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Peering into the literature: a systematic review of the roles of people who inject drugs in harm reduction initiatives*

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ABSTRACT

Background: People who inject drugs have been central to the development of harm reduction initiatives. Referred to as peer workers, peer helpers, or natural helpers, people with lived experience of drug use leverage their personal knowledge and skills to deliver harm reduction services. Addressing a gap in the literature, this systematic review focuses on the roles of people who inject drugs in harm reduction initiatives, how programs are organized, and obstacles and facilitators to engaging people with lived experience in harm reduction programs, in order to inform practice and future research. Methods: This systematic review included searches for both peer reviewed and grey literature. All titles and abstracts were screened by two reviewers. A structured data extraction tool was developed and utilized to systematically code information concerning peer roles and participation, program characteristics, obstacles, and facilitators. Results: On the basis of specific inclusion criteria 164 documents were selected, with 127 peer-reviewed and 37 grey literature references. Data extraction identified key harm reduction program characteristics and forms of participation including 36 peer roles grouped into five categories, as well as obstacles and facilitators at systemic, organizational, and individual levels. Conclusions: Research on harm reduction programs that involve people with lived experience can help us better understand these approaches and demonstrate their value. Current evidence provides good descriptive content but the field lacks agreed-upon approaches to documenting the ways peer workers contribute to harm reduction initiatives. Implications and ten strategies to better support peer involvement in harm reduction programs are identified.

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KEYWORDS: systematic review; injection drug use; peer worker; participation; harm reduction; HIV

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1. INTRODUCTION

People who inject drugs have a long history of organizing and have been central to the development of harm reduction initiatives in regions including North America, Europe, Oceania, and East and South-East Asia (Curtis, 2004; Southwell, 2002). Referred to by terms that include peer workers, peer helpers, or natural helpers (Wye, 2006), people with lived experience of drug use work both behind the scenes and at the forefront of needle distribution services, harm reduction education, peer support, and community-based research initiatives (Canadian AIDS Society and Canadian Harm Reduction Network, 2008; Hunt et al., 2010; Jain et al., 2014; Thangsing, 2012). In these ways, people who inject drugs are engaged in the development, delivery, and evaluation of harm reduction services, whether offered through mainstream public health agencies, community health settings, or drug-user organizations.

1.1. Involving people who inject drugs in harm reduction initiatives

The involvement of people who inject drugs in harm reduction programs is part of a larger trend toward the increased participation of people with lived experience in service delivery, research, policy, and evaluation (Cheng and Smith, 2009). This shift is part of the recognition that mainstream approaches to service delivery often fail to reach people who could most benefit from programs and services. The highly stigmatized and criminalized nature of drug use makes peer work especially important in harm reduction initiatives (Curtis, 2004). Evidence indicates that people who inject drugs mistrust traditional health care providers, including public health officials and hospitals, because of past experiences of discrimination and/or fear of arrest, suggesting that traditional health promotion approaches are inadequate (Broadhead et al., 2012; Strike et al., 2013).

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In this context, the involvement of people who use drugs as peer workers has been shown to offer benefits for multiple stakeholders, including individuals who use drugs, service providers, and broader communities (Dickson-Gómez et al., 2004; Friedman et al., 2004; Kermode et al., 2008; MacKenzie et al., 2012; Sherman et al., 2009). For community organizations, peers can be effective intermediaries between public health workers and people who use drugs (Des Jarlais and Semaan, 2008; Needle et al., 2004). Working in harm reduction can also have positive health impacts for peer workers themselves (Small et al., 2012; Wood et al., 2003), especially from a harm reduction perspective (Callon et al., 2013). Benefits identified in research to date include reductions in social isolation and the transmission of blood-borne pathogens, enhanced medication adherence, and improvements in mental health (e.g., Bastardo and Kimberlin, 2000; Serovich et al., 2000).

1.2. Project aims

While the importance of peer engagement in harm reduction services has been acknowledged, no systematic reviews have focused on documenting the roles of people who inject drugs. In this study, we systematically reviewed both peer-reviewed and grey literature to identify: the roles of people who inject drugs in harm reduction initiatives, how programs are organized, and the obstacles and facilitators to engaging people with lived experience in harm reduction programs. The objective was to identify and synthesize information that could inform drug user organizations, service providers who work with peers in harm reduction initiatives, policy makers, and those hoping to better engage people with lived experience in the delivery of harm reduction services.

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1.3. Project history and context

In 2013, a team of community-university partners in Atlantic Canada received funding to hold a two-day meeting focused on the involvement of people who inject drugs in harm reduction research and programming. The overall objectives of the project were: 1) to bring together an interdisciplinary, inter-sectoral group of AIDS and/or needle exchange service providers, natural/peer helpers, and academic researchers with expertise in harm reduction and/or HIV to plan a community-based research program; 2) to support the initiative of natural/peer helpers in developing more informed approaches to promoting the health and well-being of those who are currently, or are likely to begin, injecting, and; 3) to conduct a systematic review of existing natural/peer helper practices including peer-reviewed and grey literature in order to inform the direction of future work. This systematic review has included multiple stakeholders, contributing to results that are more community relevant and meaningful.

2. MATERIAL AND METHODS

2.1. Search strategy

The search strategy for the peer-reviewed literature was developed in consultation with an academic librarian at Cape Breton University. There are multiple terms to describe peer roles in relation to harm reduction initiatives such as “peer worker”, “peer educator”, “peer researcher”, or “natural helper”. In order to carry out a focused search relevant to our objectives, we conducted a search of Web of Knowledge, Academic Search Complete, PsycInfo, CINAHL, and PUBMED in July 2013 with the following search terms: ((peer OR “natural helper”) AND (IDU OR “injection drug”)).

