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A SYSTEMATIC REVIEW OF EVALUATION RESEARCH FOR ADULTS WHO HAVE PARTICIPATED IN THE 'SMART RECOVERY' MUTUAL SUPPORT PROGRAM (PROTOCOL)

Registration: PROSPERO CRD42015025574

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ABSTRACT

Introduction: Self-Management and Recovery Training (SMART Recovery) offers an alternative to the predominant twelve step approach to mutual aid (e.g. alcoholics anonymous). While the principles (e.g. self-efficacy) and therapeutic approaches (e.g. motivational interviewing and cognitive behavioural therapy) of SMART Recovery are evidence based, further clarity regarding the direct evidence of its effectiveness as a mutual aid package is needed. Relative to the methodologically rigorous reviews supporting the efficacy of 12-step approaches, to date, reviews of SMART Recovery have been descriptive. We aim to address this gap by providing an overview of the evidence for SMART Recovery in adults with experience of addiction, including a commentary on outcomes assessed, potential mediators, feasibility and a critical evaluation of the methods used.

Methods and Analysis: Our methods are informed by the Cochrane Guidelines for Systematic Reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) Statement. The review is registered and any protocol amendments will be tracked. Six electronic peer-reviewed and four grey literature databases have been identified. Preliminary searches have been conducted for literature on SMART Recovery. Articles classified as 'evaluation' will be assessed against standardized criteria and checked by an independent rater. The searches will be re-run just before final analyses and further studies retrieved for inclusion. A narrative synthesis of the findings will be reported, structured around intervention type and content, population characteristics, and outcomes. Where possible, 'summary of findings' tables will be generated for each comparison. When data are available, we will calculate a risk ratio and its 95% confidence interval (dichotomous outcomes) and/ or effect size according to Cohen's formula (continuous outcomes) for the primary outcome of each trial.

Ethics and Dissemination: No ethical issues are foreseen. Findings will be disseminated widely to clinicians and researchers via journal publication and conference presentation(s).

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INTRODUCTION

Addiction is a widespread and serious concern. Addiction can be defined as a behaviour that is habitual, compulsive and continued despite problematic cognitive, behavioural and/ or physiological consequences[1]. Addictions formally recognised by current diagnostic systems include substance-related (alcohol, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics and anxiolytics, stimulants and tobacco) and gambling[1]. Internet gaming has recently been added as a condition warranting further study[1]. Other common and problematic behavioural addictions yet to receive diagnostic classification include shopping[2], internet[3] and sex[4]. Recent data indicates that more than 40% of Australians either smoked daily, engaged in hazardous levels of alcohol use or had used at least one illicit substance in the preceding 12 months[5]. While prevalence estimates for many behavioural addictions are complicated by lack of standardised criteria, problem gambling is estimated to affect up to 160000 Australian Adults per year[6].

The burden of addiction is considerable. Alcohol and substance use disorders are leading causes of premature mortality and account for over 20% of the 183.9 million disability-adjusted life years lost to mental and substance use disorders worldwide[7]. In Australia, problem gamblers lose an average of $21000 per year – approximately one third of the average salary[6]. Substance and behavioural addictions also have a profound and detrimental impact on health, relationships, employment and quality of life[8,9,10]. Together, the harms from alcohol, substances and behavioural addictions such as gambling cost Australians over $28 billion per year[6,11,12].

The course of addiction is often chronic and characterised by multiple relapses[13]. However, sustained recovery is possible. While the actual definition of recovery will vary according to the individual, the capacity to create and live a meaningful life is key[14]. Recovery oriented service provision acknowledges the importance of harnessing strengths, maximising self-determination and facilitating self-management such that an individual can recognise and take responsibility for their own wellbeing and recovery[14].

'Mutual aid' is often central to this process. 'Mutual aid' refers to social, emotional and informational support provided by, and to, group members undergoing recovery from addiction[15].

Within the addiction field, 12-step models (e.g. Alcoholics Anonymous, Narcotics Anonymous) are the largest and most researched source of mutual aid. Within this model, addiction is conceptualised as a medical and spiritual disease, with recovery reliant on relinquishing control to a higher power[16]. Systematic reviews and meta-analyses consistently demonstrate that improvement following 12-step participation is at least equivalent to that of professional interventions[e.g. 17-19], and in the longer term, active participation increases the likelihood of sustained recovery[15,20]. Relative to the often time-limited format of formal treatment, mutual aid represents a mechanism for accessing ongoing, long-term support. The importance of mutual aid in promoting and sustaining recovery is also highlighted by The National Institute for Health and Care Excellence (NICE), which recommends that staff routinely provide information about and facilitate access to and engagement in mutual aid groups[21-22].

Why it is important to do this review?

While current findings clearly support the benefits of mutual aid, much of the evidence comes from the study of 12-step models. However, individuals may fail to engage with 12-step groups, for example, due to a mismatch between personal beliefs and the 12-step philosophy [23-24]. Indeed, to enhance engagement, clinical guidelines advocate for tailored addiction support that accounts for individual needs and preferences [e.g. 21-22]. Choice over mutual aid support options is therefore important – especially given individual variation in the definition and process of recovery. Alternatives, albeit lower in profile to the dominant 12-step model have been available for a number of years[see 18 for a review]. Self-Management and Recovery Training (SMART Recovery) is one model that is cited alongside 12-step as a recommended source of mutual aid by Australian[25-26] and international[21-22] clinical guidelines.

SMART Recovery is a not-for-profit organisation that provide group and on-line mutual aid support for individuals demonstrating problematic alcohol, substance and/ or other addictive behaviours (e.g. gambling, eating, technology, pornography)[27]. SMART Recovery focuses on self-empowerment and adopts key principles (e.g. self-efficacy) and therapeutic approaches (e.g. motivational interviewing and cognitive behavioural therapy) shown to be effective in promoting recovery from addiction (see [28] for a recent review). While these strategies are clearly evidence based, further clarity regarding direct evidence for the efficacy of SMART Recovery as a mutual aid package is needed.

Relative to the methodologically rigorous reviews summarising the evidence for 12-step models[17-19] to date, reviews of SMART Recovery are descriptive. The focus tends to be on the origins, development and principles of SMART Recovery, with limited analysis of efficacy and/ or potential mechanisms of action [e.g. 29]. Any changes in healthcare practice and policy rely on a solid evidence base. This systematic review represents an important step, as it will comprehensively summarise the available evidence on SMART Recovery and identify areas of research need. Results will inform the public health and clinical utility of SMART Recovery as a potentially helpful recovery resource for individuals suffering from addiction disorders.

Objectives

Guided by the review questions listed below, we aim to provide an overview of the current state of evidence for SMART Recovery in adults with experience of substance and/ or behavioural addiction(s), including a commentary on

1. Outcomes assessed, potential mediators and a critical evaluation of the methods used to evaluate SMART Recovery.
2. Feasibility of SMART Recovery, including economic outcomes and service user and/ or provider satisfaction
3. Future research directions

Review Question

For adults with experience of substance and/ or behavioural addiction(s)

1. Does SMART Recovery result in changes to severity of addiction and its consequences (e.g. quantity, frequency and severity of addictive behaviour; quality of life; functioning)
2. Is the effect of SMART Recovery on the above listed treatment outcomes influenced by:
    a. Treatment engagement (e.g. quantity, frequency and/ or duration of SMART Recovery attendance)
    b. Process measures/ mediators/ mechanisms [e.g. cognitive (empowerment/ self efficacy/ motivation); behavioural (e.g. active coping, including managing urges); process (e.g. therapeutic alliance)]
3. What is the evidence for the feasibility of SMART Recovery, including commentary on economic outcomes and service user and/ or provider satisfaction

METHODS AND ANALYSIS

A systematic review will be conducted in accordance with the Preferred Reporting Items for Systematic Review and Meta-analysis Protocols (PRISMA-P[30]).

Eligibility Criteria

Types of Studies

In accordance with the objective of providing an overview of the current evidence for SMART Recovery in adults with experience of substance and/ or behavioural addiction(s), liberal design criteria will be adopted. The following designs will be included - randomised controlled trials (cluster and parallel design); cross-over trial; case series or case controls; one-arm trial; non-randomised trials; cross-sectional or cohort studies and case reports. As broad inclusion criteria may increase risk of bias, this will be assessed using the Collaboration's Risk of Bias tool, as described in the Cochrane Handbook for Systematic Review of Interventions ([31]; detailed under risk of bias assessment below). Qualitative only designs will not be included.

Types of Participants

Adults (≥ 18) attending SMART Recovery with current or past problematic experience of at least one addictive behaviour (substance and/ or behavioural), identified via patient and/ or carer subjective report, self-report assessment and/ or clinical interview. 'Problematic' will be defined in terms of subjective and/ or objective impact on functioning and/or or comparison to recommended guidelines. Participants may be residing in the community, rehabilitation, treatment and/or correctional facility.

In order to better inform research and clinical care, we intend to describe the treatment context (e.g. SMART Recovery alone vs. additional pharmacological and/ or non-pharmacological support) and whether the studies target particular addictive behaviours (e.g. alcohol, smoking, illicit substances, other addictive behaviours) and/ or clinical presentations (e.g. addiction only vs. dual diagnosis).

Types of Interventions

The intervention of interest is SMART Recovery, delivered in a group format, of any intensity or frequency, by a trained facilitator. We will include all SMART Recovery approaches, including both conventional mutual aid groups delivered by a non-professional volunteer and SMART Recovery informed groups delivered by a trained professional. SMART Recovery may be a standalone intervention and/ or delivered in combination with other treatment components, including pharmacological. Interventions delivered in any setting will be included (e.g. on-line, community, hospital, rehabilitation or residential treatment centre, etc.).

