Carbone, M., Friedland, G. H., . . . Selwyn, P. A. (2002). Increasing drug users' adherence to HIV treatment: results of a peer-driven intervention feasibility study. *Social Science & Medicine (1982), 55*(2), 235-246.

Corrigan, P. W. (2006). Impact of consumer-operated services on empowerment and recovery of people with psychiatric disabilities. *Psychiatric Services, 57*(10), 1493-1496.

Marino, P., Simoni, J., & Silverstein, L. B. (2007). Peer support to promote medication adherence among people living with HIV/AIDS. *Social Work in Health Care, 45*(1), 67-80.

Mowbray, C. T., Moxley, D. P., & Collins, M. E. (1998). Consumers as mental health providers: first-person accounts of benefits and limitations. *The Journal of Behavioral Health Services & Research*, *25*(4), 397-411.

Pallaveshi, L., Balachandra, K., Subramanian, P., & Rudnick, A. (2014). Peer-Led and Professional-Led Group Interventions for People with Co-occurring Disorders: A Qualitative Study. *Community Mental Health Journal, 50*(4), 388-394.

Resnick, S. G., & Rosenheck, R. A. (2008). Integrating peer-provided services: a quasi-experimental study of recovery orientation, confidence, and empowerment. *Psychiatric Services, 59*(11), 1307-1314.

Salzer, M. S., & Shear, S. L. (2002). Identifying consumer-provider benefits in evaluations of consumer-delivered services. *Psychiatric Rehabilitation Journal, 25*(3), 281-288.

Chapter 1: Exploring the psychological benefits and challenges experienced by peer-helpers participating in take-home naloxone programs: a rapid review

Reference:

Marshall, C., Piat, M., Perreault. M (Submitted). Exploring the psychological benefits and challenges experienced by peer-helpers participating in take-home naloxone programs: a rapid review. *Drugs: Education, Prevention, and Policy.*

1.1 Abstract

Overdose is a significant problem in many countries around the world and is the leading cause of death among drug users. In order to avoid death caused by an overdose, it is necessary to intervene rapidly. Since drug users often use together, they are in an optimal position to intervene in emergency situations. Some opioid overdose prevention programs have trained drug users to intervene by administering naloxone. Little research has been devoted to understanding the benefits associated with the peer-helper role in the context of these programs. **Aim:** This rapid review aims to summarize research on the personal impacts of the peer-helper role in overdose prevention programs, while also drawing from research on peer-led interventions in other domains, including mental health and HIV/AIDS. **Method:** The review includes a search for articles on peer-helpers in take-home naloxone programs from PsychInfo, PsychNET, PubMed, PsycARTICLES, Medline, Web of Science, McGill University Library WorldCat network, Scopus, and google scholar. **Results:** The search generated a total of 152 articles, 27 of which are discussed. **Findings:** Only a few articles have been published on peer-helpers in overdose prevention. Exploratory studies suggest that empowerment and recovery are important benefits. Conditions to optimize these benefits are identified.

Keywords: overdose prevention, peer-helper role, psychological impacts, recovery, empowerment

1.2 Introduction

Peer-led interventions have become increasingly popular in a variety of areas with the recognition that including people with lived experience in interventions offers numerous benefits to the recipients of peer support, such as empowerment, increased self-esteem, and greater perceived empathy (Repper & Carter, 2011). Peer workers report similar benefits for themselves, including increased empowerment and self-esteem from helping others (Bracke, Christiaens & Verhaeghe, 2008; Repper & Carter, 2011). The contributions of peer-helpers can also reduce the workload for other health professionals and may result in potential decreased hospitalizations (Repper & Carter, 2011). Importantly, the peer-client relationship is based on common experience, trust, and empathy. Peer-led interventions represent an approach to care that allows patients' voices to be heard in treatment settings, and offers individuals opportunities to empower and support each other (Ahmed et al. 2012).

In recognition that overdose is a significant global problem, and that most overdoses occur in the presence of other drug users (Oliver & Keen, 2003; Strang et al., 1999), harm reduction programs like take-home naloxone (THN) have been developed and implemented in many countries (UNODC, 2013) in order to intervene with drug users and prevent deaths due to opioid overdose. THN programs provide naloxone kits to drug users. Naloxone is an opioid antagonist that can be injected in opioid overdose situations, which involve drugs such as heroin, morphine, methadone, or oxycodone. This medication, used for years by medical professionals and emergency personnel (Sporer & Kral, 2007), is non-addictive and safe to use (Dorp, Yassen, & Dahan, 2007). Several studies have demonstrated that drug users are willing to participate, and can in fact be

trained to be effective first responders to treat overdoses (Banjo et al., 2014; Bennett, & Holloway, 2012; Gaston, Best, Manning, & Day, 2009; Green, Heimer, & Grau, 2008; Lagu, Anderson, & Stein, 2006; Piper et al., 2008; Sherman et al., 2008; Strang et al., 2008). This type of program is innovative in that drug users can be trained to respond to others overdosing, which in turn should contribute to reducing the number of overdose deaths. In addition to reducing overdoses, these programs may have an additional impact, not on the individuals who need naloxone, but on those who administer it, especially if they are peer-helpers. Including drug users as peer-helpers in this type of program may offer a way to empower them by not only training them to respond to overdoses, but by enabling them to move beyond seeing themselves as just drug users. Contrary to paramedics, who respond to overdoses and already have a helping role due to the nature of their work, peer-helpers may move beyond the drug user role to a helping role. This role transition is particularly important because drug and alcohol users represent a vulnerable population, as they often have low self-esteem compared to non-abusing populations (Bitancourt, Tissot, Fidalgo, Galduróz, & da Silveira Filho, 2016; Salsali & Silverstone, 2003a,b) and are stigmatized in society. Research in mental health suggests that stigma against mental illness can actually contribute to lowering self-esteem (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001). Drawing from research in mental health and HIV/AIDS, feeling stigmatized can in turn hinder recovery in terms of negatively affecting treatment enrollment and retention, and relationships with health care providers (Link & Phelan, 2006; Varas-Díaz, Serrano-García, & Toro-Alfonso, 2005). Variables such as self-esteem, recovery, stigma, as well as empowerment, are important factors to consider when studying drug user experiences as peer-helpers. Up until now, research on THN programs has focused on program feasibility and the physiological

effects of naloxone on the person overdosing. To date, little research has explored the psychological impacts of being a peer-helper in THN programs, and the potential of this program to decrease drug use and risky drug use behaviours of peers.

1.3 Project Aim

The focus of this paper is to investigate whether peer-helpers in the context of THN programs receive personal benefits through their role as a peer. The initial research question was: what are the psychological impacts of being a peer-helper in a THN program? Psychological impact is operationalized as empowerment and recovery, as these are two broad themes that have been reported by studies on peer-helpers in mental health and HIV/AIDS programs. Specific impacts, such as self-esteem, sense of responsibility, confidence, self-perception, empowerment, and even personal recovery and health, were considered in the literature search. Gaining a greater understanding of the peer-helper role is essential, as the involvement, motivation and competence of peer-helpers contributes to the success of the intervention. Exploring peer-helper experiences and determining the benefits they receive from their role is also another way of demonstrating the positive effects of this type of program. Having peer-helpers give back to, as well as gain from the program is essential to reducing the number of overdose deaths. Devoting more attention to this area of research will help identify unmet training or social support needs of peer-helpers, which will contribute to program development. Understanding the experiences and benefits of the peer-helper role is also important for program and policy-makers who are involved in the design and implementation of THN programs. Increased knowledge about this role can help to create an environment that will optimize the peer-helpers' experiences and create conditions that will encourage

individuals to take on this role. It will also stimulate peer involvement with the project, and will allow for more informed decision-making with regards to improving the program.

1.4 Method

This paper represents a rapid review, which was appropriate for this particular topic, given the limited search strategy and little available information on peers in overdose prevention programs. According to Khangura et al. (2014), a rapid review is a type of accelerated systematic review; can use extended search techniques such as locating grey literature; are useful for both review and assessment; and follow most of the same principles of the systematic review but within a shorter time frame and in less detail. Rapid reviews are often used by decision-makers for urgent and emerging needs (Khangura et al. 2014). This type of review was chosen in order to provide a synthesis of information on the personal impacts of being a peer-helper in THN programs, which will help program and policy-makers improve these peer-led interventions and identify strategies to increase peer involvement.

1.4.1 Search Strategy

The initial focus of this rapid review is on peer-helpers in THN programs. In order to get an idea of the impacts of being a peer-helper in general the following keywords were first submitted to research databases: peer-helpers, peer-led interventions, program evaluation, peer-helper empowerment, impacts/benefits/challenges/effects of being a peer-helper, psychological impacts, benefits of helping others, peer educator, peer support, and peer-helper role. After these keywords were submitted, the exploration was

further refined by searching specifically for peer-helpers in THN programs, mental health programs, and HIV/AIDS programs (see Figure 1). Keywords were submitted to the following research databases: PsychInfo, PsychNET, PubMed, Web of Science, Medline, PsycARTICLES, as well as the McGill University Library WorldCat network, Scopus, and Google scholar. Articles published in English between 1995 and 2016 were searched for and included in this review. The search generated a total of 152 articles mentioning peer-helpers. Abstracts were read by the first author to determine eligibility and relevance to the main research question, and were then discussed with the third author. Only seven of the identified articles focused on THN programs and were relevant to the research question. Many of the articles only mentioned peer-helpers but did not discuss anything related to the benefits or challenges of the role.

1.4.2 Inclusion criteria

While peer-helper involvement in THN programs is relatively new, and the impact of this role has not been empirically documented, other programs have successfully implemented peer involvement including mental health and HIV/AIDS interventions. As well, there are many publications in the mental health field on self-esteem, recovery, empowerment and stigma, and similar research can be found in the area of HIV/AIDS. These are also three interrelated areas as drug users often have comorbid mental health problems (Conway, Swendsen, Husky, He, Merikangas, 2016), and are at risk of contracting HIV/AIDS by engaging in risky drug use behaviours. Another factor which contributed to choosing to include these three domains of peer-led interventions in this review is the fact that individuals facing these kinds of problems often feel stigmatized in society. As suggested by Piliavin (2005), individuals who are socially

isolated, as drug users often are, appear to receive the greatest benefits from helping others. If someone is struggling with a drug problem, mental health problem, or diagnosis of HIV/AIDS, and takes on the peer-helper role, what impact does this have on them? For these reasons, it is important to look at all three domains of peer-led programs in order to identify common benefits that peer-helpers receive through their role, to suggest areas for future research on peer-helpers in THN programs, and to provide recommendations on how peer-led programs can be improved using the knowledge of these benefits and challenges.

After reading abstracts of the 152 articles, 125 articles did not meet the inclusion criteria and were excluded from the review. These 125 articles constituted evaluation papers that mentioned peer-helpers, but focused more on evaluating the program itself, and did not discuss the impacts of being a peer-helper in the intervention. Twenty-seven articles are discussed in detail in this review because of their relevance to the research question (see Table 1). Inclusion criteria consists of peer-reviewed English publications, where peers were helping people with similar problems to their own, sharing common lived experience (Marshall, Dechman, Minichiello, Alcock, Harris, 2015; Daniels, Bergeson, Ashenden, Fricks, & Powell, 2012). For example, peers in mental health interventions were considered to be peer-helpers if they had mental health problems of their own and they were participating in a program to help others with mental health issues. As this review aims to examine the psychological impacts of being a peer-helper, the article needed to mention a psychological benefit (as defined earlier) in the results section. In general, a psychological impact is defined as an effect caused by environmental and/or biological factors on an individual's social and/or psychological

aspects (de Oliveira et al., 2013). In order to focus on the psychological aspects of the peer-helper role, this review was limited to papers that reported the ways in which the peer role personally influenced the individual's life, how they feel about themselves, how they feel about others, or how other people perceived or treated them differently as a peer-helper. Also accepted were articles which discussed the benefits that recipients gain from peer support, to see whether participants and peer-helpers receive similar benefits. The review includes original research papers with clear research methods, as well as other reviews. Bibliographies from selected articles were scanned and included in the review if they were relevant to the research question. Grey literature was also consulted by submitting keywords into Google in order to identify news articles and government reports to gain a better understanding of overdose fatalities, and identify countries in which THN programs have been implemented. However, no grey literature articles identifying the personal impacts of being a peer-helper were identified in the initial search.

1.5 Results

The findings are presented in this paper according to the domain of peer-led intervention (see Table 1) with the benefits of the peer-helper role in THN programs discussed first, as this was the initial aim of the review. The beneficial impact of the peer-helper role was documented in each domain of peer-led intervention. Results reported among participants (individuals who receive support from peers) are summarized first in each section.

In total, there were eight papers on peer-led THN programs (one of which discusses peer-helping in a 12-step program), fourteen articles on peer-led mental health

interventions, and five on peer-led HIV/AIDS interventions. Not all of the mentioned articles are focused on peer-helpers or the psychological impact of their role. Nine of the fourteen articles on peer-led mental health programs discuss the benefits of being a peer-helper and the remaining five focus on the benefits of being a participant. Out of the five articles found on HIV/AIDS programs, four discuss the benefits of being a peer-helper. Empowerment is a recurring theme among all three domains. Recovery is prominent among peer-helpers in mental health programs, and is mentioned in one overdose prevention paper as well. Other benefits include increased confidence, self-esteem, sense of responsibility, hope, and pride. Results on peer-led HIV/AIDS programs demonstrate that individuals were more willing to talk about HIV and educate others, and also became more involved with their health care provider and had better medication adherence.

In terms of methodology, results from the THN literature were found using qualitative exploratory studies. While in the mental health literature, a variety of studies have been conducted, including longitudinal designs, quasi-experimental, randomized controlled trials, and mixed methods studies using validated questionnaires. The main difference between these three domains is that studies on peer-helpers in mental health and HIV/AIDS programs have in fact documented the benefits of the peer-helper role in addition to documenting program feasibility.

1.5.1 Peer-helpers in overdose prevention programs

Only seven evaluation studies of THN programs briefly mention the effects of being a participant in the program. One of the significantly positive benefits is that participants gain a sense of empowerment (Banjo et al., 2014; Leece et al., 2013; Wagner et al., 2014). Leece et al. (2013) conducted an evaluation study of an overdose prevention

program implemented in Toronto, Canada. Although participants in the program reported to staff members that they felt empowered after receiving training, the researchers did not administer any measures of empowerment, conduct interviews, or evaluate what participants gained from the program. No peer-helpers were included in this study. Empowerment was simply mentioned by one of the participants to one of the staff members. Banjo et al. (2014) evaluated an overdose prevention program in British Columbia by conducting focus groups and individual interviews with 40 clients using the THN program. Results reveal that clients using the program felt confident to respond to overdoses, felt a sense of pride in being a part of the program, and reported feelings of empowerment and confidence. Direct quotations included in the paper illustrate that clients felt good about what they were doing in the program; some mentioned improved self-esteem and dignity, and feeling proud. In another study, Wagner et al. (2014) examined the role of becoming an overdose responder. Thirty interviews were conducted with participants in two overdose prevention programs in Los Angeles, California. Findings revealed that participants experienced both positive and negative aspects of their role. The benefits included having an increased sense of control, increased confidence, feelings of heroism and pride, and feeling appreciated. Some of the drawbacks to the role were feeling fear, anger, regret, and a sense of burden, which led to some individuals cutting social ties to others they considered at high risk of overdose. Sherman et al. (2008) conducted qualitative interviews with thirty-one injecting drug users in the Chicago Recovery Alliance needle exchange program. Participants were asked about their first time using naloxone, what their experiences were like in situations in which naloxone was not administered, factors that influenced calling 911, and how paramedics reacted to those who had administered naloxone. Participants reported feeling a sense of

dignity, which resulted from receiving education about overdose and being able to intervene effectively to save someone's life. In Scotland, a pilot THN program was implemented at two different sites, one in Lanarkshire and one in Glasgow. An evaluation of these programs carried out by McAuley, Best, Taylor, Hunter, and Robertson (2012) reveal that the participants who attended a re-supply interview reported having increased confidence and self-esteem. However, the focus of the study was not on identifying the benefits that participants received from of being an overdose responder, and it only briefly mentioned participants' increased confidence and self-esteem from their role in the program. A limitation of these results is that feedback was only obtained from participants who attended a re-supply interview, which could have been a very small and unrepresentative sample. In a case study analysis, George, Bouley and Begley (2010) presented the case of "Mr. M", a 28 year-old British man with a heroin addiction. In the study, Mr. M reports in detail how he has used naloxone in the past, and how receiving training on how to administer it gave him more confidence and a sense of responsibility.