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Health sciences librarians at Memorial University performed searches for grey literature in January 2014. As the majority of these resources are not indexed, a standard search strategy was not employed. Rather, various combinations of keywords were utilized. Keywords utilized for all searches included peer, peers, group, cohort, injection drug, drug injection, injection drug use, IDU, injecting drug users, program, evaluation, and intervention. To encompass the full breadth of grey literature, targeted document types included: theses, dissertations, conference abstracts and presentations, government documents and reports, association/organization reports and program descriptions, and relevant popular literature. Both CADTH Grey Matters and the New York Academy of Medicine Grey Literature Report were consulted to locate additional resources and relevant conferences were identified for manual conference program searching. Finally, internet searches were performed in Google, Bing, DuckDuckgo, and Canadian Public Policy, and a list of references was provided to the review team.

2.2. Study selection

Inclusion criteria included publication in English, the involvement of people who inject drugs (current or former drug use), and either a program description or evaluation component pertaining to harm reduction programming. Inclusion criteria further specified that all included articles be original research, where original research was defined as an articulation of primary research including a clear presentation of research methods. All case studies and program evaluations that described their methods of inquiry were included. Reviews, summary reports, news items, and editorials were excluded. We did not limit our data set to specific countries or

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dates in order to include a broad range of programs and strategies that had been developed over time.

Figure 1 provides a visual summary of the selection process. For the peer-reviewed literature, two reviewers screened the titles and abstracts of all references according to the criteria above. Disputes were resolved by a third reviewer. For the grey literature, many reports did not have abstracts or summaries that could be easily screened and as a result, reviewers consulted each document to determine eligibility. Similar to the process for the peer-reviewed literature, two reviewers screened each reference provided by the health sciences librarians. Where necessary, disputes were resolved by a third reviewer. Once the initial screening of peer-reviewed and grey literature was complete, a secondary search of the reference lists from reviews and summary reports were hand-searched by one reviewer. As part of this process, a list of relevant references was identified on the website peerinvolvement.eu and these were subsequently screened.

2.3. Data extraction and analysis

A data extraction form comprised of structured questions was developed in Excel and included: three questions about study characteristics (peer reviewed or grey literature, material reviewed, geographic location); nine questions related to peer roles and program characteristics (peer roles, program organization, program setting, program population focus, peer characteristics, peer training, compensation of peers, supervision, and participation type); two questions linked to outcome measures and report outcomes, and two additional questions focused on program obstacles and facilitators. Two reviewers pilot tested the data extraction tool on ten references, including five peer reviewed and five grey literature documents.

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Following pilot testing, data extraction was conducted for all references. It was agreed that as data extraction progressed, response categories on the data extraction tool would be expanded to reflect findings from the literature. The benefit of this approach was the ability to accurately include information as it was framed in the data set. The primary reviewer also maintained a series of notes during data extraction pertaining to document trends and broader questions related to the data, which helped to inform data analysis.

Once data extraction was completed, the information was transferred to systematic review software DistillerSR in order to support data analysis and reporting. Frequencies and percentages were calculated by one reviewer for each identified response category. The frequencies related to peer roles, obstacles, and facilitators were then reviewed and grouped by themes. For example, when examining program obstacles, the raw data included 61 different responses. These were combined into three broad categories and eight themes during data analysis in order to support clearer communication of the results that captured the most salient information.

3. RESULTS

3.1. Search results

Initial searches of electronic databases and search engines for peer-reviewed and grey literature produced 987 references (see Figure 1). After removing duplicates, 604 references were screened, with 240 full-text documents examined. Documents were most typically excluded because they did not meet the criteria for original research, they lacked a clear methodology, or because they did not specifically include people who inject drugs (current or former use).

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A secondary search of reference lists from 41 reviews and summary reports that were relevant to the study but excluded from our systematic review produced an additional 1,937 references for consideration. After removing duplicates, 1,667 were screened by one reviewer. Hand-searching resulted in the identification of an additional 138 articles which were potentially relevant to the review and for which full-text copies were retrieved. Of the 138 full-text articles assessed for eligibility, 77 documents were included and 61 were excluded with reasons. In total, our search strategy yielded 164 articles that met the inclusion criteria for this review: 66 from the search of academic databases, 21 from the grey literature search, and 77 from hand-searching.

3.2. Description of included studies

Of the 164 documents included, the bulk of the references were from peer-reviewed journals (127), with 37 from grey literature sources. Seventy-four (74) were research studies, 62 program evaluations, 9 community or government reports, 12 technical reports, three book chapters, two abstracts or presentations, and two unpublished dissertations (see Supplemental Table 1). References were published between the years 1987 and 2014.

The majority of documents were based on experiences of peer outreach and peer organizing in the United States (67 references), Canada (27 references), and Europe (western, eastern, and northern regions) (31 references). Additional references represented examples of peer work in Eastern Asia (10), Oceania (9), South-East Asia (7), and Southern Asia (6). See Supplemental Table 1[1] for a full summary of study characteristics.

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3.3. Characteristics of harm reduction programs that include the participation of people who inject drugs

In examining harm reduction programs that include the participation of people who inject drugs, data extraction focused on the following core areas: program characteristics, peer roles, outcomes, and program obstacles and facilitators. In this manuscript, we concentrate first on results related to program organization and setting, peer roles, and participation type. We then summarize those factors that present obstacles and those that support the facilitation of peer participation within harm reduction programs.