Types of Comparison Conditions

The intervention may be compared to inactive (e.g. standard care, waiting list control) and/ or active controls (e.g. 12 step programs, psychological interventions) of any intensity, frequency and delivery method (e.g. individual, group, technology assisted). Evaluations of SMART Recovery without a comparator group will also be included.

Types of Outcome Measures

(1) Severity of addiction and its consequences (e.g. quantity, frequency and severity of addictive behaviour; quality of life; functioning)

(2) Treatment engagement (e.g. quantity, frequency and/ or duration of SMART Recovery attendance)

(3) Process measures/ mediators/ mechanisms [e.g. cognitive (empowerment/ self efficacy/ motivation); behavioural (e.g. active coping, including managing urges); process (e.g. therapeutic alliance)]

(4) Feasibility, including economic outcomes (e.g. cost, resource use, cost effectiveness) and/ or satisfaction/ preference. Qualitative outcomes regarding participant and/ or provider satisfaction will be reported as described.

Outcomes may be clinician and/or patient rated; assessed by objective and/ or subjective indices (e.g. blood, urine, actigraph, questionnaire, monitoring form/ diary) with or without collateral information (e.g. using a family member to validate use) and of any time frame (e.g. baseline, short and/ or medium and/ or long term follow-up).

Information Sources

Search strategy

Consistent with methods detailed in Cochrane Guidelines for systematic reviews[31] the search strategy will be conducted as follows. First, in May 2015 we consulted with a qualified librarian and identified seven relevant scientific electronic databases (MEDLINE; Pubmed; EMBASE; Cinahl Complete; Psychinfo; Central) and four electronic non-scientific databases (Google Scholar; Virginia Commonwealth University; Project Cork; Prevention, Information and Evidence Library) to search. Search terms related to SMART Recovery will be combined with addiction related search terms and then outcome related search terms (Attachment 1 for the full MEDLINE search strategy).

Abstract, title, key words and subject headings specific to each of the identified database will be searched. All subject headings will be exploded so that narrower terms are included. No limits will be placed on publication year. Publications must be available in English. Reference lists of identified publications will be hand searched to identify any

additional publications. All publications will be organised in reference manager Endnote. The searches will be re-run just before final analyses and further studies retrieved for inclusion.

Classification of studies

The titles and abstracts of identified references will be classified in a three-step process.

Step 1: Identification of studies for exclusion

AKB will review the titles and/or abstracts and exclude articles if they: a) are duplicates, b) do not focus on adults with a substance and/ or behavioural addiction, c) do not focus on SMART Recovery, d) if the outcomes, process and/ or predictor variables do not include or specifically relate to SMART Recovery or e) are not journal articles, reports, book chapters or newsletter articles. If eligibility is unclear from the title and/ or abstract, the full text article will be accessed and assessed.

Step 2: Classification of studies

The abstracts and/ or full text of the remaining studies will be examined by AKB to identify studies that are (i) *Evaluation*, defined as an evaluation of SMART Recovery as per the PICO criteria outlined above; (ii) *Reviews*, including summaries, descriptive, critical and/ or systematic reviews; *Discussion*, defined as general discussion of SMART Recovery, including its development, principles, methods and implementation. References that are not evaluation, review or discussion papers (e.g. treatment manuals) will classified as 'Other'.

Step 3: Cross Checking

Publications from step two will be cross-checked by having a research assistant blinded to the results of the initial classification, reclassify the publications. In case of disagreement, the final classification will be made by consensus, with the involvement of AB. The articles excluded in step one will not be cross-checked because they will not be relevant

to the review. The evaluation studies identified in step two will retained for further examination.

Data Extraction from Evaluation Studies

Data extraction will be performed by AKB and checked by EF. Extraction forms will be piloted on several papers and modified as needed before use. When multiple reports of the same study are identified (e.g. related journal articles, conference proceedings which are then published), data from each report will be extracted separately and then combined across multiple data collection forms. Methodological critique and assessment of risk of bias will be performed independently by AKB and EF. In the event of disagreement, final ratings will be made via consensus, following discussion with AB. In the event that inadequate trial details are reported, study authors will be contacted no more than twice to obtain further information.

To enable methodological critique of both observational research and RCTs, criteria for data extraction will be adapted from the Downs and Black Scale[32] and the Cochrane Handbook for Systematic Reviews[31] and include:

(1) Participant information, including n-values at each stage of the study (and reasons for non-participation), treatment setting, eligibility criteria, descriptive data including age, gender, ethnicity, socio-economic status, diagnostic criteria, treatment history

(2) Methods, including study design, country, setting(s), methodological limitations reported, methodological limitations observed (e.g. recruitment allocation and data collection methods; blinding; comparability of groups at baseline; appropriateness of analysis methods)

(3) Interventions, including number of groups, duration of treatment (number, frequency and duration of SMART Recovery and any additional treatment components), delivery method(s), description of control intervention(s)

(4) Primary and secondary outcomes, including data collection sources/ methods, percentage of treatment sessions attended, other process measures/ mediators/ mechanisms, economic outcomes, satisfaction related outcomes, follow-up period

(5) Results, including severity of addiction and its consequences, treatment engagement, process measures/ mediators/ mechanisms, economic outcomes and patient satisfaction collected at all available follow-up time points.

Methodological Critique of Evaluation Research

To provide a thorough overview of the literature we will implement procedures to evaluate the quality of both observational studies and RCTs. A narrative synthesis of the findings from the included studies will be reported, structured around intervention type and content, population characteristics, and outcomes. This qualitative review will be supplemented with the following quantitative measures.

For observational studies, methodological quality will be assessed against the Downs and Black Scale[31]. Criteria will be assigned a yes (1 point); no (0 points); or unclear (0 points) rating. All criteria will have the same weight, and a quality score ranging from 0 to 27 points will be calculated for each study.

For RCTs, methodological quality will be assessed against the eleven item Physiotherapy Evidence Database (PEDro) scale[33]. Consistent with published reviews of psychological interventions [e.g. 34-35] two items regarding blinding of subjects and therapists will not be scored, as these criteria are not appropriate for the studies under review. The remaining nine criteria will be assigned a yes (1 point) or no (0 points) rating, and a quality score ranging from 0 to 8 points will be calculated for each study (as item one is not included in the quality score; [33]).

Risk of bias will also be assessed using the Collaboration's Risk of Bias tool, as described in the *Cochrane Handbook for Systematic Review of Interventions* [31]. We will judge each item as being high, low or unclear risk, as per the criteria provided by Higgins and Green[31] and provide a quote from the study report and a justification for our

judgement for each item in the risk of bias table. Given that growing empirical evidence suggests that sequence generation and allocation concealment are particularly important potential sources of bias, studies will be deemed to be at the highest risk of bias if either item is scored as 'high' or 'unclear'.

Measures of Treatment Effect

A narrative synthesis of the findings from the included studies will be reported, structured around intervention type and content, population characteristics, and outcomes. Where possible, 'Summary of findings' (SOF) tables will be generated for each comparison (e.g. Pharmacological/ psychological treatment alone vs Pharmacological/ psychological treatment plus SMART Recovery; SMART Recovery vs other mutual aid support groups; SMART Recovery vs active treatment; SMART Recovery vs inactive control). SOF tables will provide key information regarding evidence quality, the magnitude of effect of the interventions examined, and a summary of available data on the outcome variables defined above.

Dichotomous Outcome Measures

When data are available, a risk ratio (RR) and its 95% confidence interval will be provided for the primary outcome of each trial. RR has been selected in preference to odds ratios as evidence suggests that RR is more intuitive[36] and clinicians tend to misinterpret odds ratios as RR[37].

Continuous Outcome Measures

When data are available, effect sizes will be calculated according to Cohen's formula, to allow for comparison across studies. Effect sizes will be interpreted according to published guidelines, where 0.2-0.49 is defined as a small effect size, 0.5-0.79 is moderate and greater than 0.8 is large.

A study will be considered to have a positive outcome if at least 50% of reported outcomes demonstrate a between group difference in favour of SMART Recovery at the end

of the intervention. Positive maintenance outcome(s) will be evidenced when this effect is also evident at short and/ or medium and/ or long-term follow-up (defined as 1-6; 7-12 and >12 months after intervention completion, respectively). We anticipate there will be limited scope for meta-analysis due to the range of different outcome measures.

ETHICS AND DISSEMINATION

As no primary data collection will be undertaken, no formal ethical assessment is required. We plan to present the findings of this systematic review for peer-review in an appropriate journal. We also intend to present to clinicians and researchers at appropriate conferences, including Australasian Professional Society on Alcohol & other Drugs in November 2015.

ABOUT THE ARTICLE

Authors' contributions

Dr Beck is the guarantor of the review, wrote the protocol for the systematic review, performed the preliminary searches, will perform data extraction, conduct quality assessments and draft the systematic review paper. Ms Forbes will cross-check data extraction and perform independent quality ratings. All other authors made substantial contributions to conception and design of the systematic review and, as needed, will assist Dr Beck & Ms Forbes to resolve any discrepancies regarding study inclusion, data extraction and quality ratings. All authors offered critical revisions to the protocol manuscript and will offer critical revisions for the systematic review manuscript.

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Competing Interests

Dr Beck and Ms Forbes have no competing interests to declare. Prof Baker, Dr Kelly, Prof Deane, Prof Shakeshaft and Prof Kelly are all members of the SMART Recovery Australia Research Advisory Committee. Prof Baker is a Smart Recovery Australia Board Member. Mr David Hunt is employed by SMART Recovery as the area coordinator for South Australia, Tasmania and Victoria.

