

Addiction professionals' and substance abuse patients' attitudes towards and usage of 12-step-based self-help groups

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“In the practice of mutual aid, which we can retrace to the earliest beginnings of evolution, we thus find the positive and undoubted origin of our ethical conceptions; and we can affirm that in the ethical progress of man, mutual support – not mutual struggle – has had the leading part. In its wide extension, even at the present time, we also see the best guarantee of a still loftier evolution of our race”.¹

¹ Kropotkin P. Mutual aid - a factor of evolution, Mineola, NY, U.S.: Dover Publications, Inc.; 2006, p. 247 (originally published in 1902).

Contents

Abstract	1
Norwegian summary (norsk sammendrag).....	5
Preface	10
Acknowledgements	12
Abbreviations	14
Definitions	15
List of papers	17
1.0 Introduction.....	18
1.1 Short description of the twelve-step groups	19
1.2 Evidence for TSG usefulness.....	21
1.3 The relationship between TSGs and clinical services	23
1.4 Substance abusers' relationships with TSGs	27
1.5 The rationale for the studies.....	29
1.6 Research objectives.....	30
2.0 Materials and methods	31
2.1 Design	31
2.2 Study instruments.....	34
2.3 Samples	39
2.4 Data analyses	41
2.5 Ethics	42
3.0 Results.....	44
4.0 Methodological considerations	50
4.1 Design	50
4.2 Sample and selection bias	50
4.3 Information bias.....	53
4.4 Strengths.....	57
4.5 External validity	58
5.0 Discussion of results.....	60
6.0 Future research	74
7.0 Implications.....	75
8.0 Conclusions	76
References.....	78
Papers.....	88
Appendix	

Figures

<i>Figure 1</i>	Patient flowchart for the detox unit.....	33
<i>Figure 2</i>	Patients' earlier experiences with TSGs as the frequency distribution of the number of lifetime meetings	45
<i>Figure 3</i>	Addiction professionals' referral practices and their association with attitudes towards and knowledge of TSGs	48

Tables

Table 1	Key demographic variables of responders and non-responders in the addiction professionals study	40
Table 2	Sample characteristics of respondents in the patient study.....	41
Table 3	TSG involvement items reported by those with previous TSG experience	46

Abstract

Background

This thesis comprises two different studies that examine addiction professionals' and patients' perceptions and usage of the most common self-help groups (SHGs) for addiction in Norway, the Twelve Step groups (TSGs; i.e., Alcoholics Anonymous and Narcotics Anonymous). Addiction is considered to be a chronic disorder with high relapse tendency. For addicted individuals, TSGs offer freely available long-term support, and participation in such groups after formal treatment has been associated with improved outcomes in several studies. In some countries this form of "after-care" is considered to be a valuable and positive adjunct to formal substance abuse treatment. Though Norwegian health authorities seek to promote self-help participation, the pre-study impression was that these community-based recovery fellowships are not utilized at a high level, but a structured assessment of the use of TSGs within the Norwegian addiction treatment field has not been initiated previously. As a part of the addiction professionals study, a cross-cultural comparison with addiction professionals from the U.S. was performed. In U.S. addiction treatment services, the use of TSGs as a complement to professional services is considered normal, which put the findings from Norwegian professionals into perspective.

Study aims

The overall aims of this thesis were to investigate addiction professionals' and patients' attitudes towards and knowledge of TSGs in settings where they would be expected to be relatively unfamiliar with these groups. In addition, the utilization of TSGs among addiction professionals (TSG referrals) and patients (TSG attendance and involvement) was examined. Finally, the thesis aimed to examine potential barriers to attendance and engagement in these fellowships.

Materials and methods

Both of the studies had cross-sectional designs. The addiction professionals study was conducted in mid-2008 using a questionnaire originally developed in the U.S. to explore clinicians' attitudes/beliefs about and perceived obstacles to client participation in TSGs. The anonymous survey was self-administered.

Respondents were addiction professionals in Health Region South, Norway, and the return rate was 80% (N = 291). The U.S. sample (N = 100) in the cross-cultural comparison was obtained from historical data (2001).

Respondents in the patient study (N = 139, 89% of eligible respondents) were included at the detoxification ward of the Addiction Unit, Sørlandet Hospital in Kristiansand, Norway from September 2008 to August 2010. Data were collected on issues including patients' perceived benefits and barriers to TSGs and their intention to participate in these fellowships after discharge. A Likert-type intention scale was used; in the analysis categorized to low, moderate, or high intentions.

Results

Norwegian addiction professionals reported moderately positive attitudes towards TSGs, but these attitudes did not foster many TSG referrals; only 15% of the professionals' current patients were actively motivated to attend TSGs. Thirty-eight percent of the professionals contributed to the observed referral rates, meaning that 62% did not refer any patients at all. The level of TSG knowledge and self-efficacy for making referrals were low. Respondent integration of the 12-steps into their own treatment work, higher self-efficacy for making a successful referral, and greater TSG knowledge were associated with referring patients to TSGs.

In terms of perceived obstacles to TSG participation, six of nine statements on the 'TSG obstacle scale' were endorsed by half or more of the Norwegian professionals. Compared with U.S. addiction professionals, the most notable sample difference on the 'obstacle scale' was in regards to the religious aspects of TSGs (i.e., the "higher power" concept), with more than twice as many Norwegian addiction professionals compared to those in the U.S. (70% versus 29%) viewing the religious aspect of TSGs as a potential obstacle to participation. As expected, the U.S. professionals had consistently more positive views about the role of TSGs

in their treatment system and reported greater self-rated belief in their own ability to make successful TSG referrals.

In the patient study, less than half (48%) of participating patients entering detox had ever attended TSGs. Nevertheless, the majority of patients, between 55% and 78%, agreed with each of five statements concerning the perceived benefits of TSGs. However, only 40% reported high intention to participate in TSGs after discharge. Thirty-one percent of patients scored low and 29% had moderate intention. The notions that participation in TSGs could instill the courage to change and provide abstinence-specific support were the constructs most strongly correlated with high intention to participate in TSGs following detox. Perceived barrier items were endorsed by a maximum of 37% or fewer respondents.

In a multivariate analysis, patients with a high intention differed from those with moderate intention only by more perceived benefits and not in terms of perceived barriers to TSGs. In contrast, the 'low' intention group was categorized by more perceived barriers and not recognizing possible TSG benefits.

Discussion

Although the addiction professionals had moderate positive attitudes towards TSGs, obstacle items were endorsed by a large proportion of respondents, suggesting a high degree of ambivalence towards TSGs. The lack of belief in one's own ability to make TSG referrals and the low referral rate point to the need for education and training to increase awareness and knowledge about TSGs among addiction professionals unfamiliar with these fellowships. Findings from the cross-cultural comparison suggest that, to enhance the acceptance of TSGs among Norwegian addiction professionals, a central issue is to increase professionals' knowledge of and understanding of the 'higher power' concept and how it is understood in TSGs. Overall, increased knowledge and improved familiarity with TSGs among the professionals may be expected to result in higher referral rates and utilization of these supportive recovery resources. Findings from the patient study suggest potential for motivating a majority of patients, with relatively simple means, to attend TSGs. A plausible strategy is to highlight the possible benefits of participation the patients rated as being highly

relevant to their problem, including that participation in these groups could possibly provide the courage to change. For the one-third of patients with low intention to join these groups, potential barriers need to be explored more thoroughly, as these patients are more skeptical about attending TSGs. Processes to acquaint patients with TSGs could possibly reduce perceived barriers and enhance utilization of these fellowships.

Conclusions

This thesis provides information to guide clinician-based strategies for meeting the Norwegian government's goal of enhancing the utilization of self-help approaches in conjunction with formal addiction treatment services. Higher awareness among addiction professionals of the benefits of TSG participation may lead to more patients being referred and being affiliated with TSGs, which would enhance the possibility of improved long-term outcomes in the treatment of substance-dependent individuals. The findings indicate substantial potential for greater use of such voluntary fellowships. Norwegian addiction professionals need to be better informed about the most available groups for addiction, the TSGs, as well as their principles, beliefs, and practices, and to learn about common objections to TSGs and effective strategies for addressing these objections. Patients should at least be made aware of these informal and accessible recovery resources at their disposal. Although TSGs might not be perceived as useful or benefit all problem drug users, greater emphasis on facilitating patients into TSGs by addiction professionals would likely lead to a higher referral rate, and benefits may be extended to broader groups.

Further studies are warranted to explore the reasons for the perceived barriers towards TSGs expressed by some patients. This information would be useful for more detailed, culture-specific development of TSG referral strategies, and it may also speak to the need for establishing alternative SHGs in Norwegian settings, as few other SHGs for addiction exist, and none with a broad availability.

Norwegian summary (norsk sammendrag)

Bakgrunn

Denne avhandlingen består av to studier; en undersøkte pasienters og en undersøkte ansatte i rusfeltet sine oppfatninger om og bruk av de mest vanlige selvhjelpsgruppene for rusmiddelavhengige i Norge; de 12-trinnsbaserte selvhjelpsgruppene Anonyme Alkoholikere og Anonyme Narkomane. Rusmiddelavhengighet oppfattes nå som en kronisk lidelse med høy tilbakefallstendens. Tolvtrinnsgrupper er et gratis, fritt tilgjengelig tilbud som kan være et langvarig og støttende felleskap for rusmiddelavhengige. Slike grupper er beskrevet som et positivt supplement til formell behandling og tilknytning til slike grupper parallelt med og etter behandling er assosiert med bedre behandlingsutfall i flere studier. Norske helsemyndigheter har ønsket en høyere bruk av selvhjelpsgrupper i tilknytning til helsetjenesten. Inntrykket før studien var imidlertid at selvhjelpsgrupper blir brukt i liten grad og ingen undersøkelser har kartlagt bruken av slike grupper i rusfeltet tidligere. Som en del av undersøkelsen blant ansatte ble det i tillegg gjort en tverrkulturell sammenligning med ansatte i rusfeltet i USA. I det amerikanske behandlingssystemet er det vanlig å anbefale og motivere rusmiddelavhengige pasienter å bruke 12-trinnsgrupper, noe som kan sette de norske funnene i kontrast.

Formål

Den overordnede målsetningen med denne avhandlingen var å undersøke ansattes og pasienters holdninger til og kunnskap om 12-trinnsgrupper i omgivelser der en antok at kjennskapen til slike grupper var lav. I tillegg undersøkte en bruken av slike grupper blant de ansatte (i hvilken grad pasienter ble aktivt motivert til å delta i slike grupper) og pasienter (deltagelse og involvering). Mulige barrierer mot bruk av slike fellesskap ble også undersøkt.

Material og metode

Begge studiene var tverrsnittundersøkelser. Ansattstudien var en spørreskjemaundersøkelse som ble gjennomført vår/sommer 2008. Det ble i hovedsak brukt et spørreskjema utviklet i USA, utformet for å kartlegge ansattes

holdninger til 12-trinnsgrupper og å undersøke mulige barrierer mot å anbefale pasienter å delta i slike grupper. Spørreskjemaundersøkelsen var selvadministrert og anonym. Respondentene (N=291, 80 % av de som fikk utlevert spørreskjema) var ansatte i rusfeltet i helseregion Sør, Norge. Det amerikanske utvalget i den tverrkulturelle sammenligningen (N=100) kom fra historiske data (2001).

Respondentene i pasientstudien (N=139, 89 % av det tilgjengelige utvalget) ble inkludert på en avgiftningsavdeling ved Avdeling for rus- og avhengighetsbehandling, Sørlandet Sykehus HF i Kristiansand, Norge, fra september 2008 til august 2010. Det ble samlet inn data om pasienters oppfatning av fordeler og ulemper med å delta i 12-trinnsgrupper, samt pasientenes intensjon om å delta i slike fellesskap etter utskrivning. I analysen ble intensjonsskalaen kategorisert til lav, moderat eller høy intensjon om å delta etter behandling.

Resultater

De norske ansatte i rusfeltet hadde moderat positive holdninger til 12-trinnsgrupper, men disse holdningene så ikke ut til å føre til en aktiv "henvisningspraksis"; totalt sett ble kun 15 % av de ansattes nåværende pasienter aktivt motivert til å delta i slike fellesskap. Det var 38 % av de ansatte som bidro til denne henvisningsraten, 62 % oppgav å ikke henvise noen pasienter i det hele tatt. Kunnskapsnivået om 12-trinnsgrupper og troen på egen evne til å henvise pasienter var lav. I en multivariat analyse var det å bruke 12-trinnsfilosofien i eget behandlingsarbeid, høyere tro på egen evne til å henvise pasienter effektivt og større kunnskap om 12-trinnsgrupper assosiert med å henvise pasienter.

Når det gjaldt barrierer mot bruk av slike grupper, ble 6 av 9 påstander i en "12-trinns barriere"- skala støttet av mer enn halvparten av de norske ansatte. Sammenlignet med amerikanske ansatte kom den mest markante forskjellen frem i spørsmålet om de religiøse aspektene ved 12-trinnsgrupper. Mer en dobbelt så stor del av de norske kontra de amerikanske ansatte (70 % versus 29 %) så på de religiøse aspektene ved 12-trinnsgrupper som en mulig hindring for deltagelse. Som forventet hadde de amerikanske ansatte konsekvent mer positive synspunkter når det gjaldt rollen 12-trinnsgrupper bør ha i behandlingssystemet og

rapporterte en høyere tro på egen evne til å få pasienter til å delta i slike fellesskap.

I pasientstudien hadde mindre enn halvparten (48 %) av pasientene som kom inn til avgiftningsbehandling deltatt i 12-trinnsgrupper tidligere. En majoritet; mellom 55 % og 78 %, var enig i de fem påstandene som omhandlet mulige fordeler ved å delta, men likevel var det bare 4 av 10 som oppgav en høy intensjon om å delta i slike grupper etter utskrivning. Trettien prosent oppgav lav og 29 % oppgav en moderat intensjon. Oppfatningen om at 12-trinnsgrupper kan gi mot til forandring og gi avholdsspesifikk støtte var høyest korrelert med intensjon om å delta etter behandlingen. Blant fem påstander om mulige barrierer mot å delta ble ingen støttet av mer enn 37 % av utvalget.

I en multivariat analyse med intensjon om å delta i 12-trinnsgrupper etter behandling som avhengig variabel, skilte de med høy intensjon seg fra de med moderat intensjon kun når det gjaldt oppfatning av større fordeler ved å delta. Det var ingen forskjell mellom disse to gruppene når det gjaldt oppfatning av ulemper. Til forskjell var gruppen med lav intensjon om å delta kategorisert både ved lavere oppfatning av fordeler samt høyere oppfatning av ulemper ved deltagelse enn både de med moderat og høy intensjon.

Diskusjon

Selv om de norske ansatte i rusfeltet hadde moderat positive holdninger til 12-trinnsgrupper, ble påstander om hindringer for deltagelse støttet av store deler av utvalget, noe som indikerer ambivalens når det gjelder å anbefale disse brukerbaserte fellesskapene til pasientene. Den lave troen på egen evne til å få pasienter til å delta i slike fellesskap og den lave henvisningsraten forteller om et behov for å høyne kunnskapsnivået. Funn fra den tverrkulturelle undersøkelsen indikerer at for å øke aksepten av 12-trinnsgrupper blant de norske ansatte, kan et sentralt element være å øke kunnskapen om 12-trinnsgruppens spesielle forståelse av begreper som normalt kun brukes i religiøs sammenheng; begrepene "høyere makt" og "Gud". Økt kunnskap om 12-trinnsgrupper og økt bevissthet om at motiveringsarbeid for å få pasienter til å delta i slike grupper kan bedre

prognosen deres, vil ventelig kunne høyne de ansattes henvisningsrate.

Funn fra pasientstudien indikerer at der er et potensial for å motivere en majoritet av pasientene, med relativt enkle metoder, til å delta i 12-trinnsgrupper. En plausibel strategi vil være å legge vekt på de mulige fordeler ved å delta som pasientene oppgav å være mest relevante i forhold til sitt problem; å få mot til endring og få avholdsspesifikk støtte. For den tredjedelen som hadde lav intensjon om å delta i slike grupper, må en sannsynligvis utforske barrierer mot å delta i større grad, ettersom disse pasientene har større skepsis. Tiltak for å gjøre pasientene fortrolige med 12-trinnsgrupper og redusere deres oppfatning av barrierer mot å delta, vil ventelig kunne øke deltagelsen.

Konklusjoner

Denne avhandlingen gir informasjon om holdninger til og kunnskap om 12-trinnsgrupper blant ansatte og pasienter i det norske rusfeltet, noe som kan bidra til å utvikle strategier for å møte helsemyndighetenes målsetning om å øke bruken av selvhjelpsgrupper. Funnene viser at det er et potensial for en mer aktiv bruk av 12-trinnsgrupper i norsk sammenheng. Ansatte i det norske rusfeltet trenger å få høynet sitt kunnskapsnivå om disse vanlig forekommende selvhjelpsgruppene for rusmiddelavhengige, og bli mer kjent med deres filosofi og praksis. Ansatte bør og bli mer kjent med vanlige barrierer mot bruken av slike fellesskap og være i stand til å møte og bearbeide slike oppfatninger hos sine pasienter. Som et minimum bør pasientene gjøres kjent med at slike fellesskap finnes og kan benyttes fritt. Dersom ansatte kan implementere motivasjonsarbeid for å få rusmiddelavhengige pasienter til å delta i selvhjelpsgrupper som en del av sin vanlige behandlingsaktivitet, vil pasientenes deltagelse i slike fellesskap ventelig øke og deres langsiktige prognose vil kunne bedres. Deltagelse i 12-trinnsgrupper kan ikke forventes å passe eller oppfattes som aktuelt for alle, men et større fokus om temaet hos helsepersonell vil kunne bidra til at en større andel av pasientene kan få del i de mulige fordeler ved å delta i slike grupper.

Det er ønskelig med mer forskning for å undersøke årsakene til at noen pasienter opplever barrierer mot å delta i 12-trinnsgrupper. Det vil være nyttig for å utvikle mer kulturspesifikke henvisningsstrategier i en norsk sammenheng. I tillegg kan

det si noe om behovet for å arbeide for å etablere alternative selvhjelpsgrupper i Norge. I dag finnes det få andre alternativer enn 12-trinnsgruppene, i alle fall grupper som har god geografisk spredning og tilgjengelighet.

Preface

My own personal background for this research project is more than 15 years of clinical work in addiction treatment services. First, I was head of a 12-step-based half-way house for roughly 10 years, probably the first of its kind in Norway. This residential unit functioned as a prolonged treatment center, succeeding a 6-week intensive 12-step-based treatment period at a nearby public inpatient unit (“primary” treatment). I still remember my first weeks at the workplace, observing my own surprised thoughts: “These patients seem to be just like ordinary people”, which I interpreted as having had preconceived negative attitudes towards dependent individuals.

However, I soon learned that these patients actually had considerable functional impairments that are not apparent at first sight, such as problematic emotions (e.g., insecurity, restlessness, and impatience). Several of the patients had overwhelming practical and relational problems that could explain the difficult emotions. However, an overload of automatic negative thoughts was readily observable, and patients required extensive support for longer periods to learn more rational problem-solving strategies. In addition, there was a need to regularly work with daily life structures and, to some extent, to modulate norms acquired from the earlier life dominated by substance abuse. Thus, avoiding a relapse is difficult because of biological cues, emotional distress, and huge practical/relational problems; I gradually realized that patients had to make considerable lifestyle and cognitive adjustments to obtain reliable and stable sobriety in a long-term perspective.

Because the half-way house program was based on 12-step philosophy, patients were strongly recommended to attend community-based TSGs in parallel with treatment. Patients who became engaged in these groups seemed to have discovered an important supportive resource that was perceived as needed in their recovery process, and praised these groups as a key component of their continued sobriety. Thus, our clinical experiences with these groups were quite good and our recommendations to new patients were empirically supported.

However, it appeared that professionals in the addiction field elsewhere had little awareness of such peer-based groups and did not place much importance on referring patients to them.

Later, I came to work at the mentioned intensive inpatient unit offering “primary” treatment and was gradually involved with follow-up studies. In 2006 I wrote up a 2-year naturalistic follow-up survey in which there was a remarkable association between involvement in TSGs and improved drug use outcomes (1). However, in naturalistic designs, ruling out that the observed positive associations may be due to selection biases is not possible and no firm conclusion about causation can be drawn (2). Reviewers also commented on my use of old references, pointing to a need for updating. In the process of searching the literature and reading up on the issue, I was surprised by the wealth of articles available. A PubMed search with Alcoholic Anonymous as a subject term (“Mesh Term”) returned > 900 articles, and many more could be traced in reference lists. Very little of this material was mentioned in Norwegian addiction textbooks.

Thus, I seemed to have discovered a topic that received little attention in the national academic literature or the clinical practice of Norwegian addiction programs, which encouraged me to write up a project about the issue and apply for funding. Late in 2007 funding was obtained, as the Norwegian Research Council had just launched an addiction research program, and the project successfully started in the beginning of 2008.

Acknowledgements

This thesis was completed at the Addiction Unit (ARA), Department of Psychiatry, Sørlandet Hospital in Kristiansand. The research project upon which it is built was funded by the Research Council of Norway. I have many individuals to thank for their help and assistance throughout the process with this thesis, but the work has mainly been made possible by the support of two persons: the head of the Research & Development Unit at ARA, Øistein Kristensen, and my main supervisor, Professor Thomas Clausen, SERAF (Norwegian Centre for Addiction Research), University of Oslo (UiO).

