Which psychosocial interventions improve sex worker wellbeing? A systematic review of evidence from resource rich countries.

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ABSTRACT

Objective: To establish the state of the evidence base around psychosocial interventions that support wellbeing in sex workers in order to inform policy and practice within a resource rich geographical context.

Method: Published and unpublished studies were identified through electronic databases (PsychINFO, CINHAL PLUS, MEDLINE, EMBASE, The Cochrane Library and Open Grey), hand searching and contacting relevant organisations and experts in the field. Studies were included if they were conducted in high income settings with sex workers or people engaging in exchange or transactional sex; evaluated the effect of a psychosocial intervention with validated psychological or wellbeing measures or through qualitative evaluation.

Results: 19,202 studies were identified of which 10 studies met the eligibility criteria. The heterogeneity found dictated a narrative synthesis across studies. Overall, there was very little evidence of good quality to make clear evidence-based recommendations. Despite methodological limitations, evidence as it stands suggests that peer health initiatives improve wellbeing in female street-based sex workers. Use of Ecological Momentary Assessment (EMA), a diary-based method of collecting real life behavioural data through the use of twice-daily questionnaires via a smart phone, increased self-esteem and behaviour change intentions.

Conclusion: Work with sex workers should be based on an evidence-based approach, limitations to the existing evidence and the constraints of this work with vulnerable groups is recognised and discussed.

KEY WORDS: sex worker, transactional sex, wellbeing, psychosocial intervention, systematic review

Key messages:

- There is a gap in the evidence around the effectiveness of psychosocial interventions aiming to improve sex worker wellbeing.
- Weak evidence exists to support the benefits of Ecological Momentary Assessment (EMA) in reducing anxiety and depression and improving opportunities for behaviour change.
- Research on sex working communities focuses on female street-based sex workers and underrepresents the experiences of male sex workers.
- Participatory methodologies are recommended to ensure that future research is grounded in the actual rather than perceived needs of sex working communities.

INTRODUCTION:

Work on the wellbeing of sex workers[1] has traditionally either focused on the ways in which legal and human rights issues affect sex worker vulnerability[2], or on access to sexual health screening opportunities, in attempts to reduce the acquisition and transmission of Sexually Transmitted Infections (STI's)[3]**.**

These criminal justice or public health approaches present a limited narrative of sex work as something that is criminal or virologically dangerous. Further compounded by a focus from sexual health services on biomedical interventions such as; condom use[4], HIV Pre and Post-Exposure Prophylaxis (PrEP/ PEP)[5] and Hepatitis B vaccinations[6] to support the perceived health needs of sex workers.

The stigma[7], labour and complex routes within sex work places unique demands on the coping resources of sex workers[8] highlighting additional wellbeing needs. Previous studies based on street-based female sex workers evidences some of these psychosocial issues, which include; substance misuse, mental health problems, violence, and homelessness[9].

This systematic review aims to gather and marshal evidence on the range and effectiveness of psychosocial interventions aimed at improving the wellbeing of sex workers within resource rich countries with the aim of producing recommendations to inform policy and practice within the UK.

METHODS

Search strategy

PsychINFO, CINHAL PLUS, MEDLINE, EMBASE, Open Grey and The Cochrane Library databases were searched throughout January 2020 for peer-reviewed articles published in English between January 2000-January 2020. Truncated keywords and relevant medical subject headings (MeSH) related to the study's PICO; 'sex workers' (Population), 'psychosocial interventions'(Intervention), 'wellbeing' (Outcome) were used and linked using Boolean Operators [Appendix 1]. The reference list of included articles were also searched in addition to contacting experts in the field and sex worker organisations to further identify any additional eligible articles[10].

Study selection process

The titles of all articles identified from the search were screened by one reviewer (KT). Two reviewers screened the abstracts of the remaining articles (KT & DM). Articles were included if they; evaluated a psychosocial intervention using either validated wellbeing measures or qualitative methodologies, included sex workers or people engaging in exchange or transactional sex[11] and were conducted in high resource countries [Appendix 2]. Discrepancies were resolved through further discussion with a third reviewer (LS). A protocol for this review was peer reviewed and is registered with the International Prospective Register of Systematic Reviews (PROSPERO) CRD42020204592.

Data Extraction

Extracted data inclusive of sample characteristics, intervention type, study methods, outcome measures and findings were extracted by two reviewers (KT & DM) using a standardised form developed by the review team [Appendix 3].