3.3.1. Program organization. Programs were most commonly described in the context of research projects (57), harm reduction programs including needle exchange (45), or peer-led initiatives such as drug-user organizations or networks (24) including VANDU: the Vancouver Area Network of Drug Users (Hayashi et al., 2010; Kerr et al., 2001, 2006); Junkiebonds throughout Europe (Efthimiou-Mordaunt, 2005; Mold and Berridge, 2008; Montañes Sánchez and Oomen, 2009); the Australian Injecting and Illicit Drug Users League (AIVL, 2003); and the Sacramento Area Needle Exchange (Anderson et al., 2003). Other peer programs were offered within the context of community health organizations (11), AIDS service organizations (4), Hepatitis C (HCV) clinics (4), supervised injection facilities (1), sex-work organizations (1), and international non-governmental organizations (1). Eighteen (18) references did not provide information about the program organization site.

3.3.2. Program setting. Most frequently, peer programs were offered in community settings (54 references). Where additional details were provided about the environments within which peers worked, these were identified as drug use sites (30), outreach by foot (16), mobile van

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(5), or out of a peer's home (3). Additional locations included services within a non-governmental agency (39), hospital (2), or prison (1). Forty-nine (49) documents did not provide information pertaining to the program setting.

3.3.3. Program population focus. Some peer programs focused on reaching specific populations of people who inject drugs. In the literature reviewed, 113 documents did not identify a specific sub-population focus of their harm reduction programs. In the 51 documents where population focus was described, programs most commonly targeted African American-Caribbean populations (15 references), young people (14), men (11), women (10), people living on lower incomes (8), people living with HIV (PWA) (7), sex workers (5), Indigenous communities (4), lesbian, gay, bisexual, trans, and queer (LGBTQ) communities (2), and Latino populations (1).

3.3.4. Peer roles. Thirty-six (36) different peer roles were identified during data extraction and these were subsequently grouped into five categories: harm reduction education (104 references), direct harm reduction and health services (101), support, counseling, and referrals (64), research assistance (30), and advisory committee participation (28). These roles are summarized in Figure 2 (with details provided in Supplemental Table 2[2]).

3.3.4.1. Harm reduction education. Harm reduction education activities were the most commonly identified roles for peers (105 references). These activities include HIV prevention education (84), harm reduction messaging focused on the prevention of other blood borne viruses and sexually transmitted infections (49), educating the public (11), creation of a magazine for drug users (9), overdose prevention awareness/education (7), demonstrating the

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use of harm reduction materials to peers (6), and organizing social/education and cultural events or workshops (3).

3.3.4.2. Direct harm reduction and health services. Operation of direct harm reduction and health services was the second most common peer-based activity (103) and included 14 different roles. Specific activities identified were distributing condoms/lube (39), distributing needles or syringes (33), picking up used/discarded materials (23), distributing bleach kits (21), distributing crack kits (4), and secondary distribution of syringes (19). Some activities in this category included direct health-focused roles such as administering naloxone (28), assisting with injection (7), HCV screening, counseling and treatment (5), providing support to health care services such as supplementing clinical care at HCV clinics by offering referrals and counselling to newly diagnosed individuals (Rance and Treloar, 2012) or supervising, in tandem with nursing staff, drop-in and injection spaces at supervised injection sites (Kerr et al., 2005) (4), operating a 24-hour hotline (3), providing abscess management (2), and methadone distribution (1).

3.3.4.3. Support, counseling, and referrals. Peer support, counseling, and referrals was the third most common peer role identified (64 references). Support and counseling included activities such as facilitating support groups (23), peer counseling (13), and providing social or economic support to other drug users (9). In other roles, peers facilitated access to health care such as referring people to health services (21), referral to HIV testing and/or counseling services (21), helping to care for people living with HIV (6), accompanying their peers to health care and/or community appointments (4), and encouraging adherence to HIV (4) or HCV (3) treatment.

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3.3.4.4. Providing assistance with research studies. Thirty (30) references described the role of peers in providing research assistance and/or recruitment for studies, with five (5) studies specifically described the role of peers in delivering the Risk Avoidance Partnership (RAP) intervention. Within research projects, peers take on a range of responsibilities including recruiting active drug users through incentive based referral strategies (Broadhead et al., 2012; Grund et al., 1992; Sergeyev et al., 1999; Weeks et al. 2009;), contributing to all aspects of the research protocol from aims and study design to data collection and analysis (Australian Injecting and Illicit Drug Users League, 2003; Barnaby et al., 2010; Hayashi et al., 2012; Kerr et al., 2001;), and/or acting within their capacity as role models to deliver the program or intervention themselves (Craine et al., 2006; Wexler et al., 1994).

3.3.4.5. Advisory committee participation. Twenty-eight (28) references identified the participation of people who inject drugs on agency, national, and/or government advisory committees. Specifically, 19 documents discussed the role of peers providing a political voice to decision makers on issues of health and public policy, 15 mentioned involvement in program or site governance through initiatives such as advisory committees, and nine discussed peers participating on national or governmental committees.

3.3.5. Participation type. In order to provide additional information about peer involvement beyond specific activities, all documents that included sufficient details (158) were categorized using Pretty's (1995) participation typology (see Supplemental Table 1[3]). Pretty's framework identifies seven levels of participation from low engagement (including passive participation

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and participation in information giving), through moderate engagement (including participation by consultation and functional participation), to high engagement (including interactive participation and self-mobilization). Utilizing this classification scheme, peer initiatives among those who inject drugs tend to be concentrated within the moderate to high range of participation with 15 articles identifying involvement in information giving, 107 describing functional forms of engagement, and 33 identifying self-mobilization (see Figure 3). Examples of peer activities that reflect these levels of participation from the documents we reviewed are highlighted below.