Øistein Kristensen is senior psychiatrist at ARA and his slogan has always been: "Without research, there is no development of the profession and no betterment of clinical practice can be expected". He is the sole reason why there is any research going on at ARA at all, to some degree against all odds, which means that it is his positive stubbornness and determination that has born fruits and paved the way for the current three doctoral candidates at ARA. Thus, his continuing support and enthusiasm has been invaluable.

I am also indebted to Professor Thomas Clausen for his belief in me when I still lacked the formal qualifications needed to join the doctoral study at UiO, and for his guidance, help and encouragement through all project phases. As the project went on, I have appreciated his scientific knowledge, his knowledge of the publication process, and his supportive and enjoyable character. Although he is a very young professor, I feel that I have had the best possible supervision. He also joined me on a study tour to the U.S., where we met with Ph.D. Alexandre Laudet, NDRI, New York, and Ph.D./consulting professor Christine Timko, Veteran Affairs Health Care Evaluation/Stanford University, San Francisco. I am indebted to both of these senior researchers for spending their time to give us important feedback on the project plan and invaluable input and help with the manuscripts. Many thanks also to my second supervisor, Ph.D. Are Hugo Pripp, for his important help with the data analyses.

Not least of all, I would like to express gratitude to all the respondents for their participation, the patients at the detoxification unit at ARA and the addiction professionals in the southern counties of Health Region South-East. The high return rate in the addiction professionals study (80%) is not daily fare in survey studies. Thus, one might interpret that the current project was experienced as having some significance and value for the respondents. Also, had it not been for the administrative leaders of the addiction service units who allowed the survey study to be conducted at their units, it would not have been possible to carry through with the investigation. Thanks also must be given to the employees of the detoxification unit at ARA and its head, Frode Dunsæd. Without their support, I would not have succeeded with the patient study. Many thanks also to Anette Øydna and Anne May Berg, who were especially helpful with data collection at the ward.

I would also like to thank my other colleagues at the research unit at ARA, Bente Hjemdahl, Bjørg Hjerkin, Anne Opsal, and Grethe Høyåsen, for creating an enjoyable and supportive environment at the workplace.

Finally, I would like to say thank you to my wife, friend, and companion in life, Berit. Thank you for the joys we have shared, but also for the difficult days we have endured and the problems we have solved together. I am also forever grateful to my loving parents, who have always been there when we needed them.

I would like to dedicate this work to my dear children, Mats, Simen, Johannes, Solveig, and Margrete, with all the best wishes for their future from a father's heart.

Abbreviations

AA	Alcoholics Anonymous
AAAS	Alcoholics Anonymous Affiliation Scale
ARA	Addiction Treatment Unit, SSHF, Kristiansand, Norway (Avdeling for Rus- og Avhengighetsbehandling)
CBT	Cognitive behavioral treatment
CI	Confidence intervals
HBM	Health Belief Model
NA	Narcotics Anonymous
OCR	Optical character recognition
OMT	Opioid maintenance treatment
OR	Odds ratio
RCT	Randomized controlled trials
SHG	Self-help group
SSHF	Sørlandet Hospital, Kristiansand, Norway (Sørlandet Sykehus Helseforetak)
SYRAAP	Survey of Readiness for AA Participation
TPB	Theory of Planned Behavior
TSF	Twelve Step Facilitation
TSG	Twelve-step group
UiO	University of Oslo

Definitions ²

Addiction	Behavioral syndrome including dyscontrol, salience, and neuroadaptation (to drugs), but also compulsive behavior evidenced by the addicted person continuing to use drugs despite knowledge of negative medical and psychological consequences (4).
Attitudes	Disposition to respond favorably or unfavorably to an object, person, institution, or event. Attitudes are latent, hypothetical characteristics inaccessible to direct observation and must be inferred from measurable responses (5).
Bias	The difference between the sampling value and the true population value.
Content validity	Content validity refers to comprehensiveness of a measurement and to how adequately the selected questions cover the themes that were specified in the conceptual definition of its scope (6).
External validity	External validity refers to the generalizability of the findings to other populations and settings (7).
Face validity	When a measure is commonly inferred from the comments of experts who review its clarity and completeness (6).
Generalizability	The extent to which the results of a study population can be extrapolated to the general population or target population.
Internal validity	Internal validity refers to the certainty that the study findings are true for the study population and setting (7).
Lapse	Brief re-engagement in the addictive behavior (8).
Relapse	Significant return to the problematic pattern of (drug) use or re-engagement in the addictive behavior (8).
Reliability	The consistency of a measurement tool.
Sample population	The studied population that is theoretically representative of the target population.

² Definitions have been derived from Kakinami & Conner (3) unless otherwise noted.

Self-help groups	<p>Non-professional, peer-operated groups devoted to helping individuals who have a shared problem or status with emphasis on experiential knowledge and reciprocal assistance. Self-help groups do not charge fees and should not be equated with professional treatment services (9). The term “self-help group” is actually misleading. It is not primarily a question of helping oneself; it is a matter of mutual help. Thus, the terms “mutual-help” or “mutual-aid” have gained ground and describe the phenomenon better (10). In the Norwegian language, however, the term “mutual-aid” is somewhat awkward when directly translated, which makes “self-help” the best option.</p>
Target population	<p>The population the results of the study will be generalized to.</p>
Validity	<p>The extent to which a test measures that which it is intended to measure (6).</p>

List of papers

- Paper I** Vederhus JK, Kristensen Ø, Laudet A, Clausen T. Attitudes towards 12-step groups and referral practices in a 12-step naive treatment culture; a survey of addiction professionals in Norway. *BMC Health Services Research*, 2009; 9, 147.
- Paper II** Vederhus JK, Laudet A, Kristensen Ø, Clausen T. Obstacles to 12-step group participation as seen by addiction professionals: Comparing Norway to the United States. *Journal of Substance Abuse Treatment*, 2010; 39(3): 210 – 217
- Paper III** Vederhus JK, Timko C, Kristensen Ø, Clausen T. The Courage to Change: Patients' Perceptions of 12-Step Fellowships. Submitted manuscript.

1.0 Introduction

This thesis pertains to addiction professionals' and patients' attitudes to and usage of addiction-related self-help groups (SHGs), of which twelve-step based groups (TSGs) are the most common. The project consists of two studies: one examining addiction professionals' and one about substance abuse patients' views and experiences with these groups.

Substance dependence influences peoples' lives in complex ways and causes major health problems; for example, the harmful use of alcohol is listed as the third leading risk factor for premature death and disability in the world (11). Addiction researchers have underscored the chronic nature of substance dependence (12), arguing that dependent individuals are best handled with low-intensive interventions extended over longer periods, giving heed to their long-term needs (12;13). Public health services have made efforts to provide continuing care interventions, such as enhancing cooperation between primary care and specialist health services. However, long-lasting and easily accessible support has been difficult to organize within the formal services (14). Public treatment systems have also increasingly been exposed to financial constraints, which threatens the delivery of services (15). Because of these limitations of formal services, especially when it comes to the provision of long-term support, exploring alternative resources is of interest for keeping up with ever-increasing demands.

One possible option may be to put more focus on resources that supplement publicly funded services. In that respect, peer-based recovery resources like the twelve-step groups (TSGs) have been recommended as promising and useful (16-18). Such groups lack the bureaucratic impediments of public services and are freely available to everyone who needs support to cope with their problem. Addiction is the health problem that motivates most people to participate in SHGs worldwide (19;20). Addiction-related peer-based groups can add significantly to public financed services because they, in principle, offer a 24/7 structure (e.g., frequent group meetings, available peer sponsors), which help attendees acquire self-management skills that are essential in illnesses with substantial behavioral

components. These groups can also accommodate members without time limits.

Recently, the World Health Organization outlined some key global strategies to reduce the harmful use of alcohol. Health services are recommended to reach out to, mobilize, and involve a broad range of players outside the public health sector itself, including support for and greater reliance on mutual help initiatives (21). Thus, the use of peer-based groups as a complement to formal treatment services is recommended by international public health organizations. The public health authorities of Norway have also put the issue on the agenda; for example, a white paper encourages greater use of SHGs as an adjunct to formal treatment services (22). Furthermore, a “National Plan for Self-help” was launched in 2004 (23). Its main objectives were: *“To make self-help as a method available to more people, to promote systematic method development and knowledge about self-help, and to be instrumental in ensuring that the self-help tool can be used in mental and psychological health work, both by the users and the helpers/professionals”* (23, p. 6). Behind these public health initiatives is increasing awareness about the need for increased user involvement and an aspiration to focus on user resources in the health services.

1.1 Short description of the twelve-step groups

The TSGs are the most available and widespread groups for patients with alcohol or drug-related disorders, and are also the only groups with national availability in Norway (20;24). Alcoholics Anonymous (AA) was the first of the twelve-step-based SHGs. Although AA originated in the 1930s in middle-class North America, it has outgrown the cultural milieu of its birth. The movement has gained international distribution and is currently available in 181 countries (25). Thus, its philosophy seems to be adaptable to a variety of cultures and applicable in very different environments. Worldwide there are currently more than 117,000 registered groups with a total membership of more than two million, which makes AA the largest mutual-help movement in today’s world (20). The fellowship has been given considerable interest as a social organization, and has also been studied as a prototype of the SHG phenomenon (26). Numerous other mutual-aid movements

have adopted AA's organizational principles (the 12 traditions) and philosophy (the 12-step program)³, using it to address problems other than drinking. Thus, AA has served as a seedbed for a variety of other mutual-aid groups, most notably Narcotics Anonymous (NA).

In Norway, there are more than 200 AA groups and nearly a hundred NA groups, i.e., 6 groups per 100.000 inhabitants, but the distribution is somewhat geographically skewed (27). In larger cities, it is possible to find up to two daily meetings, whereas the common frequency in smaller towns is weekly meetings. Treatment centers that actively recommend patient involvement in TSGs may have a positive influence on the growth of new groups in their surroundings (28). Unlike professional treatment, these organizations offer recovery support that is free of charge to those who wish to attend, though small donations to cover actual costs are typically made at the discretion of individual members.

The core philosophy in these groups is a program called the Twelve Steps⁴, thus the name twelve-step groups. These steps are intended to be practiced as a way of life. The member is encouraged to: admit that s/he has a problem, seek help, make a personal moral inventory, and make amends where harm has been inflicted on others. By sharing their stories and experiences, members are also encouraged to help other addicted individuals to recover from their illness (29).

The primary activity in AA and NA is the group meetings. Meetings are chaired by members themselves, and each participates in turn by sharing their experiences of coping with addictive patterns. The groups use sponsorship arrangements, which mean that newer members can ask a more experienced group member (sponsor) for advice and guidance, even outside of the group setting.

The only requirement for participation in AA/NA is a desire to stop using alcohol/drugs. Thus, membership is based on individual life experiences and identity rather than on a persons' position in society like in many traditional organizations (26). TSGs have no membership fees and no member lists because

^{3,4} See Appendix

of the importance placed upon the anonymity principle; participation should be a safe haven for those attending (25;28). TSGs are clearly abstinence-oriented in nature. Participants do not need to be sober to enter a meeting, but intoxicated attendees are asked not to 'share' (i.e. speak up) during meetings. Nonetheless, new-comers are greatly cherished, because reaching out to those still suffering from addiction is thought of as the main reason for the fellowships' existence and described as an important function for all members if they are to maintain their own sobriety and grow in the recovery process (30).

1.2 Evidence for TSG usefulness

If formal health services are to use or recommend TSGs to their patients, there must be at least some proof of the usefulness of these groups and no substantial harms related to participation⁵ (9). Early studies on AA's effectiveness used mainly naturalistic designs and correlational methods. Meta-analyses found moderately positive associations between AA attendance and abstinence (31;32). However, in naturalistic designs, ruling out that the observed positive associations may be due to selection biases is not possible (33). A later and much cited meta-analysis that only included controlled experiments concluded that AA participation was worse than no follow-up at all (34). However, closer examination of the included studies showed that the authors' negative conclusions rested mainly on three randomized controlled trials (RCTs) that included individuals coerced into AA. RCTs are normally excellent for making causal inference about treatment effects, but research on the effectiveness of voluntary groups introduces special methodological challenges. Participation in peer-based groups cannot be considered as treatment, and a simple transaction of methodology from treatment evaluation will risk underestimation of the effects of participation (10;20). For example, including coerced individuals in SHGs can fundamentally distort the characteristics of the group under investigation and disturb recovery processes that occur when participation occurs naturally (10;35). As Levy points out, SHGs "do not exist as interventions apart from their members who are both the instrumentality and the objects of the intervention" (35). Thus, research with

⁵ Concerning possible harms and controversies, see chapter 1.3.1

mandated populations would likely underestimate the effects of naturally occurring TSG participation.

In the last decade, a large number of TSG-related research projects have been initiated, some via funding by the National Institute of Alcohol Abuse and Alcoholism (NIAAA), resulting in a large body of high quality research on the issue (36-38). The studies have introduced a new therapeutic term: Twelve Step Facilitation (TSF) approaches. In addition to acquainting patients with Twelve Step philosophy, a major goal of TSF is to foster patient commitment to participating in AA/NA (39). TSF studies do not speak to the effectiveness of TSGs per se; rather, they investigate the combined effects of the motivational initiative from the professional services and the "after care" received in TSGs. Importantly, TSF interventions do not mandate TSG participation. Because TSF interventions are rather short and the main goal is abstinence, it is expected to be mediated through subsequent TSG participation, and positive findings about TSF in many studies also indicate that TSGs have an independent positive influence on outcomes.

An increasing number of controlled studies demonstrate that TSF designed to facilitate TSG attendance enhances participation rates and is associated with improved substance use outcomes (18;40-45). Such findings demonstrate that TSG attendance is not only a question of patients self-selecting into groups, but is a behavior that may be affected positively by health professionals (17). However, a recent meta-analysis showed that more evidence on the effectiveness of TSF is needed (46). Some TSF studies are not explicitly better than control conditions in terms of outcomes (47;48). A crucial element seems to be the extent to which the intervention is able to get patients involved in TSGs during the treatment period. Patients who are more involved in parallel with treatment will also be more involved long-term compared to those who start attending after the treatment period has ended (40). Unfortunately, the authors of the mentioned meta-analysis also mix AA participation into their neutralized conclusion, e.g., AA is named as a "treatment" and handled together with TSF as though they are similar sizes. This blending of TSF and AA in the same meta-analytic procedures is unfortunate and does not recognize the differences between formal treatment efforts and voluntary

social movements, or the need for using different methodology in the evaluation of these different initiatives (49;50).

In terms of cost-benefit, a larger quasi-experimental study (n=1774) compared outcomes and costs at follow-up 1 and 2 years after 12-step-based and cognitive behavioral treatment (CBT) programs (51;52). Patients treated in the 12-step programs had significantly greater involvement in TSGs and higher abstinence rates (e.g., 50% versus 37% at 2-year follow-up). In contrast, patients treated in CBT programs relied significantly more on outpatient and inpatient mental health services, leading to significantly lower costs in the 12-step programs, 40% and 30% lower at 1 and 2 years, respectively. Thus, the authors concluded that promoting TSG involvement improves post-treatment outcomes while reducing costs and public expenditures.

Overall, current evidence suggests that participation in TSGs is useful and can be facilitated by professionals who actively recommend these groups to their patients. Findings lend credit to the argument that referrals from health professionals to self-help conditions deserve more attention in a health services perspective (53).

1.3 The relationship between TSGs and clinical services

Previous research identified substantial regional differences when it comes to the usage of TSGs by clinical services (26). In their country of origin, the U.S., referral of patients to TSGs from treatment programs is highly recommended and encouraged by professional organizations (54;55). A major reason for the high integration of TSGs with addiction treatment services is the profound influence AA has had on the way alcoholism and addiction is addressed and treated in the U.S. (56). The underlying historical determinant was that AA developed and gained momentum at a time when formal treatment options were limited and alcoholics were considered "incurable" by both the general public and addicted individuals themselves (57). Thus, when word spread that participation in this new peer-based fellowship apparently worked and restored addicted individuals, it soon led to the

widely accepted belief that TSGs contributed significantly to recovery from addiction (58).

The culmination of AA's influence on the formal treatment system is represented by the short-term residential "Minnesota Model" that originated in Minnesota in the late 1940's and is often termed as an institutional 12-step model (26). This model combines 12-step philosophy with psychodynamic theories, often providing TSG meetings on the facility premises and strongly encouraging participation in community-based TSGs as long-term "aftercare" (59;60). Considering the treatment period mostly as an introduction to TSGs, where the real recovery should take place, is common (26). The idea of aftercare is that a relatively short period of primary treatment needs to be reinforced or continued at a lower level of intensity in order to maintain its effects over the long term and to prevent relapses (61). Recently, surveys of publicly and privately funded treatment programs in the U.S. found that 60-75% of programs are best described by the 12-step model (62;63), and U.S. addiction treatment staff are described as having a near universal endorsement of 12-step approaches (64).

The relationship of treatment systems with TSGs in Europe is more diverse than in the U.S. Encouraging patients to participate in TSGs is not often viewed as part of standard professional practice (26;65), and relations range from some collaboration and incidental encouragement, to indifference, incomprehension, suspicion, or even hostility (66). For example, in Austria, AA groups are generally neglected by addiction professionals, whereas treatment institutions in Sweden and Iceland have extensive collaboration with AA and its philosophy is adopted into many treatment programs similar to the U.S. (28;67). The pre-study impression was that the Norwegian addiction treatment field lies somewhere between these two extremities with respect to the relationship between professional substance abuse treatment and TSGs. Currently, less than 5% of Norwegian addiction treatment centers (12 of 266) report using 12-step philosophy (59). Thus, the influence of the Minnesota Model is less important in Norway than, for example, its neighbor, Sweden, where roughly 25% of addiction treatment institutions use it as the main method (68). The general impression is also that 12-step tenets have not been integrated to a great extent into the Norwegian

treatment programs based on other treatment philosophies. Although TSGs are generally recommended as a possible supportive resource in Norwegian addiction treatment textbooks, strong polemics against some of the key 12-step concepts also exist (69;70). These conflicting views may lead addiction professionals to be cautious about recommending their patients participate in TSGs.

1.3.1 The role of clinicians

Clinicians can play a key role in fostering TSG participation, as it is not likely that a patient would attend fellowships their clinician views in a negative light. On the other hand, recommendations from clinicians would likely enhance the possibility of patients trying out the groups (17;18). The prevailing trends, policies, and practices in a treatment system are also obviously important for the individual clinician's practice of recommending patients to TSGs. Professional treatment staff do not operate independently of structures in their treatment agency or the overall treatment system, in which there are *social pressures* to nurse and bring out certain behaviors and standards (5). On the other hand, if general guidelines or health policies about an issue exist, they may not necessarily be implemented in the treatment units or at the individual clinician level. Individuals' *attitudes* and *self-efficacy* are known to determine behavior, i.e., the perceived ability to perform a behavior, which also applies to professionals' behavior and practice (here, TSG referral practices) (5;71). Thus, according to the social psychology literature, particularly the Theory of Planned Behavior, behaviors are at least a function of three basic determinants: one personal in nature (personal attitudes), one reflecting social influence, and a third dealing with issues of behavioral control (5).

These three basic factors have also been found to be predictors in the few earlier studies about clinicians' TSG referral practices (54;72;73). Clinician or program characteristics empirically identified to positively influence TSG referral tendency include *treatment orientation* (i.e., working in a 12-step oriented program) (54), which may be seen as the result of the policy or *social influence* in the workplace. Accordingly, clinicians who have personal familiarity/experience with the 12 steps or have *integrated* and use them in their own treatment work have higher referral rates (65). Personal experience is expected to influence both attitudes and the ability to refer patients (54;65).

However, personal attitudes towards TSGs may also be negative. Mäkelä et al. noted that a reason might be clinician suspicion of lay activities in general and pride in their own technical training and skills. Thus, they would tend to refuse cooperation with user-based groups (26). In addition to these more general attitudes towards peer-based activities, several aspects of the 12-step program and 12-step philosophy have been identified as controversial. The 12-step program's emphasis on surrender and powerlessness (step 1)⁶ has been mentioned as a negative term in contrast to a "strength perspective" (74;75), and founders of alternative SHGs have indicated this issue as an important reason for starting their groups (76). Although these points of view are reasonable based on a literal understanding of the 12 steps, the meaning of the surrender step is to accept the condition as a starting point to seek solutions. A critique that is sometimes launched is that the first step may function as a renouncement of responsibility (77). Again, this must be seen as a misunderstanding of the 12 steps, because the other steps speak specifically about taking responsibility for one's own actions (75).

Another controversy relates to whether TSGs are religious groups or not, and if so, should publicly financed services recommend them? The preamble of AA clearly states that it is not a religious organization and does not wish to engage in any controversy (78), which seems to be in stark contrast to the fact that six of the 12 steps contain words with clear religious connotations, e.g., God, higher power, and prayer (79)⁷. The 12-step literature states that the individual is free to make their own decisions about how to define such terms, e.g., a more secular version of the 'higher power' concept is to consider the fellowship as your higher power (80). Thus, the underlying principle is that addiction is not primarily a problem to solve on your own, and it suggests that you need to be open to guidance from positive external sources, whether these are secular (e.g., human relations), faith-based (e.g., different forms of theism), or some other form of spiritual foundation (81). Some authors are skeptical, though, and name TSGs at least as quasi-religious organizations (37). The 12-step literature uses the term "spiritual program", which

^{6; 7} See Appendix

likewise may raise suspicion in secular societies and a contemporary scientific world view (73;82). As early as 1985 Ellis published an article titled “Why Alcoholics Anonymous is probably doing itself more harm than good by its insistence on a higher power” and recommended the steps that refer to God or higher power to be deleted (83). Nonetheless, TSGs have stubbornly been true to their origin and kept these concepts unchanged, despite cultural changes and usage in different settings.