Quality Assessment

A quality assessment was carried out by two reviewers (KT &DM) using the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool for Quantitative data[12] [Appendix 4] and the National Institute for Health and Care Excellence (NICE) Quality Appraisal Checklist[13] for qualitative data [Appendix 5]. A third reviewer (LS) reviewed any discrepancies.

Analysis

The heterogeneity of the interventions aims, study design, outcome measures and sample populations precluded a meta-analysis of their results. A narrative synthesis across qualitative and quantitative data is presented by intervention type. Scientific quality is used to frame the validity of study effect findings, common methodological flaws, risk of bias and how well studies were conceptualised.

RESULTS

19,202 articles were identified from the literature search [Figure 1]. 70 included studies on psychosocial interventions aimed at improving sex worker wellbeing. 10 articles were selected after full text review. Reasons for exclusion are documented using a PRISMA flow chart[14] [Figure 1]. An overview of study characteristics and interventions for qualitative, quantitative and mixed method studies are presented [Table 1].

Study Characteristics

Studies from all resource rich countries were eligible for inclusion but only studies from America (n=6)[17, 23,15,21,22], followed by Canada (n=2)[18,19] and the UK (n=2)[1,16] were identified. 5 studies exclusively focused on street-based sex workers[1,17,19,23,16]. 3 studies included sex workers from a variety of contexts including exotic dancing, erotic massage and escorting[18,21,22], whilst 2 studies investigated participants engaging in transactional sex[20,15].

Intervention characteristics:

Interventions included Ecologic Momentary Assessment (EMA) (n=2)[20,15], drug treatment services (n=2) [1,16], exiting and diversion programmes (n=2)[21,22], trauma-informed interventions (n=2)[19,23], peer health initiatives (n=1)[18]and Case Management Programmes (CMP's) (n=1)[17].

Evaluation design:

Wellbeing outcomes were measured in quantitative studies by assessing quality of life (QoL), anxiety, depression and Post Traumatic Stress Disorder (PTSD) using validated measures. One study used the Christo Inventory[16], a QoL measure validated for the use in alcohol rehabilitation settings. Two studies measured depression using either the Patient Health Questionnaire (PHQ-9)[15] or CESD Depression Scale[23]. Anxiety was measured in one study using the B-AI[15]. One study measured PTSD symptom severity using the PTSD checklist[23]. All quantitative studies used pre-and post-intervention measures[23,15,16]. The timeframe between measures ranged between 4 weeks[20,15] and 1 year[16].

Semi-structured interviews, observations, journal entries and field notes were used across qualitative studies[1,17, 18,19,23,20,21,22] to evaluate the effectiveness of psychosocial interventions.

Table 1: Summary of study characteristics, data extraction table and quality appraisal outcomes

Quantitative data								
Study & aim	**Geographical location, sample size, characteristics & recruitment method**	**Intervention**	**Study Design**	**Outcomes measures**	**Data collection**	**Data analysis**	**Findings**	**Quality score**
Gunn, et al. (2016)[15] To describe the psychological benefits associated with participation in a daily diary and interview study.	USA n=24. Female. Median age 42.5. Ethnicity: Black (75%), non-Latina (87%). 58% engaged in transactional sex at least one a week 90 days prior to enrolment.25% consumed 4 or more alcoholic drinks per day, 25% used marijuana daily, 42% used cocaine weekly. All participants had been arrested at least once.58% experienced CSA before the age of 13. 42% initiated sex work as minors. 37% reported receiving little social support from family or friends at baseline. Baseline	Ecologic Momentary Assessment (EMA) Twice daily cell phone diaries capturing information on alcohol craving and use; partnered sexual behaviour and condom use, partner characteristics and locations of sexual events.	Quasi-experimental, single group pre-test post-test	Self-esteem: Rosenberg Self-Esteem scale (RSE) Depression: Patient Health Questionnaire (PHQ-9) Anxiety: (BSI-A) Taken at baseline and follow up (4 weeks later)	(1)12 hourly digital diary entries via a smartphone provided by the study. Assessing mood, alcohol/drug craving and use. Partnered sexual behaviours- including condom use, partner characteristics and locations of sexual events. (2) weekly face-to- face interviews with study	Paired t-tests to compare self-esteem, anxiety and depression at baseline and exit	Self-esteem improved significantly increasing 4.08 points from baseline to exit ($p<.001$). Mean scores for depression and anxiety decreased from baseline to exit but were overall not statistically significant. Effect modification was observed for self-esteem, depression and anxiety.	**WEAK** (EPHPP)