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Date	Database	Search Strategy	Notes
27.05.15 (Prelim Search)	Medline	"SMART Recovery" OR "Self Management And Recovery Training" OR SMART Adj Recovery [All fields] AND (alcoholism[MH] OR alcohol*[TIAB]) OR (alcohol-related disorders[MH] OR alcohol related disorder[TIAB]) OR (alcohol abuse [TIAB]) OR (alcohol dependence [TIAB]) OR (substance-related disorder[MH] OR substance use disorder[TIAB]) OR (substance abuse[TIAB]) OR (substance dependen*[TIAB]) OR (gambling[MH] OR gambling [TIAB]) (Addictive behavi*r [MH] OR Addictive behav*r [TIAB]) OR (addict* [TIAB]) AND (addiction severity [TIAB]) OR (recurrence[MH] OR recurrence[TIAB]) OR (relapse[TIAB]) OR (alcohol drinking[MH] OR alcohol drinking[TIAB]) OR (alcohol consumption[TIAB]) OR (substance us* [TIAB]) OR (alcohol abstinen*[MH] OR alcohol abstinen* [TIAB]) OR (abstinen*[TIAB]) OR (harm reduction[MH] OR harm reduction [TIAB]) OR (dollars lost [TIAB]) OR (expenditure [TIAB]) OR (hours spent [TIAB]) OR (time spent [TIAB]) OR (patient compliance[MH] OR patient compliance[TIAB] OR adherence[TIAB]) OR (patient participation[MH] OR patient participation [TIAB] OR participation[TIAB]) OR (attendance[TIAB]) OR (engagement[TIAB]) OR (health expenditures[MH] OR health expenditures [TIAB])	Limited to articles available in English

PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015 checklist: recommended items to address in a systematic review protocol*

Section and topic	Item No	Checklist item	
ADMINISTRATIVE INFORMATION			
Title:			
Identification	1a	Identify the report as a protocol of a systematic review	YES
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	NA
Registration	2	If registered, provide the name of the registry (such as PROSPERO) and registration number	YES
Authors:			
Contact	3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	YES
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	YES
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	NA
Support:			
Sources	5a	Indicate sources of financial or other support for the review	YES
Sponsor	5b	Provide name for the review funder and/or sponsor	YES
Role of sponsor or funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	YES
INTRODUCTION			
Rationale	6	Describe the rationale for the review in the context of what is already known	YES
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	YES
METHODS			
Eligibility criteria	8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	YES
Information sources	9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	YES

Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	YES
Study records:			
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	YES
Selection process	11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	YES
Data collection process	11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	YES
Data items	12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	YES
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	YES
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	YES
Data synthesis	15a	Describe criteria under which study data will be quantitatively synthesised	YES
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I^2, Kendall's τ)	YES
	15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	YES
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	YES
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	YES
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	YES

*** It is strongly recommended that this checklist be read in conjunction with the PRISMA-P Explanation and Elaboration (cite when available) for important clarification on the items. Amendments to a review protocol should be tracked and dated. The copyright for PRISMA-P (including checklist) is held by the PRISMA-P Group and is distributed under a Creative Commons Attribution Licence 4.0.**

From: Shamseer L, Moher D, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart L, PRISMA-P Group. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. BMJ. 2015 Jan 2;349(jan02 1):g7647.

BMJ Open

A protocol for a systematic review of evaluation research for adults who have participated in the 'SMART Recovery' Mutual Support Program

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Secondary Subject Heading:	Evidence based practice, Health services research
Keywords:	Substance misuse < PSYCHIATRY, Adult psychiatry < PSYCHIATRY, STATISTICS & RESEARCH METHODS

A PROTOCOL FOR A SYSTEMATIC REVIEW OF EVALUATION RESEARCH FOR ADULTS WHO HAVE PARTICIPATED IN THE 'SMART RECOVERY' MUTUAL SUPPORT PROGRAM

Registration: PROSPERO CRD42015025574

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Keywords: Systematic review, Addiction, SMART Recovery, Mutual Aid, Self help groups

Word Count: 3044

ABSTRACT

Introduction: Self-Management and Recovery Training (SMART Recovery) offers an alternative to the predominant twelve step approach to mutual aid (e.g. Alcoholics Anonymous). Although the principles (e.g. self-efficacy) and therapeutic approaches (e.g. motivational interviewing and cognitive behavioural therapy) of SMART Recovery are evidence based, further clarity regarding the direct evidence of its effectiveness as a mutual aid package is needed. Relative to the methodologically rigorous reviews supporting the efficacy of 12-step approaches, to date, reviews of SMART Recovery have been descriptive. We aim to address this gap by providing a comprehensive overview of the evidence for SMART Recovery in adults with problematic alcohol, substance and/ or behavioural addiction, including a commentary on outcomes assessed, potential mediators, feasibility and a critical evaluation of the methods used.

Methods and Analysis: Methods are informed by the Cochrane Guidelines for Systematic Reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Statement. Six electronic peer-reviewed and four grey-literature databases have been identified. Preliminary searches have been conducted for SMART Recovery literature (liberal inclusion criteria, not restricted to RCTs, qualitative only designs excluded). Eligible 'evaluation' articles will be assessed against standardized criteria and checked by an independent rater. The searches will be re-run just before final analyses and further studies retrieved for inclusion. A narrative synthesis of the findings will be reported, structured around intervention type and content, population characteristics, and outcomes. Where possible, 'summary of findings' tables will be generated for each comparison. When data are available, we will calculate a risk ratio and its 95% confidence interval (dichotomous outcomes) and/ or effect size according to Cohen's formula (continuous outcomes) for the primary outcome of each trial.

Ethics and Dissemination: No ethical issues are foreseen. Findings will be disseminated widely to clinicians and researchers via journal publication and conference presentation(s).

Registration Details: PROSPERO CRD42015025574

INTRODUCTION

Addiction is a widespread and serious concern. Addiction can be defined as a behaviour that is habitual, compulsive and continued despite problematic cognitive, behavioural and/ or physiological consequences[1]. Addictions formally recognised by current diagnostic systems include substance-related (alcohol, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics and anxiolytics, stimulants and tobacco) and gambling[1]. Internet gaming has recently been added as a condition warranting further study[1]. Other common and problematic behavioural addictions yet to receive diagnostic classification include shopping[2], internet[3] and sex[4]. Recent data indicates that more than 40% of Australians either smoked daily, engaged in hazardous levels of alcohol use or had used at least one illicit substance in the preceding 12 months[5]. Although prevalence estimates for many behavioural addictions are complicated by lack of standardised criteria, problem gambling is estimated to affect up to 160000 Australian Adults per year[6].

The burden of addiction is considerable. Alcohol and substance use disorders are leading causes of premature mortality and account for over 20% of the 183.9 million disability-adjusted life years lost to mental and substance use disorders worldwide[7]. In Australia, problem gamblers lose an average of $21000 per year – approximately one third of the average salary[6]. Substance and behavioural addictions also have a profound and detrimental impact on health, relationships, employment and quality of life[8,9,10]. Together, the harms from alcohol, substances and behavioural addictions such as gambling cost Australians over $28 billion per year[6,11,12].

The course of addiction is often chronic and characterised by multiple relapses[13]. However, sustained recovery is possible. Although the actual definition of recovery will vary according to the individual, the capacity to create and live a meaningful life is key[14]. Recovery oriented service provision acknowledges the importance of harnessing strengths, maximising self-determination and facilitating self-management such that an individual can recognise and take responsibility for their own wellbeing and recovery[14].

'Mutual aid' is often central to this process. 'Mutual aid' refers to social, emotional and informational support provided by, and to, group members undergoing recovery from addiction[15].

Within the addiction field, 12-step models (e.g. Alcoholics Anonymous, Narcotics Anonymous) are the largest and most researched source of mutual aid. Within this model, addiction is conceptualised as a medical and spiritual disease, with recovery reliant on relinquishing control to a higher power[16]. Systematic reviews and meta-analyses consistently demonstrate that improvement following 12-step participation is at least equivalent to that of professional interventions for adults with alcohol dependence[e.g. 17-19], and in the longer term, active participation increases the likelihood of sustained recovery[15,20]. Relative to the often time-limited format of formal treatment, mutual aid represents a mechanism for accessing ongoing, long-term support. The importance of mutual aid in promoting and sustaining recovery is also highlighted by The National Institute for Health and Care Excellence (NICE), which recommends that staff routinely provide information about and facilitate access to and engagement in mutual aid groups[21-22].

Why it is important to do this review?

Although current findings clearly support the benefits of mutual aid, much of the evidence comes from the study of 12-step models, and focuses on adults with alcohol dependence. However, less is known about the impact of mutual aid on other substance and/ or behavioral addictions. Moreover, individuals may fail to engage with 12-step groups, for example, due to a mismatch between personal beliefs and the 12-step philosophy [23-24]. Indeed, to enhance engagement, clinical guidelines advocate for tailored addiction support that accounts for individual needs and preferences [e.g. 21-22]. Choice over mutual aid support options is therefore important – especially given individual variation in presenting concerns and the definition and process of recovery. Alternatives, albeit lower in profile to the dominant 12-step model have been available for a number of years[see 18 for a review].

Self-Management and Recovery Training (SMART Recovery) is one model that is cited alongside 12-step as a recommended source of mutual aid by Australian[25-26] and international[21-22] clinical guidelines.

SMART Recovery is a not-for-profit organisation that provides group and on-line mutual aid support. Unlike 12-step groups that are often addiction specific (e.g. Alcoholics Anonymous, Narcotics Anonymous, Gamblers Anonymous), SMART Recovery groups offer support for a range of problematic behaviours, including alcohol, substance and/ or other addictive behaviours (e.g. gambling, eating, technology, pornography)[27]. SMART Recovery focuses on self-empowerment and adopts key principles (e.g. self-efficacy) and therapeutic approaches (e.g. motivational interviewing and cognitive behavioural therapy) shown to be effective in promoting recovery from addiction (see [28] for a recent review). Although these strategies are clearly evidence based, further clarity regarding direct evidence for the efficacy of SMART Recovery as a mutual aid package is needed.