In sum, reported feelings among participants who are trained to become peer-helpers include a sense of dignity (Sherman et al., 2008), an increase in self-esteem (McAuley et al., 2012), feeling heroism and pride (Wagner et al., 2014), being proud to be able to save someone's life (Sherman et al., 2008), as well as gaining confidence (Banjo et al., 2014; George, Boulay, & Begley, 2010; Wagner et al., 2014), a sense of control (Wagner et al., 2014), and responsibility (George, Boulay, & Begley, 2010). Research has also suggested that these psychological benefits could motivate individuals to change their behaviour. One of the concerns about prescribing naloxone to drug users is that the medication would serve as a safety net, condoning drug using habits and encouraging an increase in drug use (Seal et al., 2005; Sporer & Kral, 2007). Research

does not support this criticism, as results suggest the opposite (Seal et al., 2005). Wagner et al. (2010) found that 53% of their participants in a THN program reported a decrease in drug use at a follow-up, and an increased proportion enrolling in drug treatment. A possible explanation for a decrease in drug use could be due to drug users experiencing an increase in empowerment and responsibility, which may lead to an increase in self-esteem and allow them to actually reduce their own addictions (Wagner et al., 2010). Similarly Pagano, Phillips, Stout, Menard and Piliavin (2007), reported an increase in helping behaviours predicted substance use disorder remission, as well as body dysmorphic disorder remission. Although this was not an overdose prevention program, the results highlight the important relationship between helping behaviours and substance use. In other domains in which peer-helpers are included, there is literature on topics such as empowerment and recovery. Results from participants in THN programs provide important variables to investigate in the mental health literature, including self-esteem, responsibility, empowerment, hope, confidence, and recovery.

1.5.2 Peer-helpers in mental health programs

The inclusion of peers in interventions is common in the mental health literature. Studies demonstrate that individuals with psychiatric problems who participate in peer operated mental health services receive numerous benefits, including personal empowerment. In a systematic review and meta-analysis of randomized controlled trials, Lloyd-Evans et al. (2014) researched the effects of peer support for people with severe mental illness. The researchers reported that there was some evidence for a positive effect of peer-support on hope, recovery and empowerment of the clients. Other studies have reported similar findings, including an increase in empowerment (Barbic, Krupa, &

Armstrong, 2009; Gestel-Timmermans et al., 2012), hope (Barbic, Krupa, &Armstrong, 2009; Gestel-Timmermans et al., 2012; Cook et al., 2012), self-efficacy (Gestel-Timmermans et al., 2012; Fukui, Davidson, Holter et al., 2010), recovery (Barbic, Krupa, & Armstrong, 2009), self-esteem, improvements in spiritual well-being, social support and psychiatric symptoms (Cook et al., 2012; Fukui, Davidson, Holter et al., 2010), and an increase in quality of life (Cook et al., 2012).

Both participants and peer helpers in peer-run programs experience psychological and social benefits, such as increased empowerment and self-esteem. Qualitative research has shown that being a peer-provider allows individuals to better cope with their health, offers personal growth, increased confidence in abilities, as well as increased self-esteem, hope and empowerment (Bracke, Christiaens & Verhaeghe, 2008; Corrigan, 2006; Mowbray, Moxley & Collins, 1998; Pallaveshi, Balachandra, Subramanian, & Rudnick, 2014; Resnick & Rosenheck, 2008; Salzer & Sheer, 2002). Salzer and Sheer (2002) conducted semi-structured interviews with peer support specialists in Friends Connection, a mental health program. The peers in this program were individuals who were in recovery for substance abuse, and/or had a personal experience with mental health. A thematic analysis of the interviews revealed that peers reported increased confidence and self-esteem, and felt much appreciated in their work helping others with mental health issues. The peers also reported things that they liked about being a peer support specialist, which included facilitating recovery in others, facilitating their own recovery, professional growth, social approval from others, mutual support, and job-related benefits, such as independence, responsibility, being trusted and being challenged. Although receiving and giving peer support both offer increases in self-esteem, Bracke, Christiaens, and Verhaeghe (2008) found that providing peer support results in greater

increases in self-esteem and empowerment compared with receiving it. These results were found based on measuring the reciprocity of peer support on self-esteem and self-efficacy among 628 individuals using vocational and psychiatric rehabilitation services. Self-esteem was measured using the Flemish version of Rosenberg's global self-esteem scale, and self-efficacy was measured using an abbreviated Dutch version of Sherer et al.'s (1982) scale. Based on their results with mental health interventions, studies by Hutchinson et al. (2006), Moran et al. (2012), and Ahmed, Hunter, Mabe, Tucker and Buckley (2015) all suggest that the peer role could contribute to increases in hope, empowerment, psychosocial functioning and recovery. Hutchinson et al. (2006) evaluated a peer program for people with psychiatric disabilities and its impact on peer providers using a pre-post design. The researchers found that peer providers experienced increased empowerment, measured by the Empowerment Scale, and had more positive attitudes towards recovery and self-concept, as measured by the Recovery Attitudes Questionnaire, the Tennessee Self-Concept Scale, and the Personal Vision of Recovery Scale. Moran et al (2012a) conducted a study on thirty peer providers in mental health interventions and administered standardized measures of recovery and growth, including the Empowerment Scale, Recovery Assessment Scale, Loyola Generativity Scale, Psychological Well-Being Scale, and the Posttraumatic Growth Inventory. Multivariate analyses indicate that there was a strong relationship between participant's generativity, Erikson's concept of struggling against stagnation and a concern for helping the next generation, and past experiences as a peer provider. These results suggest that acting as a peer-helper could have a positive impact on an individual's generativity. In a related study, Moran et al. (2012b) investigated the benefits that individuals with psychiatric disabilities receive from participating as a peer provider. Semi-structured interviews were conducted with

thirty-one peer providers participating in mental health agencies. Peer providers identify numerous benefits classified into five domains, 1) foundational, 2) emotional, 3) spiritual, 4) occupational and 5) social. In a study exploring the professional experiences of peer specialists in mental health services, Ahmed et al. (2015) administered surveys and questionnaires to eighty-four peers and found that, although the peers experienced relapse throughout the study, they were better able to manage their relapse by implementing effective coping strategies. The researchers also found that the peers experienced challenges in their role, such as poor compensation, emotional stress and work stress. In this mixed study analyses showed that recovery attitudes among peers could offer clinical and psychosocial advantages, and that being employed as a peer specialist may provide individuals with a sense of empowerment, social engagement and competence (Ahmed et al., 2015). Results from these studies (Ahmed et al., 2015; Hutchinson et al., 2006, and Zemore et al., 2004) suggest that the helping role can offer clinical benefits in terms of recovery. One explanation is that acting as a peer increases the sense of recovery, along with empowerment, which may encourage individuals to take part in activities that will improve their health and quality of life (Ahmed et al., 2015). These results have been found among peer-helpers in mental health programs and similar results have been reported among peer-helpers in HIV/AIDS programs. While recovery was not expected to be one of the impacts of the peer-helper role in HIV/AIDS programs, it was anticipated that increases in empowerment and self-esteem would be identified. In order to strengthen the findings reported in the mental health domain, it is important to include this third domain of peer-led intervention.

1.5.3 Peer-helpers in HIV/AIDS interventions

In peer-led HIV/AIDS prevention programs, individuals who are HIV-positive can participate as peers to educate and transmit information to others who are HIV-positive and those who are at risk of becoming HIV-positive (Marino, Simoni, & Silverstein, 2007). Studies in this area of research also support the notion that the peer role is associated with numerous personal benefits. For example, studies have found that being an HIV-positive peer-helper contributes to reduced social isolation, a decrease in transmitting blood-borne pathogens, as well as better medication adherence and improved mental health (Bastardo & Kimberlin, 2000; Broadhead et al., 2002; Marino, Simoni, & Silverstein, 2007). Bastardo and Kimberlin (2000) conducted a cross-sectional study to measure quality of life, social support, and disease-related factors among 118 HIV-positive individuals living in Venezuela. The measures used in this study include the Spanish translation of the Interpersonal Support Evaluation List (ISEL), the Medical Outcomes Study Short Form-36 (SF-36), and a symptom inventory. Although the study did not focus on peer-helpers with HIV, results indicate a link between social support and quality of life among HIV-positive individuals, suggesting that peer-helpers, who provide and receive social support in their relationships with clients, may experience an increase in quality of life as well. Another significant finding was that social functioning, a variable related to quality of life, was associated with taking antiretroviral drugs (medication adherence). Broadhead et al. (2002) studied HIV-positive drug users in a six-month feasibility study. Each subject in the study played either the role of a health advocate, who provided support, or a peer, who received support from the health advocate. The study reported on advocate-peer interactions. In each pair, the health

advocate was responsible for administering a questionnaire to the peer and developing a calendar to ensure that the peer recorded medical appointments, and whether or not the peer went to the appointment and picked up necessary medication. One of the strengths of this study is that injecting drug users were recruited to participate if they had problematic adherence to HIV care, meaning recruitment reached individuals who were in need of HIV care and had problems maintaining it. Reduced social isolation among HIV-positive individuals is an important goal, as stigmatization may lead many individuals living with HIV to withdraw from social situations, which makes them vulnerable to psychological distress (Kalichman, 1995). The lack of a social network and loss of social intimacy can cause people to become disempowered and experience decreased self-esteem (Kalichman, 1995). Fortunately, the peer-helper role may serve as a buffer against social isolation and disempowerment. Peer-helpers in this domain have reported feeling more personally empowered through their role as helpers, feeling more comfortable to talk about HIV/AIDS, as well as a change in outlook on life (Marino, Simoni, & Silverstein, 2007). In the study by Marino, Simoni, and Silverstein (2007), peers living with HIV were recruited to participate in an intervention program to support others living with HIV, especially with medication adherence. Qualitative interviews were conducted with nine peer-helpers. Four themes emerged including 1) social acceptance, 2) reciprocal support, 3) personal growth and empowerment, and 4) resistance and other challenges. Empowerment was conceptualized as feeling entitled to talk about HIV, how being a part of the project gave the peers strength and confidence, and a change in outlook (feeling like a different person as a result of being a peer). Empowerment can promote HIV-positive individuals to become more interactive with their health care provider, more

involved in their treatment decisions, and more active knowledge seekers (Marelich et al., 2002).

1.5.4 Challenges associated with the peer-helper role

Although there are many documented advantages of being a peer and helping others, it is acknowledged that peer-helpers specifically in THN programs can encounter challenges with their role. While peers may feel empowered knowing that they are trusted with the responsibility of jobs normally performed by medical professionals, the responsibility may also be viewed as a burden, due to highly stressful situations. Some negative emotions, such as fear, regret, and burden have been reported by participants in THN programs (Wagner et al., 2014). Also reported among peer-helpers in other domains are disadvantages, such as poor compensation and benefits, work stress, the emotional stress of helping others, maintaining personal wellness, limitation in resources (Ahmed et al., 2015; Moran et al., 2014), as well as difficult work conditions, insufficient training, and competing roles as a provider, peer and consumer of services (Moran et al., 2014, Walker & Bryant, 2013).

1.6 Discussion

This rapid review provides results from twenty-seven articles on peer interventions in three domains: opioid overdose prevention, mental health, and HIV/AIDS. A common finding among all three areas is that the peer-helper role is associated with personal and psychological benefits, such as increased empowerment and recovery. In terms of research on opioid overdose prevention, many of the studies on THN programs have focused on program evaluation and have not studied in-depth the

psychological impacts of engaging in a peer-helper role. Given that there are not many studies that have investigated the benefits and challenges of peer-helping in THN programs, it was important for this review to look at how the use of peer-helpers has been implemented in other programs. Mental health interventions have successfully incorporated peer-helpers and have reported a number of psychological benefits that peer-helpers gain from their role, such as increased empowerment, self-esteem, self-efficacy, confidence, a greater sense of responsibility, improvement in psychiatric symptoms, and opportunities to work on their professional skills and find employment. In HIV/AIDS programs, HIV-positive peers have reported similar experiences of increased empowerment and self-esteem, as well as better medication adherence.

1.6.1 Methodological Issues

In the domain of mental health and HIV, evaluation research has shown that there are positive impacts associated with being a peer-helper (Table 1). The THN domain of peer-led interventions is exploratory because research has focused predominantly on demonstrating the feasibility and program evaluation. Future studies should not only demonstrate the feasibility of the THN program, but should consider the personal impacts of being a peer-helper as well. Another avenue for future research in the THN domain is the development and validation of questionnaires that will measure specific benefits associated with the peer-helper role, as well as satisfaction with the THN program and training. For example, if empowerment and recovery are in fact identified as being important benefits among peer-helpers, more work could be done to further develop, and capture the concepts of empowerment and recovery in the context of THN programs.

In this review there were only two longitudinal studies identified, one in the area of mental health (Gestel-Timmermans et al., 2012), and another on a 12-step program (Zemore et al., 2004). It may be useful for longitudinal studies to also be conducted in the areas of HIV and overdose prevention research to examine over time how peer-helpers benefit, and if these benefits last and translate into individuals making important life changes, such as obtaining employment and/or housing, reduction of symptoms, decreased use of drugs, enrolling in drug treatment, long-term medication adherence, and so on. One of the strengths of the studies presented in this review is that they included sample sizes that were diverse on a number of different variables, such as age, gender, and ethnicity. Studies were also conducted in different settings and countries and still concluded that peer-helpers and participants in these programs gained a number of personal benefits.

1.6.2 Suggestions to improve peer-led interventions

The mission of THN programs is to prevent death by opioid overdoses but can these programs be optimized to do more than just train people to respond to overdoses? Are these programs capable of preventing injecting and risky drug use behaviours? In terms of personal benefits, results from the three domains of peer-led programs indicate that empowerment, confidence, self-esteem and recovery are important benefits to both peer-helpers and participants. Based on this knowledge, strategies could be developed to optimize these benefits, which would in turn improve the program and ensure that peer-helpers continue to be involved. Based on the finding that peer-helpers have reported an increase in empowerment, one suggestion for peer-led programs is to include peer-helpers in the program design and decision-making right from the very beginning of the program.

By including peer-helpers in making decisions related to the creation and implementation of the program this could optimize their levels of empowerment (see Rogers, Chamberlin, Ellison & Crean, 1997). Other recommendations emanating from Brown, Shepherd, Merkle, Wituk, and Meissen's (2008) study demonstrate that both an empowering participation experience, which includes taking on a leadership role and contributing to the overall function of the organization, as well as a supportive participation experience, which consists of having supportive and meaningful friendships with intimacy and sharing, were both related to recovery. Having a socially supportive experience had a stronger relationship with recovery than an empowering experience. These results lend support to the notion that being a peer-helper and taking on this leadership role, helping others, developing relationships and being involved in an organization can contribute to recovery. The findings suggest that both types of participation should be encouraged and conditions should be put in place to ensure that peer-helpers have opportunities to experience both. Other recommendations to promote empowerment include: recognizing member accomplishments, creating formal leadership positions, providing volunteer opportunities, and organizing interesting activities, such as group outings and holiday parties (Brown et al., 2008).

1.7 Limitations

This review was conducted as part of a larger project investigating the psychological impacts of engaging in a peer-trainer role in a THN program. Therefore, the focus of the review was to document the personal impacts of being a peer-helper in opioid overdose prevention programs. A limitation of the literature reported in this review is that no papers were identified that discussed the personal impacts of being a peer-

helper in THN Programs. Research on other peer-led programs, such as mental health and HIV/AIDS, was included to address the research question for this review and to support the need to further investigate the personal impacts of the peer-helper role among individuals who use drugs. As a result of this, other programs where peers may be involved were excluded from this review, such as peer-support programs for people with cancer, or other serious medical conditions. Although rapid reviews provide a timely and valid view of evidence, they do sacrifice rigour (Khangura et al., 2014). However, a systematic review or meta-analysis was not ideal, given that there are few studies that have documented the impacts of being a peer in THN programs. Future reviews might consider expanding the focus and documenting the effects of being a peer-helper in other types of programs.

1.8 Conclusion

This review reveals that the benefits of being a peer-helper are empowerment, increased confidence and self-esteem, and recovery. While there have been reported psychological benefits of being a peer-helper in mental health and HIV/AIDS programs, there remains a significant knowledge gap in the literature regarding peer-helpers in THN programs. Future research should consider the possibility that THN programs may be influencing drug users in more areas of their lives than just responding to overdoses. Intervention is important but it deals only with a small part of the problem. The potential of THN programs to play a role in influencing drug-using habits through providing positive psychological impacts to peer-helpers needs to be investigated, and evidence from other types of peer-led programs supports this need. Ultimately, understanding the advantages of being a peer-helper may encourage organizations to consider including

peers in their programs, support the improvement of existing peer-led interventions, and enhance any training that peer-helpers receive. As the knowledge base of the peer-helper role increases, more informed decisions can be made to improve peer-led interventions. As outlined in this review, optimizing the benefits of being a peer-helper could have important implications in terms of personal empowerment and recovery.

References

Ahmed, A. O., Doane, N. J., Mabe, P. A., Buckley, P. F., Birgenheir, D., & Goodrum, N. M. (2012). Peers and peer-led interventions for people with schizophrenia. *The Psychiatric clinics of North America*, *35*(3), 699-715.

Ahmed, A. O., Mabe, A. P., Buckley, P. F., Ahmed, A. O., Hunter, K. M., & Tucker, S. J. (2015). The Professional experiences of peer specialists in the Georgia mental health consumer network. *Community Mental Health Journal, 51*(4), 424-436.

Banjo, O., Tzemis, D., Al-Qutub, D., Amlani, A., Kesselring, S., & Buxton, J. (2014). A quantitative and qualitative evaluation of the British Columbia take home naloxone program. *CMAJ Open, 2*(3), 153-161.

Barbic, S., Krupa, T., & Armstrong, I. (2009). A randomized controlled trial of the effectiveness of a modified recovery workbook program: preliminary findings. *Psychiatric Services*, *60*(4), 491-497.