	mean self-esteem score 27/40, depression 9/27. 33% reported high anxiety Targeted outreach, venue-based recruitment and incentivised peer referral				personnel focusing on context of sexual lives supported by diary entries.			
Litchfield, et al. (2010)[16] Outcomes of a primary care drugs treatment intervention for sex workers who use heroin, using Prescribed Maintenance Treatment (PMT) and psychosocial support	UK n=34. Female. Street-based sex workers with a physiological addiction to heroin. Incoming referrals, clinical attendance to evaluated service provision	Prescribed maintenance treatment (PMT) for heroin use in conjunction with undefined intensive health and psychosocial support	Quasi-experimental, single group pre-test post-test	Christo inventory (QoL). Urine samples for opiate screening at the point of entry and at one year. Self-reported involvement in sex work	Urine samples, Christo inventory	Paired t-tests comparing pre and post-test Christo scores.	Reduction in mean Christo score from 12.05 at entry to 8.97 at 1 year (p<.001). 67% reduction in sex work involvement. 87% of urine samples tested positive to heroin at baseline compared to 72% at follow up	**WEAK** (EPHPP)
Qualitative data								
Study & aim	**Geographical location, sample size, characteristics & recruitment method**	**Intervention**	**Study design**	**Outcome measures**	**Data collection**	**Data analysis**	**Findings**	**Quality score**

Arnold, et al. (2000) [17] To explore the psychosocial treatment needs of female street-walking prostitutes by drawing upon a recent program evaluation of a Case Management Program (CMP) that targets female prostitutes who have involvement in the criminal justice system.	USA n=23. Programme staff (n=4), Community professionals (n=9), street walking female sex workers (n=10). Sex worker average age =32 years (range: 23- 38 years). Ethnicity: African American (n=2), White (n=8). Drug/alcohol use: crack cocaine users (n=8), alcohol (n=2), and heroin (n=1). Referred whilst in jail (n=9). 8 diagnosed with mental health disorder: bipolar disorder (n=3), depression (n=3), ADHD (n=1), Anxiety (n=1). Average (mean) time in the program at the point of interview 5.9 months.	Case Management Programmes. In case management programmes a named case manager acts as a fixed point of contact for a patient during the co-ordination of their care including referrals to relevant support agencies.	Phenomenological	.	Observation of a support group for program participants and face to face (n=7) or telephone (n=2) interviews with clients, staff and community professionals.	Not reported	(1) Substance misuse treatment programs should be specific to prostitution. (2) Challenges experienced by staff helping clients to achieve stability with mental health. (3) Child custody expressed as a realistic short-term goal by sex workers and were anxious to access relevant support. (4) access to child custody support was felt to be outside of the scope of CMP by support staff – who promoted the need for respect and support in client's rights to self - determine. (5) women do not view themselves as victims.	**(-)** (NICE)

Benoit, et al. (2017)[18] Evaluation of a pilot study facilitating peer-based community leadership by designing and evaluating a small Sexually Transmitted and Blood Borne Infection (STBBI) prevention strategy led by sex workers as peer educators.	Canada n=5. Sex workers (independent indoor/webcam/escort agency/independent outdoor), varied in age, gender, sexual orientation, indigenous background, socioeconomic status and sex work history- no details provided Advertisement Cash Honorarium $40 for weekly interventions and $40 for participating in debriefing sessions	An 8 week Sexually Transmitted and Blood Borne Infection (STBBI) Peer health education program. Developed in consultation with sex workers delivering sessions on empowerment, health & safety, harm reduction, diversity awareness and overdose prevention.	Phenomenological	.	(1) Qualitative semi-structured interviews with participants prior to the training, after the training and at the end of an 8-week intervention phase. (2) Journals kept by the participants and project co-ordinator after each training and debrief session	Thematic Analysis NVivo	(1) Reduced internalised stigma and increased self esteem in participants. (2) Heightened critical consciousness relating to diversity within the sex industry. (3) Improved knowledge of local services. (4) Increased confidence in challenging stigma from front line services.	**(++)** (NICE)
Bodkin, et al. (2015)[19] To highlight the effectiveness of a collaboration between a	Canada n=14. Street level female sex workers. Age range: 23-49 years. Time in sex work: 2 months-34 years. Ethnicity: Caucasian (n=11),	Persons at Risk Program (PAR). Outreach program provided by a female police officer and general	Phenomenological	.	(1) 15-60 minute 1-2-1 semi-structured interviews with female sex workers enrolled in the PAR	Qualitative Descriptive Analytical Approach	(1) PAR programme highlighted as essential in improved assess and continued engagement with health care / law enforcement	**(-)** (NICE)