Relative to the methodologically rigorous reviews summarising the evidence for 12-step models[e.g. 17-19] to date, reviews of SMART Recovery are descriptive. The focus tends to be on the origins, development and principles of SMART Recovery, with limited analysis of feasibility, efficacy and/ or potential mechanisms of action [e.g. 29]. Any changes in healthcare practice and policy should rely on a solid evidence base. This systematic review represents an important step, as it will comprehensively summarise the available evidence on SMART Recovery and identify areas of research need. Results will inform the public health and clinical utility of SMART Recovery as a potentially helpful recovery resource for individuals suffering from addiction disorders.

Objectives

Guided by the review questions listed below, we aim to provide a comprehensive overview of the current state of evidence for SMART Recovery in adults with experience of substance and/ or behavioural addiction(s), including a commentary on

1. Population and outcomes assessed, potential mediators and a critical evaluation of the methods used to evaluate SMART Recovery.

2. Feasibility of SMART Recovery, including economic outcomes (e.g. cost, resource use, cost effectiveness), attendance and service user and/ or provider satisfaction
3. Future research directions

Review Question

For adults with experience of substance and/ or behavioural addiction(s)

1. Does SMART Recovery result in changes to severity of addiction and its consequences (e.g. quantity, frequency and severity of addictive behaviour; quality of life; functioning)
2. Is the effect of SMART Recovery on the above listed treatment outcomes influenced by:
    a. Treatment engagement (e.g. quantity, frequency and/ or duration of SMART Recovery attendance)
    b. Process measures/ mediators/ mechanisms [e.g. cognitive (empowerment/ self efficacy/ motivation); behavioural (e.g. active coping, including managing urges); process (e.g. therapeutic alliance)]
3. What is the evidence for the feasibility of SMART Recovery, including commentary on economic outcomes (e.g. cost, resource use, cost effectiveness), attendance and service user and/ or provider satisfaction

METHODS AND ANALYSIS

A systematic review will be conducted in accordance with the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA [30]).

Eligibility Criteria

Types of Studies

In accordance with the objective of providing an overview of the current evidence for SMART Recovery in adults with experience of substance and/ or behavioural addiction(s), liberal design criteria will be adopted. The following designs will be included - randomised controlled trials (cluster and parallel design); cross-over trial; case series or case controls; one-arm trial; non-randomised trials; cross-sectional or cohort studies and case reports. As

broad inclusion criteria may increase risk of bias, this will be assessed using the Collaboration's Risk of Bias tool, as described in the Cochrane Handbook for Systematic Review of Interventions ([31]; detailed under risk of bias assessment below). Qualitative only designs will not be included.

Types of Participants

Adults (≥ 18) attending SMART Recovery with current or past problematic experience of at least one addictive behaviour (substance and/ or behavioural), identified via patient and/ or carer subjective report, self-report assessment and/ or clinical interview. 'Problematic' will be defined in terms of subjective and/ or objective impact on functioning and/or or comparison to recommended guidelines. Participants may be residing in the community, rehabilitation, treatment and/or correctional facility.

Types of Interventions

The intervention of interest is SMART Recovery, delivered in a group format, of any intensity or frequency, by a trained facilitator. We will include all SMART Recovery approaches, including both conventional mutual aid groups delivered by a non-professional volunteer and SMART Recovery informed groups delivered by a trained professional. SMART Recovery may be a standalone intervention and/ or delivered in combination with other treatment components, including pharmacological. Interventions delivered in any setting will be included (e.g. on-line, community, hospital, rehabilitation or residential treatment centre, etc.).

Types of Comparison Conditions

The intervention may be compared to inactive (e.g. standard care, waiting list control) and/ or active controls (e.g. 12 step programs, psychological interventions) of any intensity, frequency and delivery method (e.g. individual, group, technology assisted). Evaluations of SMART Recovery without a comparator group will also be included.

Types of Outcome Measures

(1) Severity of addiction and its consequences (e.g. quantity, frequency and severity of addictive behaviour; quality of life; functioning)

(2) Treatment engagement (e.g. quantity, frequency and/ or duration of SMART Recovery attendance)

(3) Process measures/ mediators/ mechanisms [e.g. cognitive (empowerment/ self efficacy/ motivation); behavioural (e.g. active coping, including managing urges); process (e.g. therapeutic alliance)]

(4) Feasibility, including economic outcomes (e.g. cost, resource use, cost effectiveness) and/ or attendance/ satisfaction/ preference. Qualitative outcomes regarding participant and/ or provider satisfaction will be reported as described.

Outcomes may be clinician and/or patient rated; assessed by objective and/ or subjective indices (e.g. blood, urine, actigraph, questionnaire, monitoring form/ diary) with or without collateral information (e.g. using a family member to validate use) and of any time frame (e.g. baseline, short and/ or medium and/ or long term follow-up).

Information Sources

Search strategy

Consistent with methods detailed in Cochrane Guidelines for systematic reviews[31] the search strategy will be conducted as follows. First, in May 2015 we consulted with a qualified librarian and identified seven relevant scientific electronic databases (MEDLINE; Pubmed; EMBASE; Cinahl Complete; Psychinfo; Central) and four electronic non-scientific databases (Google Scholar; Virginia Commonwealth University; Project Cork; Prevention, Information and Evidence Library) to search. Search terms related to SMART Recovery will be combined with addiction related search terms and then outcome related search terms (Attachment 1 for the full MEDLINE search strategy).

Abstract, title, key words and subject headings specific to each of the identified database will be searched. All subject headings will be exploded so that narrower terms are included. No limits will be placed on publication year. Publications must be available in English. Reference lists of identified publications will be hand searched to identify any

additional publications. All publications will be organised in reference manager Endnote. The searches will be re-run just before final analyses and further studies retrieved for inclusion. All searches will be performed by AKB.

Classification of studies

The titles and abstracts of identified references will be classified in a three-step process.

Step 1: Identification of studies for exclusion

AKB will review the titles and/or abstracts of identified references and exclude articles if they: a) are duplicates, b) do not focus on adults with a substance and/ or behavioural addiction, c) do not focus on SMART Recovery, d) if the outcomes, process and/ or predictor variables do not include or specifically relate to SMART Recovery or e) are not journal articles, reports, book chapters or newsletter articles. If eligibility is unclear from the title and/ or abstract, the full text article will be accessed and assessed.

Step 2: Classification of studies

The abstracts and/ or full text of the remaining studies will be examined by AKB to identify studies that are (i) *Evaluation*, defined as an evaluation of SMART Recovery as per the PICO criteria outlined above; (ii) *Reviews*, including summaries, descriptive, critical and/ or systematic reviews; *Discussion*, defined as general discussion of SMART Recovery, including its development, principles, methods and implementation. References that are not evaluation, review or discussion papers (e.g. treatment manuals) will classified as 'Other'.

Step 3: Cross Checking

Publications from step two will be cross-checked by having a research assistant blinded to the results of the initial classification, reclassify the publications. In case of disagreement, the final classification will be made by consensus, with the involvement of AB. The articles excluded in step one will not be cross-checked because they will not be relevant

to the review. The evaluation studies identified in step two will retained for further examination.

Data Extraction from Evaluation Studies

Data extraction will be performed by AKB and checked by EF. Extraction forms will be piloted on several papers and modified as needed before use. When multiple reports of the same study are identified (e.g. related journal articles, conference proceedings which are then published), data from each report will be extracted separately and then combined across multiple data collection forms. In accordance with Cochrane Guidelines methodological critique and assessment of risk of bias will be performed independently by two raters (AKB and EF) and judgements reached by consensus. In the event of disagreement, final ratings will be made via consensus with a third independent rater, (following discussion with AB). The presence and resolution of any disagreements will be carefully recorded (i.e. original and consensus ratings) to allow for assessment of reliability of coding. In the event that inadequate trial details are reported, study authors will be contacted on no more than two occasions to obtain further information.

To enable methodological critique of both observational research and RCTs, criteria for data extraction will be adapted from the Downs and Black Scale[32] and the Cochrane Handbook for Systematic Reviews[31] and include:

(1) Participant information, including n-values at each stage of the study (and reasons for non-participation), treatment setting, eligibility criteria, descriptive data including age, gender, ethnicity, socio-economic status, diagnostic criteria, treatment history

(2) Methods, including study design, country, setting(s), methodological limitations reported, methodological limitations observed (e.g. recruitment allocation and data collection methods; blinding; comparability of groups at baseline; appropriateness of analysis methods; bias/ selective reporting)

(3) Interventions, including number of groups, duration of treatment (number, frequency and duration of SMART Recovery and any additional treatment components), delivery method(s; including professional vs. peer facilitation), description of control intervention(s)

(4) Primary and secondary outcomes, including data collection sources/ methods, percentage of treatment sessions attended, other process measures/ mediators/ mechanisms, economic outcomes, satisfaction related outcomes, follow-up period (short vs. medium vs. long-term follow-up; defined as 1-6; 7-12 and >12 months after intervention completion, respectively).

(5) Results, including severity of addiction and its consequences, treatment engagement, process measures/ mediators/ mechanisms, economic outcomes and patient satisfaction collected at all available follow-up time points.

See Attachment 2 for proposed data extraction forms (to be managed using Microsoft Excel).

Methodological Critique of Evaluation Research

To provide a thorough overview of the literature we will implement procedures to evaluate the quality of both observational studies and RCTs. A narrative synthesis of the findings from the included studies will be reported, structured around intervention type and content, population characteristics, and outcomes. In order to better inform research and clinical care, we intend to describe the treatment context (e.g. SMART Recovery alone vs. additional pharmacological and/ or non-pharmacological support; professionally managed vs. peer operated community groups) and whether the studies target particular addictive behaviours (e.g. alcohol, smoking, illicit substances, other addictive behaviours) and/ or clinical presentations (e.g. addiction only vs. dual diagnosis). This qualitative review will be supplemented with the following quantitative measures.