Fifteen (15) documents described peer involvement in information giving. In these programs, peers answered questions from researchers or program managers with little to no influence over decision-making. Working as a peer outreach worker within a harm reduction organization or as a peer research assistant, are forms of functional participation within Pretty's model. At this level, control remains in the hands of professionals and peers are recruited to contribute to pre-defined objectives. A large segment of literature in this review described peers in this role, typically as peer outreach workers delivering traditional harm reduction services (107).

People who use drugs can have a greater role in setting and controlling the research agenda when researchers and peers come together to engage in community-based research. This research most closely aligns with what Pretty (1995) calls interactive participation and involves peer workers and professionals working cooperatively to set research agendas, develop programs, and share knowledge. While traditional research programs that do not include peers in the early stages of decision making remain the norm, four (4) documents

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described programs that engaged peers in research formulation, development, and execution, thus upholding a commitment to collaboration and cooperation.

Drug user organizing exemplifies the highest level of participation - self-mobilization - and this formed the basis of analysis in 33 documents. As peers take on roles as both staff and members of the organization, they typically gain greater control over the program's objectives and activities. Drug-user networks seek to empower people with lived experience and typically limit involvement of non-drug-using health-care or social work professionals. Having summarized the types of peer roles in harm reduction initiatives, we now turn to the obstacles and facilitators of peer involvement identified in this review.

3.4. Factors that create obstacles to peer involvement

In examining factors that hinder the effectiveness of peer programs, obstacles were identified at systemic, organizational, and individual levels (see Figure 4).

3.4.1. Systemic obstacles. Systemic factors were most cited as obstacles in a total of 69 documents and were grouped into three main categories: continued criminalization of drug use (and people who use drugs) (44); policies that favor enforcement rather than harm reduction (39), and stigmatization of drug use and people who use drugs (32). Continued criminalization of drug use and people who use drugs included factors such as harassment by police officers and/or fear of arrest (27), illegality of drugs or drug equipment and/or exposure to arrest or prosecution (21), and by-standers failing to call for ambulances due to fear of police (14). Factors related to policies which favor enforcement include the dominance of enforcement-based policies at national levels (25), and political climates that create precarious funding situations promoting a lack of financial stability for organizations that support or promote harm

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reduction approaches (24). The impact of the stigmatization of drug use and people who use drugs were reflected in a lack of public support for programs (25) and negative reactions to peer workers from other drug users (8).

3.4.2. Organizational obstacles. Organizational obstacles focus attention at the program level. Reported in 44 documents, four main obstacles were identified: exclusionary attitudes, policies, and programs at the organizational level (20), insufficient preparation, training, and support to peers in their work (16), decision-making removed from the lived experiences of drug users and their respective social networks (13), and failure to address social determinants of health (9). As detailed in Supplemental Table 3, exclusionary attitudes, policies, and programs at the organizational level included: exclusionary practices and policies within organizations (7), peers only being offered "token" and/or underpaid jobs (7), stakeholders having concerns about hiring non-abstinent peer workers (5), attitudes against harm reduction programs by management (5), tensions between peer workers and program staff (5), and perceptions that drug users lack the organization, social, or material capacity to self-organize (5).

Insufficient training and support to peers in their work included factors such as: insufficient preparation, training, supervision, and support for peers (8), confidentiality issues (6), and low retention among peer educators (5). Decision-making removed from the lived experiences of drug users and respective social networks included challenges addressing the heterogeneity of "community" where workers lacked credibility among some drug users (8), and a lack of focus on vulnerable sub-communities despite identified needs (5). Finally, failing to address social determinants of health was reflected in a focus on individual-level responsibility without considering contextual factors (5), lack of focus during outreach on

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housing, jobs, life skills, and/or health care (5), and a lack of connection between emergency care and professional medical treatment (5).

3.4.3. Individual obstacles. Individual factors were also identified as obstacles to peer work. Lack of availability of peer educators due to arrest (13), dependent drug use (8), competing financial interests (7), and a fear of relapse (4) were reported in 20 documents.

3.5. Factors that facilitate peer involvement

Research and evaluation also identified factors at the systemic, organizational, and individual levels that can facilitate the involvement of people who use injection drugs in harm reduction programming (see Figure 4).

3.5.1. Systemic facilitators. A total of four systemic facilitators were identified in 28 documents. A positive relationship between the institution and the broader community (23), political support (13), police support (8), and recognition as a valuable organization by a local health authority (6) were all identified as factors that facilitate peer programming.

3.5.2. Organizational facilitators. Within agencies, successful peer programs report five broad types of organizational facilitators: involving people who currently use drugs in front-line, management, and governance roles (62); creating flexible, accessible, and culturally relevant programming (54); recognizing strengths of peer influence and social networks (52); providing training and support to peers in their work (45); and developing organizational cultures that support peer participation (31) (see Supplemental Table 4 for details[4]).

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The meaningful involvement of people who inject drugs (Jürgens, 2008) often requires shifts in organizational programs and cultures. Flexible, accessible, and culturally relevant programming: recognizes that structural interventions are necessary to address economic oppression/drug treatment (13); draws on real life experiences of peers to stimulate discussions (12); focuses on developing programs that are adaptive to a range of drug users (12); allows for accessible hours of site operation and flexible syringe distribution policies (11), and supports the establishment of multidisciplinary case-management teams (6).

Beyond programming, organizations and research initiatives that more effectively facilitate peer involvement monitor their peer program activities and conduct evaluations (10). The literature reviewed suggests that agency staff and researchers also may need to alter their thinking about peers by: building relationships on mutual respect (14), suspending judgment and accepting peer workers as they are (9), and considering peer workers as colleagues rather than clients (6). Additional modifications included: re-orienting services and/or schedules to meet specific experiences of peers (7), and enhancing consideration of confidentiality and privacy (5).