health care physician and police officer in accessing street level sex worker populations in London, Ontario, Canada.	Native (n=3). Sex Work Status: active (n=5), semi-retired (n=1), exited (n=8) Snowball sampling Travel reimbursement, coffee shop voucher	practitioner to improve access to law enforcement and health care services.			programme (n=14). (2) Semi-Structured interviews with health & law enforcement professionals		services. (2) treatment needs for mental health and addiction prioritised. (3) location and flexible opening hours in addition to female gender of service workers favoured.	
Felsher, et al. (2018) [20] How participation in Ecologic Momentary Assessment (EMA) – a self-report diary intervention improved the mental health of women engaging in transactional sex	USA n=25. Female. Median age:42.5 years. Ethnicity: 75% Black. 58% engaged in transactional sex at least once per week. 25% consumed 4/+ alcoholic drinks per day, 25% used marijuana daily, 42% used cocaine weekly. 42% initiated sex work before the age of 18. 37% reported receiving little social support from friends or family. Targeted outreach, venue-based	Ecologic Momentary Assessment 1) 12 hourly digital diary entries via a smartphone provided by the study assessed; mood, alcohol/drug craving and use. Partnered sexual behaviours- including condom use, partner characteristics and locations	Phenomenological	.	Interviews were conducted in a private room at community-based organisations.	Thematic analysis	Participants reported that EMA through twice daily electronic diaries increased self-reflection, which heightened self-awareness. For some, self-awareness led to intention to change behaviour and, for others, increased self-awareness led to actual behaviour change including engagement in more health-promoting behaviours.	**(+)** (NICE)

	recruitment, incentivised peer referral	of sexual events, over a period of 4 weeks (2) weekly face-to-face interviews with study personnel focusing on context of sexual lives supported by diary entries.						
Jeal, et al. (2017)[1] To explore street sex workers views and experiences of drug treatment.	UK n=24. Female street-based sex workers. Age: 26-54 years. 24 disclosed experience of street-based sex workers and dependency on crack/heroin in the previous 5 years, 14 had injected drugs at most recent use, 9 reported illicit daily drug use Flyers displayed in venues of sex worker support organisations	Drug treatment groups	Phenomenological	.	20-90-minute In-depth interviews undertaken at the site of recruitment, university setting or in the participants own home. Topic guide used for consistency	Framework analysis	(1) Inability to discuss sex work within drug treatment groups undermined engagement in treatment processes. (2) Disclosure of sex work often resulted in stigma or unwanted attention (3) recommendations made for 1-2-1 therapy with female therapists and sex worker only treatment groups.	**(+)** (NICE)

	£20 shopping voucher							
Preble, et al. (2016)[21] Describe the experiences of female sex workers receiving services to support sustained exit from the sex industry	USA n= 13. Female. prostitution (n=5), exotic dancer (n=5), exotic dancing/prostitution (n=2), prostitution/erotic massage (n=1). Industry years ranged between 3.5-20+ years.9 reported a history of substance misuse. Participant divided into 3 groups depending upon length and level of participation within the program: Beginners 3 months-12 months (n=7), Middle participants had been with the agency for more than 1 year but had not graduated (n=16) and graduates who had complete all requirements of the agency's programming (n=7). Four participants from each	Faith based 'Fresh Start Program' providing legal and medical assistance referrals, employment services, counselling, educational opportunities, financial literacy, life skills training and computer literacy.	Phenomenological	.	1.5-hour semi-structured, face-to-face interviews. Conducted in private rooms chosen by participants located within the church Focus groups to sense check initial data analysis.	Thematic analysis	Financial assistance for basic needs was powerful for beginners. Opportunities for peer support promoted community cohesion and re-investiture. Support with budgeting was experienced as patriarchal and disempowering. More support could be offered around housing assistance. Case Management Programs (CMP's) were beneficial; however, these were criticised for being grounded in assumption rather than the actual needs of service users.	**(++)** (NICE)