For observational studies, methodological quality will be assessed against the Downs and Black Scale[31]. Criteria will be assigned a yes (1 point); no (0 points); or unclear (0

points) rating. All criteria will have the same weight, and a quality score ranging from 0 to 27 points will be calculated for each study.

For RCTs, methodological quality will be assessed against the eleven item Physiotherapy Evidence Database (PEDro) scale[33]. Consistent with published reviews of psychological interventions [e.g. 34-35] two items regarding blinding of subjects and therapists will not be scored, as these criteria are not appropriate for the studies under review. The remaining nine criteria will be assigned a yes (1 point) or no (0 points) rating, and a quality score ranging from 0 to 8 points will be calculated for each study (as item one is not included in the quality score; [33]).

Risk of bias (within and across studies) will also be assessed using the Collaboration's Risk of Bias tool, as described in the *Cochrane Handbook for Systematic Review of Interventions* [31]. We will judge each item as being high, low or unclear risk, as per the criteria provided by Higgins and Green[31] and provide a quote from the study report and a justification for our judgement for each item in the risk of bias table. Given that growing empirical evidence suggests that sequence generation and allocation concealment are particularly important potential sources of bias, studies will be deemed to be at the highest risk of bias if either item is scored as 'high' or 'unclear'.

Measures of Treatment Effect

A narrative synthesis of the findings from the included studies will be reported, structured around intervention type and content, population characteristics, and outcomes. Where possible, 'Summary of findings' (SOF) tables will be generated for each comparison (e.g. Pharmacological/ psychological treatment alone vs Pharmacological/ psychological treatment plus SMART Recovery; SMART Recovery vs other mutual aid support groups; SMART Recovery vs active treatment; SMART Recovery vs inactive control). SOF tables will provide key information regarding evidence quality, the magnitude of effect of the interventions examined (i.e. within and between groups effect sizes), and a summary of available data on the outcome variables defined above.

Dichotomous Outcome Measures

When data are available, a risk ratio (RR) and its 95% confidence interval will be provided for the primary outcome of each trial. RR has been selected in preference to odds ratios as evidence suggests that RR is more intuitive[36] and clinicians tend to misinterpret odds ratios as RR[37].

Continuous Outcome Measures

When data are available, between-groups effect sizes will be calculated according to Cohen's formula, to allow for comparison across studies. Effect sizes will be interpreted according to published guidelines, where 0.2-0.49 is defined as a small effect size, 0.5-0.79 is moderate and greater than 0.8 is large.

A study will be considered to have a positive outcome if at least 50% of reported outcomes demonstrate a between group difference in favour of SMART Recovery at the end of the intervention. Positive maintenance outcome(s) will be evidenced when this effect is also evident at short and/ or medium and/ or long-term follow-up (defined as 1-6; 7-12 and >12 months after intervention completion, respectively). We anticipate there will be limited scope for meta-analysis due to the range of different outcome measures.

ETHICS AND DISSEMINATION

As no primary data collection will be undertaken, no formal ethical assessment is required. We plan to present the findings of this systematic review for peer-review in an appropriate journal. We also intend to present to clinicians and researchers at appropriate conferences, including preliminary findings to the Australasian Professional Society on Alcohol & other Drugs in November 2015.

ABOUT THE ARTICLE

Authors' contributions

Dr Beck is the guarantor of the review, wrote the protocol for the systematic review, performed the preliminary searches, will perform data extraction, conduct quality assessments and draft the systematic review paper. Ms Forbes will cross-check data extraction and perform independent quality ratings. All other authors made substantial contributions to conception and design of the systematic review and, as needed, will assist Dr Beck & Ms Forbes to resolve any discrepancies regarding study inclusion, data extraction and quality ratings. All authors offered critical revisions to the protocol manuscript and will offer critical revisions for the systematic review manuscript.

Funding Statement

Funding support for the conduct of this review has been provided by the NHMRC Centre of Research Excellence for Mental Health and Substance Use. The funder has no involvement in developing this protocol.

Competing Interests

Dr Beck and Ms Forbes have no competing interests to declare. Prof Baker, Dr Kelly, Prof Deane, Prof Shakeshaft and Prof Kelly are all members of the SMART Recovery Australia Research Advisory Committee. Prof Baker is a Smart Recovery Australia Board Member. Mr David Hunt is employed by SMART Recovery as the area coordinator for South Australia, Tasmania and Victoria.

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Attachment 1.
Medline Search Strategy

Date	Database	Search Strategy	Notes
27.05.15 (Prelim Search)	Medline	"SMART Recovery" OR "Self Management And Recovery Training" OR SMART Adj Recovery [All fields] AND (alcoholism[MH] OR alcohol*[TIAB]) OR (alcohol-related disorders[MH] OR alcohol related disorder[TIAB]) OR (alcohol abuse [TIAB]) OR (alcohol dependence [TIAB]) OR (substance-related disorder[MH] OR substance use disorder[TIAB]) OR (substance abuse[TIAB]) OR (substance dependen*[TIAB]) OR (gambling[MH] OR gambling [TIAB]) (Addictive behavi*r [MH] OR Addictive behav*r [TIAB]) OR (addict* [TIAB]) AND (addiction severity [TIAB]) OR (recurrence[MH] OR recurrence[TIAB]) OR (relapse[TIAB]) OR (alcohol drinking[MH] OR alcohol drinking[TIAB]) OR (alcohol consumption[TIAB]) OR (substance us* [TIAB]) OR (alcohol abstinen*[MH] OR alcohol abstinen* [TIAB]) OR (abstinen*[TIAB]) OR (harm reduction[MH] OR harm reduction [TIAB]) OR (dollars lost [TIAB]) OR (expenditure [TIAB]) OR (hours spent [TIAB]) OR (time spent [TIAB]) OR (patient compliance[MH] OR patient compliance[TIAB] OR adherence[TIAB]) OR (patient participation[MH] OR patient participation [TIAB] OR participation[TIAB]) OR (attendance[TIAB]) OR (engagement[TIAB]) OR (health expenditures[MH] OR health expenditures [TIAB])	Limited to articles available in English

Attachment Two.

Proposed data extraction forms (managed in Microsoft Excel)

Participant information										
n-values (at each study stage & reasons for non-participation)	**Recruitment source**	**Mean age**	**Gender**	**Ethnicity**	**socio-economic status, education and marital status**	**Diagnoses included and how those diagnoses were made**	**Clinical status (acute, post acute, remission etc) and/ or treatment history**	**Stage (e.g. first episode vs. early vs. persistent)**	**Inclusion criteria/ Clinical focus of patients recruited (e.g. negative symptoms, positive symptoms, treatment-resistant illnesses)**	**Exclusion criteria (esp mental illness)**

Methods				
Country	**Study Design**	**Blinded to allocation/ assessment?**	**Methodological limitations reported in the study**	**Other methodological limitations - e.g. recruitment, allocation and data collection methods; blinding; comparability of groups at baseline; appropriateness of analysis methods (i.e. controlling for confounding, analysis of subgroups/ interactions and how missing data was handled)**

Intervention						
Number of groups	SMART Recovery alone vs multi-component? (0 = alone; 1 = multi-component 2= unclear)	Description of SMART Recovery intervention (including number, frequency and duration of SMART Recovery and any additional intervention components),	SMART Recovery delivery method(s), including who and how - detail SMART Recovery and any additional intervention components	Description of comparsion condition(s) (including number, frequency and duration of support offered - detail SMART Recovery and any additional components)	Control delivery method(s), including who and how - detail primary intervention and any additional intervention components;	Notes

Outcomes (for each, document data collection source and methods - N/A if not assessed)							
Primary/ secondary outcomes clearly defined?	Primary Outcomes	Secondary Outcomes	Process measures/ mediators/ mechanisms measured	Economic outcomes measured	Satisfaction related qualitative outcomes measured	Follow-up periods (short 1-6; medium 7-12; long >12 months post intervention completion)	Notes

Results

SEVERITY OF ADDICTION & ITS CONSEQUENCES										
Alcohol	Substance	QOL	Functioning	Hospitalisation	Treatment engagement outcomes	Process measures/ mediators/ mechanisms	Economic outcomes	Satisfaction related outcomes measured	Clinicial significance of results - qualitative commentary (any effect sizes should be reported under outcomes)	Notes

PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015 checklist: recommended items to address in a systematic review protocol*

Section and topic	Item No	Checklist item	
ADMINISTRATIVE INFORMATION			
Title:			
Identification	1a	Identify the report as a protocol of a systematic review	✓ (p1)
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	NA
Registration	2	If registered, provide the name of the registry (such as PROSPERO) and registration number	✓ (p1)
Authors:			
Contact	3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	✓ (p1)
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	✓ (p15)
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	NA
Support:			
Sources	5a	Indicate sources of financial or other support for the review	✓ (p15)
Sponsor	5b	Provide name for the review funder and/or sponsor	✓ (p15)
Role of sponsor or funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	✓ (p15)
INTRODUCTION			
Rationale	6	Describe the rationale for the review in the context of what is already known	✓ (pp3-5)
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	✓ (p6)
METHODS			
Eligibility criteria	8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	✓ (pp6-8)
Information sources	9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	✓ (pp8-9)

Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	✓ Attachment 1
Study records:			
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	✓(p9&11)
Selection process	11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	✓(pp8-11)
Data collection process	11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	✓(pp10)
Data items	12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	✓(pp10-11)
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	✓(pp8&10)
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	✓(p12)
Data synthesis	15a	Describe criteria under which study data will be quantitatively synthesised	✓(pp11-13)
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I^2, Kendall's τ)	✓(pp11-13)
	15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	✓(p12)
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	✓(pp11-13)
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	✓(p12)
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	✓(pp11-12)