Recently, the number of articles on spirituality in relation to addiction recovery has grown rapidly (84). According to much of this literature, spirituality is considered to be a key ingredient in addiction recovery (85;86). A growing interest also exists in interventions that focus on more secular versions of spirituality, such as the mindfulness approach (87). These trends may facilitate the old and empirically based TSG programs evoking more positive interest in the future. Nevertheless, these groups will likely not be a continuing care alternative to meet all patients’ needs in the future, partly because TSGs are true to the original wordings in their programs (72). Ideally, several alternatives should be available to respond to different individuals’ belief systems and world views (77;88).

1.4 Substance abusers' relationships with TSGs

Although TSGs can be found in 181 countries, the use of these groups and number of members and groups are greatest in North-America; roughly 6 of every 10 AA members worldwide were living in the U.S. or Canada in 1988 (26). Of the American adult population, 5% have been to an AA meeting at some time for their own drinking problem and approximately 2% (6 million) will attend in any given year (89). Thus, high attendance rates in populations of substance abuse patients are not unexpected; three studies reported that 66%, 78%, and 83% of patients have had some involvement prior to treatment (90-92). As mentioned earlier, 12-step philosophy is a mainstay in U.S. substance abuse treatment, and attending TSGs is a major component of the treatment protocol of many programs throughout the U.S. (88). As a consequence, an important pathway into AA is the degree to which the treatment system is influenced by 12-step philosophy (26).

Nonetheless, because of the international diffusion of AA, less than half of all AA members are predicted to be living in North America in a short time (26). For example, AA has had a high growth rate in Latin America, which currently accounts for more than one-third of the world membership of AA (26). The wide distribution of TSGs has led, in the last few decades, to research initiatives on TSGs outside the U.S., as there have been some concerns about the generalization from American evidence. Two studies were carried out in the UK in order to learn more about TSG acceptability among patients and their relationships with these groups (93;94). Roughly three-quarters of the sample had previous experience with AA, which seems to be similar to the findings in the U.S. The most common route into AA was through treatment services. However, exposure was infrequently translated into enduring membership, as most of the patients reported low levels of affiliation (94). Even those who were generally positive about TSGs had some reservations, especially about the steps concerning the “higher power” principle, which a majority of patients experienced as problematic (93). Motivation to attend TSGs was only moderate; less than half of the sample reported an intention to attend meetings regularly following discharge (93).

In terms of factors associated with attendance, early U.S.-based studies found that the patients' perceived severity of their substance abuse problem was the most reliable predictor of subsequent TSG participation (31;32). Other demographic, personality, social, cognitive, or substance-related variables were weakly or inconsistently associated with participation (31). However, using the TSG-specific *Survey of Readiness for AA Participation (SYRAAP)* (95;96), which recently was developed within the theoretical framework of the Health Belief Model (HBM), the SYRAAP with its three sub-scales perceived severity of the substance abuse problem, perceived benefits of TSG participation, and perceived barriers of TSG participation was found to predict TSG affiliation better than demographic or life context factors (96). The HBM was developed in the 1950s to explain peoples' behavior in response to diagnosed illnesses. In general, research has shown the predictive qualities of HBM (97). Central components are that people will take action to control ill-health conditions if they believe the illness to be serious, if a course of action available to them is perceived as relevant in controlling the illness, and if they believe that the anticipated costs (barriers) of taking the action are

outweighed by the benefits (97). Later behavioral theories, the Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB), introduced behavioral intention as an antecedent of the actual behavior (98).

All in all, behavioral research based on specific behavioral theories is recommended instead of trying to predict behavior by “static” demographics or characteristics (99).

1.5 The rationale for the studies

TSGs are the only peer-based recovery groups with national availability in Norway. Knowledge and awareness of TSGs was assumed to be low among addiction professionals though the international literature recommends participation in these groups and evidence exists to support such recommendations. However, no Norwegian investigation of patterns of referral to such groups in clinical practice existed, or studies on patients' pre-treatment experiences and perceptions of these fellowships. An examination of this issue in a Norwegian setting would enhance awareness and have an impact on the use of this possibly underutilized resource. Findings may also facilitate integration and implementation, and improved clinical practice, so that benefits may be extended to a broader group.

1.6 Research objectives

1.6.1 Overall objectives

- 1) *Explore addiction professionals' attitudes towards and knowledge of TSGs in a treatment culture expected to be relatively unfamiliar with 12-step philosophy*

- 2) *Describe the prevalence of TSG utilization among*
 - a. *addiction professionals (TSG referral)*
 - b. *patients (TSG attendance and involvement)*

- 3) *Explore perceived barriers and benefits of TSG participation among*
 - a. *addiction professionals*
 - b. *patients*

1.6.2 Paper-specific objectives

Paper I

- 4) *Investigate factors associated with addiction professionals' practice of referring patients to TSGs*

Paper II

- 5) *Cross-cultural comparison of Norwegian addiction professionals' views of obstacles to TSGs with views among professionals in a pro-TSG treatment culture*

Paper III

- 6) *Investigate how patient perceptions of TSGs are related to their intention of participating in these groups following discharge*

2.0 Materials and methods

This thesis comprises two separate studies. One study of addiction professionals' attitudes, knowledge, and referral practices to TSGs, which resulted in Papers I and II (addiction professional study). The other study examines substance users' own experiences with and perceptions of 12-step fellowships, as reported in Paper III (patient study).

2.1 Design

Both studies were cross-sectional, i.e. they measured information at one point of measurement (100).

2.1.1 Addiction professionals study (Papers I and II)

Substance abuse treatment professionals in the five southern counties of Norway's Health Region South-East (Vest-Agder, Aust-Agder, Telemark, Vestfold, and Buskerud; population 930,000, about one-fifth of the Norwegian population) were included. At the time of planning this study, these five counties constituted a health region of their own, Health Region South, which later merged with region East. Of 30 specialized addiction treatment programs in the region, 21 (70%) were inpatient. Most of the programs operated under the umbrella of larger addiction treatment service units, which were located nearby or in the larger cities in the region, of which the largest were Kristiansand (82,000 inhabitants) and Drammen (64,000 inhabitants). Addiction treatment services are publicly financed in Norway and free of charge for patients, with the exception of outpatient services, which involve some co-payment from patients up to a maximum of \$300 a year. In general, the Norwegian treatment system is not guided by a specific orientation, but integrates principles of psychosocial approaches, including cognitive-behavioral therapy (CBT), psychotherapy and behavior modification, and pharmacotherapy. Moreover, the Norwegian treatment system typically does not integrate 12-step principles; fewer than 5% of treatment programs report using the 12-step philosophy (59). Because the treatment philosophy of 12-step-based units is known to positively influence cooperation with TSGs (54), it was relevant that a 12-step-based treatment unit existed within one of the addiction treatment service

units (in Vest-Agder). Concerning the availability of TSG meetings within their catchment area, all of the units had at least one weekly TSG meeting within a maximum range of 20 kilometers, but the meeting frequency varied from one weekly up to two daily meetings (101;102).

2.1.1.1 *Practical procedures*

The administrative leaders were contacted and all agreed to allow their centers participate in the study. They were also asked to appoint a contact person linking the researchers with the respondents in each unit. Because the study was anonymous, such a person was needed to carry out the data collection procedures locally. The purpose and procedures of the survey were described to each unit during a visit (by JKV). Only professionals working directly with patients were included in the study. Night shift workers and persons with small part-time positions (<25% position) were excluded. A total of 365 addiction professionals were identified as eligible by the contact persons and approached. A cover letter explained the purpose of the study to the participants, and they were requested to return the study questionnaire anonymously, preferably the same day, to the contact person, who then returned the questionnaires to the researchers. The contact persons provided some key data on the non-responders (e.g., age, gender, education) to allow for a simple analysis of non-responders versus responders. No incentives were offered to participants. The data collection period was May-July 2008. Except for two centers, data collection finished before summer holidays began. In Paper II, a cross-cultural comparison was also performed with historical data obtained from the principal investigator of a U.S.-based study in 2001 (73). The U.S. study used a different data collection method, namely personal interviews.

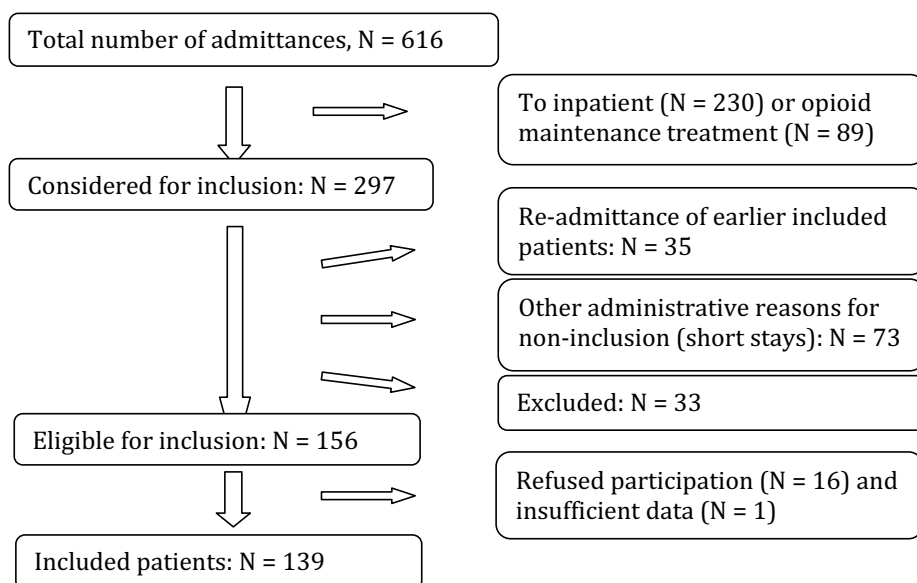
2.1.2 Patient study (Paper III)

Patients were recruited from the detoxification ward at the Addiction Unit, Sørlandet Hospital in Kristiansand, Norway from September 2008 to August 2010. The main uptake area was the southernmost county in Norway, Vest-Agder (population 166,000). Most of the patients (89%) came from that county.

2.1.2.1 Practical procedures

Detoxification treatment in Norway mainly comprises three patient groups: patients detoxed before admittance in longer-term inpatient treatment, patients in opioid maintenance treatment (OMT), and patients who are discharged back to their homes. The latter group may or may not have some follow-up appointments with outpatient services or public community-based services. During the inclusion period, the proportions of these three groups in the detox ward in Kristiansand were 37%, 14%, and 48%, respectively, of a total 616 consecutive admissions (Figure 1). The study focused on those who were discharged to home in order to focus on those without inpatient appointments in the formal treatment system at intake. OMT patients were not included. Therefore, 297 patients were considered for inclusion. An additional 141 patients were not eligible because of exclusion criteria or administrative reasons (i.e., because of short stays or leaving the unit before assessment was scheduled, mean stay for these patients was < 2 days). The relatively large number of patients not being assessed also reflects the decision not to assess or obtain informed consent from patients in the acute withdrawal state. Those who were finally included represented 89% of the eligible respondents.

Figure 1 Patient flowchart for the detox unit



2.2 Study instruments

The addiction professionals study was mainly based on a questionnaire originally developed by Laudet and White to explore attitudes towards TSGs among U.S. addiction professionals⁸ (73). For the patient study, a recently developed questionnaire specifically targeted at tapping patients' perceptions of TSGs in relation to their own problem was used (95).

After obtaining permission from the original developers of the inventories, the original English questionnaires were translated into Norwegian by standard procedure as described by Beaton et al.⁹ (103). As a part of the process, the original developers were consulted to clarify the intended meaning of English language items and ascertain that a similar meaning was conveyed to Norwegian study participants. Laudet and White's questionnaire was originally used as a structured interview and had to be slightly adjusted to fit the survey format of the present study.

The questionnaires were piloted and pre-tested in a sample of addiction professionals (n=17) and patients (n=10). The questionnaires generally worked well, and minor adjustments were made according to the feedback from the test groups. An example of adjustment was an item in the Alcoholics Anonymous Affiliation Scale (AAAS), "Have you had a spiritual awakening or a conversion experience as a result of your involvement in AA?" Such terms used in the Norwegian culture strongly suggest that AA/NA are religious organizations and the term was questioned by some in the test group. Later in the survey, participants were asked whether AA/NA are religious groups; thus, we wanted to avoid statements that could possibly alter patients' preconceptions of TSGs. Thus, in accordance with the developer, the statement was changed to the more general "Have you had a spiritual awakening or a dramatic change in your world view and values as a result of your involvement in AA/NA?" Another example of adjustment is paraphrasing the term "referring to TSGs" to "actively motivating patients to participate in TSGs" (see below, chapter 2.2.1).

⁸ The development of their questionnaire is described in more detail in chapter 4.3.1

⁹ See a more detailed description in chapter 4.3.1

Basic demographics and some descriptive data were collected in both studies. For the addiction professionals study, data included gender, age, education level, county, duration of employment in the addiction treatment field, caseload, and treatment modality (inpatient/outpatient). For the patient study, the structured interview EuropASI was used to collect data on patient demographics, life context, substance use, and treatment history (104;105). The paper-specific study domains are described for each paper below:

2.2.1 Study domains in Paper I

TSG referral practices of addiction professionals: “Referring to TSGs” is a very unfamiliar term in Norwegian. The term “referring” is consistently associated with referral to formal services, and use of the term in connection with voluntary groups is, at best, unusual. Therefore, the original term in the questionnaire was paraphrased as: “actively motivating patients to participate in TSGs”. Participants were asked how many of their current patients had been actively motivated to participate in TSGs. A referral rate was computed based on the number of referred patients divided by their caseload. For comparative analyses, the referral rate was categorized into “non-referrers”, “low-frequency referrers”, and “high-frequency referrers”. The cut-off between low and high frequency referrers was set at >50% of patients in order to compare those who referred the majority of their patients to the other categories.

To investigate the number of patients considered suitable and eligible for referral to TSGs, the professionals were asked, as in a similar UK study, how many of their patients they found “suitable” for attendance (65).

Attitudes about TSGs were assessed using the same items as Laudet and White (73), the (i) *Perceived helpfulness of TSGs* (“In your professional judgment, how helpful are TSGs?”), (ii) *Importance of TSGs to recovery* (“How important a role do you believe TSGs can play in the recovery process?”), and (iii) *Importance of TSGs in the treatment system* (“How important a role do you believe TSGs can play in the treatment system?”). Items were rated on a 10-point Likert-scale ranging from 0 (most negative) to 10 (most positive). iv) *Harmfulness of TSGs* was measured by “In your professional judgment, how harmful are TSGs?” The harmfulness item

was also scored on a 0 to 10 scale, but this scale being reversed before analysis so that 10 represented 'not at all harmful'. The mentioned attitude scores highly correlated (Cronbach's alpha = 0.88, $p < 0.001$) and a mean score combining the four attitude items was computed with a score ranging from 0 to 10, where a score > 5 indicates an overall positive attitude (73). The harmfulness/helpfulness item used in the U.S. study had to be altered on grounds of psychometric theory, because the harmfulness/helpfulness categories were used as opposite poles on the same item (very helpful versus very harmful) (106). Thus, in the present study, this item was split in two separate items (as described above) with "not at all" and "extremely" as adverbials to either helpful or harmful.¹⁰

Respondents also rated the overall attitude of their *treatment agency* ("How open is your agency to collaborating with TSGs?"), their perceived *self-efficacy* at performing successful referrals to these groups ("How well prepared do you feel you are to make successful referrals to TSGs?"), using the same Likert-type scale described above.

Personal experience with TSGs was assessed by quantifying the professionals' own meeting attendance at open and closed meetings (members only) on an ordinal scale used by Humphrey et al. (107). *The integration of the 12 steps into treatment* was assessed by asking respondents whether they used the 12 steps of AA/NA in their day-to-day counseling work (65).

TSG knowledge scale: A TSG knowledge scale was not found in the literature and had to be developed for this study. Guidelines for developing knowledge tests as described by Di Lorio were followed (106). The overall purpose was to provide a relatively simple checklist of respondents' knowledge of TSGs. The objectives of the test were set to cover two main domains: procedures involved in contact with and participation in TSGs, and knowledge about TSG organization and practices. To obtain accurate information on the topic, relevant literature was reviewed (20;26;108;109) in addition to AA/NA's own literature (29;30;78;79). The scale

¹⁰ For this reason it was not possible to compare the "harmful" or "helpful" items in the cross-cultural comparison between the U.S. and Norwegian samples

focused on information considered to be important for new members (e.g., how to make contact, questions about anonymity and participation, and whether AA/NA are religious organizations); such information would be highly relevant for professionals to pass on to their patients. Content validity (face validity) of the scale was verified by consulting two experts in the field, local AA/NA contacts, and the Alcoholics Anonymous Service Office in Norway.

The final scale consisted of 14 items phrased in a true/false format, with the correct response determined by the TSGs' conference-approved literature. According to the example of Winzenberg et al. (110), responses were coded 1 for correct response and 0 for incorrect or "don't know" responses, resulting in a possible range of 0 to 14.

2.2.2 Study domains in Paper II

Paper II was based on the same questionnaire (73), but focused on different sub-domains in the inventory.

Obstacles to 12-step participation: The "*TSG obstacle scale*" consisted of nine items describing aspects of the 12-step philosophy that may be viewed by some as obstacles to 12-step participation. The respondents rated their level of agreement with each item on a Likert-type scale (1 = strongly disagree to 4 = strongly agree). For the purpose of comparing samples, ordinal data were re-coded as categorical values, pooling strongly agree and agree, and strongly disagree and disagree responses according to the usage of data in Laudet and White (73).

Attitudes about the importance of TSGs: The same scale was used as in Paper 1 above. In addition, professionals were asked if they had ever attended TSG meetings and whether their academic training included information on addiction-related SHGs.

Clinician opinions regarding the suitability of their patients for TSGs: Additional questions explored the opinions of Norwegian professionals regarding TSGs. In open-ended fields, participants were asked to describe the most important factors

that, in their opinion, indicate that patients are unsuitable for attendance. The answers were recorded verbatim and then coded into broad categories by the paper's first author.

Clinician knowledge about the 12 steps: The TSG knowledge scale is described above (see chapter 2.2.1). Paper II reported respondents' single item scoring on this inventory.

2.2.3 Study domains in Paper III

In the patient study, pre-detox TSG affiliation was measured using Humphreys et al.'s AA Affiliation Scale (AAAS) (107). The wording was modified to refer to both AA and NA. The frequency of 12-step meetings attended during one's lifetime and the prior 6 months was recoded to a 0 to 1 scale (e.g., lifetime scale is .25 = 1-30 meetings, 0.5 = 31-90 meetings, .75 = 91-500, and 1 ≥ 500). In addition, seven yes/no involvement items were coded as 0 (no, never) or 1 (yes) (e.g., read TSG literature, had a sponsor). Together, attendance and involvement resulted in a composite score with a possible range of 0 - 9.

The Survey of Readiness for AA Participation (SYRAAP) was developed by Kingree et al. to study TSG-specific perceptions according to the theoretic framework of the HBM (96). As such, the SYRAAP measures patient perceptions of the relevance of TSGs to their problem with items on *perceived benefits* and *perceived barriers*, as well as the *perceived severity of the substance problem*. The wording was modified to refer to both AA and NA, and questions were rated in a 5-point Likert-type response format with higher scores indicating higher levels of the construct being assessed. A mean score for each subscale was computed (5 questions in each scale). The Norwegian version had good internal consistency with Cronbach's alpha values between 0.75 and 0.85 for the three subscales (111).

Behavioral intention indexes a person's motivation to perform a particular behavior (here, to attend TSGs) and encompasses both the direction (e.g., to do or not to do) and intensity of a decision to engage in a behavior (e.g., how much effort the person is prepared to expend) (112). Thus, behavioral intention is regarded as a

summary of the motivation required to perform a particular behavior (113) and was used as the dependent variable in this study. Thus, intent to attend AA/NA was measured with two items created as described by Ajzen (114): “I intend to attend AA/NA meetings regularly (at least twice a month) over the next six months” and “I will attend AA/NA meetings regularly (at least twice a month) over the next six months” as rated on a 7-point Likert scale. A test/re-test of each item for N = 20 respondents resulted in $r = 0.74$ for both using the Spearman's rho index for concordance between ordinal data, a finding that supports the notion that the items are reliable and consistent (115). The two items were highly correlated (Spearman's rho = 0.98) and a composite score was computed by averaging them. For descriptive and analytical purposes, scale responses were categorized into low (<3), moderate (3 - 5), and high (>5) intentions.

2.3 Samples

2.3.1 Addiction professionals study

The questionnaire return rate was 79.7% (n=291). The sample consisted of an experienced group of addiction professionals with a mean 8 years work experience in the addiction field. Women dominated (72%) the sample, and 85% of participants had at least a bachelor's degree. Consistent with the modality of the recruiting sites, 80% worked in inpatient treatment units.

There were no observed differences between responders and non-responders based on key demographic data (age, gender, education level, or type of unit) according to data given by the contact persons (Table 1).

Table 1 Key demographic variables of responders and non-responders in the addiction professionals study (N=365)

Characteristic	Responders N=291	Non-responders N=74 ^a	P-value
Female	209 (72.0%)	43 (58%)	0.58
Age, years	45 (10)	45 (9)	0.73
Type of unit: - Outpatient treatment	57 (20%)	12 (16%)	0.71
- Short-term inpatient treatment (detox)	91 (31%)	22 (30%)	
- Long-term inpatient treatment	143 (49%)	40 (54%)	
Education: - Lower education ^b	43 (15%)	10 (18%)	0.56
- College ^c	196 (67%)	40 (70%)	
- University ^d	52 (18%)	7 (12%)	

Data represent N (%) or mean (SD).

