

# BMJ Open Psychosocial factors associated with coping behaviour after inpatient treatment for substance use disorder: a systematic review study protocol

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**To cite:** Johannessen DA, Nordfjærn T, Geirdal AØ. Psychosocial factors associated with coping behaviour after inpatient treatment for substance use disorder: a systematic review study protocol. *BMJ Open* 2019;**9**:e022673. doi:10.1136/bmjopen-2018-022673

► Prepublication history and additional material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2018-022673>).

Received 3 March 2018

Revised 7 December 2018

Accepted 13 December 2018



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## ABSTRACT

**Introduction** Much is known about factors associated with coping with abstinence from substance use. The planned systematic review aims to summarise available studies exploring the change in psychosocial factors associated with coping after long-term ( $\geq 3$  months) inpatient treatment for substance use disorder (SUD). Examples of *psychosocial factors* of interest are social support, housing, activity (eg, employment and education) mental health and quality of life. *Coping behaviour* can be understood as responses or actions taken in a stressful situation, particularly how psychosocial factors affect a person's coping behaviour with abstinence from substances in everyday life (characterised as a stressful situation).

**Methods and analysis** A set of text words were developed based on the population (people with SUD), exposure (long-term inpatient SUD treatment), outcome (psychosocial factors) and study design (prospective cohort studies) of interest. A systematic search will be conducted in eight electronic databases: Campbell Collaboration Library, Cochrane Library, EMBASE, Epistemonikos, Medline, PsychINFO, Social Sciences Citation Index and SocINDEX. The titles and abstracts will be screened for relevance before a pre-piloted data collection form will be used to evaluate eligibility and extract data from the search results. The planned review will include peer-reviewed study reports published in English or Scandinavian language.

**Ethics and dissemination** The target group, people with SUD, might be considered as vulnerable. Based on this, the population will be the group of interest in the planned systematic review of studies that have already been conducted. Patients and the general public will not be involved in the development of this systematic review. The results will be summarised in a study report and submitted to a peer-reviewed international journal. Additionally, results will be disseminated in the mass media and at international research conferences.

**PROSPERO registration number** CRD42018087408.

## INTRODUCTION

Much is known about factors associated with coping with abstinence from substance abuse. Examples of such factors are social support and appropriate housing conditions,<sup>1–7</sup>

## Strengths and limitations of this study

- Prioritisation of resources entailed that this review will be restricted to contain study reports published in English or Scandinavian languages only.
- In the current review, the systematic search will only be conducted in databases containing published reports, not databases including unpublished or ongoing studies.
- One author will conduct the first selection steps, which is considered as a limitation due to the risk of potential selection bias in the selection process. However, two authors will evaluate the studies marked as clear and unclear in the first screening. If there is disagreement, then the third author will read and decide the eligibility of the study in question.
- The number of searched databases facilitates reaching a broad range of published study reports.
- To our knowledge, there are no former systematic reviews of psychosocial factors associated with coping behaviour after long-term inpatient substance use disorder treatment.

meaningful activity (eg, employment or education),<sup>1–4 6 8 9</sup> treatment completion and commitment to continued care discharge plans.<sup>3 8 10</sup> In the 10th edition of the International Statistical Classification of Diseases and Related Health Problems (ICD-10), substance use disorder (SUD) is described as 'A cluster of physiological, behavioural, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviours that once had greater value' (p. 75).<sup>11</sup>

Substantial resources are used internationally to provide SUD treatment, substitution treatment and treatment of SUD-related health problems.<sup>12</sup> SUD treatment can be described as interventions and measures aiming to alter conditions leading to

destructive behaviour and corroborate behaviour that reduces problematic substance use, and that takes place at a treatment facility where the patient is a resident.<sup>13</sup> Even though it is estimated that >50% relapse to substance use after completed SUD treatment<sup>9 14 15</sup> and between 17% and 57% patients drop out from SUD treatment before planned discharge,<sup>16</sup> inpatient SUD treatment is considered as a factor which may promote sustained abstinence.<sup>17</sup>

Due to the considerable resources used to provide SUD treatment and because people with SUD often strive with multiple psychosocial challenges and comorbidity,<sup>18 19</sup> the planned review will be narrowed to contain inpatient SUD treatment with a duration of  $\geq 3$  months. The reason for excluding studies exploring treatment with a duration of <3 months is that previous research has shown an association between patient outcome and treatment with a duration of >3 months.<sup>20 21</sup> Hereafter, long-term treatment refers to a treatment duration of  $\geq 3$  months. The reason to focus exclusively on inpatient treatment is to reach studies with a SUD population that strives to handle their everyday life (eg, attending appointments, living at home, attending work or activities and maintaining daily routines). Additionally, previous systematic reviews and meta-analysis have summarised effect-studies of various outpatient services.<sup>22–25</sup>

In the planned review, *psychosocial factors* refer to change related to social support, housing, activity (eg, employment and education), mental health and quality of life after completed inpatient SUD treatment. *Coping* can be understood as responses or actions taken in a stressful situation, or *coping behaviour*.<sup>26</sup> In the context of the planned review, it is of interest to examine how psychosocial factors affect a person's coping behaviour with abstinence from substances in everyday life. Everyday life as abstinent after SUD treatment may be characterised as a stressful situation.