*** It is strongly recommended that this checklist be read in conjunction with the PRISMA-P Explanation and Elaboration (cite when available) for important clarification on the items. Amendments to a review protocol should be tracked and dated. The copyright for PRISMA-P (including checklist) is held by the PRISMA-P Group and is distributed under a Creative Commons Attribution Licence 4.0.**

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BMJ Open

A protocol for a systematic review of evaluation research for adults who have participated in the 'SMART Recovery' Mutual Support Program

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Keywords:	Substance misuse < PSYCHIATRY, Adult psychiatry < PSYCHIATRY, STATISTICS & RESEARCH METHODS

A PROTOCOL FOR A SYSTEMATIC REVIEW OF EVALUATION RESEARCH FOR ADULTS WHO HAVE PARTICIPATED IN THE 'SMART RECOVERY' MUTUAL SUPPORT PROGRAM

Registration: PROSPERO CRD42015025574

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Keywords: Systematic review, Addiction, SMART Recovery, Mutual Aid, Self help groups

Word Count: 3044

ABSTRACT

Introduction: Self-Management and Recovery Training (SMART Recovery) offers an alternative to predominant 12-step approaches to mutual aid (e.g. Alcoholics Anonymous). Although the principles (e.g. self-efficacy) and therapeutic approaches (e.g. motivational interviewing and cognitive behavioural therapy) of SMART Recovery are evidence based, further clarity regarding the direct evidence of its effectiveness as a mutual aid package is needed. Relative to methodologically rigorous reviews supporting the efficacy of 12-step approaches, to date, reviews of SMART Recovery have been descriptive. We aim to address this gap by providing a comprehensive overview of the evidence for SMART Recovery in adults with problematic alcohol, substance and/ or behavioural addiction, including a commentary on outcomes assessed, potential mediators, feasibility (including economic outcomes) and a critical evaluation of the methods used.

Methods and Analysis: Methods are informed by the Cochrane Guidelines for Systematic Reviews and the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Statement. Six electronic peer-reviewed and four grey-literature databases have been identified. Preliminary searches have been conducted for SMART Recovery literature (liberal inclusion criteria, not restricted to RCTs, qualitative only designs excluded). Eligible 'evaluation' articles will be assessed against standardized criteria and checked by an independent assessor. The searches will be re-run just before final analyses and further studies retrieved for inclusion. A narrative synthesis of the findings will be reported, structured around intervention type and content, population characteristics, and outcomes. Where possible, 'summary of findings' tables will be generated for each comparison. When data are available, we will calculate a risk ratio and its 95% confidence interval (dichotomous outcomes) and/ or effect size according to Cohen's formula (continuous outcomes) for the primary outcome of each trial.

Ethics and Dissemination: No ethical issues are foreseen. Findings will be disseminated widely to clinicians and researchers via journal publication and conference presentation(s).

Registration Details: PROSPERO CRD42015025574

INTRODUCTION

Addiction is a widespread and serious concern. Addiction can be defined as a behaviour that is habitual, compulsive and continued despite problematic cognitive, behavioural and/ or physiological consequences[1]. Addictions formally recognised by current diagnostic systems include substance-related (alcohol, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics and anxiolytics, stimulants and tobacco) and gambling[1]. Internet gaming has recently been added as a condition warranting further study[1]. Other common and problematic behavioural addictions yet to receive diagnostic classification include shopping[2], internet[3] and sex[4]. Recent data indicates that more than 40% of Australians either smoked daily, engaged in hazardous levels of alcohol use or had used at least one illicit substance in the preceding 12 months[5]. Although prevalence estimates for many behavioural addictions are complicated by lack of standardised criteria, problem gambling is estimated to affect up to 160000 Australian Adults per year[6].

The burden of addiction is considerable. Alcohol and substance use disorders are leading causes of premature mortality and account for over 20% of the 183.9 million disability-adjusted life years lost to mental and substance use disorders worldwide[7]. In Australia, problem gamblers lose an average of $21000 per year – approximately one third of the average salary[6]. Substance and behavioural addictions also have a profound and detrimental impact on health, relationships, employment and quality of life[8,9,10]. Together, the harms from alcohol, substances and behavioural addictions such as gambling cost Australians over $28 billion per year[6,11,12].

The course of addiction is often chronic and characterised by multiple relapses[13]. However, sustained recovery is possible. Although the actual definition of recovery will vary according to the individual, the capacity to create and live a meaningful life is key[14]. Recovery oriented service provision acknowledges the importance of harnessing strengths, maximising self-determination and facilitating self-management such that an individual can recognise and take responsibility for their own wellbeing and recovery[14].

'Mutual aid' is often central to this process. 'Mutual aid' refers to social, emotional and informational support provided by, and to, group members undergoing recovery from addiction[15].

Within the addiction field, 12-step models (e.g. Alcoholics Anonymous, Narcotics Anonymous) are the largest and most researched source of mutual aid. Within this model, addiction is conceptualised as a medical and spiritual disease, with recovery reliant on relinquishing control to a higher power[16]. Systematic reviews and meta-analyses consistently demonstrate that improvement following 12-step participation is at least equivalent to that of professional interventions for adults with alcohol dependence[e.g. 17-19], and in the longer term, active participation increases the likelihood of sustained recovery[15,20]. Relative to the often time-limited format of formal treatment, mutual aid represents a mechanism for accessing ongoing, long-term support. The importance of mutual aid in promoting and sustaining recovery is also highlighted by The National Institute for Health and Care Excellence (NICE), which recommends that staff routinely provide information about and facilitate access to and engagement in mutual aid groups[21-22].

Why it is important to do this review?

Although current findings clearly support the benefits of mutual aid, much of the evidence comes from the study of 12-step models, and focuses on adults with alcohol dependence. However, less is known about the impact of mutual aid on other substance and/ or behavioral addictions. Moreover, individuals may fail to engage with 12-step groups, for example, due to a mismatch between personal beliefs and the 12-step philosophy [23-24]. Indeed, to enhance engagement, clinical guidelines advocate for tailored addiction support that accounts for individual needs and preferences [e.g. 21-22]. Choice over mutual aid support options is therefore important – especially given individual variation in presenting concerns and the definition and process of recovery. Alternatives, albeit lower in profile to the dominant 12-step model have been available for a number of years[see 18 for a review].

Self-Management and Recovery Training (SMART Recovery) is one model that is cited alongside 12-step as a recommended source of mutual aid by Australian[25-26] and international[21-22] clinical guidelines.

SMART Recovery is a not-for-profit organisation that provides group and on-line mutual aid support. Unlike 12-step groups that are often addiction specific (e.g. Alcoholics Anonymous, Narcotics Anonymous, Gamblers Anonymous), SMART Recovery groups offer support for a range of problematic behaviours, including alcohol, substance and/ or other addictive behaviours (e.g. gambling, eating, technology, pornography)[27]. SMART Recovery focuses on self-empowerment and adopts key principles (e.g. self-efficacy) and therapeutic approaches (e.g. motivational interviewing and cognitive behavioural therapy) shown to be effective in promoting recovery from addiction (see [28] for a recent review of the efficacy of these approaches and Attachment 1 for an overview of SMART Recovery principles/ strategies). Although these strategies are clearly evidence based, further clarity regarding direct evidence for the efficacy of SMART Recovery as a mutual aid package is needed.

Relative to the methodologically rigorous reviews summarising the evidence for 12-step models[e.g. 17-19] to date, reviews of SMART Recovery are descriptive. The focus tends to be on the origins, development and principles of SMART Recovery, with limited analysis of feasibility, efficacy and/ or potential mechanisms of action [e.g. 29]. Any changes in healthcare practice and policy should rely on a solid evidence base. This systematic review represents an important step, as it will comprehensively summarise the available evidence on SMART Recovery and identify areas of research need. Results will inform the public health and clinical utility of SMART Recovery as a potentially helpful recovery resource for individuals suffering from addiction disorders.

Objectives

Guided by the review questions listed below, we aim to provide a comprehensive overview of the current state of evidence for SMART Recovery in adults with experience of substance and/ or behavioural addiction(s), including a commentary on

1. Population and outcomes assessed, potential mediators and a critical evaluation of the methods used to evaluate SMART Recovery.
2. Feasibility of SMART Recovery, including economic outcomes (e.g. cost, resource use, cost effectiveness), attendance and service user and/ or provider satisfaction
3. Future research directions

Review Question

For adults with experience of substance and/ or behavioural addiction(s)

1. Does SMART Recovery result in changes to severity of addiction and its consequences (e.g. quantity, frequency and severity of addictive behaviour; quality of life; functioning)
2. Is the effect of SMART Recovery on the above listed treatment outcomes influenced by:
    a. Treatment engagement (e.g. quantity, frequency and/ or duration of SMART Recovery attendance)
    b. Process measures/ mediators/ mechanisms [e.g. cognitive (empowerment/ self efficacy/ motivation); behavioural (e.g. active coping, including managing urges); process (e.g. therapeutic alliance)]
3. What is the evidence for the feasibility of SMART Recovery, including commentary on economic outcomes (e.g. cost, resource use, cost effectiveness), attendance and service user and/ or provider satisfaction

METHODS AND ANALYSIS

A systematic review will be conducted in accordance with the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA [30]).

Eligibility Criteria

Types of Studies

In accordance with the objective of providing an overview of the current evidence for SMART Recovery in adults with experience of substance and/ or behavioural addiction(s), liberal design criteria will be adopted. The following designs will be included - randomised

controlled trials (cluster and parallel design); cross-over trial; case series or case controls; one-arm trial; non-randomised trials; cross-sectional or cohort studies and case reports. As broad inclusion criteria may increase risk of bias, this will be assessed using the Collaboration's Risk of Bias tool, as described in the Cochrane Handbook for Systematic Review of Interventions ([31]; detailed under risk of bias assessment below). Qualitative only designs will not be included.