Bastardo, Y. M., & Kimberlin, C. L. (2000). Relationship between quality of life, social support and disease-related factors in HIV-infected persons in Venezuela. *AIDS Care, 12*(5), 673-684.

Bennett, T., & Holloway, K. (2012). The impact of take-home naloxone distribution and training on opiate overdose knowledge and response: an evaluation of the THN Project in Wales. *Drugs: Education, Prevention and Policy, 19*(4), 320-328.

Bitancourt, T., Tissot, M. C. R. G., Fidalgo, T. M., Galduróz, J. C. F., & da Silveira Filho, D. X. (2016). Factors associated with illicit drugs' lifetime and frequent/heavy use among students results from a population survey. *Psychiatry Research, 237*(2016), 290-295.

Bracke, P., Christiaens, W., & Verhaeghe, M. (2008). Self-esteem, self-efficacy, and the balance of peer support among persons with chronic mental health problems. *Journal of Applied Social Psychology*, *38*(2), 436-459.

Broadhead, R. S., Heckathorn, D. D., Altice, F. L., van Hulst, Y., Carbone, M., Friedland, G. H., . . . Selwyn, P. A. (2002). Increasing drug users' adherence to HIV treatment: results of a peer-driven intervention feasibility study. *Social Science & Medicine (1982)*, *55*(2), 235-246.

Brown, L. D., Shepherd, M. D., Merkle, E. C., Wituk, S. A., & Meissen, G. (2008). Understanding how participation in a consumer-run organization relates to recovery. *American Journal of Community Psychology*, *42*(1-2), 1-2.

Conway, K. P., Swendsen, J., Husky, M. M., He, J.-P., & Merikangas, K. R. (2016). Association of Lifetime Mental Disorders and Subsequent Alcohol and Illicit Drug use: Results from the National Comorbidity SurveyAdolescent Supplement. *Journal of the American Academy of Child & Adolescent Psychiatry*, doi: 10.1016/j.jaac.2016.01.006.

Corrigan, P. W. (2006). Impact of consumer-operated services on empowerment and recovery of people with psychiatric disabilities. *Psychiatric Services*, *57*(10), 1493-1496.

Cook, J. A., Copeland, M. E., Jonikas, J. A., Hamilton, M. M., Razzano, L. A., Grey, D. D., Floyd, C. B., ... Boyd, S. (2012). Results of a randomized controlled trial of mental health self-management using Wellness Recovery Action Planning. *Schizophrenia Bulletin*, *38*(4), 881-891.

Daniels, A. S., Bergeson, S., Ashenden, P., Fricks, L., & Powell, I. (2012). Pillars of peer support: Advancing the role of peer support specialists in promoting recovery. *Journal of Mental Health Training, Education and Practice, 7*(2), 60-69.

de Oliveira, A. M., Buchain, P. C., Vizzotto, A. D. B., Elkis, H., & Cordeiro, Q. (2013). Psychosocial Impact. In *Encyclopedia of Behavioral Medicine* (pp. 1583-1584). Springer New York.

Dorp, E., Yassen, A., & Dahan, A. (2007). Naloxone treatment in opioid addiction: the risks and benefits. *Expert Opinion on Drug Safety, 6*(2), 125-132.

Fukui, S., Davidson, L. J., Holter, M. C., & Rapp, C. A. (2010). Pathways to recovery (PTR): impact of peer-led group participation on mental health recovery outcomes. *Psychiatric Rehabilitation Journal, 34*(1), 42-48.

George, S., Boulay, S., & Begley, D. (2010). 'I saved a life': a heroin addict's reflections on managing an overdose using 'take home naloxone'. *BMJ Case Reports, 2010.*

Green, T. C., Heimer, R., & Grau, L. E. (2008). Distinguishing signs of opioid overdose and indication for naloxone: an evaluation of six overdose training and naloxone distribution programs in the United States. *Addiction, 103*(6), 979-989.

Gestel-Timmermans, H., Brouwers, E., Marcel A. L. M. Van Assen, & Nieuwenhuizen, C. (2012). Effects of a peer-run course on recovery from serious mental health: a randomized controlled trial. *Psychiatric Services, 63*(1), 54-60.

Hutchinson, D. S., Anthony, W. A., Ashcraft, L., Johnson, E., Dunn, E. C., Lyass, A., & Rogers, E. S. (2006). The personal and vocational impact of training and employing people with psychiatric disabilities as providers. *Psychiatric Rehabilitation Journal, 29*(3), 205-213.

Khangura, S., Polisena, J., Clifford, T. J., Farrah, K., & Kamel, C. (2014). Rapid review: an emerging approach to evidence synthesis in health technology assessment. *International Journal of Technology Assessment in Health Care, 30,* 1, 20-7.

Kalichman, S. C. (1995). *Understanding AIDS: a guide for mental health professionals*. Washington, D.C.: American Psychological Association.

Lagu, T., Anderson, B. J., & Stein, M. (2006). Overdoses among friends: drug users are willingto administer naloxone to others. *Journal of Substance Abuse Treatment, 30*(2), 129-133.

Leece, P. N., Hopkins, S., Marshall, C., Orkin, A., Gassanov, M. A., & Shahin, R. M. (2013).Development and implementation of an opioid overdose prevention and response program in Toronto, Ontario. *Canadian Journal of Public Health, 104*(3), e200-e204.

Link, B. G., & Phelan, J. C. (2006). Stigma and its public health implications. *Lancet, 367*(9509), 528-529.

Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2001). Stigma as a barrier to recovery: the consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatric Services,52*(12), 1621-1626.

Lloyd-Evans, B., Mayo-Wilson, E., Harrison, B., Istead, H., Brown, E., Pilling, S., Johnson, S., ... Kendall, T. (2014). A systematic review and meta-analysis of randomised controlled trials of peer support for people with severe mental illness.*BMC Psychiatry, 14,* 1, 39.

Marelich, W. D., Johnston Roberts, K., Murphy, D. A., & Callari, T. (2002). HIV/AIDS patient involvement in antiretroviral treatment decisions. *AIDS Care, 14*(1), 17-26.

Marino, P., Simoni, J., & Silverstein, L. B. (2007). Peer support to promote medication adherence among people living with HIV/AIDS. *Social Work in Health Care, 45*(1), 67-80.

Marshall, Z., Dechman, M. K., Minichiello, A., Alcock, L., & Harris, G. E. (2015). Peering into the literature: A systematic review of the roles of people who inject drugs in harm reduction initiatives. *Drug and Alcohol Dependence, 151*, 1-14.

McAuley, A., Best, D., Taylor, A., Hunter, C., & Robertson, R. (2012). From evidence to policy: the scottish national naloxone programme. *Drugs: Education, Prevention & Policy, 19*(4), 309-319.

Moran, G. S., Russinova, Z., & Stepas, K. (2012a). Toward understanding the impact of occupational characteristics on the recovery and growth processes of peer providers. *Psychiatric Rehabilitation Journal, 35*(5), 376-380.

Moran, G. S., Russinova, Z., Gidugu, V., Yim, J. Y., & Sprague, C. (2012b). Benefits and mechanisms of recovery among peer providers with psychiatric healthes. *Qualitative Health Research, 22*(3), 304-319.

Moran, G. S., Russinova, Z., Yim, J. Y., & Sprague, C. (2014). Motivations of persons with psychiatric disabilities to work in mental health peer services: a qualitative study using self-determination theory. *Journal of Occupational Rehabilitation, 24*(1), 32-41.

Mowbray, C. T., Moxley, D. P., & Collins, M. E. (1998). Consumers as mental health providers: first-person accounts of benefits and limitations. *The Journal of Behavioral Health Services & Research, 25*(4), 397-411.

Oliver, P., & Keen, J. (2003). Concomitant drugs of misuse and drug using behaviours associated with fatal opiate-related poisonings in Sheffield, UK, 1997-2000. *Addiction, 98*(2), 191-197.

Pagano, M. E., Phillips, K. A., Stout, R. L., Menard, W., & Piliavin, J. A. (2007). Impact of helping behaviors on the course of substance-use disorders in individuals with body dysmorphic disorder. *Journal of Studies on Alcohol and Drugs, 68*(2), 291-295.

Pallaveshi, L., Balachandra, K., Subramanian, P., & Rudnick, A. (2014). Peer-Led and Professional-Led Group Interventions for People with Co-occurring Disorders: A Qualitative Study. *Community Mental Health Journal, 50*(4), 388-394.

Piliavin, J. A. (2005). Feeling good by doing good: health consequences of social service. *Processes of Community Change and Social Action*, 29-50.

Piper, T. M., Stancliff, S., Rudenstine, S., Sherman, S., Nandi, V., Clear, A., & Galea, S. (2008). Evaluation of a naloxone distribution and administration program in New York City. *Substance Use & Misuse, 43*(7), 858-870.

Repper, J., & Carter, T. (2011). A review of the literature on peer support in mental health services. *Journal of Mental Health, 20*, 4, 392-411.

Resnick, S. G., & Rosenheck, R. A. (2008). Integrating peer-provided services: a quasi-experimental study of recovery orientation, confidence, and empowerment. *Psychiatric Services, 59*(11), 1307-1314.

Rogers, E. S., Chamberlin, J., Ellison, M. L., & Crean, T. (1997). A consumer-constructed scale to measure empowerment among users of mental health services. *Psychiatric Services, 48*(8), 1042-1047.

Salsali, M., & Silverstone, P. (2003a). Low self-esteem and psychiatric patients: Part I The relationship between low self-esteem and psychiatric diagnosis. *Annals of General Hospital Psychiatry*, *2*(1), 1-9.

Salsali, M., & Silverstone, P. H. (2003b). Low self-esteem and psychiatric patients: Part II - The relationship between self-esteem and demographic factors and psychosocial stressors in psychiatric patients. *Annals of General Hospital Psychiatry, 2*(1), 1-8.

Salzer, M. S., & Shear, S. L. (2002). Identifying consumer-provider benefits in evaluations of consumer-delivered services. *Psychiatric Rehabilitation Journal, 25*(3), 281-288.

Seal, K. H., Thawley, R., Gee, L., Bamberger, J., Kral, A. H., Ciccarone, D., ... & Edlin, B. R. (2005). Naloxone distribution and cardiopulmonary resuscitation training for injection drug users to prevent heroin overdose death: a pilot intervention study. *Journal of Urban Health*, *82*(2), 303-311.

Sherman, S. G., Gann, D. S., Scott, G., Carlberg, S., Bigg, D., & Heimer, R. (2008). A qualitative study of overdose responses among Chicago IDUs. *Harm Reduction Journal*, *5*(2), 1-5.

Strang, J., Powis, B., Best, D., Vingoe, L., Griffiths, P., Taylor, C., ... & Gossop, M. (1999).Preventing opiate overdose fatalities with take-home naloxone: pre-launch study of possible impact and acceptability. *Addiction*, *94*(2), 199-204.

UNODC. (2013). World Drug Report 2013.

Varas-Díaz, N., Serrano-García, I., & Toro-Alfonso, J. (2005). AIDS-related stigma and social interaction: Puerto Ricans living with HIV/AIDS. *Qualitative Health Research, 15*(2), 169-187.

Wagner, K. D., Davidson, P. J., Iverson, E., Washburn, R., Burke, E., Kral, A. H., ... & Lankenau, S. E. (2014). "I felt like a superhero": The experience of responding to drug overdose among individuals trained in overdose prevention. *International Journal of Drug Policy, 25*(1), 157-165.

Wagner, K. D., Valente, T. W., Casanova, M., Partovi, S. M., Mendenhall, B. M., Hundley, J. H., ... & Unger, J. B. (2010). Evaluation of an overdose prevention and response training programme for injection drug users in the Skid Row area of Los Angeles, CA. *International Journal of Drug Policy, 21*(3), 186-193.

Walker, G., & Bryant, W. (2013). Peer support in adult mental health services: a metasynthesis of qualitative findings. *Psychiatric Rehabilitation Journal, 36*(1), 28-34.

Zemore, S. E., Kaskutas, L. A., & Ammon, L. N. (2004). In 12-step groups, helping helps the helper. *Addiction, 99*(8), 1015-1023.

Figure 1. Search strategy process for articles on the psychological impacts of being a peer-helper.

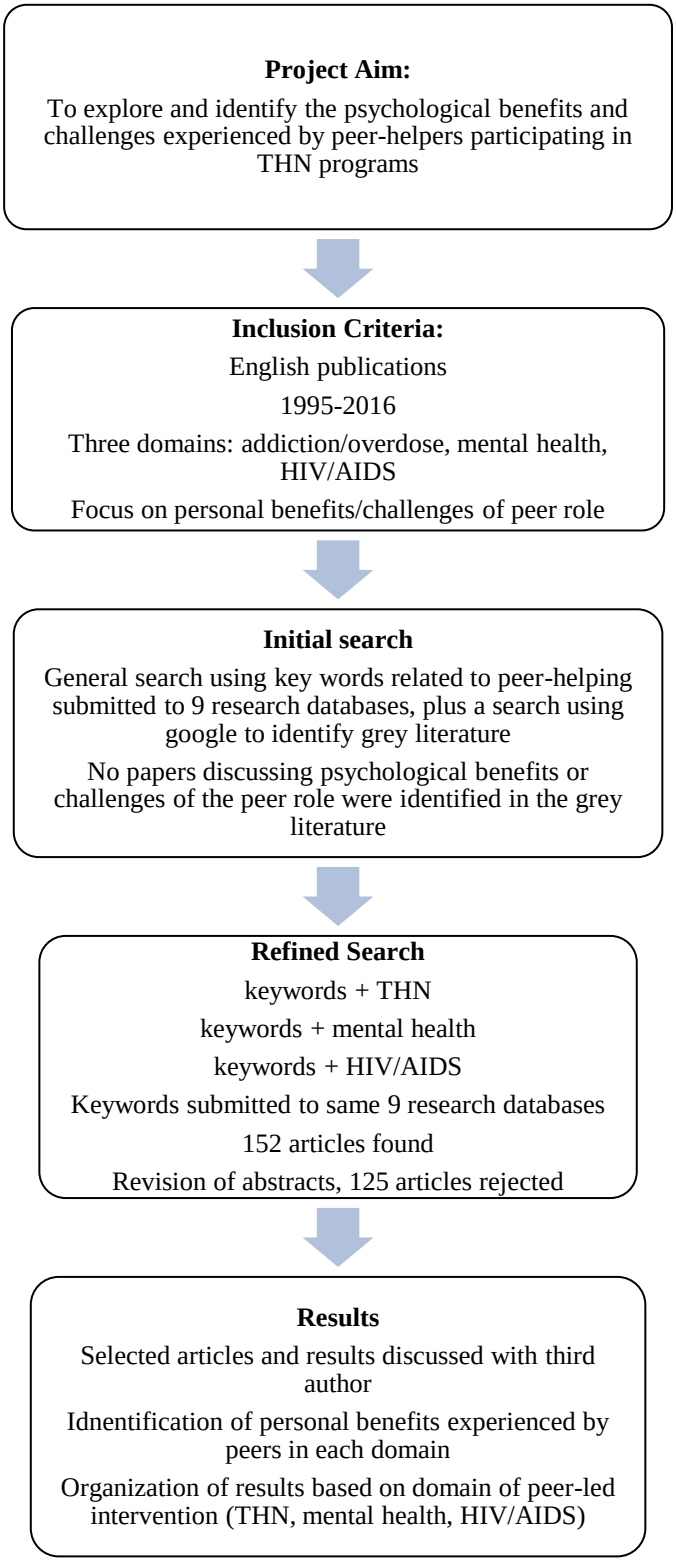

Table 1. Review of peer-led interventions, methods, measures used and findings

Paper	Method	Measures	Findings
Addiction and Drug Overdose Prevention Literature			
Zemore, Kaskutas, & Ammon (2004)	Longitudinal treatment outcome	Eight-item scale on 12-step involvement, Seven questions to assess helping actions (participants had to indicate how much time they spent helping others in recovery), Substance use was measured at the 6-month follow-up, Addiction Severity Index (ASI), University of Rhode Island Change Assessment (URICA)	Helping others in the group, was associated with greater 12-step involvement; helping others also predicted lower probability of binge-drinking at a 6-month follow-up time
Leece et al. (2013)	-Evaluation study of opioid overdose prevention program in Toronto (POINT) -Participants in the program were individuals who use opioids	-Participants in the program were trained by public health staff to recognize overdose risk factors, the signs of an overdose, and symptoms of an overdose. They were also instructed to call 911 when someone is experiencing an overdose, as well as how to administer naloxone, and how to start chest compressions. -Training was offered one-on-one or in small groups	-Trained 209 clients in the first eight months -**Participants** told the staff that they felt empowered after receiving the training
Banjo et al. (2014)	Cross-sectional study to report on outcomes of the THN program in British Columbia	-Reviewed records of the British Columbia THN administrative program -Focus groups and individual interviews	**-Clients** felt confident to intervene in overdose situations, felt a sense of pride for being a part of the program and receiving training to save someone's