The target group of this review, people with SUD, might be considered as a vulnerable group. On this background, this target group will be the population of interest in an effort to gather, unify and summarise available studies about psychosocial factors associated with coping after long-term inpatient SUD treatment.

The primary aim of this review is to explore how psychosocial factors are associated with coping after inpatient SUD treatment. To our knowledge, no systematic reviews with a similar aim have been conducted previously. The planned systematic review aims to explore the following:

*What psychosocial factors are associated with coping after inpatient treatment for substance use disorder?*

## METHODS AND ANALYSIS

The planned systematic review will include studies that meet the eligibility criteria presented in the upcoming section.

**Table 1** PECO

Population	People with substance use disorder
Exposure	Inpatient treatment
Comparison	Any other intervention
Outcome	Psychosocial factors associated with coping

The presented objectives are systematised according to the PECO (population, exposure, comparison, outcome)<sup>27</sup> presented in [table 1](#).

The PECO lays ground for the selected text words and facilitates the limitation criteria of the population, treatment setting and outcome of interest.

## Inclusion criteria

The search will be conducted in relevant electronic databases, which are outlined below, containing peer-reviewed study reports. The determined inclusion criteria, which will be presented in the following section, are deliberately made fairly narrow to broaden the probability to find studies that can highlight the current issue.

## Participants

The population of interest are adult ( $\geq 18$  years) people with SUD. In the current review, SUD is defined as outlined in the introduction. However, in the planned systematic search people who are admitted to inpatient SUD treatment are also characterised as struggling with SUD. Therefore, both studies which include a diagnostic measure of SUD and those which do not will be evaluated for eligibility.

## Treatment setting (exposure)

The treatment setting of interest is inpatient SUD treatment with a duration of  $\geq 3$  months.

## Comparison

All studies that explore long-term SUD treatment will be evaluated for eligibility regardless if they are compared with modalities that are considered as non-eligible in the planned systematic review.

## Outcomes

The outcomes of interest are change in psychosocial factors (eg, housing, employment, mental health or quality of life) related to coping after completed inpatient SUD treatment. Because a multitude of measurement instruments often are used to measure overlapping/similar constructs and to broaden the probability of reaching studies that examine various types of psychosocial outcomes, there were no eligibility criteria in terms of how the outcome was measured.

Measures revealing the prevalence of continued substance use after discharge from inpatient SUD treatment are considered as secondary outcomes of interest.

## Type of study

This review will consider all available eligible prospective cohort studies with one or more measurement point(s) after discharge from inpatient SUD treatment.

## Search strategy

The search string used in the main search (see the online supplementary appendix 1) and the text words (see the online supplementary appendix 2) is determined using the PECO model. Relevant subject headings (see the online supplementary appendix 3) have been identified in each of the included databases. A set of text words for this particular systematic search has been designed by exploring the definitions, keywords and indexing of articles with a similar topic and aim as the planned review. Together, the combination of the text words and the subject headings constitute the search string used in each of the included databases.

To decide if the search should be restricted to a particular timespan, a search for systematic reviews was conducted in Campbell Collaboration, Cochrane Library and Epistemonikos (see the online supplementary appendix 4). The search yielded one relevant systematic review published in 2014, exploring the effectiveness of one specific SUD treatment approach. The aims of the mentioned review were narrower than the one of this planned review and we will, therefore, avoid timespan restrictions in the systematic search. We will include all studies written in English or Scandinavian languages, published before the time of the systematic search.

To increase the probability of finding studies which are not embraced by the chosen databases, a citation search of included studies will be conducted. Additionally, the 100 first hits from an advanced search in Google Scholar will be screened for eligible studies (reported as *other sources*). The selection of databases is done based on advice from academic librarians and experienced researchers with expertise on the field. Guidelines collected from relevant literature sources, such as the *Cochrane handbook for systematic reviews of interventions*,<sup>28</sup> are also used in the decision of which databases to include. The aim of this review is at an intersection point between medicine/health and social sciences. Therefore, we have selected databases with its main focus in these sciences. A comprehensive search will be conducted in the following databases: Campbell Collaboration Library, Cochrane Library, EMBASE, Epistemonikos, Medline, PsychINFO, Social Sciences Citation Index and SocINDEX.

## Data

### Data selection

The results from the systematic search will be combined and controlled for duplicates using EndNote X8. The remaining search results will further be evaluated through two selection steps. The titles and abstracts will be screened for relevance by one author (DAJ), using EndNote X8. In the first selection step, obviously irrelevant studies will be eliminated. In the second selection

step, remaining studies will be evaluated using a data selection form developed by the authors. The data selection form will be piloted on a sample of 100 studies. The remaining studies will initially be screened for eligibility by one author (DAJ), and identified as *include*, *exclude* or *unclear*, and then be screened by the second author (TN) with a specific focus on which are unclear. Diverse evaluation of eligibility should be resolved by discussion. In case of disagreement, the third author (AØG) will decide the eligibility of the study in question.