^a Missing data on education for N = 17 non-respondents

^b Primary/secondary school (9-13 years)

^c At least a bachelor's degree (e.g., nurse, mean education in college = 4.2 years)

^d Graduate degree (e.g., physician, psychologist; mean education in university = 6.6 years)

In Paper 1, the total number of usable questionnaires for the analysis was reduced to 279 because 12 respondents had left out data on that paper's dependent variable.

The cross-cultural comparison in Paper 2 was performed with a historic U.S. sample (n=100) with similar demographics as in the Norwegian study; 71% were women, 76% had at least a bachelor's degree, and the participants had worked a mean 8 years in the addiction field.

2.3.2 Patient study

The sample consisted of 139 patients (89% of eligible respondents). Demographic and descriptive details of the sample are shown in Table 2. A majority of respondents (77%) had previous experience with some kind of substance abuse treatment. Similar proportions of the sample had either alcohol or drugs as their major substance/s of abuse (39% versus 42%), whereas 19% used both to a level at which it was impossible to separate either alcohol or drugs as being the major

problem. However, poly-drug use is common; a minority reported using alcohol only (21%) or a single drug only (4%) the previous 6 months. The mean duration of problematic use for the major substance/s of abuse was > 11 years.

Table 2 Sample characteristics of respondents in the patient study (N=139)

Characteristic	N (%), Mean (SD)
Age, years	41 (14)
Female	45 (32%)
Proportion native Norwegians or European origin	134 (96%)
Education, years	11.2 (2.3)
Proportion from own county (Vest-Agder)	123 (89%)
Relationship, proportion of singles	65 (47%)
Major substance/s of abuse	
Alcohol	54 (39%)
Combination of alcohol and drugs	26 (19%)
Drugs	59 (42%)
Years of problematic use ^a , major drug/s of abuse	11.4 (9.1)
Earlier treatment (prior to current detox)	
No earlier treatment	32 (23%)
Outpatient treatment only	33 (24%)
Inpatient treatment	
12-step-based treatment	39 (28%)
Other inpatient treatment (detox or longer-term)	35 (25%)

^a Problematic use as defined in EuropASI; counted for years with use of 5 or more standard drinks at least 3 times weekly, or binge drinking on 2 coherent days to a level that afflicts daily functioning

2.4 Data analyses

Variables are presented using descriptive statistics. Inter-group variation was investigated by comparing means with student's t-test or ANOVA and chi-square tests for categorical variables.

In Paper I, logistic regression analysis (forward selection) was utilized to identify factors associated with the dependent variable, current TSG referrals. Continuous variables were checked for correlation using Spearman's rho. No variables had a

higher correlation than 0.7 (111). Variables with a $p < 0.10$ in the bivariate analysis were included in the multivariate analysis (116).

In Paper III, the gamma test for ordinal data was used to explore the strength of association between variables. To further explore the association between dependent and independent variables, multinomial logistic regression modeling was performed, a logistic regression procedure that allows a comparison of more than two groups (117). In the present analysis, the 'low' and 'high' intention groups were compared to the 'moderate' group, which was defined as the reference group. Results are shown as adjusted odds ratios (OR) and with 95% confidence intervals (CI). Significance was set at $p < 0.05$. Analyses were performed using SPSS 16.0.

2.5 Ethics

Both studies were approved by the Norwegian Social Science Data Services (NSD) and the Regional Ethics Committee of Health Region South-East (REK).

2.5.1 Confidentiality

Data were kept inside the hospital's secured network for the strictest confidence, and identification numbers were substituted for participants' names in the computer files (patient study). Anonymity occurs when the researchers cannot link participants to their data, and it is the most secure means of protecting confidentiality (118). For the addiction professionals study, REK underscored the importance of using a contact person to preserve anonymity. In addition to the confidentiality aspect, anonymity was also an important factor in the study design to assure that respondents felt free to express their true attitudes about the issue under consideration.

When anonymity is impossible, as in the patient study, patients are given a pledge of confidentiality, which means that the information participants provided will not be publicly reported in a manner that identifies them, and data will not be made accessible to persons outside the project group.

2.5.2 Consent

A superior ethical principle for protecting study participants is the respect for human dignity and the right of self-determination, which encompasses people's right to make informed, voluntary decisions about participation. This principle requires disclosure of the nature and purpose of the study to respondents (118). Participants in both studies received written information. For the anonymous addiction professionals study, returning the questionnaire was considered *implied consent*. For the patient study, all respondents provided *informed consent*, which means that adequate written and oral information was provided, e.g., patients were informed that refusing to participate in the study would not interfere or have negative consequences with respect to any aspect of treatment. The consent process was documented by having participants sign a *consent form*.

Providing adequate information is also dependent on the recipients' state, whether they are in a state in which they are able to understand the information. For the consent to be valid, it was decided that patients should not be in an acute detoxification phase, allowing them to be informed in a situation with sufficient cognitive ability and giving them the power to make a free choice concerning study participation. This decision resulted in the loss of a relatively large number of possible respondents because of the number of patients leaving the ward during the initial phase of the withdrawal period, preventing data collection and the informed consent procedure from taking place.

3.0 Results

3.1 Addiction professionals' attitudes towards and knowledge of TSGs (Aim 1)

The professionals' personal attitudes towards TSGs and their perception of their units' openness to TSGs (mean 7.7 and 7.4, respectively, on a 0 – 10 attitude scale) reflect a moderately positive view (Paper I). The level of knowledge about TSGs among addiction professionals measured on the TSG knowledge scale indicated a mean 7.8 of a possible 14. Almost one-third of respondents (29%) had sum scores in the highest two-fifths of the scale (≥ 9 correct scores). Participants were fairly knowledgeable about how to contact TSGs and what participation entailed (5.0 of possible 7), but knowledge of how TSGs are organized was low (2.7 of possible 7). The most common misconception, held by over half the sample (54%), was that community-based TSGs are the same as professional treatment using the "Minnesota Model" (68), and the belief that TSGs run treatment institutions, which was held by 38% of the professionals (Paper II). The item answered correctly by the largest percentage of participants was that TSGs are not religious organizations (65% correct). The main exception to the respondents' superior knowledge about rules and procedures involved in 12-step participation versus organizational knowledge of TSGs was that only 50% knew that you do not need to be sober to attend a 12-step meeting. A minority ($n = 59$, 21%) reported to the use of the 12 steps in their own treatment work, of which 80% were working in the county that encompassed the 12-step unit.

3.2 Prevalence of TSG utilization

3.2.1 Prevalence of TSG utilization among addiction professionals (i.e., referral practices; Aim 2a)

Referral to TSGs among Norwegian addiction professionals was low, as more than six out of ten did not refer any patients to TSGs, and only 15% of the professionals' current patients were actively motivated to attend TSGs (Paper I).

Of those who were considered to be “suitable” for TSG participation, approximately half of all patients, one-third were referred to TSGs.

3.2.2 Prevalence of TSG utilization among patients (Aim 2b)

In the patient study, 66 of 139 (48%) patients had ever participated in TSGs prior to being admitted to the detoxification ward and 35 (25%) had participated during the past six months (Paper III). For those having attended a meeting in the past six months, the median number of meetings was 7 (range, 1 to 90). The frequency distribution of the number of meetings attended in a patient’s lifetime can be seen in Figure 2. A minority (17%) had > 90 lifetime meetings.

Figure 2 Patients’ earlier experiences with TSGs as the frequency distribution of the number of lifetime meetings (N=139)

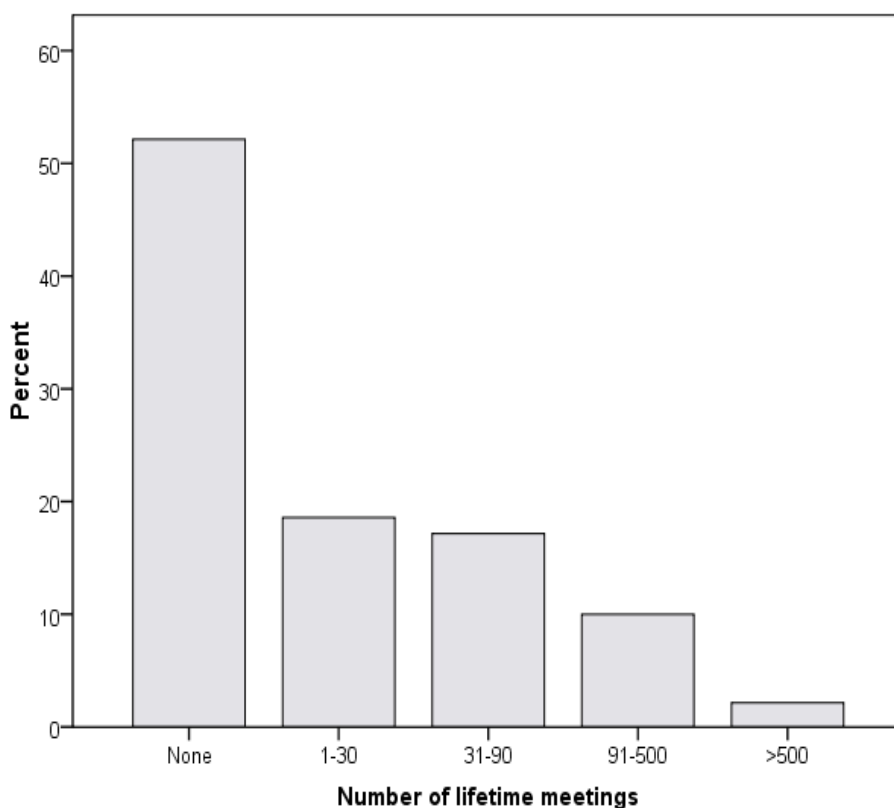


Table 3 TSG involvement items reported by those with previous TSG experience (N= 66)

Item	N (%)
Have you ever considered yourself a member of AA or NA?	43 (65%)
Have you ever called an AA/NA member for help?	36 (55%)
Do you now have an AA or NA sponsor?	21 (32%)
Have you ever sponsored anyone in AA/NA?	11 (17%)
Have you had a spiritual awakening or dramatic change in your world view and values as a result of your involvement in AA/NA?	26 (39%)
In the past 12 months, have you read AA or NA literature?	32 (48%)
In the past 12 months, have you done service, helped newcomers, or set up chairs, made coffee, cleaned up after a meeting, etc. ?	12 (18%)

Detailed scoring on TSG involvement items (AAAS) is shown in Table 3. Two-thirds of the patients with earlier TSG experience ever considered themselves members of AA/NA, which speaks to the issue that exposure does not always lead to identification and a sense of belonging to these groups.

Summing attendance and involvement scores (TSG composite score in AAAS) resulted in a mean 1.7 (SD=2.4) out of a maximum 9 and a positively skewed curve, with 59% of respondents scoring ≤ 1 (i.e., they did not score yes to any involvement item).

3.3 Perceived barriers and benefits of TSG participation

3.3.1 Perceived obstacles to TSG participation among addiction professionals (Aim 3a)

In the addiction professionals study, the focus was more on the perceived obstacles to TSG participation than on the possible benefits (Paper II). Six of nine statements on the TSG obstacle scale were endorsed by half or more of the professionals, suggesting a high degree of ambivalence about TSGs (Paper II). The items that stood out were: the intensity of meetings (80%), the religious aspect (70%), and the risk of fostering dependence on these fellowships (64%).

Overall, only half of patients were regarded by the professionals as being suited for TSG participation; the most cited reason (42%) for patients being considered ill suited was psychiatric co-morbidity.

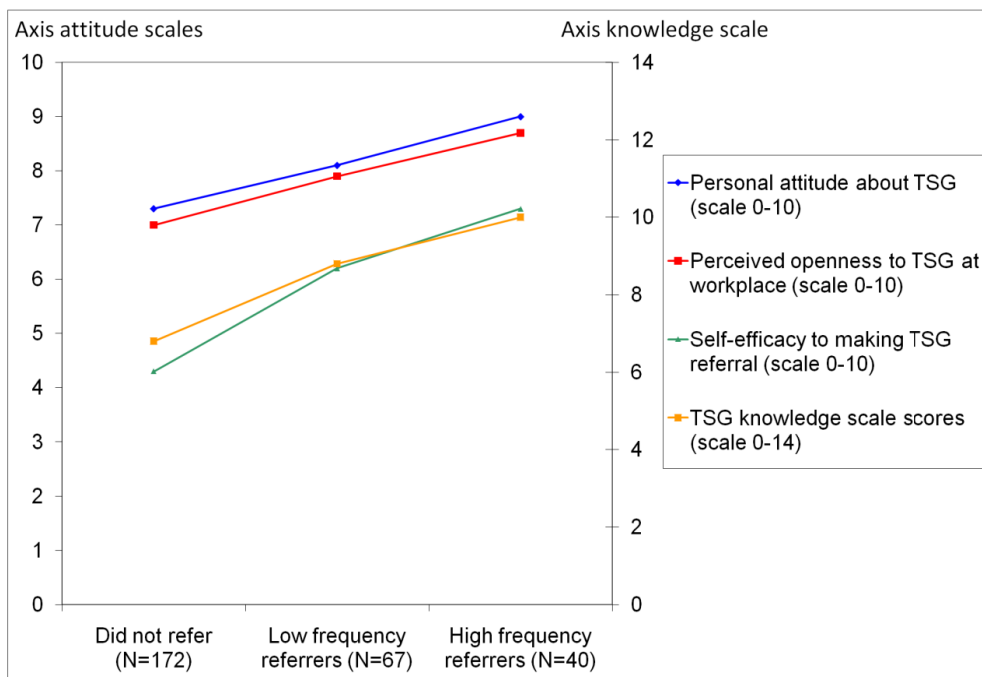
3.3.2 Perceived barriers and benefits of TSGs among patients (Aim 3b)

A much higher proportion of respondents embraced benefit items rather than barrier items (Paper III). The two most agreed upon benefits of participating in TSGs were: “In AA/NA, I will find people who understand me” (78%) and “If I go to AA/NA, I will find people who can guide me in how to be sober” (73%). The two barrier statements endorsed by the largest proportions of patients concerned embarrassment due to going to AA/NA (37%), and not wanting people to know that s/he goes there (29%) (Paper III).

3.4 Factors associated with addiction professionals’ practice of referring patients to TSGs (Aim 4)

Clear differences emerged across referral groups (Paper I). The “high frequency referrers” had more positive personal attitudes and reported greater openness to TSGs in their organization than both “low frequency referrers” and “non-referrers” (Figure 3). Similar patterns of between group differences also emerged for self-efficacy of making TSG referrals and TSG knowledge.

Figure 3 Addiction professionals' referral practices and their association with attitudes towards and knowledge of TSGs (N = 279)



In the multivariate analysis, respondents' integration of the 12 steps in their own treatment work, higher self-efficacy for making a successful referral, and greater TSG knowledge were associated with referring patients (Paper I). Familiarity with the 12-step philosophy was the strongest factor, and professionals reporting use of the 12 steps in their treatment work (N = 59) were substantially more likely to refer patients (OR = 4.4, 95% CI = 2.1 – 9.6, $p < 0.001$).

3.5 Cross-cultural comparison of Norwegian addiction professionals' views of obstacles to TSGs with views among professionals in a pro-TSG treatment culture (Aim 5)

The most notable sample difference was found with the religious aspects of TSGs, with more than twice as many Norwegian addiction professionals than their U.S. counterparts viewing the religious aspect of TSGs as a potential obstacle to

participation (70% vs. 29%, Paper II). The U.S. professionals had consistently more positive views about the role of TSGs in their treatment system (mean 9.3, SD=2.0 versus 7.4, SD=2.0; $p < 0.001$) and reported a higher self-rated belief in their own ability to make successful TSG referrals (mean 8.7, SD = 1.8 versus 5.3, SD = 2.7; $p < 0.001$).

3.6 How patient perceptions of TSGs are related to their intention of participating in these groups following discharge (Aim 6)

Forty percent of patients reported a high intention to participate in TSGs after discharge, 31% scored low, and 29% had a moderate intention (Paper III). Patients' notions that participation in TSGs can instill the courage to change and provide abstinence-specific support were the constructs that correlated most with high intention to participate following detox. A sense of not belonging in AA/NA was the item that most strongly correlated with low intention to participate.

A multivariate regression model revealed that perceiving TSGs as beneficial was most important in explaining differences in intention, as this factor was both inversely associated with being in the 'low' intention group and positively associated with being in the 'high' intention group versus those with a 'moderate' intention. Differences in perceived barriers towards TSGs were found only between the 'low' and 'moderate' intention groups. The patients' perception of the severity of their substance dependence did not come out as a significant variable in the multivariate analysis.

4.0 Methodological considerations

4.1 Design

Cross-sectional design is a type of observational study and can be thought of as a “snapshot” because data are collected at one point in time (119). Cross-sectional studies are correlational in nature. The direction of the association between variables is uncertain, which means that such studies cannot reliably establish causal relationships.

This important caution should not be forgotten, but cross-sectional designs can be useful for measuring the prevalence of certain phenomena, especially phenomena that are expected to be relatively stable over time, e.g., to explore the prevalence of some behavior among, or the opinion, beliefs, or attitudes of a group of people (119;120). Examining the association between factors to explore the relationship between variables and phenomena is also possible. One possible form of usage is to collect information that can be used to map clinical practice patterns before health policy makers make new recommendation for a practice field. Such information would allow for an evaluation of to what extent policy makers have been successful in implementing the policies at a later stage (54). The present project made efforts to explore the attitude towards and usage of this phenomenon in the Norwegian addiction field, at least not long after the time of the introduction of the National Plan that aspired to promote self-help approaches (23).

4.2 Sample and selection bias

Drawing inferences from study findings to the real world is a core purpose of research (100). Thus, it is important that the selected sample population be at least theoretically representative of the target population, i.e., the population the results of the study will generalize to (3). If not, considerable differences between the measured sampling value and the true population value can be expected, which would make inferences to the target population at least unreliable, or even false.

4.2.1 Addiction professionals study

The target population for the addiction professionals study was addiction treatment professionals in Norway. Obviously, using professionals from the researcher's home county would give a small sample and a relatively atypical proportion of addiction professionals familiar with 12-step philosophy compared to the Norwegian population of addiction professionals as a whole. This disproportion is due to the well-established 12-step unit in that county with more than 25 years of local history. Earlier research indicated that clinicians who are familiar with 12-step philosophy are also very positive towards TSGs (54;65). To infer findings to the target population, balancing this factor to the level that could be expected in the addiction field at large was important. Thus, addiction professionals from the larger health region consisting of four additional counties were recruited. No differences were observed between responders and non-responders based on key demographic data. Thus, the responders are representative of all addiction professionals in that region. Because the sample then consisted of a similar proportion of addiction professionals influenced by 12-step philosophy as that of Norwegian addiction professionals as a whole (5% of treatment units describe themselves as using the 12-step model), findings would likely have generalizability. There is no reason to believe that professionals of this region differed from other regions in Norway.

Because at least a portion of the sample was expected to be similarly influenced by the prevailing treatment philosophy in the U.S. treatment system, the 12-step philosophy (62;63), a cross-cultural comparison with the U.S. was also seen as relevant.

The cross-cultural comparison in Paper II had several drawbacks. The U.S. study used a sample of convenience, a historic comparison group, and included only outpatient workers from New York. Thus, one could ask whether that sample was representative of all U.S. addiction professionals. However, Laudet and White commented that a central variable of their study, the TSG referral rate, was similar to findings documented by others with larger and more diverse U.S. samples (54), giving some confidence as to the representativeness of their findings and other aspects of clinicians' relationships with TSGs (73).

4.2.2 Patient study

The final sample considered eligible for the patient study comprised only 25% (156 of 616) of admissions to the ward during the inclusion period. Thus, one could critically question the population to which the findings of this study could be inferred. The focus on patients who were to be discharged to their homes was deliberate; the target population was those with little or no follow-up appointments in the formal treatment system, at least with no direct transfer to inpatient units. Because of the known controversy between being in methadone/buprenorphine treatment and TSG attendance, patients in OMT were not included (121-123). Thinking of patients with active and serious psychiatric problems as eligible for ordinary TSGs is also controversial, and likely unrealistic; therefore, patients with severe psychiatric co-morbidity were excluded (124;125).

The mentioned factors represent choices to enhance the *internal validity* of the study, i.e., to obtain a homogenous sample according to the purpose of the study (7). However, higher internal validity reduces the *external validity* of findings; findings from the selected sample are not necessarily representative for all patients admitted to detoxification wards. Thus, the findings should be considered in light of the restraints for the inclusion of patients, which speaks to the limitations and specificity of what target population to which the findings can be generalized. For example, the patients who left the ward prematurely and were not able to be assessed (patients with short stays, mean < 2 days; n=73) may have had more ambivalence towards trying to solve their drug problem. In turn, such factors would also likely have negatively affected a patient's motivation to attend TSGs. However, if data from the above mentioned group of "short-stayers" was known, it is not likely that the conclusion of the paper, that patients have relatively little motivation to attend TSGs, would have been much different, and there is no reason to believe that an association exists between being unable to make it through detox and different perceived barriers or benefits of TSGs than what was observed in the sample for which information was available.

4.3 Information bias

A variety of factors related to the quality of measurement, including conceptual factors, respondent factors, item factors, and methods of administration, might lead to measurement errors that influence whether findings are reliable. Two central concepts speak to the understanding of measurement errors in research, and as such they are the quality criteria for the study findings. These are *reliability*, which is related to the precision of data collection, and *validity*, which relates to construct concordance, i.e., if the collected data reflects what is said to be studied (100). Flaws in these properties may lead to false conclusions, or at least limit the generalizability of the findings.