		with 40 clients in the program, 12 interviews with service providers, police officers and parents of people who use drugs -Qualitative data analyzed using content analyses and qualitative descriptive approach	life, and reported feelings of empowerment and confidence
Wagner et al. (2014)	Qualitative study	-Qualitative interviews with 30 participants in two overdose prevention programs in Los Angeles -Investigated the role of **overdose responder**	-Positive and negative effects of being an overdose responder. -Benefits included an increased sense of control, increased confidence, feelings of heroism and provide, and being appreciated. -Some disadvantages included feeling a sense of burden, regret, fear, anger. -These negative effects sometimes translated into cutting social ties with people at high risk for overdose.
Sherman et al. (2008)	-Qualitative study -Investigated the experiences of responding to overdoses among individuals	-Qualitative interviews with 31 clients of the Chicago Recovery Alliance needle exchange program -Responses were transcribed, coded and analyzed thematically	Injecting drug users **(participants in the program)** reported feeling a sense of dignity, which resulted from receiving education about overdose and being able to intervene effectively to save someone's life
McAuley, Best, Taylor, Hunter, & Robertson (2012)	Evaluation of THN program in Scotland	Qualitative feedback from participants who attended a re-supply interview (re-supply of naloxone)	Increased confidence and self-esteem among **participants**
George, Boulay, & Begley (2010)	Case study of a 28-year old British man with a heroin addiction	Mr. M's perspectives on being prescribed naloxone and using it in overdose situations to save lives	Increased confidence and sense of responsibility
Wagner et al. (2010)	Qualitative evaluation study. Evaluated an	47 individuals participated in a short	Most **participants** (73%) were homeless or had

	overdose prevention program in Los Angeles, California. Drug users were trained during a 1 hour training session on how to recognize the signs of an overdose and respond. Forty-seven participants were included in the evaluation study.	interview at baseline and another interview 3 months later. Trained interviews administered surveys to collect data on demographics, housing status, drug use behaviour, and enrolment in drug treatment.	temporary accommodations Significant increase in knowledge about overdose and naloxone. 53% of the participants in the program reported decreased drug use at the 3 month follow-up
Mental Health Literature			
Lloyd-Evans et al. (2014)	Systematic review and meta-analysis of randomized controlled trials	Systematic review-Cochrane CENTRAL Register, Medline, Embase, PsycInfo, and CINAHL were searched	Positive influence of peer support in terms of hope, recovery and empowerment on **clients** with severe mental illness. This result was not consistent within or across different kinds of peer support programs.
Gestel-Timmermans et al. (2012)	Longitudinal study using a randomized controlled trial	Dutch Empowerment Scale	Increased empowerment, hope and self-efficacy among **participants**
Barbic, Krupa, & Armstrong (2009)	Randomized controlled trial	Herth Hope Index, Empowerment Scale, Recovery Assessment Scale	Positive effects on empowerment, hope and recovery among **participants**
Fukui, Davidson, Holter et al. (2010)	Single group pretest-posttest design	Rosenberg Self-Esteem Scale, General Self-Efficacy Scale, Multidimensional Scale of Perceived Social Support, Spirituality Index of Well-Being, Modified Colorado Symptom Index	**Participants** experienced improvements in spiritual well-being, self-esteem, self-efficacy, social support, and psychiatric symptoms
Cook et al. (2012)	-Randomized controlled trial design	Brief Symptom Inventory (BSI), Hope Scale (HS), World Health Organization Quality of Life Brief	**Participants** receiving the intervention reported a greater reduction in symptom severity, and a greater increase in quality of life and hopefulness
Salzer & Sheer (2002)	-Thematic analysis of the interviews with 14	-Semi-structured interview to obtain	**-Peers** reported increased confidence, self-esteem, felt

	peer providers to examine consumer-provider benefits in a peer-support program called Friends Connections. The program is for people with mental health and substance use disorders.	information about the peer specialists' experiences. -Questions on what it was like to be a peer, what they liked, and how they benefited from it.	much appreciated in their work helping others with mental health issues -What they liked about being a peer provider: facilitation of others' recovery, facilitating own recovery, social approval, professional growth, job-related benefits, and mutual support.
Bracke et al. (2008)	-Survey data -Measured balance of support by comparing two measures: indicator of social support from peers, and an indicator of support provided to peers	Flemish version of Rosenberg's global self-esteem scale, abbreviated Dutch version of Sherer et al.'s (1982) self-efficacy scale	Providing peer support in a mental health intervention resulted in greater increases in self-esteem and empowerment compared with receiving it
Mowbray, Moxley & Collins (1998)	Semi-structured interviews with 11 peer support specialists in the Project WINS program, a management-vocational program for individuals with mental health	Interview guide covered the following topics:, peer specialist's employment history, activities after leaving the program, description of peer activities, retrospective analysis of their experience in the program and its effects on their lives, recommendations for improvement, and their future plans.	-Improved self-esteem, as well as benefits of having money, better able to handle emotions, becoming more assertive, providing stepping stones for other jobs, and career direction among **peers**
Pallaveshi, Balachandra, Subramanian, & Rudnick (2014)	-Qualitative comparative pilot study, comparing a group led by persons with a co-occurring disorder, and a comparative group led by a mental health professional -Semi-structured interviews were conducted with each of the 6 participants	Interview questions to compare the two treatment groups (interview guide is available from the authors)	-In the peer-led intervention group, **participants** reported a sense of hope and optimism. -Peer group leaders were more likely to empower participants in the group with their personal recovery experiences -**Participants** felt more comfortable in the peer-led group, but obtained more knowledge and skills in the

			professional-led group.
Resnick & Rosenheck (2008)	-Quasi-experimental study in a Vet-to-Vet peer support program -Recruitment of participants in two cohorts (2002 and 2006). Follow-up interviews were conducted at 1, 3 and nine months. Intention-to-treat analyses were conducted to compare differences between cohorts	-The Activities of Daily Living Scale, Global Assessment of Functioning, self-report questions from the Addiction Severity Index, Brief psychiatric Rating Scale, PTSD Check List-Stressor Specific Version, checklist adapted from the Traumatic Life Events questionnaire, Lehman Quality of Life scale, reporting number of vet-to-vet sessions participants had attended, Making Decisions Scale to measure general empowerment	-The Vet-to-Vet cohort scored higher on empowerment, confidence. -Suggest that participating in peer support may improve well-being, which was measured by recovery-oriented and more traditional clinical measures
Hutchinson et al. (2006)	Pre-post design, evaluation of a 5 week peer program	Empowerment Scale (28 items), Recovery Attitudes Questionnaire-7, the Tennessee Self-Concept Scale, and the Personal Vision of Recovery Scale.	**Peer providers** experienced increased empowerment, and had more positive attitudes towards recovery and self-concept
Moran et al. (2012a)	Mixed methods, two interviews, standardized measures of recovery and growth	Empowerment Scale (28 items), Recovery Assessment Scale, Loyola Generativity Scale, Psychological Well-Being Scale, Posttraumatic Growth Inventory	-Strong relationship between participants' generativity, Erikson's concept of struggling against stagnation and a concern for helping the next generation. -Results suggest that acting as a **peer** could have a positive impact on the individual's generativity
Moran et al. (2012b)	Semi-structured interviews with 31 peer providers	Interview questions to evaluate benefits of being a peer, and mechanisms of recovery	Benefits to **peer providers** were classified into five domains: foundational, emotional, spiritual, occupational and social

Ahmed et al. (2015)	Surveys and questionnaires, qualitative and quantitative analyses	Maryland Assessment of Recovery in Serious Mental Health (MARS), Brief Symptom Inventory (BSI), Social Functioning Scale (SFS), Peer Specialist Experiences Survey	-**Peers** were better able to manage relapses. -Peer specialists faced numerous challenges in their work. -Employment through being a peer specialist may provide individuals with a sense of empowerment, social engagement and competence
HIV/AIDS prevention literature			
Bastardo and Kimberlin (2000)	Cross-sectional study involving a survey of 118 individuals with HIV in Venezuela. Multiple regression analyses.	Spanish translation of the Interpersonal Support Evaluation List (ISEL) Medical Outcomes Study Short Form-36 (SF-36), a symptom inventory.	**Only investigated individuals with HIV (not peer-helpers).** Strong association between social support and quality of life among HIV positive individuals.
Broadhead et al. (2002)	Six-month feasibility study of a peer-intervention model. Peers were HIV-positive injecting drug users	Health advocate questionnaire administered to the peer (variables of interest: setting and meeting medical appointments, picking up prescriptions, missed appointments, rescheduling appointments, conducting pill counts).	-Drug-related HIV risk behaviours decreased, the 14 peers kept 84% of their appointments (high levels of keeping appointments), **peers** were willing to meet each other regularly to keep one another on track, were capable of administering questionnaires and calculating medication adherence scores. -Demonstrated feasibility of drug users helping each other adhere to HIV care.
Kalichman (1995)	Interviews with 63 men and women who were HIV-positive	Interview questions to understand **participants' experiences** with being HIV-positive	-HIV is a highly stigmatized disease -Many individuals living with HIV tend to withdraw from social situations, which makes them vulnerable to psychological distress -Lack of a social network and loss of social intimacy can cause people to become disempowered and

			experience decreased self-esteem
Marino, Simoni, & Silverstein (2007)	Qualitative interviews with 9 HIV-positive peers. Peers were matched with an HIV-positive patient in the project to provide support	Interview to obtain information about the relationship between the peers and their assigned patients. Peers were invited to speak freely. Can you describe the project?" and "How would you describe what you did as a peer?"	-Four themes emerged from analyzing the **peers'** dialogue: social acceptance, reciprocal support, personal growth and empowerment, and resistance and other challenges. -Empowerment was conceptualized as feeling entitled to talk about HIV, how being a part of the project gave the peers strength and confidence, and a change in outlook (feeling like a different person from being a peer)
Marelich et al. (2002)	Four focus group interviews with HIV-positive individuals receiving medication	-Qualitative analyses using Ethnography. -Review of transcripts collected from focus groups Questions asked: When you were prescribed your current HIV therapy, how much did your doctor or health care provider involve you in that decision? That is, did you feel like you were part of the decision-making process? -Aim was to understand how patients were involved with their health care providers regarding decision-making	-Four themes emerged from the analyses: joint decision-making, patients taking control, initial passivity then involvement, and patients as knowledge gatherers -Empowerment can promote **HIV-positive peers** to become more interactive with their health care provider, more involved in their treatment decisions, and more active knowledge seekers

Transitional Text

As outlined in the first manuscript, there are a number of personal benefits to engaging in a peer role in mental health and HIV/AIDS interventions. These benefits are broadly related to the themes of empowerment and recovery, as individuals have reported feeling increased self-esteem, confidence, responsibility, a greater sense of connectedness, creating new relationships, and even reducing their drug use. The second manuscript intended to explore to what extent peer-trainers in a THN program experience these benefits as well. As mentioned, research on overdose prevention programs has not devoted much attention to identifying the effects of being a peer in these programs. Additionally, no known THN program has included peers training peers in overdose prevention, therefore, the specific role of being a peer-trainer, which involves receiving overdose training and then training other drug users, has been unexplored. This second manuscript represents a qualitative study using individual interviews to explore the psychological impacts of being a peer-trainer in a THN program. This research will contribute to bridging a gap in the literature, and encourage further research to be conducted on this topic.

Chapter 2: Experiences of peer-trainers in a take-home naloxone program: results from a qualitative study

Reference:

Marshall, C., Perreault., M., Archambault, L., Milton, D. (Submitted). Experiences of peer trainers in a take-home naloxone program: results from a qualitative study. *International Journal of Drug Policy.*

2.1 Abstract

Background Take-home naloxone programs (THN) are harm reduction programs with the aim of reducing the number of deaths caused by opioid overdoses. A THN program in Montreal called the PROFAN project was implemented with the goal of reducing overdoses through the use of peer-trainers. Peer-trainers are people who are currently or have previously used drugs, who are trained in overdose prevention and are then responsible for delivering a training session to other individuals who use drugs. While studies on other peer-led programs have shown that peer-helpers gain numerous benefits from their role, little attention has been devoted to understanding this role in the context of overdose prevention. Additionally, to our knowledge, this is the first time that the impacts of the peer-trainer role are being studied and documented for a scientific journal. **Methods** This research represents a qualitative study using individual interviews with the six peer-trainers of the Montreal program to explore the benefits and challenges encountered in their role. **Results** Interview results suggest that there are psychological benefits received through the peer-trainer role, such as empowerment and recovery. As well, there are a number of challenges associated with their role and suggestions to improve the program. **Conclusions** Knowledge about the impacts of the peer-trainer role will contribute to the development of THN programs. Additionally, the findings may also serve to demonstrate that THN programs are capable of not only reducing the number of deaths by opioid overdose, but that these programs may also have wider effects on a psychological level.

Keywords: overdose prevention, peer-trainer role, harm reduction, psychological impacts, recovery, empowerment

Research Highlights

Little is known about the psychological impacts of being a peer-trainer on people who use drug involved in an overdose prevention program.

A qualitative study using semi-structured interviews was conducted to explore the impacts of the peer-trainer role on people who use drugs involved in a Montreal take-home naloxone program.

Results suggest that psychological benefits, such as empowerment and recovery, are associated
with being a peer-trainer.

Acknowledgements: The authors would like to thank Leonie Archambault for her help with conducting interviews, as well as Chantale Perron and Guy-Pierre Lévesque at Méta D'Âme for recruiting participants.

Ethical Approval: Research ethics approval for this project came from the Direction of Public Health of Montreal.

Funding: This study was partly funded by the Direction of Public Health of Montreal.

Introduction

Death caused by opioid overdose is a significant problem in many countries around the world. In fact, overdose is the leading cause of death among people who inject drugs worldwide (Degenhardt et al., 2011). In Canada, estimating the number of opioid overdose deaths across the country is difficult, as only a few provinces report the number of overdose fatalities (Fischer & Argento, 2012). Over an 8-year period, from 2002 to 2010, there were 1,654 overdose deaths in British Columbia, 2,325 overdose hospitalizations between 2002 and 2009 (Vallance et al., 2012), and 275 drug overdose deaths in the year of 2011 alone (Banjo et al., 2014). Recently in April 2016, the Provincial Health Officer of British Columbia declared a state of emergency in response to the high number of overdoses and deaths (Provincial Health Services Authority (2016). Other provinces in Canada, such as Ontario and Quebec, have also reported a high number of overdoses. For example, in the summer of 2014 in Montreal there were 28 reported overdoses, 15 of which were fatalities due to street heroin (Lindeman, 2014). The increase in deaths by drug overdose reported in Toronto also reflects the worldwide trend (Centers for Disease Control and Prevention, 2010). With the increasing distribution of high-purity heroin and the lethal combination of heroin and fentanyl, an increase in fatal overdoses is expected due to the higher potency of fentanyl, as well as users being unfamiliar with this drug (Carter, Graham, & Canadian Drug Policy, 2015). Since people who use drugs (PWUD) often consume together, they are usually present when an overdose occurs (Oliver & Keen, 2003; Strang et al., 1999). Some take-home naloxone programs (THN) aim to reduce the number of overdoses by training PWUD to respond by administering naloxone, which is an opioid antagonist that prevents death by overdose through the reverse of respiratory depression. The medication presents no effects in the

absence of opioids and is non-addictive (Dorp, Yassen, & Dahan, 2007; Dorp, Yassen, & Sarton et al., 2006).

Peer-led interventions have shown great success in terms of the benefits that are offered to the participants in the program (the ones who receive help from the peer-helpers), as well as for the peer-helpers themselves. Alcoholics Anonymous (AA) programs represent a well-known example of a peer intervention in the addiction domain. In AA programs, peers are often in the process of recovery and may be involved in leading meetings and helping others with their recovery process (Zemore, Kaskutas, & Ammon, 2004). There has been an abundance of research on AA, as well as other 12-step programs, and how these programs offer benefits in terms of recovery by individuals mutually helping each other. There have been many studies published documenting the feasibility of THN programs, showing that PWUD are willing to participate and can be trained to respond to overdoses (Banjo et al., 2014; Bennett & Holloway, 2012; Day Manning, Best, & Gaston, 2009; Green, Heimer, & Grau, 2008). A few evaluation studies on THN programs have briefly mentioned the personal impacts of being a participant in the program. These benefits include a sense of empowerment (Banjo et al., 2014; Leece et al., 2013; Wagner et al., 2014), heroism and pride (Wagner et al., 2014), increased sense of control (Wagner et al., 2014), increased self-esteem (McAuley, Best, Taylor, Hunter, & Robertson, 2012), and even a decrease in drug use (Wagner et al., 2010). However, no studies discussing the impact of being a THN peer-helper were identified. Peer-led programs in other domains, particularly mental health and HIV/AIDS, have also reported a number of benefits among peer-helpers, including empowerment, increased self-esteem, increased confidence and responsibility, better medication adherence for individuals with

HIV/AIDS, as well as factors related to recovery (Ahmed, Hunter, Mabe, Tucker & Buckley, 2015; Bastardo & Kimberlin, 2000; Bracke, Christiaens & Verhaeghe, 2008; Broadhead et al., 2002; Corrigan, 2006; Hutchinson et al., 2006; Marino, Simoni, & Silverstein, 2007; Moran et al., 2012; Mowbray, Moxley, & Collins, 1998; Pallaveshi, Balachandra, Subramanian, & Rudnick, 2014; Resnick & Rosenheck, 2008; Salzer & Sheer, 2002).