Training peers was an important activity identified in this review. Evidence suggests that peers in volunteer roles should be offered training consistent with practices for other paid staff (5) and that such training should include sessions on ethics, coaching skills, relationship building (6), public speaking and fund development (6), and peer education (6). In working with peers specifically, the following factors were most commonly identified: support of peer workers by staff in debrief sessions (13), development of agreement on responsibilities and responses to

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circumstances that violate expectations (10), creation of time for peers and peer work (7), and establishment of activities that strengthen the motivation of volunteers (7).

More broadly, successful harm reduction programs that engage peers recognize the strengths of peer influence and social networks (17) by training influential network members to be health promoters (19) and recognizing that the leadership of peers in promoting health fosters behavior change (17). This thinking is also reflected in services for specific populations including creating specific spaces and/or places for youth involvement (6); hiring female peer outreach workers to specifically target vulnerable populations, and offering women-friendly outreach kits and referrals to female-specific services (6).

3.5.3. Individual facilitators. Two facilitators were identified at the individual level: a transformation of norms of acceptable risk (23), and influential peers who leverage social networks to alter community norms (23), including the need for individual peers to model safer behaviors (9).

4. DISCUSSION

With aims to provide key stakeholders, including community organizations offering harm reduction programs, tools to aid in their own peer engagement efforts, a number of lessons can be drawn from this systematic review. In this section, we first discuss how these findings contribute to our understanding of peer roles in harm reduction initiatives and subsequently identify ten strategies for improving peer involvement based on the evidence included in this synthesis.

4.1. Enhancing understandings of peer worker involvement

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To the best of our knowledge, the current review is the first to systematically explore peer roles among people who inject drugs making it an important contribution. In this review, 36 different peer roles for people who inject drugs were identified. We grouped these into five categories based on the types of activities involved: harm reduction education; direct harm reduction and health services; support, counseling, and referrals; research assistance and; advisory committee participation. While these categories provide solid descriptive information about the types of roles that peer workers undertake, they do not address more complex information about the ways people with lived experience may be involved in decision-making or the organizational structures of harm reduction programs.

In an effort to capture such information, we also extracted information about level of participation from the program descriptions provided in each document. As noted in Figure 3, functional participation was the most commonly described form of engagement within both the grey and peer-reviewed literature. There are several challenges with these types of categorization systems such as who decides on the level of participation, and whether "inactive" or "functional" participation is more related to the activity, the individual peer worker, and/or the way that the program may be organized.

The goal of incorporating this participation typology was to begin to explore the different types of participation involved and to highlight the need for more nuanced and coherent frameworks for analyzing peer worker involvement. Other harm reduction authors have proposed alternate classification approaches to understanding peer roles. For example, Penn et al. (2011) presented peer roles in their program using a two-dimensional continuum of peer work ranging from formal to informal on one axis, and peer participation to employment

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development on the other. Considering peer roles from two or more dimensions can help to differentiate between the types of activities and programs within which peers are involved.

Charlois (2009) makes the added distinction between involvement and empowerment in considering the roles of people who use drugs in harm reduction programs. While drug user organizations are mainly associated with the empowerment of people who use drugs, Charlois (2009) maintains that community-based organizations also may be spaces for drug user empowerment. In reflecting on the peer roles identified in this review and including concepts of involvement and empowerment, and formality and informality, we mapped a number of core roles from this synthesis onto a diagram inspired by Penn et al. (2011; Figure 5). Thinking about peer roles from multiple perspectives and dimensions may help to differentiate between forms of participation. As a field, developing consensus about how to describe and categorize peer roles in harm reduction could help to move the literature beyond program description and would enhance the contribution this work makes to larger fields of participation and mobilization for social change.

4.2. Strategies to improve peer involvement in harm reduction initiatives

Evidence from this review has provided a great deal of information about obstacles and facilitators to peer involvement in harm reduction initiatives. Obstacles at the systemic level were identified most often in a total of 69 documents. In contrast, facilitators at the organizational level tended to be more frequently discussed in a total of 108 references (see supplemental Tables 3 and 4[5]).

[5] Supplementary material can be found by accessing the online version of this paper at http://dx.doi.org and by entering doi:...

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It is perhaps not surprising that systemic obstacles are more frequently identified, as external factors such as criminalization, stigmatization, and abstinence-based policy environments impact many aspects of harm reduction work and may be more difficult for researchers and people leading harm reduction programs to address. While it may be more difficult to tackle systemic obstacles, it is encouraging to see the number of documents that discuss facilitators that contribute to increased peer involvement at the organizational level. Taking the full list of facilitators and obstacles into account (Figure 4), the following approaches to improving peer involvement in harm reduction initiatives have been identified:

1. Develop strategies to address the criminalization of drug use (and drug users).
2. Initiate anti-stigma campaigns related to drug use.
3. Create opportunities to bring together policy makers, researchers, and practitioners in dialogue about harm reduction.
4. Dedicate time and organizational resources to developing a positive rapport with community influencers including government officials, community leaders, gatekeepers, and the general public.
5. Foster organizational cultures that support the leadership and meaningful participation of people who inject drugs in harm reduction initiatives.
6. Create adaptive harm reduction programs grounded in the lived experience of people who use drugs that recognize the importance of peer influence and networks.
7. Provide appropriate training and supervision to peer workers.
8. Address barriers to the participation of people who use drugs by putting in place supports that acknowledge broader social determinants of health.

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9. Develop consensus frameworks for describing and categorizing peer participation in harm reduction initiatives.
10. Implement and evaluate interventions to address individual, organizational, and systemic barriers to the involvement of people who inject drugs in harm reduction initiatives.