4.3.1 Validity

Validity is often defined as the extent to which a test or survey measures that which it is intended to measure, and may be thought of as how well an archer is able to hit the center of the target (6). For any given measure, different aspects of validity will have to be investigated, depending upon the measure's purpose (115) (e.g., *content validity*, how adequately the selected questions cover the themes that are specified in the conceptual definition of its scope (6)).

A recommended strategy, rather than to develop scales or questionnaires for each study, is to apply questionnaires or scales that have been examined and considered reliable and valid in previous research (100). Making sense of the results is easier and they can be interpreted in light of the existing literature, and other researchers will better understand and trust what is claimed to be measured (120). In the present addiction professionals study, a survey developed by Laudet and White (73;91), which had similar objectives as the Norwegian study, i.e., to broaden the understanding of predictors influencing TSG referral practices among addiction professionals and investigate what may constitute obstacles to TSG participation in the professionals' views, was re-used (73;91;126). The development of Laudet and White's questionnaire was guided by extensive review of the literature (126), including SHG and TSG studies and relevant theories on key determinants of human behavior (5;127). Items were adapted to be specific to the study purpose (TSG-specific) and pre-tested with qualitative interviews. One of

the subscales, the TSG obstacle scale, underwent formal statistical validation with factor analysis, followed by the removal of redundant items (73). For the patient study, two well-established and reliable instruments developed in the U.S. were used (95;96;107).

As Beaton and colleagues point out, most research questionnaires are developed in English-speaking countries (103). When questionnaires are to be used in a different language and culture than the original, certain guidelines should be followed to reach equivalence between the source and target versions. Items must not only be translated well linguistically in order to maintain the content validity of the original at a conceptual level, but cultural adaptations are also needed (103). Following these guidelines, all of the original English scales and questionnaires used in this study underwent two forward translations into Norwegian by independent translators, synthesizing of the results by the project group in collaboration with the translators, two backward translations, and then the pre-final versions were composed by the project group in collaboration with the translators and original developers. At the end, field-testing was performed with 17 addiction professionals (addiction professionals study) and 10 patients (patient study). Upon completing the questionnaires, subjects were interviewed to probe what s/he thought was meant by items and responses. Finally, the project group, in collaboration with the developers of the original instruments, consolidated a final version of the questionnaires.

The described process provided a level of quality for the content validity of the questionnaires used. Therefore, the resultant version should have sound reliability and validity if the original version did, as was the case with the TSG Obstacle Scale, AAAS, and SYRAAP. Nonetheless, a few additional tests for the retention of the psychometric properties of the questionnaires were carried out as recommended (103). However, more formal testing of the instruments might have been desirable.

Although several of the objectives could be covered by existing questionnaires, two scales had to be developed specifically for this study: the *TSG knowledge scale* and the *intention items* related to TSG participation after discharge. The

content validity of these scales was secured by following the procedures described in the methods section (see chapters 2.2.1 and 2.2.3).

4.3.2 Reliability

The value obtained from any measurement can be viewed as a combination of the underlying true score and some degree of error (6). In this view, every measurement involves some error that can be reduced, although it can never be completely eliminated (115). Thus, unreliability can be understood as the proportion of variance in the observed score distribution that is due to error. Reliability of measurement usually focuses on the consistency of a measure, e.g., if a test and re-test by the same individual gives similar results (100). Reliability is calculated by correlations and scored '1' when the measured variance and true variance are the same, meaning no measurement errors. When the measured variance merely consists of error, reliability is '0'(100). For example, the test/re-test for the two intention items used in Paper III resulted in $r = 0.74$ for both using the Spearman's rho index for concordance between ordinal data (115), which is considered a satisfactory test/re-test concordance (120).

The standardized procedure for translating previously validated scales (i.e., Obstacle Scale, AAAS, and SYRAAP) is thought to secure sound reliability with the target version in a new language (103). However, many sources of measurement error exist, including respondent factors. The present study was performed on a detox ward. To secure reliable information, patients were not assessed before they had passed the acute detoxification state, defined as not being intoxicated by drugs and not having considerable withdrawal symptoms. Mean days from admittance to the EuropASI interview in the patient study was 4.5 days (SD 3.1).

Another issue is the methods of administration. In the cross-cultural paper, different data collection methods were used in the two samples: self-administered anonymous surveys versus personal interviews. Thus, a natural question is whether the observed country differences could simply be due to differences in the data collection methods. When addressing attitudinal issues, respondents who are personally interviewed and not anonymous to the researcher may likely feel more

obligated to be positive about the domains studied. This tendency can be thought of as a response set, a response pattern that introduces self-report bias in the data (106). The pattern described here has been identified as *social desirability*, an “expectancy factor” that draws the scores towards what is expected; people feel obligated to be positive about the domains studied (128). However, when it comes to factual questions, such as the respondents’ practice and experience, social desirability is less likely to lead to the same response biases. The more positive views of TSGs reported by the U.S. addiction professionals were consistent with their experience (education) and practice (e.g., having sought out and attended TSGs); therefore, the differences between the samples were considered real and relevant. This argument was also supported by findings within the Norwegian sample, in which more positive attitudes, greater knowledge, and higher self-efficacy scores were positively associated with higher TSG referral rates (27).

An often overlooked issue is quality control of the data (111). In the health personnel study, forms were scanned with Readsoft’s optical character recognition (OCR) software (version 5.0) (129). To be readable, questionnaires had to be defined in the software. Scanning with OCR software is thought to reduce random error that inevitably occurs when data are manually typed into a database. Nonetheless, sound advice before beginning the analysis is to check the data file for errors and inspect the frequencies of each of the variables; e.g., check the minimum and maximum values to determine whether they are within the range of possible scores for the variable (111). When data from the pilot bulk scan was transferred to the SPSS file and checked for errors as described by Pallant (111), one item was found to have values outside the range of possible scores defined in the codebook and SPSS file. Two items had accidentally changed places in the OCR definition set and had to be corrected. If this quality control had not been performed, the error would have resulted in an inaccurate mean value for that item.

To summarize, the above elaborations indicate that the quality of data in this study can be considered valid and reliable. To the best of my knowledge, there are no considerable biases that would have altered the conclusions made in the papers or this thesis.

4.3.3 Confounding

A simple definition of confounding would be the confusion, or mixing, of effects; the observed associations between dependent and independent variables may be better explained by a variable that was not examined or asked for (130). For example, Laudet and White's questionnaire did not include level of knowledge as a variable, although knowledge is logically a prerequisite for attitudes. Thus, knowledge level was measured in the present study because it was expected to be an important factor for which to control (73;131). Thus, the level of knowledge could be a factor that might be more important than, e.g., attitudes to explain variations in the dependent variable, referral practices.

"Reinventing the wheel" is not necessary (120). A sensible strategy would be to build on relevant theory and earlier research, as in the present study, to ensure that information is collected on some of the most important variables known to influence the dependent variable. However, this approach does not mean that ruling out other factors relevant to the examined constructs is possible. For example, for item reduction purposes, the SYRAAP scale was reduced during the original validation process from 10 to 5 items in each sub-scale based on highest item-total correlations (95). In hindsight, this process could have been done with the Norwegian version to determine if any of the other original 10 items would be more important for the evaluation of TSGs in a European culture compared to the U.S.

4.4 Strengths

Both studies used standardized and/or established instruments. The addiction professionals study had a relatively large sample size; the number of respondents was three times larger than that of the similar U.S. study. The addiction professionals study also had a high response rate (80%). The patient study had a more moderate sample size but was still considered sufficient for answering the research questions and to perform the analyses (117). The addiction professionals study is the first study to examine Norwegian clinicians' attitudes and practices with respect to SHGs in general, and TSGs in particular. The study is also among

the few that have examined addiction professionals' relationships with TSGs outside the U.S. The focus on formal health services relationships and cooperation with the third sector, i.e., with voluntary resources outside the health services, has been emphasized in recent national and international public health documents, which make the issue relevant for health services research. Earlier research on the usefulness of TSGs also found that the issue is clinically important. In addition, the study included a cross-cultural comparison, which put the findings into an international perspective.

The project also investigated patient perceptions of TSGs, and is among the few to examine this phenomenon in Europe. In addition to the focus on a relevant health service issue, the study population was a group of patients with no or few continuing care appointments in the formal treatment system, though support is likely to be needed for lengthy intervals. Formal health services typically experience restraints and limitations (15). Thus, the focus on resources outside formal health services seems to be a reasonable and important step to allow professionals and patients to recognize other available support systems.

4.5 External validity

The addiction professionals study included a relatively large sample of respondents; all the treatment sites in the region participated and the response rate was good. No differences in key demographic data were found between respondents and non-respondents. Thus, the findings are considered representative for the region. There is no reason to believe that the investigated region is considerably different from other regions in the country, and the findings may also be considered fairly representative for Norway as a whole.

The single site design of the patient study could be argued to be a problem. The county with that unit also has a public 12-step treatment ward, one of the few of its kind in Norway. Thus, patients' prior experiences with TSGs and perceptions of TSG benefits may be overestimated compared to what would have been found if wards from other counties had been included. However, that almost half of the

patients had some experience with TSGs prior to the study can be considered a strength. Experience, knowledge, or at least some hearsay is a logical prerequisite for acquiring perceptions about an issue and activating the evaluative processes that characterize attitude building (131). Thus, attitudinal constructs should be examined in samples in which a reasonable proportion of respondents, as in this sample, have experience with the topic under investigation.

Notably, patients entering a detox ward are self-identified problem drug users. Consequently, the sample is not necessarily representative from the perspective of a general population with addiction-related problems, and it does not necessarily represent “typical” TSG recruits, as there also are other possible pathways into AA/NA than through treatment (50). Thus, the present findings are relevant for detox patients who do not have inpatient follow-up appointments in the formal health services and are not necessarily representative of TSG recruits from other contexts.

5.0 Discussion of results

5.1 Addiction professionals' attitudes towards and knowledge of TSGs (Aim 1)

Norwegian addiction professionals reported moderately positive attitudes towards TSGs and predominantly considered participation in TSGs to be harmless for patients. However, the perceived ability to refer patients to these groups (self-efficacy ratings) and knowledge scores were only at a medium level.

Although attitudes were generally positive, they were apparently not positive enough to foster a high use of these groups in terms of a substantial referral rate (see chapter 3.2.1). Some of the secondary characteristics of attitude that are said to moderate the attitude-behavior relationship are: importance of the attitudinal domain, direct experience with the attitude object, and information and reflection about the issue (5). Such factors would likely influence the attitudinal strength and lead to variation in the attitudinal impact, e.g., in the manifestation of attitudes, namely behavior (131). Thus, strong attitudes would likely have a stronger influence on behavior than weak ones, as seen in the present study (Figure 3). For example, direct experience with an object would likely enhance the attitudinal importance of it, and few in the present sample had had direct contact with TSGs in terms of own attendance (Paper I). Furthermore, although knowledge was at a middle level, respondents were only moderately interested in obtaining more information about TSGs (Paper I). Strong attitudes (both positive and negative) are more likely to impart bias in information processing and judgments than weak attitudes in the sense that they make it more likely that certain information will be recognized, or that certain decisions will be rendered (131). Attitudes that do not lead to actions may, to some extent, be regarded as “non-attitudes”, in that they do not lead to specific preferences about an issue (131). Nonetheless, the Norwegian professionals seemed to be generally positive towards TSGs, which would likely serve as a seedbed for measures to enhance their utilization of TSGs in the future.

To the best of my knowledge, no U.S.-based study has examined actual or self-rated knowledge of TSGs; however, given the high status TSGs have in the U.S. addiction treatment system, one might expect knowledge and familiarity with these groups to be greater than in European countries (see comparison with U.S. conditions in chapter 5.5). In a UK-based study with 346 participating clinicians, 32% of respondents self-rated their knowledge about TSGs as high or very high (highest two-fifths of the scale) (65), whereas 29% in the present study had scores within the highest two-fifths of the present scale. Although this is a comparison of self-rated versus actual knowledge scores, it indicates some similarities in regards to the level of TSG knowledge between UK and Norwegian addiction professionals.

In the present study, respondents had greater knowledge about the rules and procedures involved in 12-step participation than organizational knowledge of TSGs (see chapter 3.1). The main exception was that only 50% knew that participants do not need to be sober to attend a 12-step meeting¹¹. If addiction professionals do not know that TSGs have a low threshold policy, patients may be discouraged to attend groups during vulnerable periods when they are not completely sober and struggling to stay away from drug use. Not being aware of the low threshold policy in TSGs is also quite revealing and adds to the suggestion that professionals confuse institutional and voluntary 12-step programs. Formal 12-step based treatment models require abstinence before treatment, e.g., through detoxification at a detox unit, and usually that patients abstain throughout the treatment period (132). If lapses happen, the patient is expelled or their treatment is halted for some time, during which abstinence has to be re-established before re-entering the treatment program (133). Thus, the issue of abstinence before admittance is addressed differently and acts as an important distinction between 12-step-based treatment models and community-based TSGs.

Overall, the purpose of the TSG knowledge scale was to provide a relatively simple checklist of respondents' knowledge of TSGs. The overall moderate score,

¹¹ Although intoxicated attendees are asked not to 'share' (i.e. speak up) during the meeting.

the limited self-rated belief in one's own TSG referral ability and the important gap in knowledge concerning criteria for TSG attendance (see above), suggest that addiction professionals need more information about these addiction-related SHGs. This knowledge gap may stem, in part, from the TSGs being less available in some areas in the region, making it difficult for professionals to become acquainted with the groups firsthand. However, all of the treatment centers in this study had at least one 12-step group in its immediate surroundings, providing an opportunity for some level of cooperation (Paper I). Alternatively, indifference towards TSGs as the result of a lack of a formal policy regarding TSGs in the units may be an explanation for the findings.

5.2 Prevalence of TSG utilization

5.2.1 Prevalence of TSG utilization among addiction professionals:

Referral practices (Aim 2a)

The finding that attracts attention is the very low TSG referral rate observed among the Norwegian addiction professionals (15%), as it was considerably lower than in U.S. studies, which have reported proportions of 76 to 79% of all patients (54;73). TSG referral practices are described as a distinct treatment technique, TSF, a relatively new term in the international literature (17). The very low TSG referral rate indicates that TSF has been implemented to a very limited degree in the Norwegian addiction field.

Using only the number of patients the professionals considered to be suitable for TSG participation as a denominator, a little more than half of the patients, the referral rate increased to one-third. Thus, of those who were eligible in the professionals' own view, the majority were not recommended to attend TSGs. These findings resemble the situation in the UK, where addiction professionals rarely recommend TSGs to their clients (65). Thus, if the U.S. treatment system's high use of TSGs is considered a "gold standard", available evidence indicates that TSGs are underutilized and that there is great unused potential for such resources in European countries.

5.2.2 Prevalence of TSG utilization among patients (Aim 2b)

Forty-eight percent of the patient sample had ever been to TSGs prior to admittance at the detox unit, which is substantially lower than the 66% to 82% reported in U.S. and U.K.-based studies (90-94), and also lower than that observed in a Swedish treatment sample; 60% (134). Twelve-step-based treatment models usually require patients to begin TSG attendance during treatment (133). Those who had previous 12-step-based treatment (28% of respondents; Table 2) can be expected to have initiated their 12-step participation during earlier treatment periods, which represents more than half of the 48% who had prior TSG attendance in the sample. In contrast to the county where this study was located, 12-step-based treatment units are quite rare in Norway (Paper II), and even lower TSG attendance rates among patients can be expected in other Norwegian counties without such units.

Findings also indicate that, although half of the sample had entered a TSG meeting at some point, a smaller proportion felt a sense of belonging to TSGs, as only two-thirds of those with prior TSG experience reported ever having considered themselves a member of AA/NA. Thus, attendance at some point in time is not the same as being involved in a TSG (135). Only two of seven TSG involvement items were scored positively by more than half of the earlier TSG participants (Table 3). Similar findings have been observed in long-term remitted samples. In an outpatient treated sample of who had completed one year of abstinence (N=81), almost half did not consider themselves as members of AA though they had attended a considerable number of AA meetings (136). Smith examined the development of group dependency, i.e., belonging in positive terms in AA, and described a “re-socialization” process that is often needed in recovery from addiction, in which one has to “radically reassign reality accents and, consequently, must replicate to a considerable degree the strongly affective identification with the socializing personnel” (137, p. 144). Thus, a process of re-socialization is often an interactive process that seems to begin with the formation of a significant-other relationship, which for some may take a long time (138).

Overall, the findings reported in chapters 3.1 and 3.2 (Aims 1 and 2) support the notion that the Norwegian treatment system is 12-step naive, i.e., with little

awareness and little knowledge of TSGs as possible recovery resources. Considerable potential seems to exist for greater use of these groups in the Norwegian addiction treatment system.

5.3 Perceived barriers and benefits of TSG participation

5.3.1 Perceived obstacles to TSG participation among addiction professionals (Aim 3a)

A rather large proportion, almost half, of the patients seen by the addiction professionals were deemed as unsuitable for TSGs by the professionals. The most cited reason was psychiatric co-morbidity (Paper II). Respondents also commented on these patients' general problems with group settings, which may be an underlying reason for the strong endorsement of TSGs as 'too intense' on the obstacle scale (Paper II), and it resembles findings in U.S.-based studies about dual diagnosed patients. For example, 38% of clinicians in the Veteran's Administration reported being less likely to refer substance abuse patients to TSGs if they had co-morbid psychiatric diagnoses (54). Such findings do not necessarily indicate reluctance to use TSGs per se, but rather the clinicians' consideration of the member-group fit for co-morbid patients. Thus, that a clinician may consider an individual patient ill suited for TSG participation because of individual characteristics does not necessarily mean that the clinician has objections to TSGs in general. In the United States, the more complex needs of co-morbid patients have led to the establishment of alternative SHGs for dual diagnosed patients (125;139). Such groups currently do not exist in Norway and, for the time being, co-morbid patients have to rely on the ordinary TSGs.

That the Norwegian professionals perceived TSGs as too intense may also stem from their confusion of voluntary community-based TSGs and professional 12-step-based programs. The 12-step treatment model is considered by some as being too confrontational (140), and professionals may think that this applies to 12-step meetings as well, but this is not in line with how 12-step meetings are run or with the literature in which the non-confrontational aspect of TSGs has been noted

(e.g., the prohibition of cross talk and overt negative feedback to previous turns of talk during meetings) (141).

The statement regarding the possible religious aspects of TSGs was also endorsed by a high percentage of Norwegian professionals as a potential obstacle to participation. Curiously, the religious aspects of TSGs were rarely mentioned in the open-ended responses. The religious aspect may not have been at the top of the professionals' minds initially, and it seems that they have to be reminded about this possibly controversial aspect to recognize it. Interestingly, 70% of the professionals thought that the religious aspect may be an obstacle for their patients, though 65% answered correctly on the knowledge scale that TSGs are not religious groups. TSGs define themselves as spiritual, not religious, organizations, and individuals are free to define his/her own understanding of the 'higher power' concept (142). Whether it is the professionals' own reaction or concern regarding their patients' reactions to the TSGs' use of words with religious connotations is not clear based on the present data. Being familiar with the Norwegian secular culture, it is reasonable to expect that the Norwegian addiction professionals have had similar observations among their patients as a study conducted in the UK in which the majority of patients (>50%) reported finding references to "God" and "higher power" in the 12 steps as problematic (94). Such factors have also led to the recommendation that clinicians in the U.S. should assess a patient's religious/spiritual beliefs when referring patients to SHGs (54). Patients that may be expected to be uncomfortable with AA's focus on spirituality should be referred to a different program with less emphasis on this aspect of healing (54;72). In a Norwegian context, this approach would be difficult because few alternatives exist. An option for professionals would be to engage themselves in the establishment of alternative groups seen as needed by patients/users. Professional involvement in establishing SHGs is an increasing trend (143), and even the strongly self-organized AA has received help from professionals in the fellowship's initial phases in some countries, such as Poland (144).

5.3.2 Perceived barriers and benefits of TSG participation among patients (Aim 3b)

A substantially larger proportion of patients agreed with TSG benefit items than TSG barrier items, suggesting that experiences with TSGs tend to be more positive than negative, and that TSGs are perceived as possible supportive resources. The two most agreed upon benefits of TSG participation pertained to the assistance patients expected to obtain from meeting with peers and the possibility of finding people who could provide guidance in regards to sobriety. Although this Norwegian sample had less prior experience with TSGs than that observed in a U.S.-based patient sample (48% versus 66% had ever been to AA/NA) (91), a large proportion of the Norwegians (approximately three-quarters of respondents) embraced similar benefits as those frequently cited by the U.S. patients: support and fellowship from peers and help with sobriety and recovery. Direct comparisons cannot be made, however, because of different methods of measuring: open qualitative questions versus a structured questionnaire. The overall clinical impression is that Norwegian patients are primarily concerned about what kind of help can be obtained from the formal treatment system. However, the findings indicate that they seem to be aware that other possible resources exist.

The barrier items embraced by the largest proportion of patients were: "I do not want people to know that I am going to AA/NA" (37%) and "Going to AA/NA can be embarrassing to me" (32%) (Paper III). The issue of embarrassment also seemed to have some relevance for those with high intentions to participate in AA/NA after discharge and may reflect the difficulty of disclosing a problem with alcohol and drugs. To attend a TSG meeting may be felt as a high threshold to pass. Merely showing up at a meeting implicates acceptance of not mastering your life; in going there you, in a way, admit to be in need of help. For those who attended a TSG previously, there may be emotional and psychological obstacles to rejoining TSGs after a relapse (1). Thus, patients may be ambivalent about returning to the groups and may need support in a process to come back to their groups.