While feasibility of the program and effectiveness of naloxone are both important to demonstrate, it is necessary for researchers to now consider other impacts and purposes of this program. Clearly PWUD gain the knowledge and training that they can use to respond to overdoses and save lives. Since the success of THN programs depends on peers being involved and motivated to participate in the program, better understanding their experiences will help to ensure that they will continue to be involved, and that they gain the most they can from their involvement. However, there is a knowledge gap in the literature concerning the psychological impacts, as well as the challenges, associated with involvement in THN programs as a peer-trainer. The current study, which is part of a larger evaluation study of a Montreal THN program, aims to evaluate peer-trainer experiences.

Program Description

The Centre de recherche et d'aide pour narcomanes (Cran), an addiction research and assistance centre, and Méta d'Âme, a peer-run drop-in residential centre, have implemented an overdose prevention program in Montreal called PROFAN (prevention and reduction of overdoses-training on, and access to, naloxone). The centre is run by

individuals with a history of opioid use, and the PROFAN training is administered and supervised by peers at Méta d'Âme. Accredited by the Direction of Public Health of Montreal, this is a harm reduction program with the aim of reducing the number of deaths caused by opioid overdose. The initiative involves training people who use opioid drugs to correctly identify the signs of an opioid overdose, how to administer naloxone through needle injection, and how to perform cardiopulmonary resuscitation (CPR). A unique aspect of this program is that it has implemented the use of peers training peers, also called peer-trainers.

Objectives

This study aims to explore the extent to which peer-trainers experience benefits through their role as a trainer. The main research question guiding this study is: what are the psychological impacts of being a peer-trainer in the Montreal THN program? The paper presents qualitative data on the experiences of peer-trainers with 1) the overdose prevention training that they received, 2) their role as a trainer, and 3) the personal impact of taking on this role.

Method

The methodology chosen for this project is phenomenology, as the aim is to better understand personal experiences. Conducting individual interviews rather than a focus group was preferred in order to capture individual experiences, as not everyone may experience this role in the same way or may not adopt the role to the same extent. The research is approached from a constructivist framework (Berger & Luckmann, 1966) due to a personal belief that realities are socially constructed. This paper follows the SRQR

guideline for reporting qualitative research (O'Brien, Harris, Beckman, Reed, & Cook, 2014).

Participants

Recruitment for participating as a peer-trainer in the PROFAN take-home naloxone study was conducted by Méta D'Âme, a peer-run organization in Montreal. The peer-helpers at Méta D'Âme recruited individuals to be peer-trainers through their clientele who frequently came to Méta D'Âme, were known well by the peer-helpers, and who expressed being able and comfortable to take on the peer-trainer role. Participants who attended the training sessions led by peer-trainers were recruited through word of mouth and posters. Peer-trainers and participants received $50 in cash at the end of the PROFAN training session. Six individuals volunteered to be peer-trainers, representing a convenience sample. Out of the six peer-trainers three were male and three were female. The age range of this group was between 25 and 44. Although there were six individuals who volunteered and were trained to be peer-trainers, only five delivered training sessions to other PWUD, as one trainer left the program to go back to school, and therefore did not have the opportunity to deliver any training sessions. This individual was still interviewed since he did sign up to be a peer-trainer and completed the training with the other five peers.

Training Procedure

In April 2015, the six peer-trainers received a full-day training session on overdose prevention, naloxone administration, and CPR. All training sessions took place at Méta D'Âme and food was provided for the session. After being trained they were then

in charge of delivering a training session to other PWUD (participants) on how to intervene in an overdose situation. The training sessions delivered by peer-trainers took pace from June to August 2015. Five of the six trainers delivered four training sessions (each session lasted about one hour) to a group of participants ranging in size from 6 to 12. During the training session two peer-trainers were paired together to give the presentation. To assist them they used a PowerPoint presentation which included information about the myths of overdose intervention, the steps to take to intervene in an opioid overdose, as well as what naloxone is, what it is used for, how it should be injected, and how long it lasts. Participants in the group were allowed to engage and ask the peer-trainers questions. A member from Méta D'Âme and a nurse also attended the training sessions.

Study Procedure

Informed consent was obtained from all six peer-trainers to conduct individual interviews, which took place from October to March 2016. These semi-structured interviews commenced approximately five months post-training in order to allow the peer-trainers to gain enough experience in their roles. Each interview was set to last approximately one hour and took place at Méta D'Âme, an environment that was comfortable and familiar for the peer-trainers. Two female interviewers conducted all six interviews, with a debriefing session taking place after each interview.

Instrument Development

A semi-structured interview was administered to the six individuals. As Montreal is a bilingual city, in order to have protocols available in both official languages an

English protocol was first developed, which was then translated into French and translated back to English to ensure correct translation of the questions. The interview included primarily open-ended questions, which allowed peer-trainers to discuss their experiences in a narrative form. After conducting an extensive literature review no existing questionnaire was found that addressed the personal impacts of being a peer-trainer. These aspects include self-esteem, empowerment, and recovery variables. Based on the literature on peer-helpers in mental health and HIV/AIDS programs, questions were created to examine variables of interest that peer-trainers may experience, specifically, increased empowerment, self-esteem, recovery, and the development of positive social roles. In developing interview questions to explore whether peer-trainers experienced increased empowerment, concepts of empowerment from Zimmerman and Rappaport (1988), Rogers, Chamberlin, Ellison, and Crean (1997), Salzer (1997), Schutt and Rogers (2009), and Segal, Silverman, and Temkin (1995) were used. Questions to explore empowerment focused on peer-trainer level of involvement and participation in the program, their involvement in other programs as a peer-helper, whether they felt they had power in decision-making to implement changes, whether or not they felt that others perceived them differently after becoming a peer, and a general question about what has changed in their life since being a peer-trainer. To develop questions to explore factors related to recovery, the CHIME framework was used (Leamy, Bird, Le Boutillier, Williams, & Slade, 2011), which is a conceptual framework for personal recovery from mental illness, but many of the concepts are relevant to studying recovery from drug use as well. Recovery-related questions were used to inquire about identity, change in relationships, viewing the peer-trainer role as an opportunity to give back, changes in

drug use or habits, and feelings about the future. Before conducting the interviews with the peer-trainers pre-tests were conducted among members of the research team.

Data Analysis

All interviews were audio recorded and were transcribed verbatim. Peer-trainer names were not associated with any of the transcripts to maintain anonymity. A hybrid, also known as mixed, content analysis was chosen to analyze the interviews (L'Écuyer, 1987). This method consists of first analyzing the interviews deductively using codes identified from the literature review. These pre-determined codes were related to empowerment and recovery. After deductive coding, inductive coding, in which new codes are identified directly from the data, was conducted. Deductive codes helped to identify and better understand the experiences of peer-helpers in other interventions and to guide development of the interview protocol, while the inductive coding left space for new discoveries. Data analysis was not an iterative process, meaning the interview protocol did not change after reviewing the transcripts. One coder analyzed all six interviews with the peer-trainers, however, the same definitions of empowerment and recovery, and the same codes were also used by two other coders to analyze interviews that have been conducted with the participants in the PROFAN project. These three coders were involved only in conducting evaluation research of the peer-trainer and participant experiences; they were not involved in the program implementation. Each coder has a background in either psychology or social work and had not previously worked with PWUD. After both deductive and inductive coding were completed for all six interviews, content analysis summaries were written for each peer-trainer with the aim to summarize the major themes present in the individual interviews. Subsequently,

content analysis summaries based on theme were written in order to identify common themes among all six trainers. The content analysis summaries by peer-trainer and by theme were used to address the research question to identify the difficulties and personal benefits of the peer-trainer role. Significant quotes representing each theme were selected from each interview.

Results

The interviews were conducted in the language of preference of the peer-trainers. Five interviews were conducted in French and one was conducted in English. Results from the interviews reveal several important themes related to the experiences of being a peer-trainer and their evaluation of the PROFAN program and training. The major themes that emerged from the interviews were: positive evaluation and satisfaction with the peer-trainer role, improvement of the PROFAN program; motivation to get involved as a peer-trainer; increase in empowerment; recovery; difficulties associated with the peer-trainer role; and the desire to be more involved in the program. The first three themes are grouped together as representing experiences with the PROFAN training and the peer-trainer role. The themes of empowerment, recovery, and challenges are identified as being the personal and psychological impacts of being a peer-trainer, including both the benefits and challenges of the role. Lastly, a common theme that was present in all six interviews was a desire to be more involved in the program. Quotes representing this desire are presented in Figure 1, and they indicate that the peer-trainers could have been, and were willing to be more involved in the PROFAN program. These quotes suggest that their involvement in the program and the benefits associated with the peer-trainer role

could be optimized by implementing specific changes to the program, which will be discussed.

Theme 1: Peer-trainer experiences of the PROFAN training

While all six individuals expressed being satisfied with the training that they received to become a peer-trainer, there were a number of suggestions mentioned in each interview to improve the program and training. Some of these suggestions were: making the training shorter, potentially half a day instead of a full day; limiting the amount of repetition in the PowerPoint presentation; improving the accessibility of naloxone, as it is only available in three pharmacies; making the size of the naloxone kit smaller; paying the participants, who come to receive the training, on the same day rather than a few days later; combining the theoretical and practical parts of the training more, as it is a long day for participants to sit; hiring peers to go out in the street to advocate for the program and get users to register for the training; being more strict about the start time of the training day, as many participants were arriving late; holding refresher courses a few times throughout the year; changing the setting of the training sessions to a larger room; and allowing more time for questions and more interactions between the peer-trainers and participants.

> "The accessibility, I understand that there are just three pharmacies who have it, but it's ok, it's still downtown."
> "Let people go in the street and go see the people and say, give them a pamphlet and say, look we're giving this course out, that would have been maybe… there's a thing maybe we could do."
> "It is a very long day for the people. And I don't know, just maybe if it was more paired together [the theory and practical CPR portions]…that there was like a bit more practical."
> "I would suggest a refresh of the practical, especially for the CPR."

> "Maybe just the place [where the training took place], we were a little packed… it wasn't the ideal room."

Theme 2: Peer-trainer experiences of their role as a trainer

All six peer-trainers reported being proud and happy that this overdose prevention training is available and that naloxone is now available in Quebec. All peer-trainers expressed being proud to be involved in the program. As well, all six individuals described being motivated and passionate about the project, they were appreciative of having naloxone and finally being able to act in overdose situations, and they were happy to tell others on the street to go and get the training. As mentioned earlier, only five out of six peer-trainers were responsible for delivering training sessions to other PWUD. During the interviews, the peers were asked for their opinions about the PowerPoint training material that they used to assist with their presentations. They felt that the PowerPoint was helpful; the material was clear, understandable, and relevant; it was a fun experience; they appreciated the opportunity to learn CPR; appreciated working with a team; and they felt confident to intervene after receiving the training themselves.

> "I am truly proud, we are the only ones in Quebec who did this, I think it's cool"
> "I was proud of being a part of this. It's been so long that everyone wanted that…to be able to be the one who trains and pass it on in the street."
> "I just wanna tell my peers like that we have this here to save our friends to save us, we should use it, you know like, finally Quebec has agreed to have this for us."
> "I really appreciated the fact that naloxone has finally become available."

Theme 3: Motivation to get involved as a peer-trainer in the PROFAN program

When asked about why they wanted to become a peer-trainer in this specific program, a range of responses were elicited. Three categories representing motivation to

be a peer-trainer were identified: reciprocity, wanting a method to intervene, and wanting to help others. Motivation to become a peer-trainer seems to stem from wanting to give back to others, a desire to be able to intervene in overdose situations, rather than relying solely on calling 911 and waiting for the paramedics to arrive, and wanting to be able to save someone's life. Three out of six peer-trainers said that they have been waiting for naloxone to come to Quebec for a long time, and as soon as it was available they wanted to be involved. One peer-trainer mentioned that he wanted to do something positive, and another trainer discussed witnessing a lot of deaths and overdoses of people who were close to him, which motivated him to find a way to intervene.

> [I: Have you had the opportunity to give back to others?] "Yes, yes I do. That's why I wanted to do it, I wanted to come because it was interesting to me also, but I wanted to do it, I know that it saves lives, but I wanted to give. Because Méta D'Âme, all the organizations, give so much to us, they are always there to help us, to advise us. I wanted to give a bit more there also."
> "It was to give back in another way to other people, what I had. And what I could give."
> "In my experience as an addict, to want maybe to have a way, not to save yourself…At least maybe save someone else around you if ever it happens."
> "The feeling to be able to help someone else."

Personal impacts of being a peer-trainer

The following themes represent the personal impacts that being a peer-trainer had on each individual in this study, as well as any difficulties that the peers experienced in their role. Two of the major benefits reported in peer-led mental health and HIV/AIDS programs are empowerment and factors related to personal recovery. These benefits were also reported by the peer-trainers in this study. When asked an open-ended question on

what has changed in their lives since becoming a peer-trainer, four spontaneously reported feeling empowered, specifically having increased confidence or self-esteem.

Theme 4: Empowerment—participation

Results reveal that being a peer-trainer in the PROFAN program did not require a significant level of participation. Five out of the five individuals who gave training sessions reported preparing and reviewing the training material a lot in the beginning, but after they had given a few training sessions there was no need to spend a lot of time studying. Three of the trainers mentioned that there was an increase in the amount of their responsibilities over time. However, five of the peer-trainers described that they did not feel very involved, since the PROFAN training was completely made before they were involved in the program, and that they were not involved in this project right from the very beginning (Figure 1).

> "Well, look, I'd say that for the first times, every night I gave myself maybe an hour or two, I looked at my stuff. Eventually, I realized that the course was so simple, in fact, I didn't really need to…."
> "So it's like half an hour of preparation before the day, otherwise you don't need to spend time outside of these days to like study your material and everything."
> "I would say the first time, I really got more prepared, I was reading my book and, like the thing they gave us, but the other times it was really no preparation."
> "I think that it was 4 or 5 each that we gave [training sessions]."

Theme 5: Empowerment—feeling in control

Three categories of control were identified in the interviews: control over life, control in decision-making with regards to the PROFAN program, and control in overdose situations. In terms of control over life, two of the peer-trainers mentioned

wanting to go back to school, and one trainer described wanting to save her money and buy a house and find more permanent employment. The peer-trainers also felt a certain amount of control and power to bring about change within the PROFAN program. All six expressed feeling comfortable to suggest changes if they felt something should be changed and felt that their suggestions would be received positively. Another sense of control that was mentioned is related to overdose situations. The peer-trainers described that they felt more confident, responsible, less stressed, and more useful to intervene in overdose situations due to receiving the PROFAN training themselves. Receiving the overdose prevention training seems to contribute to decreasing the feeling of helplessness in overdose situations, which promotes a sense of empowerment.

> "Well let's say that if a situation like that happened to me it would stress me, I would feel more responsible let's say than before I had no training."
> "I can say having a kit on me that I feel like I am able to do more when it happens."
> [I: What is your confidence level, like if this situation happens now with regards to when it happened then?] "Oh my gosh, it would be so much less stressful… now it would be so much easier with like the CPR and the naloxone, it would be so much more simpler now."
> "I decided that I was returning to school and that I didn't want to do interventions, but I wanted to continue to be involved in the field, but more as a peer."
> "I had the chance to say my word… On ideas how to present it, the way and…. Also we even evaluated the duration, we even evaluated the content. We were involved at different levels to make decisions, how to rehearse."

Theme 6: Empowerment—being responsible for others

One of the peer-trainers mentioned that since she took on this role that it is her responsibility to have the kit on her and be ready to use it in case she needs to intervene in an overdose situation. She viewed her role not so much as a responsibility, but as an opportunity to help others. Others described the peer-trainer role as being a good

responsibility. Also representing a sense of personal responsibility is the fact that three of the peer-trainers have been involved in responding to overdoses either before or after their involvement as a trainer.

> "I see it [peer-trainer role] as a good responsibility."
> "Since I did the course, my responsibility is to have it on me, to have it ready, to give it to someone."
> "When I lived in the street, every time there was an overdose people would just run away. And it would be just me and my boyfriend left and I can't just leave someone die you know, you try to help them out."

Theme 7: Empowerment—change in social identity from taking on the peer-trainer role

Two of the peer-trainers felt that their role positively changed the way in which others see them. Three of the trainers said that other PWUD were surprised to find out that they were a peer-trainer; two trainers mentioned that their friends or family were proud of them; two stated that they were seen as a role model to other PWUD; and another peer-trainer said that others see them as being capable of intervening. The nature of interactions with police and first responders was also discussed in the interview, which revealed that the peer-trainers did not often have interactions with the police, but if they were to intervene in an overdose situation and had to interact with police, they felt that they would be perceived in a positive way.

> "Others they were proud, because for the first time the drug has given me a positive thing. There is not much positive to drugs."
> [I: Has your role as a peer-trainer changed the way that others perceive you?] . "I think so yes… Maybe that they saw me as a kind of model, I don't know… Because people….often people who followed the training, I knew them from another life, and they saw me differently."
> "We are capable of giving it and everyone sees us like that."
> "I think maybe like my parents are proud of me, like they're happy that I'm doing something that's good."