To demonstrate the selection steps taken in the process of data selection, a *Preferred Reporting Items for Systematic reviews and Meta-Analyses* (PRISMA) Flow Diagram will be included in the review. The listed inclusion criteria in the data selection form are arranged in the same order as the *reason for exclusion* will be reported (excluded in the order: (1) participants, (2) setting, (3) study design and (4) outcome). Meaning that a study that does not meet the inclusion criteria based on the included participants will be reported as excluded on the background of *participants*, even if the study also may be excluded based on the *setting* or *study design*.

### Data extraction

A predetermined data extraction form will be used, deciding which data to extract from the included study reports. The form is developed by the authors, based on the aim and inclusion criteria. The data extraction form will be piloted on a sample of 10 studies.<sup>29</sup> The quality of the included study will be appraised by using the *Critical Appraisal Skills Programme* (CASP)<sup>30</sup> checklist tool developed to evaluate the relevance of the included cohort studies. The evaluation and data extraction of the final studies will be done by one author (DAJ).

In case of missing data or disagreement regarding the extracted data, the corresponding author of the study in question will be contacted to address their opinion. If the corresponding author does not reply within 14 days, then the third author (AØG) will determine the eligibility of the study in question and the disagreement will be addressed in the review.

### Patient and public involvement

Patients and/or the general public were not involved in the development of this systematic review. The results from the planned systematic review will be summarised in an article and submitted to an academic journal. Additionally, results will be disseminated in the mass media and at international research conferences.

## CRITICAL APPRAISAL

Developing this protocol is an important initiative to counter selection and reporting bias. By developing transparent and clear-cut predetermined procedures before the screening of the results from the systematic search is undertaken, and by revealing the protocol with the



published material, the risk of selection and reporting bias will be reduced.<sup>31</sup>

We have adhered to the *PRISMA for Protocol* (PRISMA-P) in the development of this protocol (see the online supplementary appendix 5). The PRISMA-P consists of a checklist with 17 points used to ensure that the protocol facilitates a robust and transparent systematic review. Completing a PRISMA-P and making the protocol available minimises the risk of selective reporting, for instance, in the case of unexpected results.<sup>31 32</sup>

To ensure a satisfying quality, the planned review will be reported according to the PRISMA before it is submitted to a journal.<sup>33</sup> The PRISMA is a 27-items checklist used to evaluate the reporting in systematic reviews and meta-analyses. The PRISMA will also be used to evaluate reporting in potential reviews among the included studies.<sup>34</sup>

There are three important aspects to appraise in the included study reports; method, study design and relevance in relation to the aim of the planned systematic review. The appraisal should be done before the studies are included in the systematic review.<sup>33</sup> To facilitate such an appraisal and reduce the risk of bias, the CASP checklist will be used to evaluate the relevance and quality of the included cohort studies. CASP consists of 12 questions evaluating the study design, risk of bias, relevance and whether the results are useful to the current review.<sup>30</sup>

## SYNTHESIS AND ANALYSIS

The approach of the planned synthesis will be a thematic summary. The presentation of the findings will be structured based on the characteristics of the extracted data. The findings will partly be reported through text summaries and partly through infographics presenting patient and study characteristics, patient outcome and prevalence of continued substance use after inpatient SUD treatment.

In addition to psychosocial factors and continued substance use, the potential influence of demographic variables on the ability to cope without substance use after inpatient SUD treatment will be taken into consideration in the planned review.

A meta-analysis will only be conducted if diversity in the preformed statistical analysis and if variety in characteristics of the included studies is not a concern, and if the effect sizes, mean and/or SD are reported consistently at baseline and follow-up in the finally included studies.

## POTENTIAL IMPLICATIONS

The planned systematic review may attain information about psychosocial factors that could serve as protective factors among patients after long-term SUD treatment. The results could provide knowledge about which psychosocial factors to be particularly aware of among patients undergoing long-term SUD treatment. These factors may, in turn, be addressed by targeted clinical

initiatives. Additionally, the planned review may point out new avenues for further research on this topic.

## ETHICS AND DISSEMINATION

The target group, people with SUD, might be considered as vulnerable. Based on this, the population will be the group of interest in the planned systematic review of studies that have already been conducted. Patients and the general public will not be involved in the development of this systematic review. The results will be summarised in a study report and submitted to a peer-reviewed international journal. Additionally, results will be disseminated in the mass media and at international research conferences. The planned systematic review has been registered at PROSPERO with registration ID: CRD42018087408.

## Review status

At the time of submission, the systematic search has been conducted and the search results have been controlled for duplicates. The screening of titles and abstracts has started. The review is planned for submission in December 2018.

**Contributors** DAJ, TN and AØG: contributed to the writing of this protocol.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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