The earlier papers using the SYRAAP only reported the composite score of the scale (95;96); thus, comparing findings is difficult. In a U.S.-based study (N=101) that examined attitudes and beliefs about TSGs among clients, reasons for not attending were examined and the two most cited reasons were "People are not ready to stop using or are still using" (47%) and "People can do it on their own" (21%)(91). In contrast to the Norwegian patients, few (7%) mentioned being embarrassed or not wanting to be seen at a TSG, which indicates that embarrassment about going to an AA/NA-meeting is less of a problem among U.S. patients, which may be due to the high standing and applicability TSGs have in American society (89;145). The difference may also be caused by the positive attitude towards and acceptance of TSGs that patients likely notice during treatment with U.S. professionals (54;72;73), which could possible reduce embarrassment.

5.4 Factors associated with addiction professionals' practice of referring patients to TSGs (Aim 4)

Addiction professionals who refer patients to TSGs, in contrast to the non-referrers, were most strongly characterized by the integration and use of 12 steps in their own treatment work. Twelve-step-based treatment programs have always placed a strong focus on making patients begin in TSGs in parallel with treatment (60), and this feature may be thought of as an agency policy in these programs. According to attitude and behavior theory, the person's perception of attitudes in the environment towards an issue is a very important factor that influences clinician behavior (146). Thus, it is not surprising that professionals influenced by this model also have a strong awareness of TSG utilization in their treatment work, as also observed by others (26;54). However, from the point of view of the TSG, there is no specific binding or loyalty to 12-step-based treatment units. The focus of the TSG is on the individual's needs. If a person has a wish to stop using/drinking, s/he is welcomed into the groups, regardless of which type of prior addiction treatment model the person has experienced (30).

Clear between-group trends in knowledge and self-efficacy items emerged between referral groups, with those referring a larger proportion of patients scoring more positively on all items (Figure 3). Again, this speaks to the uncertainty Norwegian addiction professionals express about TSF and that training is needed in how to refer patients and encourage them to attend TSGs.

Although attitudes significantly explained referral practice in bivariate analysis (Paper I) and followed a clear parallel trend across referral groups (Figure 3), neither personal attitudes nor perceived openness to TSGs at the workplace were significant in the multivariate analysis (Paper I). Several factors moderate the attitude-behavior relationship, e.g., attitudinal strength, which is typically influenced by the perceived attitude toward an issue in the social environment (131). Those with more positive personal attitudes also reported more a positive attitude towards TSGs in their units (Figure 3), suggesting an interaction between the individual clinician and the agency's policy. Different policies, articulated or not, may exist regarding TSGs. Importantly, silence on the matter may also serve as a policy. However, inference must be drawn with caution. The present study did not examine actual policies about TSGs. The item about this issue in the questionnaire is better understood as an examination of professionals' impressions of the attitudes in their environments, whether that pertains to a pronounced policy or a general attitudinal climate towards TSGs among colleagues. Again, it is difficult to compare these results to other studies because of different designs, but the overall picture in this Norwegian region, possibly with the exception of the county with the 12-step-based unit, resembles that which was noted by Best et al. in the UK; it is left to the individual clinician's discretion as to whether or not they are supportive of Twelve-Step-like approaches, and no strong policy about the matter exists (93).

5.5 Cross-cultural comparison of Norwegian addiction professionals' views of obstacles to TSGs with views among professionals in a pro-TSG treatment culture (Aim 5)

The rationale for this objective was to compare findings in Norway with a country in a different phase when it comes to TSG utilization in its treatment system. The comparison should show the most relevant barriers to more extensive use of TSGs in addiction treatment in Norway and highlight possible developmental directions.

As expected, more positive attitudes towards TSGs exist among U.S. addiction professionals compared to Norwegian professionals (Paper II). Comparing the attitude item “How important a role do you believe TSGs can play in the treatment system?”, the Norwegian sample scored a mean 7.3 compared to 9.3 in the U.S. sample (Paper II). Attitudes were also visible in different treatment practice and experiential knowledge of TSGs; the two studies reported 76% (U.S.) and 15% (Norway) of patients being referred to TSGs, and 89% of U.S. versus 32% of Norwegian professionals had ever attended a TSG meeting. Although the two countries typically differ in the proportion of addiction professionals being in recovery from substance abuse themselves (e.g., a U.S.-based study reported 15% of staff members (147) versus an estimated < 5% in the present Norwegian study (Paper I)), it cannot explain the huge differences in the professionals' attendance at TSG meetings. The high percentage of American professionals who have attended TSG meetings may be interpreted as a reflection of their appreciation of TSGs and that becoming familiar with TSGs is considered necessary for their practice. Nonetheless, a small subgroup in the Norwegian sample, the “high frequency referrers”, had positive attitudes towards TSGs, similar to their U.S. colleagues (Paper I), which indicates that the topic is considered to be important among at least some Norwegian addiction professionals.

The most notable sample difference for specific TSG obstacles was found with the religious aspects of TSGs, with more than twice as many Norwegian as U.S. addiction professionals viewing the religious aspect of TSGs as a potential

obstacle to participation (Paper II). Norway, and most of Europe, has been described as being much more secular than the United States (148-150), and this may partly explain our findings. Another cross-cultural study that compared the views of Norwegian and U.S. social workers regarding spirituality, both religious and non-religious, shines some light on the present findings (151). In that study, U.S. social workers employed spiritually oriented helping activities (e.g., recommend participation in a religious/spiritual support system or activity) to a much greater extent than their Norwegian colleagues. The Norwegians were also more skeptical about religion and spirituality in their practice. Zahl and Furman provided some possible explanations for these findings, such as the topics of religion and spirituality have been neglected or overlooked by social work practitioners and educators, and that the prevailing secular belief system in Norway creates a negative alertness for religion and spirituality in general (152;153). Thus, Norwegian treatment professionals would hesitate to integrate into their services or recommend organizations that may be viewed as religious. This situation is not unique to Norway, as noted by Day et al. regarding similar findings among UK addiction professionals; the tendency to consider the 12 steps as religious may stem from the professionals being unable to distinguish between religion and spirituality (65).

Overall, skepticism among professionals may decrease by educating them about the "higher power" concept in TSGs, which would facilitate client re-conceptualization of "higher power" so that it may be tailored to personal beliefs. A greater flexibility in a patient's conceptualization of "higher power" would provide a more relaxed attitude towards the use of these terms that are normally interpreted religiously (93). Nonetheless, studies on this issue among patients have shown that a more secular orientation in personal beliefs (e.g., agnostic or atheist) negatively influences affiliation with TSGs. In a large multisite study, patients self-labeling as spiritual or religious were more likely to initiate and sustain AA attendance than self-labeled atheist and agnostic patients (154). On the other hand, belief in God appeared to be relatively unimportant in deriving AA-related benefits; atheist and agnostics who eventually were involved had similar benefits as self-labeled spiritual/religious patients. The problematic affiliation process for more secularly oriented individuals has led to research aiming to match individual

beliefs to that of the person's primary SHG (77;88). Favorable outcomes may be less dependent on attendance at SHG meetings per se, but more on the extent to which those who attend embrace the philosophy in their respective SHGs (88;155). Findings from such studies suggest that groups that separate recovery from spirituality and religious beliefs may provide a more appropriate environment to nurture recovery for those of a more secular orientation (88;156).

5.6 How patient perceptions of TSGs are related to their intention of participating in these groups following discharge (Aim 6)

In the patient study, 40% of patients reported a high intention to participate in TSGs after discharge, 31% had low intention, and 29% had moderate intention (Paper III). Perceiving TSGs as beneficial was the most important factor explaining variation in the intention to participate in TSGs, as this factor was both inversely associated with being in the 'low' intention group and positively associated with being in the 'high' intention group compared to those with moderate intention. Differences in perceived barriers to TSGs were found only between the 'low' and 'moderate' intention groups, implying that the "moderate intention" group is not primarily described as having important barriers to TSG participation; they just perceived fewer advantages of TSGs than those with 'high' intention.

The findings are in line with those of Harris et al.'s UK-based study in which a similar distribution, roughly one-third in each category, were categorized as having "negative", "neutral", or "positive" attitudes toward TSGs (94). As noted by the authors, the presence of a considerably sized non-polarized/neutral group challenged their preconception that substance users were heavily polarized in regards to their attitudes towards TSGs (94). It can be presumed that those who were "neutral" or those having 'moderate' intentions (as in the present study) may be moved towards a greater intention to participate if addiction professionals highlight possible gains of participation and participation is recommended. These actions would possibly enhance the patients' perceptions of the relevance of TSGs to their problems and function as clinician approval of TSGs, a potentially

important pathway towards recovery (126). A starting point for such information could be the topics that were most important for higher intention in the single item analysis of the present study: the possibility of obtaining the courage to change and receiving support for abstinence from peers (Paper III). Such findings do not only tell what patients think can be achieved through TSGs, but presumably the needs patients perceive they have.

Among those with low intention, which was a little less than one-third of the patient sample, perceived barriers to participation represent a challenge. Perceptions of the advantages of TSGs were also considerably weaker than in the other two groups. Some of the perceived barriers may refer to personal experiences with TSGs. Approximately one-third of the 'low intention' group had some previous experience with TSGs (Paper III), which may have led these patients to conclude that TSGs were not an appropriate fit with that person's problems or belief system. Similar observations were made in a U.S.-based study (N=101) in which a reason for non-attendance among 19 with prior, but no current, attendance was "I got the message and it didn't help" (91). TSGs likely do not fit every person's needs or belief system (88). Ideally, patients should have several SHG options available. An expert consensus report recommends that clinicians present SHG alternatives and the client select a suitable SHG based on their needs, beliefs, and preferences (9), a recommendation that has been repeated by others (88). Approximately half of the 38 non-attendees in Laudet's study cited the reason "do not feel that I need it" to explain their non-attendance (91), and patient preference may include the option to try to solve the addiction problem on their own, which may be a realistic option for some (136). However, one of the strongest recommendations from the large Project Match study was that involvement in TSGs should be given special consideration for patients with networks supportive of drinking (157). Particularly for patients who have little support for abstinence in their networks, recommending they adhere to a fellowship with a solid abstinence-specific support system is of utmost clinical importance (158).

Overall, a balanced clinical approach may be at least to confirm patient views regarding TSGs. If patients clearly reject SHGs in general or TSGs in particular, it may be best to let the matter rest for a while. If alternatives to TSGs are available,

a preferred goal would be to try finding the best match for the individual patient's beliefs and world view with available SHGs (9;77;88). The issue of SHGs may also be brought up again if the patient does not reach his/her goals on his/her own. On the other hand, some of the patient's perceived barriers may be based on hearsay or misconceptions of TSGs, which may be adjustable. Professionals should integrate SHG and TSG attendance into their treatment practice, be knowledgeable about it (e.g., know the most common objections and be able to work on misconceptions), and implement the most common facilitative measures (e.g., as described in TSF manuals (39) or other relevant literature (142;159)).

6.0 Future research

This thesis provides some baseline information that will allow later follow-up studies to measure changes in attitudes towards and the usage of TSGs in the Norwegian treatment system. The two studies had cross-sectional designs, which prevent inference from causality. Building on the present findings, later studies could include randomized designs to examine whether efforts to enhance knowledge and awareness among professionals (e.g., educational interventions) lead to higher TSG referral rates. A future cross-sectional study on the topic would probably benefit from using an identical design and questionnaires in the included countries with a simultaneous data collection procedure.

Furthermore, investigating whether TSG facilitative intervention studies (TSF) performed in the “12-step naïve” Norwegian treatment system yield similar positive outcomes as those seen in several U.S.-based studies would be important. Additional studies are also warranted to obtain a deeper understanding of the reasons for some patients having perceived barriers towards TSGs and to determine whether some patients have experienced adverse events with these groups. This information would be useful for more detailed culture-specific development of TSG referral strategies, and it may also indicate a need for establishing alternative SHGs in Norwegian settings, as few other SHGs for addiction exist, and none with broad availability.

7.0 Implications

A natural implication of the findings is to implement measures to increase familiarity and provide a better understanding of the 12-step philosophy among addiction professionals, which can potentially increase the referral rate and ultimately maximize positive long-term patient outcomes. Such strategies may include local implementation of the national goals on the issue: stronger academic focus and more research on how practice can increase participation in Norwegian contexts (9;122).

Overall, treatment programs not accustomed to focusing on SHG attendance during and after treatment should consider implementing facilitative measures to enhance utilization of these fellowships (e.g., TSF techniques). Although TSGs might not benefit all problem drug-users, consideration of the barriers to attendance and engagement may facilitate integration and implementation so that benefits can be extended to a broader group. Patients should at least be made aware of these informal and accessible recovery resources at their disposal. Such use of complementary resources in conjunction with the formal services would augment the total capacity of countering addiction problems in the society at large.

8.0 Conclusions

This thesis comprised two studies that investigated attitudes towards and usage of TSGs among addiction professionals and patients in Norway. The studies provide baseline information on the current status of the relationship with the most common and available SHGs within the addiction field, the TSGs.

The use of TSGs by addiction professionals was low; only one-third of patients found to be eligible for participation was actively motivated to attend these fellowships. Thus, potential exists for greater utilization of TSGs. Low self-rated ability in conducting effective TSG referrals and the low referral rate point to the need for education and training in order to raise awareness and increase knowledge about TSGs among addiction professionals unfamiliar with these fellowships. Because few Norwegian treatment units base their program on 12-step philosophy, it is important to acknowledge that the community-based TSGs are recovery fellowships not reserved for the few existing 12-step-based treatment modalities and patients can be referred from any program, independent of its therapeutic orientation.

The patient study provides some information about substance users' own experience with, as well as perception of the benefits of and barriers to, TSGs. This information increases the understanding of beliefs likely to influence decisions to attend TSGs in the context of substance abuse treatment in which TSG participation is not normative, and provides some information to guide clinician-based strategies in such settings. A plausible strategy for facilitating TSG attendance is to highlight the possible gains of participation that the patients rated as being highly relevant to their problem (e.g., to obtain abstinence-specific support). For individuals with low intention to participate, potential barriers need to be explored more thoroughly, as these patients were more skeptical towards TSGs. Although the majority of patients saw these fellowships as possible supportive resources, less than 4 in 10 had high intention to participate after discharge. Patient motivation to participate in TSGs would potentially increase if

professionals implemented measures into their daily treatment work to facilitate patient entry into these groups.

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Papers

Attitudes towards 12-step groups and referral practices in a 12-step naive treatment culture; a survey of addiction professionals in Norway

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Abstract

Background: Addressing substance use disorders effectively requires a long-term approach. Substance abuse treatment is typically of short duration; referring patients to Twelve Step based self-help groups (TSGs) – e.g. Narcotics Anonymous, represents a promising complementary recovery resource. Clinicians' attitudes and referral practices towards the TSGs have mainly been studied in countries with high integration of the 12-step philosophy in their substance abuse services and where the TSGs are widely available, such as the US. In Norway, there are currently 294 weekly TSG meetings (6 per 100,000 inhabitants). This study describes clinicians' attitudes and referral practices to TSGs in Norway where health authorities seek to promote self-help participation, but where the treatment culture is unfamiliar with 12-step fellowships.

Methods: Data collected by a self-administered questionnaire, adapted from established US and UK instruments. Information covered the attitudes, knowledge and referral practices towards TSGs among addiction treatment professionals in Norway in mid 2008.

Results: The return rate was 79.7% (n = 291). Participants had moderately positive attitude scores towards TSGs, but referral to these groups among Norwegian addiction professionals was low, as was the level of knowledge about TSGs. More than six out of ten did not refer any patients to TSGs in the previous week. Local variation with more referrals to TSGs in the county with the one established 12-step treatment facility was observed. Respondents' integration of the 12-steps in their own treatment work, higher self-efficacy for making a successful referral, and greater TSG knowledge were associated with referring patients.

Conclusion: Low referral rates to TSGs point to the need for education and training to raise the awareness and knowledge about it among addiction professionals unfamiliar with these 12-step fellowships. Training should focus on the usefulness of these groups for all types of treatment models regardless of therapeutic orientation. Increased knowledge is expected to lead to higher referral rates, which in turn would maximize the likelihood of positive long-term patient outcomes.

Background

Substance use disorders are, for many, a chronic condition and recovery requires ongoing support [1]. Public treatment systems are typically limited in resources and often cannot provide services of sufficient duration to address effectively the needs of severely dependent individuals. Self-help groups including Twelve Step groups (TSGs) such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) represent a useful complement to formal treatment services that contribute to sustaining treatment gains [2,3]. These organisations offer recovery support that is continuously available and free of charge to those who wish to attend, though small donations are typically made at individual members' discretion. Humphreys & Moos have reported that promoting TSG involvement among treatment clients improves post-treatment substance use outcomes while reducing the costs of continuing care [4,5]. Patients who choose to attend TSGs following formal treatment are more likely than those who do not to maintain abstinence, and greater TSG involvement is associated with more improvement on substance use outcomes [6-9]. In the literature, self-selection effects have been discussed as explanatory factors [10,11]; however, recent evidence indicates that TSG attendance is beneficial, and importantly, is a practice that can be promoted by clinicians [12,13]. Promoting TSG participation during treatment enhances the likelihood of stable TSG affiliation after treatment [6]. Moreover, TSG participation contributes to changing the identity of substance users from socially problematic to helpers, a resource rather than a problem, according to the "self-help paradigm" [14,15]. Therefore, referrals to self-help groups from health professionals deserve more attention in health services research.

Empirically demonstrated clinician or program characteristics identified to influence positively the referral tendency to TSGs include *treatment orientation* (e.g. working in a 12-step treatment oriented workplace) [16], or having *integrated the 12-steps* and using them in their own treatment work [17]. Personal experience with TSGs (i.e. own TSG participation) [16,17], more positive attitude towards TSGs [18], and more TSG knowledge have also been associated with higher referral rates [17]. In addition, *environmental factors*, i.e. the social influence and *self-efficacy* (the perceived ability to perform the behaviour, here, the perceived ability with how to carry out a successful referral), can determine behaviour [19,20].

Most studies about clinicians' attitudes towards TSGs have been conducted in the US [16,18,21]. To our knowledge, only one European study has specifically investigated clinicians' attitudes towards and referral practices to the TSGs [17]. In the US, there is an extensive integration of self-help organisations with the substance abuse treat-

ment system and the groups are socially accepted [16]. The situation in several European countries is different, treatment professionals being more usually reticent – sometimes even openly opposed to TSGs, – to referring or even encouraging TSG participation as a part of standard professional practices [17,22]. However, there are differences amongst some countries, e.g. Austria, where TSGs are generally ignored by the professional community. In contrast, Iceland's AA is well known and accepted by society, and the 12-step philosophy is integrated into many of the treatment institutions [23]. The Norwegian addiction treatment field lies somewhere between these two models with respect to the relationship between professional substance abuse treatment and 12-step groups. Recently, the government issued a policy paper on a "National Plan for self-help", with the goal of enhancing the self-help perspective and utilisation of self-help groups in its health services [24]. However, no study has focused on how Norwegian addiction professionals relate to the relevant groups in the addiction field, namely the TSGs. AA and NA are the only groups for substance dependent patients with a nationwide availability in Norway.

Alcoholics Anonymous was established in Norway in 1946 and Narcotics Anonymous in 1990. Together, these two fellowships currently hold 294 weekly meetings (AA = 208 and NA = 86), i.e. 6 meetings per 100,000 inhabitants [25,26]. As a comparison, Iceland has about 80–90 AA groups/meetings per 100,000 inhabitants [23]. According to AA/NA contact persons, the total combined membership of AA and NA in Norway is estimated at 3,000 members.

Currently, very few Norwegian centres base their treatment on the 12-step philosophy ("Minnesota Model"), and the general impression is of little integration of 12-step tenets into formal treatment. In Norwegian addiction treatment textbooks, referral to TSGs is generally recommended [27,28]. However, strong polemics against some of the key 12-step concepts are also presented (e.g. the understanding of alcoholism as a "disease" and the concept of "powerlessness") [28,29]. These contrasting views may lead addiction professionals to be ambivalent and cautious about recommending that patients participate in TSGs and compromise the effectiveness of the government's efforts to promote self-help participation.

It is not known whether US findings can be transferred to settings where TSGs are less integrated with formal services, e.g. Norway, making further research needed in treatment settings outside the US.

Objectives

This study aims to describe attitudes towards, knowledge about TSGs and current referral practices among addiction

professionals in a treatment culture largely unfamiliar with the 12-step philosophy. In addition, factors associated with active referral of patients to AA/NA in such settings are investigated.

Methods

The study concerned addiction treatment professionals in the southern 5 counties of Health Region South East, Norway (population 930,000, about one-fifth of the Norwegian population). All the treatment centres in the region agreed to participate, representing 30 wards/units, of which 21 were inpatient units, treating a variety of substance dependent patients differing in age, type of drug used, psychiatric co-morbidity and length of treatment. Concerning the availability of TSG meetings within their catchment area, all the treatment centres had at least one weekly TSG meeting within a maximum range of 20 kilometres, but the meeting frequency varied from one weekly up to two daily meetings [25,26]. A total of 365 addiction professionals received the questionnaire. A cover-letter explained the purpose of the study and participants were requested to return the questionnaire anonymously, preferably the same day, to an assigned contact person in each ward, who returned the questionnaires to the researchers. No incentives were offered to participants. The data collection period was May-July 2008. The study was approved by the Regional Ethic Committee of Health Region South-East.