Theme 8: Recovery—feeling a sense of connectedness

Feeling a sense of connectedness in terms of being involved in the community, establishing new relationships, and building upon existing relationships were found among all peer-trainers to some extent. Four of the trainers had previously been involved in other community organizations in Montreal as a peer-helper, in which their role involved helping and training other PWUD. When asked about giving back, all six individuals expressed that their role in this program allowed them to give back to others in terms of giving other PWUD training and information to be able to save lives. Another part of this connectedness theme pertains to relationships. One peer-trainer mentioned that this role has opened a lot of doors for her in terms of job opportunities at other similar organizations, and that it allowed for networking to take place. Other peer-trainers said that their involvement in the PROFAN project allowed them to get to know each other more personally, as some of them only knew each other by sight. As well, it allowed them to meet new people and collaborate with others. It is important to note, however, that two peers indicated that the relationships they had with the other trainers started to fade by the end of the project, and that the other trainers were not a part of their everyday lives. Becoming a peer support worker or advocate is an additional part of connectedness that applies to all six peers, as they all had the motivation to become a peer-trainer. However, this role consists of more than just becoming trained and delivering training to others. Three of the peer-trainers seemed to have really adopted and integrated this role in their lives, as they repeatedly mentioned how it important it is to them to advocate for this program, and to tell others to get trained because it can save

lives. In two of the interviews, the desire to expand this program to other areas of Quebec and to other clients, such as homeless people, was expressed.

> "I developed relationships with the people with who I train, for example… even though I knew them by sight, I got to know them more personally, outside of drugs."
> "I think we helped three, I think three people, three lives were saved, and so yeah, we did make a difference, it's for sure we made a difference."
> "It's not giving back to the same people who gave to me for example. It's giving back a little what I got from other people."
> "Later if I'm going to apply to a certain organization and these people are there, it's always a bonus. Plus we know each other well and we have good experiences, it opens more doors."
> "It was an opportunity to collaborate and even exchange with other people and to know other people and to get out a bit….you get out of consumption, you're all alone."
> [I: Do you feel that you have made a difference in the lives of people with this role?]
> "Well yes, yes, for sure. Because I think that it's still what I discuss with friends of mine who are consumers, who are still really active or consume occasionally. But I try to encourage them to do the training and I also respond to their questions about naloxone."

Theme 9: Recovery—changing self-perceptions

According to the CHIME framework (Leamy et al., 2011), an aspect of personal recovery is the redefinition of self, which consists of an enhanced self-esteem, self-confidence, and acceptance. In each interview, the peer-trainers were asked about whether or not this role had an impact on their lives. One peer-trainer said that being involved in the project increased his self-esteem; one stated that the experience gave him a sense of assertiveness; one expressed pride in being involved in the project; one described how being a peer-trainer made her feel valued; and one expressed that the role made him feel more useful. Four of the peer-trainers said they have gained confidence, and two felt that the role gave them a sense of importance. Acceptance was only relevant

in one interview, in which the peer-trainer described how Méta D'Âme was a place where people did not have to feel ashamed of where they came from.

> "It's true that it maybe gives a feeling of some importance."
> "It increased my self-esteem."
> "I gained confidence in my personal life."
> [I: Would you say that your perception of yourself has changed since becoming a peer-trainer in this program?] "Yeah, yeah, it made me feel…more responsible maybe, or more like, I don't want to say important, but you're like proud that you're giving a course."
> [I:?] "I think the confidence level is really way, way high… because you feel more important that you're doing something that is really important, it's like, because we're the first to do that, like we're peers giving it to other peers."
> "Self-esteem, yes. It increases self-confidence. It's a training, you feel more useful."

Theme 10: Recovery—increased meaning in life through identifying and setting goals, and rebuilding lives.

In four of the interviews, the peer-trainers discussed issues that reflected an increased meaning in life. One peer-trainer stated that through responding to overdoses she realized that she liked responding in emergency situations, and that it even made her think about becoming a paramedic. The same peer-trainer, as well as another trainer, both mentioned their desire to go back to school. One of the peer-trainers realized that she wanted to be more involved in organizations as a peer-helper, and less as an intervener, because she wanted to be truly equal with the people she was helping. Developing new skills is also a part of this meaning in life category. The peer-trainers identified that this role helped them to talk in front of people and work on their presentation skills, and it also helped one peer-trainer develop his capacity to discipline others in the context of teaching a difficult clientele.

> "I know that I need to start now to save if I want a house in 10 years. I am capable. Before I was really impatient and I didn't believe in the long-term. And now, I know it and I have a lot of nice projects."
> "I realized what I was missing was…to be truly equal with the people [participants in the program]."
> "I enjoyed every second of it and it helped me also to talk in front of people."

Theme 11: Recovery—changing drug using habits

While only one peer-trainer mentioned decreasing her quantities and frequency of drug use, it is a significant finding that other trainers also said that since being a peer-trainer they have become more careful with their drug using habits and they pay more attention now. One trainer said that his participation in the PROFAN project motivated him to reduce his consumption, and that if he had a refresher course this would likely motivate him again. Two trainers said that it has had no effect on their habits, and one trainer said that his habits have changed since his involvement in the project, but did not want to discuss the details of this. Four of the trainers were taking methadone, and four have had overdoses in the past.

> "No it [drug use] hasn't changed, but maybe for certain people it will decrease."
> "I'm more careful with what I'm using and the quantities, like my quantities are smaller that I'm using, and I'm not using as much, I'm maybe using once or twice a week."
> "If I re-do the training it would probably be like a little boost of "I will not consume tonight"…I find that it's a positive message. It wakes you up a bit to say "Look, it's dangerous."
> "It [the training] primed me a bit to be anti-consumption… At that time I wasn't consuming, but it like boosted my desire to want to not consume. Yes, it did that when I did the training."
> "I still consume coke, but now I pay attention."

Theme 12: Recovery—feeling hopeful about the future

Part of recovery is related to feeling hopeful and optimistic about the future. Two of the trainers were hopeful to do more training, one wanted to be involved in research, and one mentioned a belief in the possibility of recovery and was seeking help to do so, reflecting a motivation to change. Having dreams and aspirations in terms of setting long-term goals was also important for one of the trainers. As well, two mentioned being confident about the future and one was worried about the future. The fact that two of the trainers mentioned going back to school also reveals a hope for the future.

> "Well I hope I am going to be able to do it more."
> "It's something that I use to relieve my anxiety. At the same time it's not a good way…But I do everything, I try, I go work out, I'm doing relaxation things and everything, to try to not have the need anymore."
> "I know that I need to start now to save if I want a house in 10 years. I am capable. Before I was really impatient and I didn't believe in the long-term. And now, I know it and I have a lot of nice projects."
> "I hope that they are going to find…that it is going to continue."

Theme 13: Challenges associated with the peer-trainer role

While there were many reported benefits of engaging in a peer-trainer role, there were also some difficulties related to teaching and training a clientele of PWUD with challenging life conditions. The challenges that peer-trainers mentioned were: keeping the attention of the participants; conveying the information properly to make sure the participants understand; public-speaking; managing different and difficult personalities; the balancing roles of peer and intervener; participants arriving late; clarifying all the myths that participants believed in about how to respond to overdoses; and the fact that participants had to leave early sometimes to pick up their methadone.

> "Yeah I would say that's the most important thing, to try to keep them interested." (peer-trainer 3)
> "Keeping the attention of people."
> "Sometimes it can be the proximity with certain people who are there…There are people who have…their myths are very strong…Sometimes in a group, you're going to have the kind of people who don't stop talking…And the people who are in a state of consumption, it's to try to keep them alert."
> "It was to convey the importance maybe to be able to intervene in the case of overdoses. How to do it if you want to save a life."

Discussion

The PROFAN program in Montreal provides a full-day training session to PWUD interested in receiving the training. All six of the peer-trainers in this study mentioned that the session could be shorter. In other overdose prevention programs, training to administer naloxone takes about twenty minutes, such as in the Toronto POINT program (Leece et al., 2013). Another program in New York City (Piper et al., 2008) offers short training sessions, lasting between ten and thirty minutes, which includes information about how to administer naloxone, as well as rescue breathing practices and methods of cooperating with police and medical staff. As well, in the United States, naloxone is already available without prescription, and programs have started to make available the naloxone nasal spray instead of needles (Doe-Simkins, Walley, Epstein, & Moyer, 2009). One of the trainers in this study also expressed that she looked forward to the day that Montreal will make available the nasal spray. As THN programs continue to evolve in Canada, these changes may be implemented in the future. Regardless of the modality of training or the method of naloxone administration, what will remain an important aspect of THN programs is the personal impact of becoming a peer-helper, receiving this training and responding to overdoses.

As peers training peers is a new implementation in THN programs, it was important to evaluate the personal impacts of this role. Studies have just recently started to document the benefits experienced by participants in THN programs (e.g. Leece et al., 2013; Wagner et al., 2014). The findings presented in this article aid in bridging a gap in the literature and extend the literature by documenting a psychological impact of being a peer-trainer in the context of a THN program, which supports the notion that THN programs have additional effects besides solely acting as an overdose prevention program. As suggested by this study, THN programs appear to have both personal and societal advantages: they are capable of saving lives, and also seem to allow PWUD to take on a different role in society, a role which appears to be associated with personal empowerment and provides motivation to change drug using habits. The findings that peer-trainers in this study experienced empowerment, and that the role seemed to encourage some to reduce their drug use or to be more careful with their drug use, are significant to the literature on recovery. A reduction in drug use among participants in a THN program was also reported by Wagner et al. (2010). THN programs were designed as harm reduction programs to respond to the problem of opioid overdoses, however, with peers experiencing psychological impacts that could influence their behaviours, an unintended outcome of the program may be a reduction in drug use or risky behaviours, which should be studied further. While there were many identified benefits there were also challenges associated with the peer-trainer role which should be studied and addressed in the future. Knowledge of these benefits and challenges may allow for improvement and more informed decision-making concerning changes to the Montreal program, and may be applicable to other THN programs as well.

Optimizing benefits and minimizing challenges of the peer-trainer role

As suggested by Slade et al. (2014), one of the recovery-oriented implementations that mental health organizations should consider to maximize recovery is the inclusion of peer support workers. However, the mere inclusion of support workers is not sufficient. Although this study suggests that benefits related to empowerment and personal recovery can be experienced through the peer-trainer role, all six peer-trainers indicated that they could have been included more in the project and could have taken on more responsibility (see Figure 1). Given this finding, some suggestions are provided as to how peer-trainers could be involved more in the future, which may potentially optimize their sense of empowerment and recovery. These suggestions could be applied to peer-trainers or peer-helpers working in other peer-led interventions as well.

Components of empowerment, as described by Rogers, Chamberlin, Ellison, and Crean (1997), include having a sense of control over one's life, decision-making power, learning skills, having access to information and resources, assertiveness, not feeling alone, influencing change in one's community, changing other's perceptions, changing one's self-image more positively, and overcoming stigma. Knowledge about empowerment and recovery can be used to make concrete changes in THN programs. Based on the suggestions that were expressed during the interviews, as well as suggestions reported by Brown et al. (2008), order to increase a sense of involvement, peer-trainers could be more included in decision-making from the very beginning of the project, and to have regular meetings where peers are included. Brown et al. (2008) also suggest that to promote an empowering environment organizations should provide volunteer opportunities, allow peers to be involved in planning and organizing activities,

such as group outings, holiday parties, learning opportunities, game tournaments, and create formal leadership positions. To promote a socially supportive environment, they suggest recognizing member accomplishments, organizing a variety of interesting activities, and developing self-help groups.

In line with these suggestions to fully include peer-trainers in THN programs, in a recent systematic review of peer-helpers working in harm reduction initiatives, Marshall et al. (2015) identified some of the facilitating factors to peer involvement, including developing positive relationships with the broader community, providing training and support to peers, as well as peer involvement in the governance and management of the program or research project. Marshall et al. (2015) also provide suggestions to improve peer involvement, some of which are directly related to the comments provided by the peer-trainers in this study, such as implementing anti-stigma campaigns; creating opportunities for policy-makers, researchers, users, and practitioners to discuss harm reduction initiatives; fostering a culture and work environment that will allow PWUD to take on leadership positions and to have a meaningful participation; and provide appropriate training and supervision to peer workers. Another study by Greer, Luchenski, Amlani, Lacroix, Burmeister, and Buxton (2016) also provide factors that increase peer engagement in harm reduction services, including a supportive environment by inviting peers to meetings and setting clear expecatations; equitable participation in terms of involving more than just a select few peers in meetings; and capacity building and empowerment through expanding peer networks.

Limitations

This study represents a qualitative exploratory study based on a small number of peer-trainers in one project. As there are currently only six peer-trainers in the Montreal program, the study is limited to the experiences of one group of trainers. However, the reality is that six peer-trainers is a good number of individuals to train more than one hundred participants. As well, the individual interviews that took place with each trainer allowed a lot of data and valuable information to be collected. The PROFAN program was also managed by peers, which is another unique aspect of this program. This article aimed to identify the impacts of being a trainer, not a participant, since this has been unexplored and the two roles can differ in terms of responsibility and leadership. Even with a small number of subjects, the results suggest that studies should devote attention to studying the impacts of being a peer-trainer in THN programs. To increase the strength of the findings, future studies may consider using member-checking, which was not used in this study due to a lack of time and funding, and limited availability of the peer-trainers (some were going back to school/work). Studies could also use triangulation by interviewing the peer-trainers in the program, the program-makers, and participants who received the training from the peers. In fact, interviews with the participants in this program took place after the interviews were conducted with the peer-trainers, and these results will be published in a separate publication.

Conclusion

In conclusion, evaluation of peer-trainer experiences in this program suggests that there are benefits associated with this role involving an increase in one's sense of control,

sense of responsibility, power in decision-making, self-esteem, self-confidence, drug use, connectedness, and meaning in life—concepts which reflect empowerment and recovery. This alludes to the possibility that THN programs are capable of not only reducing the number of overdoses, but may have wider reaching effects than once thought, with the potential of making positive psychological impacts on those who take on this role.

Future Directions

A general suggestion for future evaluation research of THN programs is to not only demonstrate the feasibility of the program, but also explore the personal impacts of the peer-trainer role. A question for future research is whether peer-helpers involved in the Montreal program experience similar benefits as the peer-trainers. Few studies have investigated the experiences of peer-helpers (individuals who receive training and then respond to overdoses) in THN programs, but the results suggest that there is a psychological impact associated with this role as well (Banjo et al., 2014; Leece et al., 2013; Wagner et al., 2014). The results provide encouragement for the inclusion of peer-trainers in THN programs. Given the benefits reported in this study, and the fact that peers can reach and communicate with other PWUD (Repper & Carter, 2011), it would be advantageous to include peer-trainers in more programs. For research purposes, it would be interesting to compare different THN programs in order to identify the characteristics that foster empowerment among PWUD, especially among those who act as peer-trainers. Although it is supervised by the Direction of Public Health of Montreal, it is important to keep in mind that the PROFAN program in Montreal is being implemented at Méta D'Âme, an organization run by peers for peers. The papers discussed in this article were primarily organizations run by professionals, in which peer-

helpers were integrated. Future research could compare professional vs. peer-led THN programs in terms of efficiency of the program, the personal benefits experienced by peers in each type of program, and the differences between professional trainers and peers with regards to targeting and recruiting PWUD to participate in overdose prevention training. With advanced knowledge of peer experiences in overdose prevention programs, the literature on harm reduction initiatives can be expanded, which can lead to improving programs, and the development and validation of questionnaires to measure the impacts of being a peer-trainer, further expanding the methods and literature on peers involved in overdose prevention. Qualitative methods will continue to be useful in exploring the individual experiences of being a peer, though it would also be useful to develop questionnaires and conduct pre-post studies to measure changes in empowerment, self-esteem, and drug use behaviours, as validated questionnaires have already been used to measure peer-helper experiences in mental health and HIV/AIDS programs (e.g. Bastardo & Kimberlin, 2000; Hutchinson et al., 2006; Moran et al., 2012). Finally, further research could also be devoted to identifying strategies to recruit a more hard-to-reach clientele to participate as peer-trainers, as they may gain the most from this role.

References

Ahmed, A. O., Hunter, K. M., Mabe, A. P., Tucker, S. J., & Buckley, P. F. (2015). The professional experiences of peer specialists in the Georgia Mental Health Consumer Network. *Community Mental Health Journal, 51*(4), 424-436.

Banjo, O., Tzemis, D., Al-Qutub, D., Amlani, A., Kesselring, S., & Buxton, J. (2014). A quantitative and qualitative evaluation of the British Columbia take home naloxone program. *CMAJ Open, 2*(3), 153-161.

Bastardo, Y. M., & Kimberlin, C. L. (2000). Relationship between quality of life, social support and disease-related factors in HIV-infected persons in Venezuela. *AIDS Care, 12*(5), 673-684.

Bennett, T., & Holloway, K. (2012). The impact of take-home naloxone distribution and training on opiate overdose knowledge and response: an evaluation of the THN Project in Wales. *Drugs: Education, Prevention and Policy, 19*(4), 320-328.

Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Garden City, N.Y: Doubleday.

Bracke, P., Christiaens, W., & Verhaeghe, M. (2008). Self-esteem, self-efficacy, and the balance of peer support among persons with chronic mental health problems. *Journal of Applied Social Psychology, 38*(2), 436-459.