	group were randomly selected to make up the final sample. Participants selected by program staff Pre-requisite for participants to leave sex work prior to being enrolled on the program							
Wahab (2006)[22] Evaluate the usefulness of a Prostitution Diversion Project (PDP)	USA n=31. Female. Current or ex sex workers n=12 & non-sex workers-service providers n=19. Age range: 22-43 years. Age when starting sex work 15-22 years. Industry years range: 1 month - 27 years. Ethnicity: Hispanic (n=3), African American (n=1), White/Caucasian (n=7), Bi-racial (n=1). Education: High school-college diploma.	PDP was designed and operationalised as a three-phase program lasting for 40 weeks. Each phase required attendance to weekly group sessions of facilitated Harm Reduction workshops, individual counselling and engagement with outside treatment providers	Phenomenological	.	1-2-hour semi-structured qualitative interviews, extended on-site observations, field notes and copies of written program materials	Open coding	Sex workers: felt supported by counsellors and felt they were able to teach PDP stakeholders about sex work, reported engaging in harm reduction behaviours and consequently believed they were protecting themselves from HIV. Personal benefits include individual therapy, resource referrals & help with sobriety.	**(+)** (NICE)

	Sex workers referred to the PDP at the time of the study received a generic recruitment letter. Honorarium at $20 per hour							
Mixed methods data								
Study & aim	**Geographical location, sample size, characteristics & recruitment method**	**Intervention**	**Study design**	**Outcome measures**	**Data collection**	**Data analysis**	**Findings**	**Quality score**
Decker, et al. (2018)[23] Evaluate a brief trauma-informed intervention to improve safety and reduce HIV risk among female sex workers.	USA n=60. Female.73 % street-based sex workers, 27% venue based. Average age: 35.3 years. Ethnicity: 72% White, 16% Black. 41% relied on sex work as their sole income, 86% current IVDU. Participants were recruited from a street-based needle exchange outreach van in a location with high levels of sex trading activity	INSPIRE (Integrating safety promotion with HIV Risk Reduction) Intervention consists of a brief semi-structured dialogue, reinforced with a safety card. Content includes trauma-informed support,	Quasi-experimental, single group pre-test post-test	Revised Conflict Tactics Scale (CTS) adapted for sex work, 6 item Perceptions of Abuse Likert Scale, Sex Work-specific Rape Myths Scale adapted from general population instruments,	Pre-test self-administered survey. Post-intervention exit survey. 10-12 week follow up survey and participation in a 25-45 min in depth interview. Interventions and data collection were conducted in private locations in	Descriptive analysis was calculated for baseline characteristics. Attrition analysis compared baseline characteristics to those retained using t-tests and chi square analysis. Baseline and follow up data were evaluated using paired t-	Increase in Safety Behaviour Scores (51.2 vs. 58.1 p<.0001) and knowledge of sexual violence support programs increased from 28.9% to 76.3% (p<.0001). Avoidance of condom negotiation decreased between baseline and follow up (2.0 vs 1.4 p=.04). Average frequency of sex	**Weak** (EPHPP) **(+)** (NICE)

		validation, safety promotion and links to services.		Sex Work Safety Behaviour Scale adapted from the Safety Promoting behaviour checklist, Condom Confidence Scale, Depression: CESD, PTSD 17 item PTSD checklist, Intervention acceptability Likert Scale	the outreach van or adjacent vehicles.	tests. Iterative thematic analysis was undertaken on qualitative data from interviews	with clients while under the frequency of sex with clients while under the influence of drugs or alcohol decreased significantly (men=4.4 vs. 4.0; p=.04) PTSD and depression symptomology were high at baseline (PTSD mean 51.4), no changes were observed from baseline to follow up	

Summary of findings:

Ecologic Momentary Assessment (EMA)

Ecological Momentary Assessments (EMA) study people's thoughts and behaviour in their daily lives by repeatedly collecting questionnaire data in their normal environment, at or close to the time they carry out that behaviour. This is achieved through regular self-report diary entries covering key information around risks logged by mobile phone.