Instrument

We used an adaptation of the questionnaire developed by Laudet and White's to explore attitudes towards TSGs among US addiction professionals [18]. Additional questions from a similar UK study were also included [17]. The questionnaires were translated to Norwegian by standard procedure [30]. As one of the original instruments was used in structured interviews, some adjustments were needed and were made in consultation with the developers of the instrument. Consultation included clarification of the intended meaning of English language items to ascertain that a similar meaning was conveyed to Norwegian study participants. In addition to collecting information on the main study domains (see below), the questionnaire covered basic demographics and descriptors that include county, gender, age, educational level, duration of employment in addiction treatment field, caseload and treatment modality (in-patient/out-patient). County variability was dichotomised in the analysis to whether 12-step unit was present or not.

Study domains

Referral practices: "Referring to TSGs" was defined as "actively motivating patients to participate in TSGs". Participants were asked how many of their patients were referred to TSGs in the past week and a referral rate was

computed based on number of referred patients divided by the caseload. For comparative analyses, the referral rate was categorised into "no-referrers", "low-frequency referrers" and "high-frequency referrers". The cut-off between low and high frequency referrers was set at >50%, to compare those who referred the majority of their patients to the other categories. Additionally, the overall proportion of patients referred to TSGs was computed, based on the sum of patients referred divided by the total caseload of all professionals in the previous week.

To investigate how many of the patients were considered suitable and eligible for referral to TSGs, the professionals were asked, as in the UK study, how many of their patients they found "suitable" for attendance [17]. The proportion of patients referred was computed alternatively, based on the sum of eligible patients.

Attitudes about the TSGs were assessed using the same items as Laudet and White [18]: (1) *Perceived helpfulness of TSGs* ("in your professional judgement, how helpful are TSGs?"), (2) *Importance of TSGs to recovery* ("how important a role do you believe TSGs can play in the recovery process?" and (3) *Importance of TSGs in the treatment system*: ("how important a role do you believe TSGs can play in the treatment system?"). Items were rated on a 10-point Likert-scale ranging from 0 (most negative) to 10 (most positive). 4) *Harmfulness of TSGs* was measured by "in your professional judgement, how harmful are TSGs?" The harmfulness item was also scored on a 0 to 10 scale, this scale being reversed so that 10 represented 'not at all harmful'. The mentioned attitude scores were highly correlated (Chronbach's Alpha = 0.88, $p < 0.001$), and therefore a mean score combining the 4 items was computed with score ranging from 0 to 10 where a score > 5 indicates an overall positive attitude [18].

Respondents also rated the overall attitude of their *treatment agency* ("how open is your agency to collaborating with TSGs?"), their perceived *self-efficacy* to performing successful referrals to these groups ("how well prepared do you feel you are to making successful referrals to TSGs?"), and their interest in obtaining additional information about TSGs using the same Likert-type scale described above.

Personal experience with TSGs was assessed by quantifying the professionals' own meeting attendance to both open and closed meetings (members only) on an ordinal scale (0, 1-30, 30-90, 90-500, > 500 meetings) [31]. *The integration of the 12-steps into treatment* was assessed by asking respondents whether they used the 12-steps of AA/NA in their day-to-day counselling work [17].

TSG knowledge scale: A scale consisting of 14 items covering general information about TSGs was developed. The scale was based on information in AA/NA literature given to new members (e.g. how to make contact, questions about anonymity and participation, and whether AA/NA are religious organisations) [32]. Each of the 14 items was phrased in a true/false format (e.g. "you need to be completely sober to enter a 12-step meeting"; the correct answer to this item is "false", whereas the answer to whether "AA/NA may easily be contacted via a national telephone number" should be "true"). Responses were coded 1 for correct response and 0 for an incorrect or "don't know" responses, resulting in a possible range from 0 to 14. Face validity of the scale was verified by consulting two experts in the field, local AA/NA contacts and the Alcoholics Anonymous Service Office in Norway.

Open fields were integrated in the questionnaire to allow respondents to provide more qualitative comments. The questionnaire was piloted and pretested on a sample of addiction professionals (n = 17). The questionnaire generally worked well, and minor adjustments were made according to the feedback from the test group.

Analysis and statistical methods

Sample characteristics, referral practices, attitudes and knowledge about TSGs are presented descriptively. Inter-group variation was investigated by comparing means (ANOVA-analysis) or Chi-square tests for categorical variables. Logistic regression analysis (forward selection) was utilised to identify factors associated with current TSG referrals. The dependent variable was whether or not the respondents had had any referrals to AA/NA the previous week. The continuous variables were checked for correlation with Spearman's rho. None of the included continuous variables had a correlation > 0.7. From bivariate analysis, variables with a p-value < 0.10 were included in

the multivariate analysis. Significance level was $p < 0.05$. Analyses were performed by SPSS 16.0.

Results

The return rate was 79.7% (n = 291). Twelve questionnaires had missing or incomplete information about referral practice, thus the final sample size consisted of 279 professionals (76.4%). There were no observed differences between responders and non-responders based on age, gender, educational level or type of unit, according to data given by the contact persons. The sample consisted of an experienced group of clinicians with a mean working experience of ~8 years in the addiction field (Table 1). Women predominated in the sample and 86% of participants had at least a bachelor degree. One of the 30 participating wards/units was a dedicated 12-step treatment ward (according to administrative information), representing 13 respondents in this study.

Attitudes, knowledge and referral practices

Nearly 4 out of 10 (38.4%) participants had actively sought to motivate at least one of their patients to participate in TSG meetings the past week (Table 2). Respondents had a mean caseload of 8.6 patients (SD 6.6); collectively, the sample's caseload in the week before the data collection consisted of 2,402 patients, of which 364 (15.2%) were referred to TSGs. The addiction professionals regarded a little over half the patients "suitable" for AA/NA attendance. Of these, about one third had been referred to TSGs (Table 2).

The clinicians' personal attitude about TSGs (7.7) and their perception of their units' openness towards TSGs (7.4) reflect a moderately positive view. The professionals considered participation in TSGs predominantly to be harmless for patients (8.4 on scale 0 – 10 where 10 is "harmless"). The perceived self-efficacy to make successful referrals had only a middle score (5.2), as was knowledge

Table 1: Sample characteristics of the addiction professionals (N = 279)

Characteristics	N (%), Mean (SD)
Gender: % female	201 (72.0%)
Age, years	45 (10)
Working experience in the addiction field; mean months	93 (77)
Type of unit:	
- Out-patient	57 (20.4%)
- Short-term inpatient treatment (detox)	86 (30.8%)
- Long-term inpatient treatment	136 (48.7%)
Education	
- Lower education *	39 (14.0%)
- College**	188 (67.4%)
- University ***	52 (18.6%)

* Primary/secondary school (9–13 years)

** At least a bachelor degree (e.g. nurse, social worker; mean education in college = 4.2 years)

*** Graduate degree (e.g. physician, psychologist; mean education in university = 6.6 years)

Table 2: Clinical practice, attitudes and referral practice towards TSGs.

Characteristics	N (%) or Mean (SD)
Proportion of professionals actively referring any patient last week	107 (38.4%)
Proportion of patients referred to TSGs (364 of 2402 patients)	15.2%
Proportion of all patients considered to be "suitable" for TSG participation (1017 of 1965 patients *)	51.8%
Percentage of "suitable" patients referred to TSGs (342 of 1017 patients *)	33.6%
Personal attitude about TSGs (scale 0 – 10, score 10 is most positive)	7.7 (1.6)
Attitude about TSG subscale items (scale 0 – 10):	
In your professional judgement, how helpful are TSGs?	7.5 (1.9)
How important are TSGs to the recovery process of patients?	7.6 (1.9)
How important are TSGs in the treatment system?	7.3 (2.0)
Harmfulness of TSGs (scale 0 – 10, score 10 is harmless)	8.4 (1.6)
Perceived openness for TSGs at workplace (scale 0 – 10)	7.4 (2.5)
Self efficacy for making TSG referrals (scale 0 – 10)	5.2 (2.7)
TSG knowledge scale score (scale 0 – 14)	7.8 (3.2)
Interest in obtaining more information about TSGs? (scale 0 – 10)	7.1 (2.6)
Integration and use of the 12-steps in daily treatment work (N = 275)	59 (21.1%)
Ever attended AA/NA meetings (N = 278)	88 (31.5%)

N (%) or Mean and SD (N = 279)

* N = 229 respondents

Table 3: Differences between clinicians compared with referral tendency.

Characteristics	Did not refer (N = 172)	Low frequent referrers * (N = 67)	High frequent referrers ** (N = 40)	P-value
Gender: % women	134 (77.9%)	43 (64.2%)	24 (60.0%)	0.02
Age, years	44.0 (10.0)	44 (10.8)	47.9 (9.8)	0.08
Working experience in the addiction field; months	88.2 (74.4)	103.0 (87.1)	94.8 (71.1)	0.41
Twelve step treatment unit present in the county	38 (22.1%)	29 (43.3%)	29 (72.5%)	<0.001
Personal attitude about TSGs (scale 0 – 10, score 10 is most positive)	7.3 (1.5)	8.1 (1.6)	9.0 (1.1)	<0.001
Attitude about TSG subscale items (scale 0 – 10):				
How helpful are TSGs?	7.0 (1.9)	8.0 (1.8)	9.1 (1.3)	<0.001
How important are TSGs to the recovery process of patients?	7.1 (1.8)	8.1 (1.9)	9.0 (1.2)	<0.001
How important are TSGs in the treatment system?	6.8 (1.9)	7.7 (2.0)	8.7 (1.6)	<0.001
Harmfulness of TSGs (scale 0 – 10, score 10 is harmless)	8.2 (1.7)	8.6 (1.6)	9.1 (0.9)	0.003
Perceived openness to TSGs at workplace (scale 0 – 10)	7.0 (2.5)	7.9 (2.3)	8.7 (1.8)	<0.001
Self efficacy to make TSG referrals (scale 0 – 10)	4.3 (2.5)	6.2 (2.4)	7.3 (2.3)	<0.001
TSG knowledge scale score (scale 0 – 14)	6.8 (2.9)	8.8 (3.0)	10.0 (3.1)	<0.001
Interest in obtaining additional information about TSGs (scale 0 – 10)	6.7 (2.7)	7.1 (2.4)	8.9 (2.0)	<0.001
Integration and use of the 12-steps in daily treatment work (N = 275)	14 (8.2%)	23 (34.8%)	22 (56.4%)	<0.001
Ever attended AA/NA meeting (N = 278)	40 (23.4%)	25 (37.3%)	23 (57.5%)	<0.001

N (%) or mean (SD). P-value obtained from ANOVA or Chi-square (N = 279)

* <50% of patients

** >50% of patients

about TSGs (mean score 7.8 out of maximum 14; Table 2).

Fifty nine respondents (21.1%) reported having integrated and used the 12-steps in their day-to-day counseling work. About one third of the professionals had personally participated in TSG-meetings. However, according to their comments, several of the respondents were not familiar with the definition of an "AA/NA-meeting". It is likely that several of the 88 professionals had only participated in information meetings on the wards, held by invited AA/NA members to inform about AA/NA to patients rather than in an actual 12-step meeting. Only 13 respondents (4.7%) had been to > 30 AA/NA meetings (lifetime), which probably represents those engaged in AA/NA as a part of their own recovery process, in parallel with being addiction professionals.

The majority of respondents (61.6%) had not referred any patients the previous week, while only 40 respondents (14.3%) referred a majority of their patients (Table 3). Even among those who reported no referral the past week, attitudes were relatively positive (7.3; Table 3). However, clear differences emerged across referral groups. The "high frequency referrers" had significantly more positive attitudes and reported greater openness to TSGs in their organisation than both "low frequency referrers" and "no-referrers" (Table 3). Similar patterns of between group differences also emerged in self-efficacy and TSG knowledge. This tendency was also observed in terms of participants' stated interest in obtaining additional information about

TSGs; high frequency referrers, who also reported higher integration of 12-steps in their own treatment work, had the highest interest in getting more information.

Geographical differences were observed; almost 75% of the "high frequency referrers" and almost 80% of those who used the 12-steps in their daily work (47 of 59) worked in the county which encompassed the 12-step unit (Table 3). As there were only 13 respondents from the dedicated 12-step unit in this county, dissemination of 12-step philosophy seem to be spreading to other units/wards in this county there.

Factors associated with referral to AA and NA

Multiple variables showed significant bivariate association with referral practice in the analysis (Table 4). However, only 3 variables were retained in the multivariate logistic regression model. Respondents having 1) integrated the 12-steps in own treatment work; 2) higher self-efficacy of performing referrals; and 3) higher knowledge scales scores. All three were associated with greater odds of referring patients (Table 4).

Discussion

Norwegian addiction professionals reported moderately positive attitudes towards TSGs but >6 out of 10 (61.6%) had made no referrals during the past week. Of the total caseload in the week preceding the data collection, only 15.2% were referred to TSGs. About half (51.8%) of all patients were considered 'suitable' for AA/NA participation by the professionals. High frequency referrers had

Table 4: Logistic regression analysis showing factors associated with referral to TSGs.

Characteristics	Bivariate analysis OR ^a (95% CI)	P-value	Multivariate analysis OR ^b (95% CI)	P-value
Gender: women	0.5 (0.3 – 0.8)	< 0.006	-	-
Older age	1.0 (0.9 – 1.0)	0.254	-	-
Longer experience in addiction field	1.0 (0.9 – 1.0)	0.220	-	-
Twelve step treatment unit present in the county	3.8 (2.3 – 6.5)	< 0.001	-	-
More positive attitude about TSGs	1.7 (1.4 – 2.0)	< 0.001	-	-
More openness to TSG at workplace	1.3 (1.1 – 1.4)	< 0.001	-	-
Higher self-efficacy for making successful referrals to TSGs	1.5 (1.3 – 1.7)	< 0.001	1.3 (1.1 – 1.5)	< 0.001
Greater TSG knowledge	1.3 (1.2 – 1.4)	< 0.001	1.2 (1.1 – 1.3)	0.005
Integration and use of the 12-steps in own treatment work	8.4 (4.3 – 16.3)	< 0.001	4.4 (2.1 – 9.6)	< 0.001
Ever attended AA/NA meetings	2.7 (1.6 – 4.5)	< 0.001	-	-
Education:				
- Lower education	0.9 (0.4 – 2.0)	0.762	-	-
- College university	0.4 (0.2 – 0.8)	0.011	-	-
- University	reference			
Type of unit:				
- Out-patient	0.8 (0.4 – 1.6)	0.565	-	-
- Short-term treatment (detox)	0.4 (0.3 – 0.8)	0.007	-	-
- Long-term treatment	reference			

Variables with p-value < 0.10 were included in the multivariate analysis (N = 279)

^a = unadjusted OR

^b = adjusted OR

more positive attitudes, greater TSG knowledge and higher self-efficacy to make TSG referrals than both low frequent and no-referrers. The strongest predictor for an active referral practice was having integrated the 12-steps in own treatment work.

Even though the sample as a whole reported positive attitudes to the TSGs, the scores were substantially lower than in the similar US study [18]. Directly comparing the attitude item; "How important a role do you believe TSGs can play in the treatment system?" the Norwegian sample scored mean 7.3 (SD 2.0) versus 9.3 (SD 1.4) in the US sample. In contrast, the "high frequency referrers" scored a mean 8.7, indicating that a small subgroup in the Norwegian sample has positive attitudes towards TSGs more like their US colleagues and that these attitudes foster more referrals.

The observed percentage of patients referred to TSGs in our analysis (15.2%) were substantially lower than in US studies, which reported proportions from 76 to 79% of all patients [16,18]. Thus, it is evident that the utilisation of TSGs varies considerably between countries and regions. Integration and use of the 12-steps in the professionals' own treatment work, which was associated with working in the county with the 12-step unit present, was a strong predictor of higher utilisation of TSGs, as also observed by others [16,22]. This is not surprising because the 12-step-influenced treatment models focus strongly on regular TSG participation as a vital factor in recovery for substance-dependent persons [33]. Except for participants who worked in the county with the 12-step ward, few ($n = 12$) reported integrating and using the 12-steps in their daily counselling work and the overall knowledge score was only moderate. Thus, the Norwegian treatment system seems largely unfamiliar with the 12-step philosophy, which is in line with UK findings, where an even lower proportion of clinicians reported using the 12-steps in their daily work and rarely recommended their clients to use the TSGs [17].

Greater knowledge about TSGs and higher self-efficacy to make referral were also predictive factors for referring patients to TSGs. The uncertainty Norwegian addiction professionals express about how to make referrals, combined with the low level of TSG knowledge, may partially explain the low referral rates. The findings suggest that a high proportion of the respondents lack both information about TSGs and training in how to refer patients. This knowledge gap may in part stem from the TSGs being less available in some areas in the region, thus making it difficult for professionals to get acquainted with the groups. However, all the treatment centres in this study had at least one 12-step group in its immediate surroundings, although the TSG meeting frequency varied.

Improved knowledge of TSGs is a logical pre-requisite for changing attitudes. However, if professionals are ambivalent and even opposed to TSGs *a priori* because of perceived controversies with these groups, attitudes will not necessarily change in a positive direction through simple information campaigns. Even in a sample of clinicians with a very positive attitude towards TSGs, underlying points of resistance were found [18]. It is likely that such obstacles exist also among Norwegian professionals. An indication of this is that those not referring patients or being "low frequency referrers" were the least interested in obtaining additional information about TSGs. On the other hand, participation in TSGs were rated as harmless by all clinicians, regardless of their referral patterns; therefore we may infer that clinicians who did not refer patients to TSGs did not do so out of a belief that participation in these groups are harmful to patients. Again, insufficient knowledge is most likely at the root of low referral rates.

Attitudes, both personal and perceived openness to TSGs at the workplace, were not significant factors in the multivariate analysis. Indifference towards TSGs as a result of low levels of knowledge or by lack of formal policy about the issue on the units may be explanatory factors. In this study, "perceived openness to TSGs at workplace" was less positive than "personal attitude towards TSGs" in each referral category. The differences were small but consistent. We note that individual clinicians' practices are determined in part by the context in which clinicians operate. That is, we cannot and should not assume that individual clinicians operate independently of the system in which they practice or the structure in their treatment agency. We do not have data to further explore this issue.

Implications

What are the strategies that will help to foster higher referral rates? Proactive strategies are needed, especially in countries where the 12-step based treatment units are only a small or marginal proportion of the treatment system, and where there is a less knowledge of TSGs in the professional work force. An important strategy is to place a stronger focus on the usefulness of TSG participation for patients being treated in all types of treatment modalities. To reach possible ambivalent professionals, it is not only important to explain the research evidence for 12-step participation when trying to foster higher referral rates, but also to identify and address possible concerns and misconceptions the professionals may have towards these groups [18,34]. The addiction professionals should be encouraged to acquire their own personal experience with these fellowships and attend open AA/NA-meetings. Doing so would possibly familiarize the workforce with what takes place at meetings and the basic information about the overall philosophy of 12-step recovery, enabling them to educate patients about what to expect, as

also to address questions or concerns patients may have. In addition, AA/NA members could be invited to the wards to acquaint both patients and professionals with their groups. Ideally, training should start during professional training (e.g. college, university) where the curriculum ought to include information on post-treatment community-based recovery resources and present empirical evidence for their usefulness.

A positive starting point for the addiction professionals changing to a more active TSG referral practice should be to focus on the patients whom the professionals already considered suitable for participation, a little over half of the caseload. Of these, the Norwegian professionals did not work actively with referring more than one third. Even with this conservative outset, there is a large reserve of underutilised potential for TSGs in Norway.

Methodological considerations

This is the first study to examine Norwegian clinicians' attitudes and practices with respect to 12-step recovery fellowships. The study has a number of strengths that includes a relatively large sample of addiction professionals. We used established instruments [17,18] to explore an important yet thus far neglected topic in the context of the Norwegian government interest in enhancing self-help participation. All the treatment sites in the region participated and the response rate was good. The findings are considered fairly representative of the Norwegian situation as a whole.

However, the study also has several limitations in interpreting our findings. First, we used a cross-sectional observational design that did not allow establishing causation, and a relatively short time-frame (one week) for examining referral practices. We selected this time-frame to maximize recall accuracy of the referral practice of respondents. Second, when addressing attitudes, there may be an "expectancy factor" that draws the scores towards what is expected, namely social desirability – people feel obligated to be positive about the domains studied. However, the respondents remain anonymous and we believe that they felt free to express their "true" attitudes. For comparative purposes, this potential bias should be no different in the Norwegian sample compared with other samples. Finally, we note that 12-step fellowships are only one source of mutual support for substance-dependent persons. We have focused on the TSGs because they are the only available self-help groups for the entire investigated region.

Future research

The variable "referring to TSGs" as defined may be open to multiple interpretations. This general and broad type of definition is considered reasonable in a context where

Twelve Step facilitation (TSF) efforts are rare, like in Norway. In a treatment culture where there is a wide variety of TSF techniques depending on the context and the structure and practices of the agency, such a general definition may be insufficient. It is recommended that future research in this area use more specific language that allows investigation of referral practices and differences between individual practices from formal agency policies in a more detailed manner. Future studies that build on the present report would also benefit from adopting a mixed method approach that incorporate qualitative data to gain an in-depth understanding of the nature of attitudinal or knowledge-based barriers to referral to TSGs.

Conclusion

The addiction professionals' rates of referring patients to TSGs in this study are low, substantially lower than that reported from the US, and also much lower than the proportion the professionals themselves seen to be eligible for participation. Thus, much needs to be done to achieve the stated goal of the Norwegian health authorities of a higher utilisation of self-help groups.

Clear gradients of attitudes and knowledge emerged that may explain the observed differences in referral practice. The most important predictors for an active referral practice were the integration of the 12-steps in own treatment work, greater TSG knowledge and higher self-efficacy to make TSG referrals.