4.3. Limitations

This systematic review was initiated as part of a larger project, which brought together researchers, peer workers, and practitioners from needle distribution initiatives to identify opportunities for community-based research in Atlantic Canada. Because our community partners were focused on harm reduction initiatives such as needle distribution and natural helper networks, the literature search was limited to the role of peers who inject drugs in harm reduction work. A broader search of peer roles in harm reduction programs would have produced a larger number of references, additional information on differences between and across harm reduction initiatives, and is recommended for future work in this area.

A second limitation relates to time and resources. Due to the number of references identified in our initial search, and the time it took us to complete hand-searching, screening, and data extraction, it was not feasible for us to conduct additional web-based searches. In relation to grey literature, we had initially hoped to search the websites of drug user organizations, both in North America and internationally. Although time constraints did not permit this search, this option is recommended for future reviews in this area.

The third limitation relates to the challenge of relying on published literature as the only source of data in this review. Because drug use is both criminalized and stigmatized, it is likely that some current and former drug users are involved in a variety of other roles in formal

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and/or informal harm reduction initiatives, however they may not be open to discussing this with researchers or people conducting program evaluation due to potential repercussions. This means that this review captures only the information peers and other harm reduction workers were willing to share as part of the development of this body of evidence.

4.4 Conclusion

In the process of conducting this review, we were fortunate to be able to draw on a great deal of peer-reviewed and grey literature that met our inclusion criteria. Researchers, community members and organizers, and practitioners in harm reduction initiatives seem to be aware of the importance of documenting ways of working, as well as program facilitators, challenges, and lessons learned. Harm reduction initiatives have come under increased scrutiny, pressure, and attack (Smith, 2012). One of the responses has been to conduct rigorous studies documenting the impacts of harm reduction work. Research linked to North America's first legal supervised injection site (Insite) is one example of this strategy, where evidence published in some of the top medical journals (e.g., Wood et al. 2006) formed part of the legal justification for Insite's ongoing operations.

One benefit of harm reduction research is its contribution to developing and sustaining evidence-informed programs. In a climate where it is important to attend to personal values and critiques of science (Christie et al., 2008), these studies also provide valuable information for funders and decision-makers interested in learning more about how best to engage and support people who use drugs. Perhaps more importantly, research and evaluation can be used by community and drug user organizations to learn from each other. Systematic reviews such as this one provide a full picture of peer involvement in harm reduction initiatives, moving away

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from having to rely on the findings from isolated studies. By combining information from multiple sources in one place, this review is a valuable resource for decision-makers and people working in harm reduction initiatives.

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FIGURE LEGEND

Figure 1: PRISMA Flow Diagram for Peer-Reviewed and Grey Literature Searches

Figure 2: Categories of Peer Roles in Harm Reduction Initiatives

Figure 3: Forms of Participation Identified in each Harm Reduction Program or Research Project

Bar graph displaying participation type using Pretty et al.'s (1995) typology of participation

Figure 4: Obstacles and Facilitators to Peer Roles in Harm Reduction Initiatives

Figure 5: Considering Peer Roles from Multiple Dimensions

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Contributors

Margaret Dechman, Zack Marshall, and Greg Harris were involved in all stages of the project including design, screening, review, and analysis. Alexa Minichiello conducted screening and data extraction and was a full member of the data analysis team. Lindsay Alcock designed the grey literature search strategy and coordinated the team of librarians who conducted the initial screening of grey literature references. All authors contributed to and have approved the final manuscript.

Conflict of Interest

No conflict declared.

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Highlights

- People who inject drugs are actively involved in the development and delivery of harm reduction programs
- Multiple peer roles, approaches to service delivery, obstacles, and facilitators are documented in the literature
- Current evidence provides good descriptive content but the field lacks agreed-upon approaches to documenting the ways peer workers contribute to harm reduction initiatives
- Implications and ten strategies to better support peer involvement in harm reduction programs are identified