In a quantitative study investigating the benefits of EMA through smart phone enabled diary entries every 12 hours and weekly face to face interviews, levels of self-esteem increased from 4.08 points from baseline to exit ($p<.001$) over a period of 4 weeks amongst a sample of 25 women engaging in transactional sex. Whilst mean scores for anxiety and depression decreased from baseline, they were not statistically significant. Women who initiated sex work as minors reported decreased depression between base line and exit (4.1 points, $p=.05$). Anxiety also decreased in women who drank less than four alcoholic drinks per day (1.9 points, $p=.03$) or used marijuana daily (3.7 points $p=.05$)[15].

Statistical analysis through the use of t-tests failed to stratify which element of the intervention, EMA or weekly interviews had the greatest effect on the otherwise combined outcome measures reported. The short study time documented for participating in EMA impacts on the ability to assess sustainability of intervention success outside of the documented 4 weeks. The small sample size of this study further limits the power of the findings to detect differences across wider populations of sex workers.

In a separate study, qualitative evaluations of women participating in transactional sex who engaged in the same intervention experienced a heightened awareness of their emotions and behaviour. Resulting in either actual or intended changes in behaviour, including; decreased engagement in sex work, sobriety, procurement of condoms and addressing negative behavioural triggers[20]. Whilst the exploratory nature of the study, absence of theoretical framework and small sample (n=25) limits the generalisability of findings, EMA shows some utility in its ability to facilitate behaviour change to further support sex worker wellbeing.

Exiting programmes

Exiting programmes address the causes and consequences of sex work to encourage industry exit. Group counselling was experienced as being helpful to women participating in qualitative evaluations of a Prostitution Diversion Program, specifically in its utility to facilitate conversations around addiction, abuse, trauma, mental health and relationships[22]. These were considered beneficial to both participants and stakeholders who were able to learn directly from lived experiences to further inform and develop group sessions.

Programmes that offered financial assistance to women who were in the early stages of exiting sex work (between 3 months-1 year) were positively evaluated in a qualitative review of a faith-based exiting programme developed to support sustained exit from the sex industry. Peer support was encouraged by women participating in sex worker support services. Engaging with peers promoted a sense of community belonging and

cohesion in addition to presenting opportunities for re-investing help and support to other sex working women[21].

The lack of quantitative based research inclusive of validated measures to assess intervention success contributes to the weak evidence base for diversion and exiting programs. Available evidence is grounded in selection bias in account that programme enrolment is largely offered as an alternative to jail time or dependent on a pre-requisite to have already exited from sex work.

Drug support

Prescribed Maintenance Therapy (PMT) in the form of a regulated and controlled prescription for heroin to support drug addiction, along with psychosocial support for female street sex workers from a specialist GP setting in the UK, reported significant improvements in quality of life between pre and post-test measures recorded 1 year apart (12.05 at entry to 8.97 after 1-year p<.001)[16].

The use of paired t-tests to look for changes in pre-post-test scores fails to distinguish between the separate effects of PMT and psychosocial interventions. Poor reporting fails to provide a definition as to what psychosocial interventions were offered and how these were accounted for in response to confounding factors. Despite being free from attrition bias these findings are vulnerable to bias, given that the setting was based in a GP practice, where over reporting of healthy behaviour is likely and reporting success could also be perceived by participants as a requisite to securing ongoing prescriptions.

Qualitative evaluations of female street sex workers 's experiences of drug treatment services (n=24) highlight the importance of providing opportunities for sex working women to openly discuss their drug use free from the unwanted attention of male service users. Across interview data, participants described how feeling unable to discuss their sex work in drug treatment groups undermined their engagement in treatment processes. Non-disclosure meant that they could not discuss unresolved issues around trauma which emerged or increased when reducing their drug use[1].

Recommendations were made for sex worker only services delivered by female staff. The provision of one-to-one counselling was felt to provide the opportunities for people explore personal issues in more depth, not possible within group settings. However, these claims lack transferability to male or transgendered sex workers given that the findings reflect the voices and experiences of women[24].

Trauma-informed interventions:

The development of a safety card, developed in consultation with sex workers, providing harm reduction, safety information and support for accessing violence related services for sex workers attending an outreach needle exchange service reported an increase in; safety behaviour scores (51.2 to 58.1, p<.0001) and use of support programmes responding to intimate partner violence (10.5% to 28.9%, p<.01) between baseline and follow up (10-12 weeks)[23].