Broadhead, R. S., Heckathorn, D. D., Altice, F. L., van Hulst, Y., Carbone, M., Friedland, G. H., . . . Selwyn, P. A. (2002). Increasing drug users' adherence to HIV treatment: results of a peer-driven intervention feasibility study. *Social Science & Medicine (1982), 55*(2), 235-246.

Brown, L. D., Shepherd, M. D., Merkle, E. C., Wituk, S. A., & Meissen, G. (2008). Understanding how participation in a consumer-run organization relates to recovery. *American Journal of Community Psychology, 42*(1-2), 1-2.

Carter, C., Graham, B., & Canadian Drug Policy Coalition. (2015). *Opioid overdose prevention and response in Canada*.

Centers for Disease Control and Prevention (CDC. (2012). Community-based opioid overdose prevention programs providing naloxone-United States, 2010. *Morbidity and Mortality Weekly Report*, *61*(6), 101.

Corrigan, P. W. (2006). Impact of consumer-operated services on empowerment and recovery of people with psychiatric disabilities. *Psychiatric Services*, *57*(10), 1493-1496.

Day, E., Manning, V., Best, D., & Gaston, R. (2009). Can we prevent drug related deaths by training opioid users to recognise and manage overdoses? *Harm Reduction Journal*, *6*(1), 1-8.

Degenhardt, L., Bucello, C., Mathers, B., Briegleb, C., Ali, H., Hickman, M., & McLaren, J. (2011). Mortality among regular or dependent users of heroin and other opioids: a systematic review and meta-analysis of cohort studies. *Addiction*, *106*(1), 32-51.

Doe-Simkins, M., Walley, A. Y., Epstein, A., & Moyer, P. (2009). Saved by the nose: bystander administered intranasal naloxone hydrochloride for opioid overdose. *American Journal of Public Health*, *99*(5), 788-791.

Dorp, E., Yassen, A., & Dahan, A. (2007). Naloxone treatment in opioid addiction: the risks and benefits. *Expert Opinion on Drug Safety*, *6*(2), 125-132.

Dorp, E., Yassen, A., Sarton, E., Romberg, R., Olofsen, E., Teppema, L., ... Dahan, A. (2006).Naloxone Reversal of Buprenorphine-induced Respiratory Depression. *Anesthesiology,* 51-57.

Fischer, B., & Argento, E. (2012). Prescription opioid related misuse, harms, diversion and interventions in Canada: a review. *Pain Physician, 15*(3 Suppl), ES191-203.

Greer, A. M., Luchenski, S. A., Amlani, A. A., Lacroix, K., Burmeister, C., & Buxton, J. A. (2016). Peer engagement in harm reduction strategies and services: a critical case study and evaluation framework from British Columbia, Canada. *BMC Public Health, 16*(1).

Green, T. C., Heimer, R., & Grau, L. E. (2008). Distinguishing signs of opioid overdose and indication for naloxone: an evaluation of six overdose training and naloxone distribution programs in the United States. *Addiction, 103*(6), 979-989.

Hutchinson, D. S., Anthony, W. A., Ashcraft, L., Johnson, E., Dunn, E. C., Lyass, A., & Rogers, E. S. (2006). The personal and vocational impact of training and employing people with psychiatric disabilities as providers. *Psychiatric Rehabilitation Journal, 29*(3), 205-213.

Leamy, M., Bird, V., Le, B. C., Williams, J., & Slade, M. (2011). Conceptual framework for personal recovery in mental health: systematic review and narrative synthesis. *The British Journal of Psychiatry: The Journal of Mental Science, 199*(6), 445-52.

L'Écuyer, R. (1987). L'analyse de contenu: notion et étapes. *Les méthodes de la recherché qualitative,* 49-65.

Leece, P. N., Hopkins, S., Marshall, C., Orkin, A., Gassanov, M. A., & Shahin, R. M. (2013). Development and implementation of an opioid overdose prevention and response program in Toronto, Ontario. *Canadian Journal of Public Health, 104*(3), e200-e204.

Lindeman, T. (2014). Rash of fatal overdoses in Montreal could be linked to fentanyl. Retrieved January 1, 2015, from http://www.cbc.ca/news/canada/montreal/rash of-fataloverdoses-in-montreal-could-be-linked-to-fentanyl-1.2692418 4

Marino, P., Simoni, J., & Silverstein, L. B. (2007). Peer support to promote medication adherence among people living with HIV/AIDS. *Social Work in Health Care, 45*(1), 67-80.

Marshall, Z., Dechman, M. K., Minichiello, A., Alcock, L., & Harris, G. E. (2015). Peering into the literature: A systematic review of the roles of people who inject drugs in harm reduction initiatives. *Drug and Alcohol Dependence, 151*, 1-14.

McAuley, A., Best, D., Taylor, A., Hunter, C., & Robertson, R. (2012). From evidence to policy: the scottish national naloxone programme. *Drugs: Education, Prevention & Policy, 19*(4), 309-319.

Moran, G. S., Russinova, Z., & Stepas, K. (2012). Toward understanding the impact of occupational characteristics on the recovery and growth processes of peer providers. *Psychiatric Rehabilitation Journal, 35*(5), 376-380.

Mowbray, C. T., Moxley, D. P., & Collins, M. E. (1998). Consumers as mental health providers: first-person accounts of benefits and limitations. *The Journal of Behavioral Health Services & Research, 25*(4), 397-411.

O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for Reporting Qualitative Research. *Academic Medicine Academic Medicine*, *89*(9), 1245-1251.

Oliver, P., & Keen, J. (2003). Concomitant drugs of misuse and drug using behaviours associated with fatal opiate-related poisonings in Sheffield, UK, 1997-2000. *Addiction, 98*(2), 191-197.

Pallaveshi, L., Balachandra, K., Subramanian, P., & Rudnick, A. (2014). Peer-Led and Professional-Led Group Interventions for People with Co-occurring Disorders: A Qualitative Study. *Community Mental Health Journal, 50*(4), 388-394.

Piper, T. M., Stancliff, S., Rudenstine, S., Sherman, S., Nandi, V., Clear, A., & Galea, S. (2008). Evaluation of a Naloxone Distribution and Administration Program in New York City. *Substance Use & Misuse, 43*(7), 858-870.

Provincial Health Services Authority (2016). *Public health emergency in BC*. Retrieved August 29, 2016, from BC Centre for Disease Control, http://www.bccdc.ca/about/news-stories/stories/public-health-emergency-in-bc

Repper, J., & Carter, T. (2011). A review of the literature on peer support in mental health services. *Journal of Mental Health, 20*(4), 392-411.

Resnick, S. G., & Rosenheck, R. A. (2008). Integrating peer-provided services: a quasi-experimental study of recovery orientation, confidence, and empowerment. *Psychiatric Services, 59*(11), 1307-1314.

Rogers, E. S., Chamberlin, J., Ellison, M. L., & Crean, T. (1997). A consumer-constructed scale to measure empowerment among users of mental health services. *Psychiatric Services, 48*(8), 1042-1047.

Salzer, M. S. (1997). Consumer empowerment in mental health organizations: Concept, benefits, and impediments. *Administration and Policy in Mental Health and Mental Health Services Research, 24*(5), 425-434.

Salzer, M. S., & Shear, S. L. (2002). Identifying consumer-provider benefits in evaluations of consumer-delivered services. *Psychiatric Rehabilitation Journal, 25*(3), 281-288.

Schutt, R. K., & Rogers, E. S. (2009). Empowerment and peer support: Structure and process of self-help in a consumer-run center for individuals with mental illness. *Journal of Community Psychology*, *37*(6), 697-710.

Segal, S. P., Silverman, C., & Temkin, T. (1995). Measuring empowerment in client-run self-help agencies. *Community Mental Health Journal*, *31*(3), 215-227.

Slade, M., Amering, M., Farkas, M., Hamilton, B., O'Hagan, M., Panther, G., . . . Whitley, R. (2014). Uses and abuses of recovery: implementing recovery-oriented practices in mental health systems. *WPS World Psychiatry*, *13*(1), 12-20.

Strang, J., Powis, B., Best, D., Vingoe, L., Griffiths, P., Taylor, C., ... & Gossop, M. (1999). Preventing opiate overdose fatalities with take-home naloxone: pre-launch study of possible impact and acceptability. *Addiction*, *94*(2), 199-204

Vallance et al., 2012. *Overdose Events in British Columbia: Trends in Substances Involved, Contexts and Responses. Victoria: Centre for Addiction Research of BC.* Available at: http://www.carbc.ca/Portals/0/propertyagent/558/files/180/carbc_ bulletin8.pdf

Wagner, K. D., Davidson, P. J., Iverson, E., Washburn, R., Burke, E., Kral, A. H., ... & Lankenau, S. E. (2014). “I felt like a superhero”: The experience of responding to

drug overdose among individuals trained in overdose prevention. *International Journal of Drug Policy*, *25*(1), 157-165.

Wagner, K. D., Valente, T. W., Casanova, M., Partovi, S. M., Mendenhall, B. M., Hundley, J. H., ... & Unger, J. B. (2010). Evaluation of an overdose prevention and response training programme for injection drug users in the Skid Row area of Los Angeles, CA. *International Journal of Drug Policy*, *21*(3), 186-193.

Zemore, S. E., Kaskutas, L. A., & Ammon, L. N. (2004). In 12-step groups, helping helps the helper. *Addiction, 99*(8), 1015-1023.

Zimmerman, M. A., & Rappaport, J. (1988). Citizen participation, perceived control, and psychological empowerment. *American Journal of Community Psychology, 16*(5), 725-750.

Figure 1. Optimizing empowerment and recovery: quotes indicating that peer-trainers want to be more involved in the project

- I would like to be more involved.
- In regards to the room setup. We didn't have to do it so far. Like two weeks ago, we were shown how to set up the room, how to prepare the things. But me I would have liked to do it from the beginning you know, it's like, it's part of the job.
- I hope I am going to be able to do it more…, it wasn't enough, I need to do others… I would like to be more involved, I would like to do research.
- They really made the whole document.
- He could have asked for more opinions [when developing the training].
- Because it's DSP [Direction of Public Health] of Montreal, the money from Montreal, they don't want us to go outside the city with that money. So we have to find a way to have money to dissociate with them and go do it, but not with their material because they will not want us to use theirs….We try to go farther because everyone believes in this.
- All the organizations they're working…it's like everyone wants it [naloxone], nobody wants to get together. I don't like it, but that's how it is.
- Well I don't feel like I was really, I didn't really do anything in making the PROFAN preparation or anything…Like I would have liked to do more, I would have liked to have done more…we didn't really do much, like we just gave the training, and we didn't really do anything else besides that.
- I really hope that I could have done more, but I guess maybe if there's going be more next year or, I really hope to do more.
- I would have given it [the training] two more times.
- I think that we could have had more responsibilities in a sense.
- We were consulted a bit throughout the development and all that. But I think that it still changed a lot between…I think that it was really not up to the peer-trainers. It was like a vision of Meta D'Ame.
- I would be ready to even spend a day just for [CPR]…because it's a complete day, the CPR training. I would be ready to do it. I would be interested.

Chapter 3: General conclusions and directions for future research

Based on a rapid review of the literature on the psychological impacts of being a peer-helper in mental health and HIV/AIDS programs, this study aimed to evaluate the experiences of six peer-trainers in a Montreal overdose prevention program, and to identify the psychological benefits and challenges associated with this role. This research project provides valuable insight into the experiences of drug users taking on a helping, leadership role, as they were involved in delivering an overdose prevention training session to other users. Results presented in the first manuscript highlight the relative lack of research on the experiences of peers in overdose prevention, and no studies on the psychological impacts of being a peer-trainer in a THN program were identified. Studies have just recently started to document the benefits experienced by participants in THN programs (e.g. Leece et al., 2013; Wagner et al., 2014). The findings presented in the second manuscript aid in bridging a gap in the literature and extend the literature by documenting a psychological impact of being a peer-trainer in the context of a THN program, which supports the notion that THN programs have additional effects besides solely acting as an overdose prevention program. As suggested by this study, THN programs appear to have both personal and societal advantages: they are capable of saving lives, and also seem to allow drug users to take on an acceptable role in society, a role which appears to be associated with personal empowerment and provides motivation to change drug using habits. The findings that peer-trainers in this study experienced empowerment, and that the role seemed to encourage some to reduce their drug use, or to be more careful with their drug use, are significant to the literature on recovery. A reduction in drug use among participants in a THN program was also reported by Wagner

et al. (2010). THN programs were designed as harm reduction programs to respond to the problem of opioid overdoses, however, with peers experiencing psychological impacts that could influence their behaviours, an unintended outcome of the program may be a reduction in drug use or risky behaviours, which should be studied further. While there were many identified benefits there were also challenges associated with the peer-trainer role which should be studied and addressed in the future. Knowledge of these benefits and challenges may allow for improvement and more informed decision-making concerning changes to the Montreal program, and may be applicable to other THN programs as well. Based on the comments mentioned by these six peer-trainers, a number of suggestions were provided to increase their level of involvement, and these could be helpful to other peer-led programs in optimizing a sense of empowerment and recovery. For instance, allowing peer-trainers to be more involved in the program, more present in decision-making, to give more training sessions, to take on more tasks and responsibility; these are all general suggestions which were produced by this study, but similar ones have also been suggested elsewhere, such as in a study on peer-helpers in mental health programs by Brown et al. (2008), and by a systematic review of peer-helpers in harm reduction initiatives by Marshall et al. (2015)

A general suggestion for future evaluation research of THN programs is to not only demonstrate the feasibility of the program, but also explore the personal impacts of the peer-trainer role. The fact that the results reported in this study are in line with benefits reported among peer-helpers in the domains of mental health and HIV/AIDS contributes to the external validity of this study. A question for future research is whether peer-helpers involved in the Montreal program experience similar benefits as the peer-trainers. Few studies have investigated the experiences of peer-helpers (individuals who

receive training and then respond to overdoses) in THN programs, but the results do suggest that there is a psychological impact associated with this role as well (Banjo et al., 2014; Leece et al., 2013; Wagner et al., 2014). In terms of future directions, the results provide encouragement for the inclusion of peer-trainers in THN programs. Given the benefits reported in this study, and the fact that peers can reach and communicate with other drug users (Repper and Carter, 2011), it would be advantageous to include peer-trainers in more programs. For research purposes, it would be interesting to compare different THN programs in order to identify the characteristics that foster empowerment among drug users, especially among those who act as peer-trainers. Although it is supervised by the Direction of Public Health of Montreal, it is important to keep in mind that the PROFAN program in Montreal is being implemented at Meta D'Ame, an organization run by peers for peers. The papers discussed in this thesis were primarily organizations run by professionals, in which peer-helpers were integrated. Future research could compare professional vs. peer-led THN programs in terms of efficiency of the program, the personal benefits experienced by peers in each type of program, and the differences between professional trainers and peers with regards to targeting and recruiting the drug using population to participate in overdose prevention training.

With advanced knowledge of peer experiences in overdose prevention programs, the literature on harm reduction initiatives can be expanded, which can lead to improving programs, and the development and validation of questionnaires to measure and quantify the impacts of being a peer-trainer, further expanding the methods and literature on peers involved in overdose prevention. Qualitative methods will continue to be useful in exploring the individual experiences of being a peer, though it would also be useful to develop questionnaires and conduct pre-post studies to measure changes in

empowerment, self-esteem, and drug use behaviours, as validated questionnaires have already been used to measure peer-helper experiences in mental health and HIV/AIDS programs (e.g. Bastardo & Kimberlin, 2000; Hutchinson et al., 2006; Moran et al., 2012a). Finally, further research could also be devoted to identifying strategies to recruit a more hard-to-reach clientele to participate as peer-trainers, as they may gain the most from this role.

References

Bastardo, Y. M., & Kimberlin, C. L. (2000). Relationship between quality of life, social support and disease-related factors in HIV-infected persons in Venezuela. *AIDS Care, 12*(5), 673-684.

Brown, L. D., Shepherd, M. D., Merkle, E. C., Wituk, S. A., & Meissen, G. (2008). Understanding how participation in a consumer-run organization relates to recovery. *American Journal of Community Psychology, 42*(1-2), 1-2.

Hutchinson, D. S., Anthony, W. A., Ashcraft, L., Johnson, E., Dunn, E. C., Lyass, A., & Rogers, E. S. (2006). The personal and vocational impact of training and employing people with psychiatric disabilities as providers. *Psychiatric Rehabilitation Journal, 29*(3), 205-213.

Moran, G. S., Russinova, Z., & Stepas, K. (2012a). Toward understanding the impact of occupational characteristics on the recovery and growth processes of peer providers. *Psychiatric Rehabilitation Journal, 35*(5), 376-380.

Repper, J., & Carter, T. (2011). A review of the literature on peer support in mental health services. *Journal of Mental Health, 20*, 4, 392-411.

Wagner, K. D., Davidson, P. J., Iverson, E., Washburn, R., Burke, E., Kral, A. H., ... & Lankenau, S. E. (2014). "I felt like a superhero": The experience of responding to drug overdose among individuals trained in overdose prevention. *International Journal of Drug Policy*, *25*(1), 157-165.