Types of Participants

Adults (≥ 18) attending SMART Recovery with current or past problematic experience of at least one addictive behaviour (substance and/ or behavioural), identified via patient and/ or carer subjective report, self-report assessment and/ or clinical interview. 'Problematic' will be defined in terms of subjective and/ or objective impact on functioning and/or or comparison to recommended guidelines. Participants may be residing in the community, rehabilitation, treatment and/or correctional facility.

Types of Interventions

The intervention of interest is SMART Recovery, delivered in a group format, of any intensity or frequency, by a trained facilitator. We will include all SMART Recovery approaches, including both conventional mutual aid groups delivered by a non-professional volunteer and SMART Recovery informed groups delivered by a trained professional. SMART Recovery may be a standalone intervention and/ or delivered in combination with other treatment components, including pharmacological. Interventions delivered in any setting will be included (e.g. on-line, community, hospital, rehabilitation or residential treatment centre, etc.).

Types of Comparison Conditions

The intervention may be compared to inactive (e.g. standard care, waiting list control) and/ or active controls (e.g. 12 step programs, psychological interventions) of any intensity, frequency and delivery method (e.g. individual, group, technology assisted). Evaluations of SMART Recovery without a comparator group will also be included.

Types of Outcome Measures

(1) Severity of addiction and its consequences (e.g. quantity, frequency and severity of addictive behaviour; quality of life; functioning)

(2) Treatment engagement (e.g. quantity, frequency and/ or duration of SMART Recovery attendance)

(3) Process measures/ mediators/ mechanisms [e.g. cognitive (empowerment/ self efficacy/ motivation); behavioural (e.g. active coping, including managing urges); process (e.g. therapeutic alliance)]

(4) Feasibility, including economic outcomes (e.g. cost, resource use, cost effectiveness) and/ or attendance/ satisfaction/ preference. Qualitative outcomes regarding participant and/ or provider satisfaction will be reported as described.

Outcomes may be clinician and/or patient rated; assessed by objective and/ or subjective indices (e.g. blood, urine, actigraph, questionnaire, monitoring form/ diary) with or without collateral information (e.g. using a family member to validate use) and of any time frame (e.g. baseline, short and/ or medium and/ or long term follow-up).

Information Sources

Search strategy

Consistent with methods detailed in Cochrane Guidelines for systematic reviews[31] the search strategy will be conducted as follows. First, in May 2015 we consulted with a qualified librarian and identified seven relevant scientific electronic databases (MEDLINE; Pubmed; EMBASE; Cinahl Complete; Psychinfo; Central) and four electronic non-scientific databases (Google Scholar; Virginia Commonwealth University; Project Cork; Prevention, Information and Evidence Library) to search. Search terms related to SMART Recovery will be combined with addiction related search terms and then outcome related search terms (Attachment 2 for the full MEDLINE search strategy).

Abstract, title, key words and subject headings specific to each of the identified database will be searched. All subject headings will be exploded so that narrower terms are included. No limits will be placed on publication year. Publications must be available in

English. Reference lists of identified publications will be hand searched to identify any additional publications. All publications will be organised in reference manager Endnote. The searches will be re-run just before final analyses and further studies retrieved for inclusion. All searches will be performed by AKB.

Classification of studies

The titles and abstracts of identified references will be classified in a three-step process.

Step 1: Identification of studies for exclusion

AKB will review the titles and/or abstracts of identified references and exclude articles if they: a) are duplicates, b) do not focus on adults with a substance and/ or behavioural addiction, c) do not focus on SMART Recovery, d) if the outcomes, process and/ or predictor variables do not include or specifically relate to SMART Recovery or e) are not journal articles, reports, book chapters or newsletter articles. If eligibility is unclear from the title and/ or abstract, the full text article will be accessed and assessed.

Step 2: Classification of studies

The abstracts and/ or full text of the remaining studies will be examined by AKB to identify studies that are (i) *Evaluation*, defined as an evaluation of SMART Recovery as per the PICO criteria outlined above; (ii) *Reviews*, including summaries, descriptive, critical and/ or systematic reviews; *Discussion*, defined as general discussion of SMART Recovery, including its development, principles, methods and implementation. References that are not evaluation, review or discussion papers (e.g. treatment manuals) will classified as 'Other'.

Step 3: Cross Checking

Publications from step two will be cross-checked by having a research assistant blinded to the results of the initial classification, reclassify the publications. In case of disagreement, the final classification will be made by consensus, with the involvement of AB.

The articles excluded in step one will not be cross-checked because they will not be relevant to the review. The evaluation studies identified in step two will retained for further examination.

Data Extraction from Evaluation Studies

Data extraction will be performed by AKB and checked by EF. Extraction forms will be piloted on several papers and modified as needed before use. When multiple reports of the same study are identified (e.g. related journal articles, conference proceedings which are then published), data from each report will be extracted separately and then combined across multiple data collection forms. In accordance with Cochrane Guidelines methodological critique and assessment of risk of bias will be performed independently by two raters (AKB and EF) and judgements reached by consensus. In the event of disagreement, final ratings will be made via consensus with a third independent rater, (following discussion with AB). The presence and resolution of any disagreements will be carefully recorded (i.e. original and consensus ratings) to allow for assessment of reliability of coding. In the event that inadequate trial details are reported, study authors will be contacted on no more than two occasions to obtain further information.

To enable methodological critique of both observational research and RCTs, criteria for data extraction will be adapted from the Downs and Black Scale[32] and the Cochrane Handbook for Systematic Reviews[31] and include:

(1) Participant information, including n-values at each stage of the study (and reasons for non-participation), treatment setting, eligibility criteria, descriptive data including age, gender, ethnicity, socio-economic status, diagnostic criteria, treatment history

(2) Methods, including study design, country, setting(s), methodological limitations reported, methodological limitations observed (e.g. recruitment allocation and data collection methods; blinding; comparability of groups at baseline; appropriateness of analysis methods; bias/ selective reporting)

(3) Interventions, including number of groups, duration of treatment (number, frequency and duration of SMART Recovery and any additional treatment components), delivery method(s; including professional vs. peer facilitation), description of control intervention(s)

(4) Primary and secondary outcomes, including data collection sources/ methods, percentage of treatment sessions attended, other process measures/ mediators/ mechanisms, economic outcomes, satisfaction related outcomes, follow-up period (short vs. medium vs. long-term follow-up; defined as 1-6; 7-12 and >12 months after intervention completion, respectively).

(5) Results, including severity of addiction and its consequences, treatment engagement, process measures/ mediators/ mechanisms, economic outcomes and patient satisfaction collected at all available follow-up time points.

See Attachment 3 for proposed data extraction forms (to be managed using Microsoft Excel).

Methodological Critique of Evaluation Research

To provide a thorough overview of the literature we will implement procedures to evaluate the quality of both observational studies and RCTs. A narrative synthesis of the findings from the included studies will be reported, structured around intervention type and content, population characteristics, and outcomes. In order to better inform research and clinical care, we intend to describe the treatment context (e.g. SMART Recovery alone vs. additional pharmacological and/ or non-pharmacological support; professionally managed vs. peer operated community groups) and whether the studies target particular addictive behaviours (e.g. alcohol, smoking, illicit substances, other addictive behaviours) and/ or clinical presentations (e.g. addiction only vs. dual diagnosis). This qualitative review will be supplemented with the following quantitative measures.

For observational studies, methodological quality will be assessed against the Downs and Black Scale[31]. Criteria will be assigned a yes (1 point); no (0 points); or unclear (0

points) rating. All criteria will have the same weight, and a quality score ranging from 0 to 27 points will be calculated for each study.

For RCTs, methodological quality will be assessed against the eleven item Physiotherapy Evidence Database (PEDro) scale[33]. Consistent with published reviews of psychological interventions [e.g. 34-35] two items regarding blinding of subjects and therapists will not be scored, as these criteria are not appropriate for the studies under review. The remaining nine criteria will be assigned a yes (1 point) or no (0 points) rating, and a quality score ranging from 0 to 8 points will be calculated for each study (as item one is not included in the quality score; [33]).

Risk of bias (within and across studies) will also be assessed using the Collaboration's Risk of Bias tool, as described in the *Cochrane Handbook for Systematic Review of Interventions* [31]. We will judge each item as being high, low or unclear risk, as per the criteria provided by Higgins and Green[31] and provide a quote from the study report and a justification for our judgement for each item in the risk of bias table. Given that growing empirical evidence suggests that sequence generation and allocation concealment are particularly important potential sources of bias, studies will be deemed to be at the highest risk of bias if either item is scored as 'high' or 'unclear'.

Measures of Treatment Effect

A narrative synthesis of the findings from the included studies will be reported, structured around intervention type and content, population characteristics, and outcomes. Where possible, 'Summary of findings' (SOF) tables will be generated for each comparison (e.g. Pharmacological/ psychological treatment alone vs Pharmacological/ psychological treatment plus SMART Recovery; SMART Recovery vs other mutual aid support groups; SMART Recovery vs active treatment; SMART Recovery vs inactive control). SOF tables will provide key information regarding evidence quality, the magnitude of effect of the interventions examined (i.e. within and between groups effect sizes), and a summary of available data on the outcome variables defined above.

Dichotomous Outcome Measures

When data are available, a risk ratio (RR) and its 95% confidence interval will be provided for the primary outcome of each trial. RR has been selected in preference to odds ratios as evidence suggests that RR is more intuitive[36] and clinicians tend to misinterpret odds ratios as RR[37].