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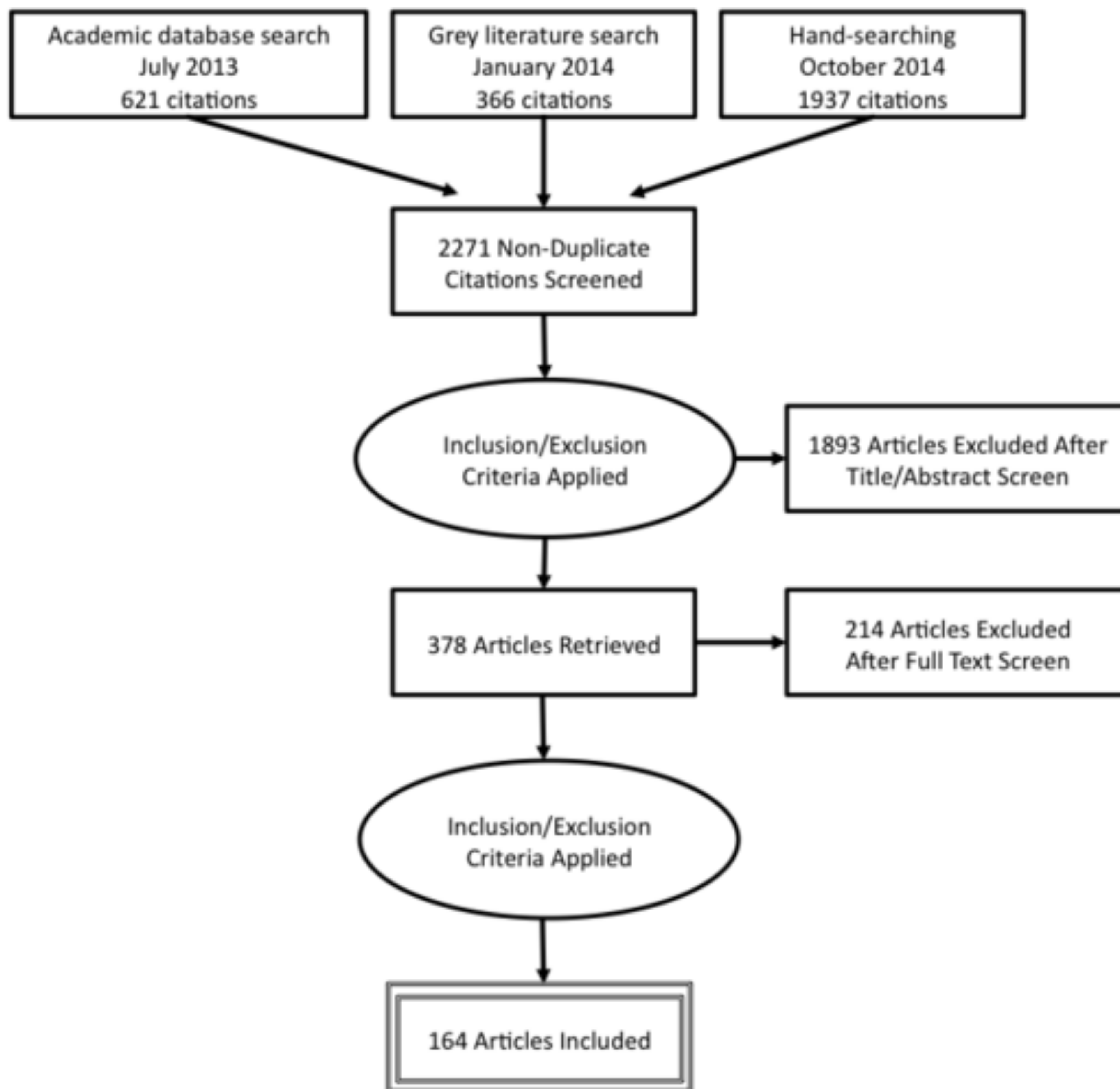
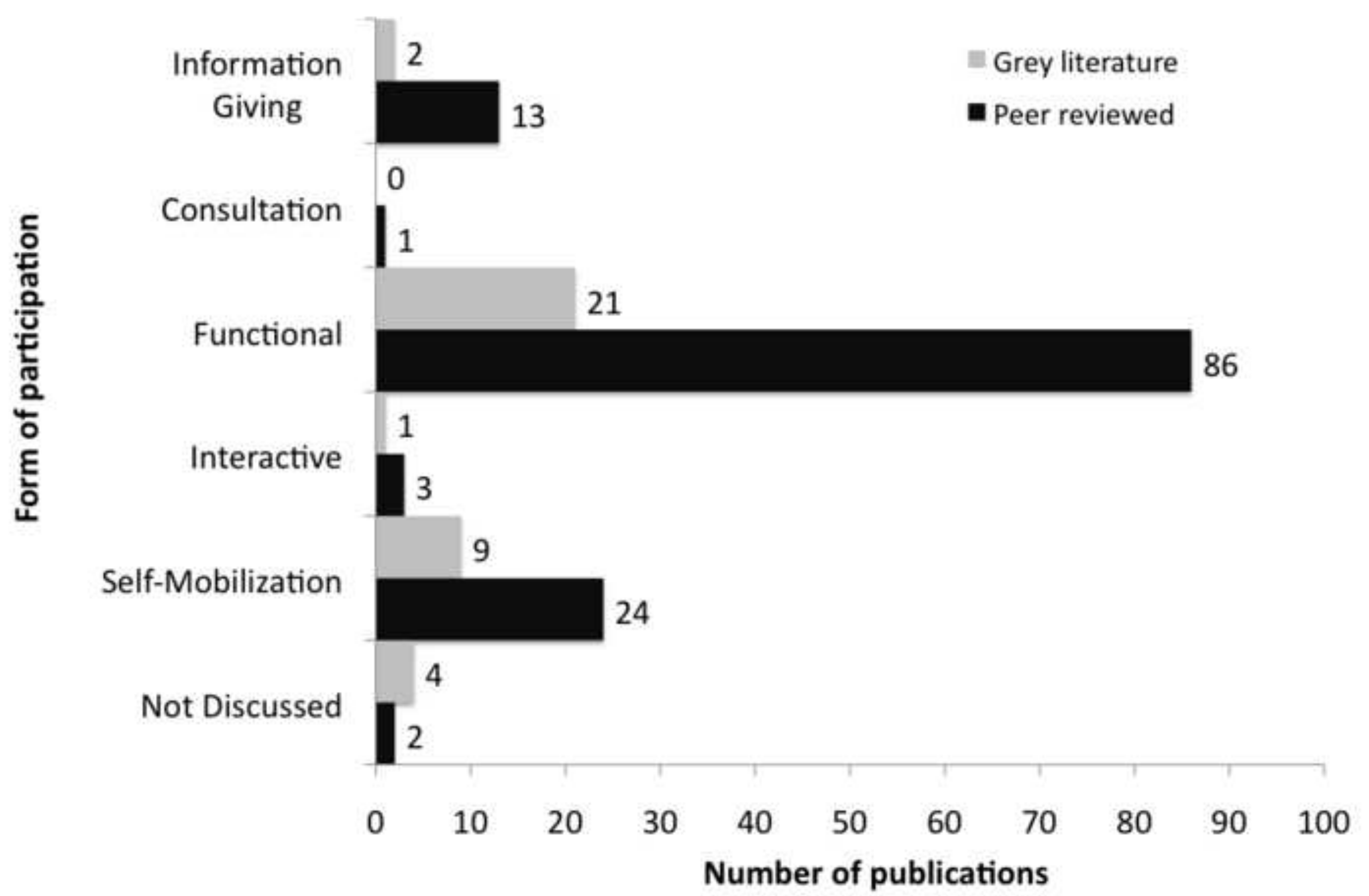
Figure