Whilst no changes were observed at follow up from high baseline levels of PTSD (mean=51.4) or depression (mean=19.2). Avoidance of condom negotiation (2.0 to 1.4, p=.04) and the average frequency of sex with clients while under the influence of drugs or alcohol (mean=4.4 to 4.0, p=.04) decreased. Generalisability of these findings is restricted due to rates of data attrition (39/60) and the population being limited to street-based female sex workers already engaging in relevant risk reduction interventions.

Within qualitative evaluations, new knowledge of support organisations included on the safety card prompted and enabled women to offer peer support to friends and colleagues. An enhanced confidence was experienced by women through open discussions, enabled through use of the card, around topics rarely discussed including coercive barriers to condom use and safety

The Persons at Risk Program (PAR), a harm reduction service which aimed to improve access to health care and essential services for street level sex workers through outreach work undertaken by a general practitioner and police officer was qualitatively evaluated in a second trauma informed intervention study[19].

The PAR was valued by sex workers for the streamlined and focused nature of care provision in overcoming barriers to services otherwise avoided due to fear of stigma from front line service staff, including; drug abuse, infectious diseases and mental health assistance. However, findings are limited to a sample of women who choose not to access front line services, who had stopped using drugs and successfully exited sex work.

Peer health initiatives

Findings from qualitative interviews show that peer advocacy in the delivery of a Sexually Transmitted and Blood-Borne Infection (STBBI) prevention strategy, developed and delivered by sex workers as peer educators[18], led to reduced internalised stigma and increased self-esteem and confidence across participants (n=5). Improved critical consciousness and resource mobilisation was attributed to the inclusion of training materials that promoted diversity within sex working communities and awareness of local support agencies.

Small numbers of participants, limits the generalisability of findings in this study and inclusion of broader sex working experiences across wider demographics and geographical contexts. The short duration of the study also restricts our understanding of the long-term sustainability and ownership of peer health initiatives. Future studies incorporating quantitative measures of internalised stigma and self-esteem would help to strengthen the evidence base for peer health interventions. However, the study provides proof of concept that local sex working communities are receptive and willing to participate in peer-led health initiatives.

Case Management Programmes (CMP's)

In Case Management Programs (CMP's) a named case manager acts as a fixed point of contact for a patient during the co-ordination of care. One study qualitatively evaluated a community-based CMP for street-walking prostitutes in Florida[17]. Across a purposive

sample, access to sex worker specific treatment programmes for substance misuse and support with child custody were identified as important services amongst sex working women (n=10). Whilst support with engaging in mental services was highlighted by program staff (n=4) and community professionals (n=9).

The inability to compare outcomes from these services independently of CMP referrals weakens the evidence base for the effectiveness of CMPs. Bias exists in the sample, as the majority of participants had been referred in to the service whilst in jail. Attendance to the programme is likely to be linked to conditions of their parole and therefore not representative of those freely engaging in service provision.

Discussion:

Sex workers present with specific health and wellbeing needs[25] beyond the scope of sexual health screening. Despite this, an identifiable gap exists in the current evidence, around how to respond to the additional psychosocial needs experienced by sex workers or those engaging in transactional sex.

The results from this review highlight the utility of a range of interventions which aim to improve sex worker wellbeing including peer health initiatives, EMA (phone base diary intervention), drug support services and trauma-informed interventions. However, the limited information around study characteristics and small sample sizes reflects low levels of participation beyond street-based female sex workers. Limiting the power of studies to detect differences across more diverse and less researched populations including male, transgender and migrant sex workers and those using a range of platforms to engage in wider arenas of sex work.

The implications of these findings are firstly, that the field would benefit from broadening definitions of sex work by including wider and more contemporary outlets of sex work such as adult content creators operating on subscription only platforms. A broader definition of sex work will help to adequately acknowledge and represent the diversification of sex work, helping to challenge perpetuated stereotypes of sex worker identities and their needs.

Poor study design contributed to the weak evidence base for psychosocial interventions aiming to improve sex worker wellbeing. Across quantitative studies the opportunities for comparison of findings against control groups and an inability to discriminate between intervention effects in statistical analysis, impacts our ability to make clear evidence-based recommendations to inform policy and practice within geographical rich countries.