Continuous Outcome Measures

When data are available, between-groups effect sizes will be calculated according to Cohen's formula, to allow for comparison across studies. Effect sizes will be interpreted according to published guidelines, where 0.2-0.49 is defined as a small effect size, 0.5-0.79 is moderate and greater than 0.8 is large.

A study will be considered to have a positive outcome if at least 50% of reported outcomes demonstrate a between group difference in favour of SMART Recovery at the end of the intervention. Positive maintenance outcome(s) will be evidenced when this effect is also evident at short and/ or medium and/ or long-term follow-up (defined as 1-6; 7-12 and >12 months after intervention completion, respectively). We anticipate there will be limited scope for meta-analysis due to the range of different outcome measures.

ETHICS AND DISSEMINATION

As no primary data collection will be undertaken, no formal ethical assessment is required. We plan to present the findings of this systematic review for peer-review in an appropriate journal. We also intend to present to clinicians and researchers at appropriate conferences, including preliminary findings to the Australasian Professional Society on Alcohol & other Drugs in November 2015.

ABOUT THE ARTICLE

Authors' contributions

Dr Beck is the guarantor of the review, wrote the protocol for the systematic review, performed the preliminary searches, will perform data extraction, conduct quality assessments and draft the systematic review paper. Ms Forbes will cross-check data extraction and perform independent quality ratings. All other authors made substantial contributions to conception and design of the systematic review and, as needed, will assist Dr Beck & Ms Forbes to resolve any discrepancies regarding study inclusion, data extraction and quality ratings. All authors offered critical revisions to the protocol manuscript and will offer critical revisions for the systematic review manuscript.

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Competing Interests

Dr Beck and Ms Forbes have no competing interests to declare. Prof Baker, Dr Kelly, Prof Deane, Prof Shakeshaft and Prof Kelly are all members of the SMART Recovery Australia Research Advisory Committee. Prof Baker is a Smart Recovery Australia Board Member. Mr David Hunt is employed by SMART Recovery as the area coordinator for South Australia, Tasmania and Victoria.

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Attachment One: SMART Recovery Principles and Strategies

SMART Recovery Australia

COME WITH A PURPOSE, LEAVE WITH A PLAN

What is SMART Recovery?

SMART (Self Management and Recovery Training) Recovery is a free group program assisting any problematic behaviours, including drugs, alcohol, cigarettes, gambling, food, shopping, Internet and others.

Guided by trained peers and professionals, participants come to help themselves and help each other using a variety of cognitive behaviour therapy (CBT) and motivational tools and techniques.

SMART Recovery is a registered health promotion charity and a non-profit organisation

(02) 9373 5100
smartrecovery@srau.org.au
www.smartrecoveryaustralia.com.au

What to expect

- Weekly meetings
- 90minute duration
- Run by trained facilitator
- Focus is on the addictive behaviour and not on the substance itself
- Goal setting: Set your own achievable plan for the week ahead
- Concentrate on present an future, not on the past (no life stories!)
- Evidence-based tools and techniques (cognitive behaviour therapy (CBT), Motivational Interviewing)

Meeting guidelines

- Respect
- Confidentiality
- One person talking at a time
- Non judgmental
- No 'drug talk'
- Mobile phone off
- No intoxication
- Remain in room for the duration of the meeting
- No children allowed

Meeting format

- Check-in (how has your previous week been?)
- Discussion (using CBT tools & techniques)
- Sharing solutions (mutual aid)
- Checkout (plan for next seven days)

4 Point program

1. Enhancing and maintaining motivation
2. Coping with urges
3. Problem Solving
4. Lifestyle balance

Some of the tools and techniques to help you manage addictive behaviours include:

- Pros and cons of problematic behaviour
- Triggers, beliefs and consequences
- Craving and urges
- Goal setting
- Areas of Importance

SMART Recovery online

Visit www.smartrecoveryaustralia.com.au to:

- Locate your nearest meeting
- Contact head off
- Learn more about the program
- Purchase manuals
- Download worksheets and resources
- Join the Online Community

How To Become A Meeting Facilitator

SMART Recovery Australia provides professional training courses for peers and professionals wanting to become SMART Recovery facilitators and start new groups in the community.

If you are interested in becoming a SMART Recovery meeting facilitator or would like more information, please contact head office.

Attachment 2.
Medline Search Strategy

Date	Database	Search Strategy	Notes
27.05.15 (Prelim Search)	Medline	"SMART Recovery" OR "Self Management And Recovery Training" OR SMART Adj Recovery [All fields] AND (alcoholism[MH] OR alcohol*[TIAB]) OR (alcohol-related disorders[MH] OR alcohol related disorder[TIAB]) OR (alcohol abuse [TIAB]) OR (alcohol dependence [TIAB]) OR (substance-related disorder[MH] OR substance use disorder[TIAB]) OR (substance abuse[TIAB]) OR (substance dependen*[TIAB]) OR (gambling[MH] OR gambling [TIAB]) (Addictive behavi*r [MH] OR Addictive behav*r [TIAB]) OR (addict* [TIAB]) AND (addiction severity [TIAB]) OR (recurrence[MH] OR recurrence[TIAB]) OR (relapse[TIAB]) OR (alcohol drinking[MH] OR alcohol drinking[TIAB]) OR (alcohol consumption[TIAB]) OR (substance us* [TIAB]) OR (alcohol abstinen*[MH] OR alcohol abstinen* [TIAB]) OR (abstinen*[TIAB]) OR (harm reduction[MH] OR harm reduction [TIAB]) OR (dollars lost [TIAB]) OR (expenditure [TIAB]) OR (hours spent [TIAB]) OR (time spent [TIAB]) OR (patient compliance[MH] OR patient compliance[TIAB] OR adherence[TIAB]) OR (patient participation[MH] OR patient participation [TIAB] OR participation[TIAB]) OR (attendance[TIAB]) OR (engagement[TIAB]) OR (health expenditures[MH] OR health expenditures [TIAB])	Limited to articles available in English

Attachment Three.

Proposed data extraction forms (managed in Microsoft Excel)

Participant information										
n-values (at each study stage & reasons for non-participation)	Recruitment source	Mean age	Gender	Ethnicity	socio-economic status, education and marital status	Diagnoses included and how those diagnoses were made	Clinical status (acute, post acute, remission etc) and/ or treatment history	Stage (e.g. first episode vs. early illness vs. persistent)	Inclusion criteria/ Clinical focus of patients recruited (e.g. negative symptoms, positive symptoms, treatment-resistant illnesses)	Exclusion criteria (esp mental illness)

Methods				
Country	Study Design	Blinded to allocation/ assessment?	Methodological limitations reported in the study	Other methodological limitations - e.g. recruitment, allocation and data collection methods; blinding; comparability of groups at baseline; appropriateness of analysis methods (i.e. controlling for confounding, analysis of subgroups/ interactions and how missing data was handled)

Intervention						
Number of groups	SMART Recovery alone vs multi-component? (0 = alone; 1 = multi-component 2= unclear)	Description of SMART Recovery intervention (including number, frequency and duration of SMART Recovery and any additional intervention components),	SMART Recovery delivery method(s), including who and how - detail SMART Recovery and any additional intervention components	Description of comparsion condition(s) (including number, frequency and duration of support offered - detail SMART Recovery and any additional components)	Control delivery method(s), including who and how - detail primary intervention and any additional intervention components;	Notes

Outcomes (for each, document data collection source and methods - N/A if not assessed)							
Primary/ secondary outcomes clearly defined?	Primary Outcomes	Secondary Outcomes	Process measures/ mediators/ mechanisms measured	Economic outcomes measured	Satisfaction related qualitative outcomes measured	Follow-up periods (short 1-6; medium 7-12; long >12 months post intervention completion)	Notes

Results										
SEVERITY OF ADDICTION & ITS CONSEQUENCES										
Alcohol	Substance	QOL	Functioning	Hospitalisation	Treatment engagement outcomes	Process measures/ mediators/ mechanisms	Economic outcomes	Satisfaction related outcomes measured	Clinicial significance of results - qualitative commentary (any effect sizes should be reported under outcomes)	Notes

PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015 checklist: recommended items to address in a systematic review protocol*

Section and topic	Item No	Checklist item	
ADMINISTRATIVE INFORMATION			
Title:			
Identification	1a	Identify the report as a protocol of a systematic review	✓ (p1)
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	NA
Registration	2	If registered, provide the name of the registry (such as PROSPERO) and registration number	✓ (p1)
Authors:			
Contact	3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	✓ (p1)
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	✓ (p15)
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	NA
Support:			
Sources	5a	Indicate sources of financial or other support for the review	✓ (p15)
Sponsor	5b	Provide name for the review funder and/or sponsor	✓ (p15)
Role of sponsor or funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	✓ (p15)
INTRODUCTION			
Rationale	6	Describe the rationale for the review in the context of what is already known	✓ (pp3-5)
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	✓ (p6)
METHODS			
Eligibility criteria	8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	✓ (pp6-8)
Information sources	9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	✓ (pp8-9)

Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	✓ Attachment 1
Study records:			
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	✓(p9&11)
Selection process	11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	✓(pp8-11)
Data collection process	11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	✓(pp10)
Data items	12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	✓(pp10-11)
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	✓(pp8&10)
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	✓(p12)
Data synthesis	15a	Describe criteria under which study data will be quantitatively synthesised	✓(pp11-13)
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I^2, Kendall's τ)	✓(pp11-13)
	15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	✓(p12)
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	✓(pp11-13)
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	✓(p12)
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	✓(pp11-12)

*** It is strongly recommended that this checklist be read in conjunction with the PRISMA-P Explanation and Elaboration (cite when available) for important clarification on the items. Amendments to a review protocol should be tracked and dated. The copyright for PRISMA-P (including checklist) is held by the PRISMA-P Group and is distributed under a Creative Commons Attribution Licence 4.0.**

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