Figure

105 references	103 references	64 references	30	28
Harm Reduction Education	**Direct Harm Reduction and Health Services**	**Peer Support, Counseling, and Referrals**	**Research Assistance**	**Advisory Committees**
TYPES OF PEER ROLES • HIV prevention education • Harm reduction messaging • Educating the public • Creation of a magazine for drug users • Demonstrating use of harm reduction materials • Overdose prevention awareness/education • Organizing social/ educational and cultural events	TYPES OF PEER ROLES • Distributing condoms/ lube • Distributing needles/ syringes • Picking up used/ discarded materials • Distributing bleach kits or crack kits • Administering naloxone • Secondary distribution • Assisting with injection • HCV screening, counseling & treatment • Providing support to healthcare services • Operating 24-hour hotline	TYPES OF PEER ROLES • Facilitating support groups • Referring people to health services • Referral to HIV testing/ counseling services • Peer counseling • Providing social or economic support • Helping to care for people living with HIV • Accompanying peers to healthcare/community appointments • Encouraging adherence to HIV and/or HCV treatments	TYPES OF PEER ROLES • Providing research assistance and/or recruitment for studies • Delivering Risk Avoidance Partnership (RAP) intervention	TYPES OF PEER ROLES • Political voice with decision makers on issues of health and public policy • Involvement in program or site governance through initiatives such as advisory committees • Participating on national/governmental committees

Figure



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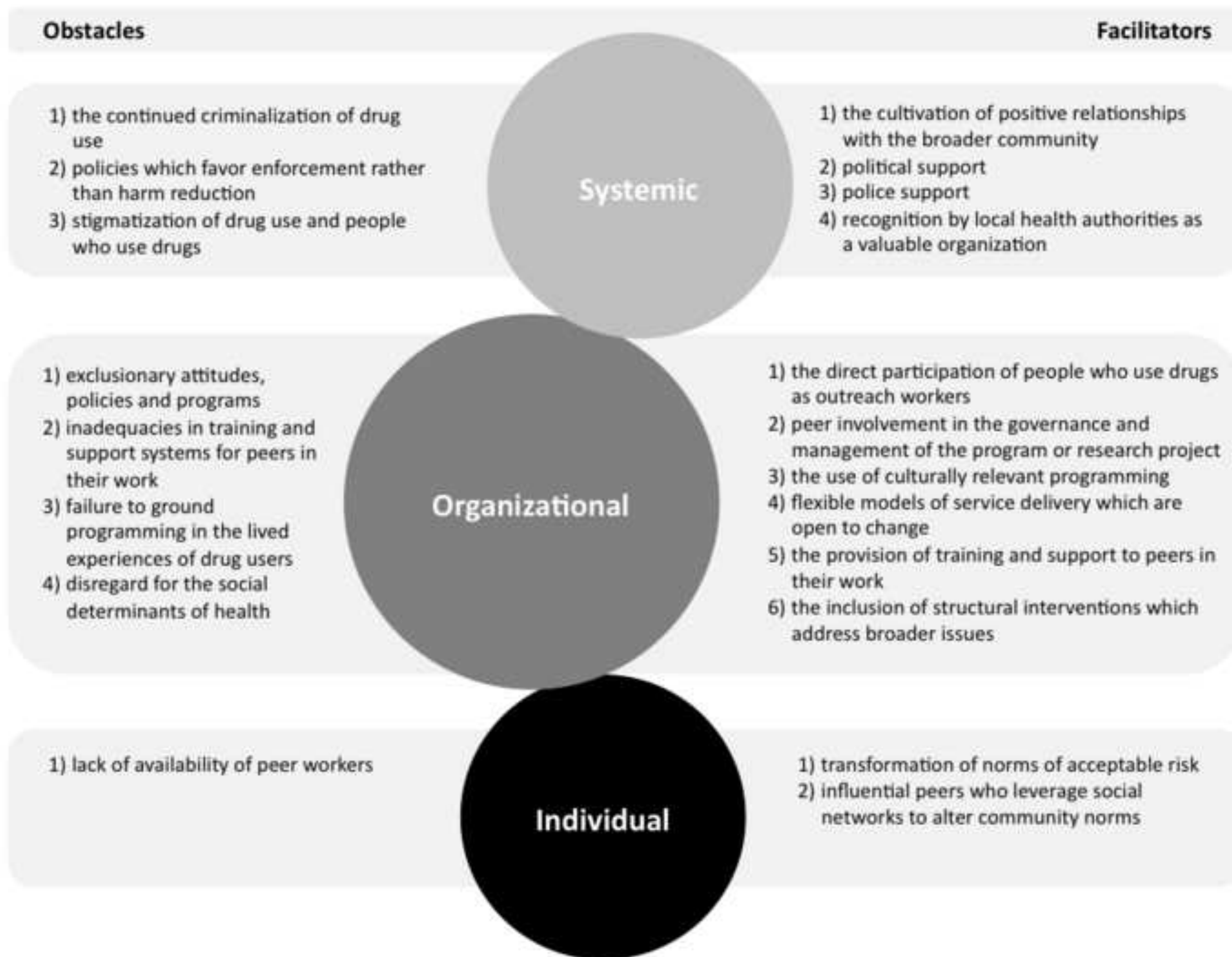

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