Whilst the evidence for EMA (phone prompted diary approach)[15] remains weak and unsubstantiated, participation in regular diary entries enabled by smart phone technology improved self-esteem whilst encouraging intention for, or actual behaviour change[20]. Further research grounded in behaviour change theory would inform the development of EMA and its ability to identify and support individual psychosocial wellbeing needs.

The small number of methodologically rigorous studies reflects the challenges of studying this population[26], including the ethical issues such as compensation of sex worker time or researcher standpoint on decriminalisation. Furthermore, barriers to sex worker identification and availability include exacerbation of minority stress, given that sex working practices are perceived to differ from the majority of surrounding society[27] and potential breaches in confidentiality which may expose sex workers to public disclosure of highly stigmatised and criminalised identities[28,29].

In addressing these issues, some studies included in the review recruited sex workers to Patient and Public Involvement (PPI) roles, to assist in the administration of surveys and questionnaires or facilitation of focus groups[30]. Very few authors discussed the pro and cons of this approach particularly in consideration to any impact on the data collected. Similarly, the use of incentives such as gift cards, travel coupons or money to enable participation remain largely undiscussed.

The use of incentives to recruit research participants remains a controversial issue[31], but was featured in several of the studies included in this review. Sanders (2006)[32] argues that paying sex workers for gaining access to information about their life experiences is similar to the situation of a client paying the sex worker for gaining access to their body and is highly exploitative. However, Maher (2000)[33] contends that providing modest renumeration is only fair practice and one that encourages participation. In previous research with socially and economically marginalised communities, uncompensated studies of sex workers often bias the sample towards more privileged and more political engaged individuals than studies which offer recompense. This is important as much sex work is driven by economic survival[34].

Alongside fear of exploitation, community participation in research can be constrained by scepticism that the research will not result in any direct benefit[35]. The under use of participatory methodologies, often means that available studies are often conceptualised without relevant engagement with sex working communities or organisations, resulting in the production of research which targets the perceived rather than actual needs of sex workers.

Participatory methodologies along with Patient Public Involvement (PPI) help to address some of these ethical issues in their ability to develop research that adequately addresses the needs of sex workers whilst also safeguarding participants from exploitation[35,36]. Attempts to engage sex workers in the design of research should not be tokenistic or used to legitimise research, but instead should focus on developing methodologies and equitable partnerships that meet the needs of sex working communities.

The evidence for peer health initiatives[18] further highlights the importance of community-based responses that prioritise the engagement of target populations in the development and delivery of support programmes[37]. Collective processes, initiated by this engagement, are experienced as helping to create a community voice capable of social and behavioural changes, including improved awareness and access to support services[18]. Findings presented in this review provides some proof of concept that peer support is effective in hidden and stigmatised populations[38], who do not otherwise engage well with health care providers. Peer education may provide the opportunity for sex workers to become authentic educators[39] not only in their community but across public service organisations.

Potential biases of the review process:

The scope of this review focused on psychosocial interventions which were evaluated using only validated health and wellbeing outcome measures, which are considered to being at a reduced risk of bias compared to self-reported measures[40]. This may have led to the exclusion of some studies where interventions were less rigorously evaluated, but still experienced as beneficial to overall wellbeing by participants. Disaggregation of data will have also contributed to the exclusion of studies where sex work is reported within sample characteristics, but not presented separately within research findings.

Conclusion:

This systematic review identifies a gap in the evidence base around the effectiveness of psychosocial interventions to support the wellbeing of sex workers. Available studies are weak in their design and lack generalisability beyond female street-based sex workers. Phone based diarising such as EMA provides some evidence of promoting intentions for behaviour change but as with other approaches, would benefit to some focus around how such interventions create change. Finally, peer health initiatives developed in consultation with sex workers offer promise but warrant further investigation.

Additional educational resources

- **The nature and prevalence of prostitution and sex work in England and Wales today. Professor Marianne Hester** Prostitution_and_Sex_Work_Report.pdf (publishing.service.gov.uk)
- **Sex Work and Mental Health: Reviewing the occupational risks of sex workers in comparison to other 'risky' professions. Professor Teela Sanders** Microsoft Word - briefing paper final .docx (le.ac.uk)
- **Guiding principles for best practice research with sex workers. Samuel Brookfield** Barriers to Accessing Sexual Health Services for Transgender and Male Sex Workers: A Systematic Qualitative Meta-summary | SpringerLink

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