Wagner, K. D., Valente, T. W., Casanova, M., Partovi, S. M., Mendenhall, B. M., Hundley, J. H., ... & Unger, J. B. (2010). Evaluation of an overdose prevention and response training programme for injection drug users in the Skid Row area of Los Angeles, CA. *International Journal of Drug Policy*, *21*(3), 186-193.

Appendices

Appendix A

Summary of qualitative data specifying theme and category definitions

Theme and Definition	Categories and definitions	Example quotes
Peer-trainer experiences related to the PROFAN training		
Theme 1: Peer-trainer experiences of the PROFAN training	*Areas for improvement:* suggestions to improve the training for participants who receive it.	• The accessibility, I understand that there are just three pharmacies who have it, but it's ok, it's still downtown. • Let people go in the street and go see the people and say, give them a pamphlet and say, look we're giving this course out, that would have been maybe… there's a thing maybe we could do. • We can't wait that instead of the syringe it's the nasal or EpiPen • [I: What were the main points to improve according to you for this training?] Just that the people….try to organize that we always start on time. • It is a very long day for the people. And I don't know, just maybe if it was more paired together [the theory and practical CPR portions]…that there was like a bit more practical. • I would suggest a refresh of the practical, especially for the CPR. • Maybe just the place [where the training took

		place], we were a little packed… it wasn't the ideal room.
Theme 2: Peer-trainer experiences of their role as a trainer	*Pride and satisfaction:* feeling proud to be involved in the program. Positive evaluation of the PROFAN program in terms of the training and finally having naloxone.	• I am truly proud, we are the only ones in Quebec who did this, I think it's cool. • I was proud of being a part of this. It's been so long that everyone wanted that…to be able to be the one who trains and pass it on in the street. • It's a project that I believe in, that I am very motivated. It's a passion. • I just wanna tell my peers like that we have this here to save our friends to save us, we should use it, you know like, finally Quebec has agreed to have this for us. • I really appreciated the fact that naloxone has finally become available.
Theme 3: Motivation to take get involved as a peer-trainer in the PROFAN program	*Reciprocity:* personally receiving help in the past, and wanting to be able to give help to others	• [I: Have you had the opportunity to give back to others?] Yes, yes I do. That's why I wanted to do it, I wanted to come because it was interesting to me also, but I wanted to do it, I know that it saves lives, but I wanted to give. Because Meta D'Ame, all the organizations, give so much to us, they are always there to help us, to advise us. I wanted to give a bit

		more there also. • It was to give back in another way to other people, what I had. And what I could give.
	Having a method to intervene: waiting to have naloxone in Quebec for a long time in order to have a way of intervening in opioid overdoses.	• In my experience as a user, to want maybe to have a way, not to save yourself…At least maybe save someone else around you if ever it happens. • I really appreciated the fact that naloxone has finally become available.
	Help: desire to help others	• The feeling to be able to help someone else.
Personal benefits and challenges associated with being a peer-trainer		
Theme 4: empowerment—participation	*Level of participation as a peer-trainer:* level of involvement in the program and in what ways were they involved? How many hours did they devote to their peer-trainer role? Do they feel like they took on a leadership role?	• Well, look, I'd say that for the first times, every night I gave myself maybe an hour or two, I looked at my stuff. Eventually, I realized that the course was so simple, in fact, I didn't really need to…. • So it's like half an hour of preparation before the day, otherwise you don't need to spend time outside of these days to like study your material and everything. • I would say the first time, I really got more prepared, I was reading my book and, like the thing they gave us, but the other times it was really no preparation. • I think that it was 4 or 5 each that we gave

		[training sessions].
Theme 5: empowerment—feeling in control	*Control over one's life*: the ability to exert control over one's life (going back to school, obtaining employment, buying a house, etc), exhibiting self-control in terms of drug use.	• [I: Have your drug using habits changed since you became a peer-trainer?] No. It's something that I know for a long time, that I control. I know that I am not out of control, but at the same time it's something that needs to disappear, that I want to disappear… I haven't lost control. Except that I know very well that I play with fire. • I decided that I was returning to school and that I didn't want to do interventions, but I wanted to continue to be involved in the field, but more as a peer.
	Control in decision-making related to the PROFAN program: feeling a sense of power to contribute to decision-making in the development and implementation of the PROFAN program. Being able to make decisions, suggest changes, and see an actual change brought about. Knowing that their suggestions to make changes will be received positively and taken into consideration.	• Because it's a lot Meta D'Ame, they listen to us a lot, so I think that we are good trainers. • I had the chance to say my word… On ideas how to present it, the way and…. Also we even evaluated the duration, we even evaluated the content. We were involved at different levels to make decisions, how to rehearse.
	Control in overdose situations: feeling a greater sense of control when intervening in overdose situations after receiving the PROFAN training and being a peer-trainer. Feeling more	• Well let's say that if a situation like that happened to me it would stress me, I would feel more responsible let's say than before I had no training.

	confident in their intervention abilities, and feeling less stressed in overdose situations, as a result of being trained on how to respond.	• I can say having a kit on me that I feel like I am able to do more when it happens. • It makes you say, I have my kit, I can do something, and I realized that I have the nerve to do it and I like it. • [I: What is your confidence level, like if this situation happens now with regards to when it happened then?] oh my gosh, it would be so much less stressful… now it would be so much easier with like the CPR and the naloxone, it would be so much more simpler now. • The capacity to intervene, that satisfies me. I feel more useful.
Theme 6: empowerment—being responsible for others	*Personal responsibility:* having a sense of personal responsibility/obligation to help others in overdose situations, and to carry their naloxone kit with them	• Since I did the course, my responsibility is to have it on me, to have it ready, to give it to someone. • When I lived in the street, every time there was an overdose people would just run away. And it would be just me and my boyfriend left and I can't just leave someone die you know, you try to help them out.
Theme 7: empowerment—change in social identity from taking on the peer-trainer role	*Positive change in social identity:* the ways in which others perceive them has changed since they became a peer-trainer, and this is a result of their new role. How do others in society perceive	• Others they were proud, because for the first time the drug has given me a positive thing. There is not much positive to drugs. • [I: Has your role as a

	them? Do peer-trainers feel stigmatized by others? Has this changed since becoming a peer-trainer?	peer-trainer changed the way that others perceive you?] . I think so yes… Maybe that they saw me as a kind of model, I don't know… Because people….often people who followed the training, I knew them from another life, and they saw me differently. • We are capable of giving it and everyone sees us like that**.** • I think maybe like my parents are proud of me, like they're happy that I'm doing something that's good.
Theme 8: recovery—feeling a sense of connectedness	*Connectedness through being a part of the community:* involvement in a previous organization as a peer-helper. Feeling as though they are contributing and giving back to the community through their peer-trainer role.	• I developed relationships with the people with who I train, for example… even though I knew them by sight, I got to know them more personally, outside of drugs. • I think we helped three, I think three people, three lives were saved, and so yeah, we did make a difference, it's for sure we made a difference. • It's not giving back to the same people who gave to me for example. It's giving back a little what I got from other people. • In therapy, home therapy. I did floor monitoring. I was doing the transports also, I did the floor monitoring, I distributed the

		medication. I had a lot of roles.
	Relationships: establishing new relationships with other peer-trainers or participants who followed the training. Building upon existing relationships: current relationships becoming stronger or more intimate.	• Later if I'm going to apply to a certain organization and these people are there, it's always a bonus. Plus we know each other well and we have good experiences, it opens more doors. • For friends, I can't really say I've lost any or made any, but maybe like the acquaintances I've had are maybe a little closer, like the people I worked with doing this maybe are closer. • It was an opportunity to collaborate and even exchange with other people and to know other people and to get out a bit….you get out of consumption, you're all alone.
	Peer support and support groups: becoming an advocate for the PROFAN training by spreading the word, advertising, and telling their friends, family members and other users to register and get the training.	• If I was able to do it, I would do it elsewhere… • Yes, put it in. Not just drug addicts… for everyone working in the organizations, even for people who are homeless… I find it's important. • We also want to reach the very disorganized people, big consumers, we want to be sure that they have the kit, because they are the ones each day who

		consume big doses and they are surrounding other people. So that is more the next step that is going to come. • [I: Do you feel that you have made a difference in the lives of people with this role?] Well yes, yes, for sure. Because I think that it's still what I discuss with friends of mine who are consumers, who are still really active or consume occasionally. But I try to encourage them to do the training and I also respond to their questions about naloxone. • When I received my training, the first 3 months, I was in publicity mode.
Theme 9: recovery—changing self-perceptions	*Self-esteem:* being a peer-trainer made them feel more positive about themselves. Self-reported increase in self-esteem. *Self-confidence:* becoming more confident in one's self due to their involvement as a peer-trainer	• It's true that it maybe gives a feeling of some importance. • It increased my self-esteem. • I gained confidence in my personal life. • Yes. I have…you know as addicts, we don't really feel good about ourselves, at least me, I talk about myself, it gave me that, I don't have issues saying it. It even helped me to assert myself. • [I: Would you say that your perception of yourself has changed

		since becoming a peer-trainer in this program?] Yeah, yeah, it made me feel…more responsible maybe, or more like, I don't want to say important, but you're like proud that you're giving a course. • [I : What has changed in your life since you became a peer-trainer?] I think that it's more confidence towards people. Confidence to speak in public, confidence that I am capable of doing that. Now I know it. • [I: What has changed in your life since you have become a peer-trainer in this program?] I think the confidence level is really way, way high… because you feel more important that you're doing something that is really important, it's like, because we're the first to do that, like we're peers giving it to other peers. • Self-esteem, yes. It increases self-confidence. It's a training, you feel more useful.
Theme 10: recovery—increased meaning in life through identifying and setting goals, and rebuilding their lives.	*Pursuing life or social goals:* actively pursuing new goals, such as making steps to enroll in drug treatment, enrolling in school, career counselling, setting long-term goals related to employment or housing.	• I know that I need to start now to save if I want a house in 10 years. I am capable. Before I was really impatient and I didn't believe in the long-term. And now, I know it and

		I have a lot of nice projects.
	Identifying previous or new life or social goals: making personal realizations/identifications related what they want their life to be like in the future, and setting goals.	• [I: Has this specific experience with the PROFAN project changed something for you in your life?] Yes actually. I think that…I mean, it's not just the training. But that's it, actually I decided that I was returning to school and that I didn't want to do interventions, but I wanted to continue to be involved in the field but more as a peer. • And I realized what I was missing was…to be truly equal with the people [participants in the program who are users].
	Rebuilding of life through training: developing new skills from the peer-trainer role which will be useful in their lives. Resuming with daily activities.	• I enjoyed every second of it and it helped me also to talk in front of people. • I'm in the middle of resolving my justice problem before returning to school. So in the meantime I'm going to go work.
Theme 11: recovery—changing drug using habits	*Changing drug use:* limiting the frequency, amount, or kind of drug since being a peer-trainer.	• No it hasn't changed, but maybe for certain people it will decrease. • I'm more careful with what I'm using and the quantities, like my quantities are smaller that I'm using, and I'm not using as much, I'm maybe using once or twice a week.

		• If I re-do the training it would probably be like a little boost of "I will not consume tonight"…I find that it's a positive message. It wakes you up a bit to say "Look, it's dangerous." • It [the training] primed me a bit to be anti-consumption… At that time I wasn't consuming, but it like boosted my desire to want to not consume. Yes, it did that when I did the training.
	Caution: being more careful and paying more attention to what they are consuming, how much they are consuming, and listening to drug deals when they say that a certain drug may be really strong	• I still consume coke, but now I pay attention/ • I am 95% sure that people who came to take the training pay more attention now. • [I: Have your drug using habits changed since becoming a peer-trainer?] It made me like, I kind of realized, yeah they say it's heroin but we don't really know what's in it, so I think I'm more careful.
Theme 12: recovery—feeling hopeful about the future	*Hope for recovery:* the desire to recover from drug addiction.	• It's something that I use to relieve my anxiety. At the same time it's not a good way…But I do everything, I try, I go work out, I'm doing relaxation things and everything, to try to not have the need anymore.
	Motivation to change: motivated to change their	• I can't wait for this to not be part of my life…I

	drug using habits and recover from addiction, and taking steps towards this. *Having dreams and aspirations:* feeling positive about the future, and having dreams and aspirations regarding where they want to be in their lives.	see that one lady who helps me, a social worker, my doctor. • I know that I need to start now to save if I want a house in 10 years. I am capable. Before I was really impatient and I didn't believe in the long-term. And now, I know it and I have a lot of nice projects.
Theme 13: difficulties associated with the peer-trainer role	*Difficulties associated with teaching:* challenges to keep the attention of the participants, public-speaking, managing difficult personalities, conveying the information properly to make sure that participants understand, participants arriving late or leaving early, and clarifying myths about overdose and naloxone.	• Yeah I would say that's the most important thing, to try to keep them interested. • Keeping the attention of people. • Sometimes it can be the proximity with certain people who are there…There are people who have…their myths are very strong…Sometimes in a group, you're going to have the kind of people who don't stop talking…And the people who are in a state of consumption, it's to try to keep them alert. • It was to convey the importance maybe to be able to intervene in the case of overdoses. How to do it if you want to save a life.

Appendix B

English Interview Protocol

CANEVAS D'ENTREVUE – *ENTREVUES INDIVIDUELLES* (PAIRS-FORMATEURS)

DATE : _____

INTRODUCTION

The interview that we are proposing to you today will document your opinions on the PROFAN training, and your experience being a peer-trainer. Your feedback will help to improve the training. There are no good or bad answers, because to us, each opinion is interesting to know.

PROFAN TRAINING

1) What did you appreciate the most about the PROFAN training and why?
   Prompt : comprehension, duration, pertinence, material, quantity of information, importance of including CPR training in the prevention of overdoses.

2) What do you think could be improved?

PEER-TRAINER ROLE

3) Can you describe to us your experience as a peer-trainer in the PROFAN program?
   Prompt : what did you appreciate the most? What were your responsibilities? Do you think you have more or less responsibilities since becoming a peer-trainer, compared to before?

(Empowerment- participation)

4) How much time do you devote to your responsibilities as a peer-trainer?

5) What are the difficulties associated with your role as a peer-trainer?
   Prompt : What do you think could be improved?

6) Have you been a peer-trainer in another organization before?
   Prompt : If yes, did you receive training? What type of training?

(Empowerment : decision-making power)

7) In what measure have you been involved in the development of the PROFAN training?
   Prompt: What type of decisions were you able to make?

(Empowerment- control)

8) If you felt that something should be changed about the training, would you do something to change it?
   Prompt : If yes, what would you do? Who would you speak to?

(Recovery-identity/redefinition of self- self-esteem, acceptance, etc)

9) What has changed in your life since you have been a peer-trainer?
   Prompt : self-esteem, independence, did your participation impact your personal life?

(Recovery : identity/redefinition of self)

10) Would you say that your perception of yourself has changed since becoming a peer-trainer? If yes, in what way? Why?
   Prompt : do you think that this has something to do with being a peer-trainer?

(Recovery- relationships)

11) Since you have been a peer-trainer, has your group of friends changed (increased, decreased, different people)? Do you think that you have made important connections with the other peer-trainers? And what about the people you train?

(Recovery- reciprocity)

12) Being a peer-trainer, would you say that you have opportunities to give back to others? If yes, could you tell me about this?

(Empowerment- social identity & stigma)

13) Has your role as a peer-trainer changed the way that others see you?
   Prompt : friends, family, police officers, paramedics, other drug users—how do they perceive you? How do they treat you?

14) What motivated you to participate in the program?
   Prompt: do you feel that you have made a difference in the lives of others? (if yes, how?)

15) Have you intervened in any overdose situations following your participation in the PROFAN training?
   Prompt : What happened? Did you feel confident to intervene before receiving the training? And what about now?

(Life History)

16) Can you tell us about your experience with drugs?
   Prompt: At what age did you start taking drugs and why? What substances did you start with? Have you experienced an overdose? Have you consumed substances in the last six months? If yes, which ones? Mode of consumption? Where did you consume? Do you take methadone (prescribed or not)?

(Recovery - drug use)

17) Since you have been a peer-trainer, have your drug using habits changed?

(Recovery- hope)

18) How do you feel about the future?

19) Do you have any other comments to add?

INFORMATIONS PERSONNELLES

Before finishing with the interview, we would also like to have some basic demographic information, including your age and your area of residence.

20) In which age group are you?
   a) 15 à 24 ans
   b) 25 à 34 ans

c) 35 à 44 ans
d) 45 à 54 ans
e) 55 à 64 ans
f) 65 à 74 ans

21) In what neighbourhood do you live?
g) Ahuntsic-Cartierville
h) Anjou
i) Côte-des-Neiges–Notre-Dame-de-Grâce
j) Lachine
k) LaSalle
l) Le Plateau-Mont-Royal
m) Le Sud-Ouest
n) L'Île-Bizard–Sainte-Geneviève
o) Mercier–Hochelaga-Maisonneuve
p) Montréal-Nord
q) Outremont
r) Pierrefonds-Roxboro
s) Rivière-des-Prairies–Pointe-aux-Trembles
t) Rosemont–La Petite-Patrie
u) Saint-Laurent
v) Saint-Léonard
w) Verdun
x) Ville-Marie
y) Villeray–Saint-Michel–Parc-Extension