Training to increase the addiction professionals' awareness of TSGs should focus on the demonstrated usefulness of these groups for all types of treatment models and therapeutic orientation, not only for the few existing 12-step treatment modalities. Measures to increase familiarity and comfort with the 12-step philosophy among the addiction professionals can potentially increase the referral rate and ultimately maximize positive long-term patient outcomes.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

JKV participated in study design, data collection, interpretation, performed the analysis and drafted the manuscript. ØK, AL and TC participated in the study design, interpretation and drafting of the manuscript. All authors read and approved the final manuscript.

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The courage to change: Patients' perceptions of 12-Step fellowships

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Abstract

Background

Peer-based resources deserve more attention in a health services perspective. Participation in self-help fellowships like the Twelve Step Groups (TSGs) can improve substance abuse patients' outcomes and be a valuable adjunct to the substance abuse treatment system. This study investigates patients' conceptions of TSGs and their relationship with intent to participate in TSGs.

Methods

Patients (N=139) entering a detoxification (detox) unit in Kristiansand, Norway, were included. Factors associated with intentions to participate in TSGs post-discharge were analyzed with contingency table and multinomial logistic regression analyses.

Results

Forty-eight percent of patients had participated in TSGs before entering detox. Respondents saw more advantages than disadvantages of TSG participation, but only 40% of patients had a high intention to participate in TSGs post-discharge. The notion that participation in TSGs is able to instill the courage to change was the construct most strongly correlated with higher intention to participate in TSGs. Overall, lower intention is associated with lack of attention to possible benefits of TSGs more than of perceived barriers to these groups.

Conclusions

Findings increase the understanding of beliefs likely to influence decisions to attend or not attend TSGs in substance abuse treatment contexts where TSG participation is not normative. Findings suggest that for the majority of patients, it may be sufficient to highlight possible gains of participation to enhance their perception of TSGs' relevance. For those with low intention to participate, potential barriers also need to be explored more thoroughly. Treatment programs not accustomed to putting a focus on self-help group attendance during and after treatment should consider implementing facilitative measures to enhance utilization of these fellowships.

Background

Publicly funded health services are now increasingly exposed to fiscal constraints and service delivery may shrink [1]. To keep up with ever increasing demands, a possible option for treatment services may be to consider a greater involvement with the third sector, i.e., with voluntary resources like peer-based groups [2]. In their suggested global strategies to reduce the harmful use of alcohol, the WHO recommends for health services to mobilize and involve such peer-based recourses to a greater degree [3]. For substance abuse patients, participation in addiction-focused mutual-help groups like Twelve Step Groups (TSGs; e.g., Alcoholics Anonymous (AA), Narcotics Anonymous (NA)) has been shown to improve success rates after treatment and is considered to be a valuable adjunct to formal substance abuse treatment [4-6]. These groups are especially valued as an important recovery resource in their country of origin, the United States, and accordingly, manualized strategies, most notably Twelve Step Facilitation (TSF), have been developed for clinicians to introduce the 12-step principles to patients [7]. The prevalence of lifetime TSG attendance in the target population of substance abuse patients is generally high in the U.S.; e.g., two studies reported 78% and 83% of patients having at least some involvement at treatment arrival [8,9]. Patients' intentions to participate in TSGs are also at a high level; 79% of patients in a recent U.S.-based study planned to attend AA or NA at least twice a week after treatment [10]. Two United Kingdom studies report similar pre-treatment attendance levels, with 73% and 77% of patients having at least some

previous participation [11,12]. However, only 47% had an intention to regularly attend TSG meetings following discharge [11].

Research about patients' relationships with TSGs is scarce in other European countries. A few studies have investigated clinicians' attitudes and knowledge about TSGs, and findings suggest that there is little awareness about referring patients to these fellowships [13,14]. Hence, there is a need for additional research on strategies to enhance TSG utilization when awareness is low. Chief among the topics to examine are substance users' own experience with and conceptions about 12-step fellowships.

Factors Associated with TSG Participation

In early U.S.-based studies, patients' perceived severity of their substance abuse problem was the most reliable predictor of subsequent TSG participation [15,16]. Other demographic, personality, social, cognitive or substance-related variables were weakly or inconsistently associated with participation [15]. The *Survey of Readiness for AA Participation* (SYRAAP) [17,18], with its three sub-scales -- perceived severity of the substance abuse problem, perceived benefits and barriers of TSG participation -- predicted TSG affiliation better than demographic or life context factors [18]. The SYRAAP may also be used to examine patients' conceptions of TSGs. The dependent variable in the present analysis; behavioural intention, indexes a person's motivation to perform a particular behaviour (here: to attend TSGs), and encompasses both the direction (e.g., to do or not to do) and

the intensity of a decision to engage in a behaviour (e.g., how much effort the person is prepared to expend) [19].

Objectives

The aim of this paper is to 1) Explore substance users' perceived benefits and barriers of TSGs at admission to detox, and 2) Investigate the relationship between patients' conceptions of TSGs and their intention to participate in these groups following discharge.

Methods

Participants and procedures

Patients were recruited on a detoxification unit at the Addiction Unit, Sørlandet Hospital in Kristiansand, Norway from September 2008 to August 2010. The main uptake area is the southernmost county in Norway (population 166,000). Patients were deemed eligible if they had an alcohol or drug use disorder, did not receive opioid maintenance treatment, were being admitted to the detox unit with a stay long enough to allow for assessment, were discharged to home and having at least one TSG available within a range of 30 km. Exclusion criteria were severe psychiatric co-morbidity and not being able to complete a structured interview (due to, for example, severe somatic symptoms, cognitive disability and language problems). Of the 156 eligible patients, 16 refused to participate and one provided insufficient data, giving a final sample of N=139 (89% of eligible respondents).

After providing informed consent, participants completed the inventory described below. The Regional Ethic Committee of Health Region South-East, Norway, approved the study.

Measures

The EuropASI was used to collect data on patients' demographics, life context, substance use and treatment history [20,21]. Pre-detox TSG affiliation was measured using Humphreys et al.'s *AA Affiliation Scale (AAAS)* [22]. Wording was modified to refer to both AA and NA. Frequency of 12-step meetings attended during one's lifetime and during the prior 6 months is recoded to a 0 to 1 scale (e.g., for lifetime, scale is .25 = 1-30 meetings, 0.5 = 31–90 meetings, .75 = 91–500, and 1 = >500). In addition, seven yes/no involvement items are coded to 0 (no, never) or 1 (yes) (e.g., read TSG literature, had a sponsor). Together, attendance and involvement result in a composite score with a possible range of 0 - 9.

The *Survey of Readiness for AA Participation (SYRAAP)* measures patients' perceived substance problem severity, as well as patients' conceptions of TSGs' relevance to their problem measured with *perceived benefits* and *perceived barriers* items [18]. Wordings were modified to refer to both AA and NA. Questions are rated on a 5-point Likert-type response format with higher scores indicating higher levels of the construct being assessed. A mean score for each subscale is computed (5 questions in each scale).

Intent to attend AA/NA was rated with two questions on a 7-point Likert scale: “I intend to attend AA/NA meetings regularly (at least twice a month) over the next six months” and “I will attend AA/NA meetings regularly (at least twice a month) over the next six months” [23]. The two items were highly correlated ($r=.98$), and a composite score was computed by averaging them. For descriptive and analytic purposes, scale responses are categorized into low (<3), moderate (3 - 5) and high (>5) intentions.

The original English questionnaires (AAAS and SYRAAP) were translated to Norwegian by standard procedure (two forward and two backward translations) [24], in collaboration with their developers.

Statistical analyses

Variables are presented using descriptive statistics. In contingency tables we use single items from the SYRAAP’s benefits and barriers subscale to maximize information about these possibly modifiable constructs, and use the gamma test for ordinal data to explore the strength of association between variables. To further explore the association between intention to participate in TSGs and the independent variables on the SYRAAP (i.e., scales measuring conceptions of TSGs and one’s own substance problem), multinomial logistic regression modeling was performed; results are shown as adjusted odds ratios (OR) and 95 % confidence intervals (CI). This analysis controlled for previous TSG involvement. In

the multivariate analysis we compare the 'low' and 'high' intention groups versus the 'moderate' group (reference). Significance level was set at $p < 0.05$. All statistical analyses were performed by SPSS 16.0.

Results

Sample description

The sample consisted of 139 patients. The mean age was 41 years (SD=14); 32% were women, 96% were native Norwegians or born European, and 47% were single. Major drug/s of abuse for patients were alcohol (39%), a combination of alcohol and drugs (19%), and primarily drugs (43%). Twenty-three percent had never been in specialized substance abuse treatment; 28% had been to 12-step-based treatment before, and 49% had obtained some other type of substance abuse treatment or detox. Forty-eight percent of patients had ever participated in TSGs; 25% had done so during the last six months. The mean TSG composite score, 1.7 (SD=2.4) out of a maximum of 9, displayed a highly positively skewed curve, with 59% of respondents scoring ≤ 1 , i.e., they did not say yes to any involvement item.

Intention to participate in TSGs post-detox

With regard to patients' intentions to participate regularly in TSGs during the 6 months following detox, 43 (31%) scored low (< 3), 41 (29%) had a moderate intention (3-5), and 55 (40%) scored high (> 5) (figure 1).

Perceived benefits and barriers toward TSG participation

The two most agreed upon benefits of participating in TSGs were, "In AA/NA, I will find people who understand me" (78%), and, "If I go to AA/NA, I will find people who can guide me in how to be sober" (73%) (total column in Table 1). Between 55% and 78% of patients agreed with each of the five statements concerning perceived benefits of TSGs, suggesting that the majority of patients thought of TSGs as a possible option for obtaining help and support with combating addiction. The two barrier statements endorsed by the largest proportions of patients concerned embarrassment due to going to AA/NA (37%), and not wanting people to know that s/he is going to AA/NA (29%) (Table 1).

Patients' conceptions about TSGs and their intentions to participate

There was a clear trend that those with more perceived benefits and fewer perceived barriers also having greater intentions to participate in TSGs post discharge (Table 1). However, those with high and moderate intentions also seemed to put some weight on embarrassment if they were to go to AA/NA, as about 3 in 10 agreed to this item. The strongest positive correlation was found in the constructs "Going to AA gives me courage to change" ($\gamma = 0.79$, $p < 0.001$) and "If I go to AA/NA, I will find people who can guide me in how to be sober" ($\gamma = 0.78$, $p < 0.001$). The strongest negative correlation was found for "I feel like I do not belong at AA/NA meetings" ($\gamma = -0.65$, $p < 0.001$) (Table 1).

Multinomial regression analysis

Variables used in the regression analysis are shown in Table 2. The proportion of patients having attended TSGs before were 35%, 34% and 67% in the 'low', 'moderate' and 'high' intention groups respectively. In a multivariate analysis those with a high intention differed from the 'moderate' intention group only by having more perceived benefits (Table 3). These two groups were not different in terms of perceived barriers. Although the 'high' intention group had substantially higher scores on previous involvement in TSGs, this variable did not come out as significant in the multivariate analysis. Compared with the 'moderate' group, more perceived barriers and previous involvement in TSGs increased the likelihood of being in the 'low' intention group, whereas higher perceived benefits was inversely associated with being in the 'low' group. Thus, the 'low' intention group is categorized both by higher perceived barriers and not recognizing possible TSG benefits. Perceived severity of the drug problem did not come out as significant in the multivariate analysis.

Discussion

Less than half of participating patients entering detox in a Norwegian addiction treatment unit had ever attended TSGs before; still, three-quarters of patients agreed with benefit items implying an understanding of TSGs as a possible supportive resource. However, only 40% of patients reported a high intention to participate in TSGs post-discharge. The notions that participation in TSGs could instill the courage to change and provide abstinence-specific support were the constructs most strongly correlated with high intention to participate in TSGs

following detox. A sense of not belonging in AA/NA was the strongest predictor of low intentions to participation. A multivariate regression model suggested that lower intention to participate in TSGs is associated more strongly with less attention to possible benefits than with high perceived barriers to these groups.

The previous TSG attendance rate in this cohort (48%) was substantially lower than the 73% to 82% reported in U.S. and U.K.-based studies [8,9,11,12]. An even smaller proportion reported involvement in these fellowships; only 41% had at least one positive response to TSG involvement items. Twelve-step based treatment models usually require patients to begin TSG attendance during treatment [25]. In contrast to the county where this study was located, that offered a 12-step-oriented treatment unit, 12-step based treatment units are quite rare in Norway, comprising less than 5% of the available programs [26]. Therefore, even lower TSG attendance rates might be expected in most other Norwegian counties. Thus, patients' TSG attendance rate in Norway seems to be lower than that found in other European countries like the U.K.

Notwithstanding that a majority (52%) had no prior attendance in TSGs, still, 78% of patients perceived TSGs as fellowships where meeting with people who understand their condition was possible. The positive influence on self-help group attendees based on a sense of identification has been reported as an important mechanism in peer support groups, and this feature may even be more appreciated than the support obtained from professionals [27]. Almost three-quarters of patients also agreed that TSGs are a possible resource for obtaining abstinence-specific support. Although there is no requirement to be drug free to

attend TSGs, these fellowships are strongly abstinence-oriented [28]. The patients seemed to perceive both the need for support to achieve abstinence but also that TSGs offer a structure that may make a goal like that attainable. Moos describes the importance of norms and role models as important active ingredients in TSGs [29]. Experiencing role models, who with their own lives advocate for abstinence, and receiving abstinence-specific support, are likely to be of great value for TSG attendees. This was seen in a study where those involved in TSGs at a 1-year follow up, compared to baseline, had fewer friends who used alcohol and drugs and more friends who supported abstinence; these changes in abstinence support also mediated between TSG participation and reduced substance use [30].

The concept most strongly correlated with higher intention to participate in TSGs was the notion that participation in TSGs can instill the courage to change. Addiction researchers have underscored the chronic nature of substance-related dependency [31], thus making negative perceptions of coping with triggers and urges to use and relapses likely. Although negative consequences of the condition may make people prepared to make changes, obtaining hope and courage may be a prerequisite for enabling the alternative of stop using drugs to seem realistic. Thus, watching role models who have learned to handle their addiction is a positive adjunct to the support obtained from professionals.

The most important negative predictor for intention was “I feel like I do not belong at TSG meetings”. There are at least two reasons why patients may agree to this item. They may have been to TSGs before and have decided that “this is not the right place for me”. Another possibility is that they have never been to TSGs

before or have attended just a few meetings, and did not stay around long enough to obtain a sense of belonging to the group. To get involved with a new social group, one has to get past a difficult threshold of attending the first meeting, and some perseverance is needed to get used to the climate of new settings. Tonigan, Connors, and Miller [32] highlighted the importance of initiating TSG attendance during formal treatment. Project MATCH participants who were not involved in TSGs during treatment had much less participation after treatment. Thus, 12-step facilitation initiatives that encourage patients to attend TSGs during treatment appear to make a significant contribution to patients' higher participation rates post discharge [6].

One of the barriers that seemed to have some relevance for those with higher intentions to participate in TSGs was embarrassment about going to AA/NA, which may reflect the difficulty of disclosing having a problem with alcohol and drugs. For those having attended before, there may also be emotional and psychological obstacles to rejoining the groups after a relapse [25]. Thus, patients may need extra support and encouragement to start over again if they are ambivalent about rejoining the groups.

The regression analysis revealed that perceiving TSGs as beneficial was most important in explaining differences in intention, as this factor was both inversely associated with being in the 'low' and positively associated with being in the 'high' intention group versus those with a moderate intention. Differences in perceived barriers towards TSGs were found only between the 'low' versus the 'moderate' intention group. Such findings suggest that for the majority of patients, it may be

sufficient to highlight possible gains of participation to enhance their perception of TSGs' relevance. The finding that earlier TSG involvement was associated with higher odds of being in the 'low' versus the 'moderate' group deserves comment. One could speculate that it may be explained by some in the 'low' group having had adverse experiences with TSGs, affecting perceived barriers more negatively than in the 'moderate' group. Studies to explore this issue further are warranted.

Methodological considerations

This is among the few European studies to examine patients' own conceptions of TSGs. The strengths are the use of standardized instruments and a focus on complementary peer-based resources for a population that has no or few continuing care appointments in the formal treatment system, although support is likely to be needed for lengthy intervals.

However, the study also has limitations in interpreting the findings. We used a cross-sectional design that does not allow for establishing causation among variables. In addition, the dependent variable in the analysis is a psychological construct (behavioural intention) known to predict behaviour but we have not established to what degree patients actually follow their intentions. However, although intention is not as concrete a measure as actual behaviour, it is regarded as the most immediate and important predictor of subsequent behaviour [19]. Finally, although we measured conceptions of TSGs with a standardized instrument, it was developed in a different cultural setting and the list of single

items most relevant for the perceived benefits/barriers constructs may not be exhaustive in the present culture.

Implications

Despite the limitations, findings increase the understanding of beliefs likely to influence decisions to attend TSGs or not in substance abuse treatment contexts where TSG attendance and involvement are not normative. These modifiable conceptions may be targeted by clinicians to promote patients' readiness to participate in TSGs. Treatment programs not accustomed to putting a focus on self-help group attendance during and after treatment should consider implementing facilitative measures, for example, members of AA/NA could be invited to the treatment units to acquaint patients with their groups.

Conclusions

Overall, the findings suggest that there is a potential for motivating a majority of patients, with relatively simple means, to attend TSGs. A plausible main strategy is to highlight possible gains of participation. For those with a low intention to join the groups, potential barriers need to be explored more thoroughly, as these patients possess more scepticism towards attending TSGs. Processes to acquaint patients with TSGs would possibly reduce perceived barriers and enhance utilization of these voluntary fellowships. Patients with no or little continuing care in the formal services ought at least to be made aware of these informal and accessible recovery resources at their disposal.

Competing interests

The authors declare that they have no competing interest.

Authors' contributions

JKV participated in study design, data collection, interpretation, performed the analysis and drafted the manuscript. CT, ØK and TC participated in the study design, interpretation and drafting of the manuscript. All authors read and approved the final manuscript.

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TABLES

Table 1 Patients' perceived benefits and barriers towards TSGs related to their intention to participate in TSGs post-discharge, N (%)

<i>Items</i>	<i>a</i>	LOW ^b N = 43	MOD ^b N = 41	HIGH ^b N = 55	Total	Gamma ^c
<i>Perceived benefits</i>						
Going to AA/NA gives me courage to change (N=138)	Disagree	11	0	0	11 (8)	0.79
	N/N	24	19	6	49 (36)	
	Agree	8	22	48	78 (57)	
If I go to AA/NA, I will find people who can guide me in how to be sober (N=135)	Disagree	8	1	0	9 (7)	0.78
	N/N	18	9	0	27 (20)	
	Agree	16	31	52	99 (73)	
I will feel better about myself if I go to AA/NA (N=139)	Disagree	16	1	2	19 (14)	0.71
	N/N	21	17	6	44 (32)	
	Agree	6	23	47	76 (55)	
In AA/NA, I will find people who understand me (N=138)	Disagree	3	0	2	5 (4)	0.62
	N/N	18	6	1	25 (18)	
	Agree	21	35	52	108 (78)	
I know someone who has been helped by going to AA/NA (N=138)	Disagree	19	10	5	34 (25)	0.51
	N/N	6	9	3	18 (13)	
	Agree	18	22	46	86 (62)	
<i>Perceived barriers</i>						
I feel like I do not belong at AA/NA meetings (N=139)	Disagree	8	18	42	68 (49)	- 0.65
	N/N	15	21	9	45 (32)	
	Agree	20	2	4	26 (19)	
Going to AA/NA makes me feel depressed (N=138)	Disagree	11	27	44	82 (59)	- 0.62
	N/N	19	11	10	40 (29)	
	Agree	12	3	1	16 (12)	
I do not want people to know that I am going to AA/NA (N=139)	Disagree	10	22	37	69 (50)	- 0.43
	N/N	10	11	9	30 (22)	
	Agree	23	8	9	40 (29)	
Going to AA/NA requires changes that are too difficult (N=139)	Disagree	9	14	33	56 (40)	- 0.41
	N/N	19	20	13	52 (37)	
	Agree	15	7	9	31 (22)	
Going to AA/NA can be embarrassing to me (N=139)	Disagree	9	21	32	62 (45)	- 0.36
	N/N	12	6	7	25 (18)	
	Agree	22	14	16	52 (37)	

^a For descriptive purposes, the original scale has been recoded pooling strongly agree and agree, and strongly disagree and disagree responses. N/N = neither disagrees nor agrees

^b Low score (LOW) =<3, intermediate score (MOD) = 3 – 5, high score (HIGH)=>5 on a 7-point Likert scale

^c Gamma-values are obtained from analysis of the full ordinal scale for independent variables. All items were significant at p<0.001 level

Table 2 Descriptive comparison between patients' intention to participate regularly in TSGs and independent variables; perceived drug severity, their conceptions of and previous involvement in TSGs

Data are presented as mean (SD), N=139

<i>Items</i>	Low intention ^a N=43	Intermediate intention ^a N=41	High intention ^a N=55	P-value ^b
Perceived drug problem severity (SYRAAP subscale)	3.9 (0.7)	4.2 (0.6)	4.3 (0.6)	0.012
Perceived benefits of TSGs (SYRAAP subscale)	3.1 (0.8)	3.7 (0.5)	4.3 (0.6)	<0.001
Perceived barriers of TSGs (SYRAAP subscale)	3.3 (0.8)	2.6 (0.8)	2.2 (0.6)	<0.001
Earlier involvement in TSGs (AAAS composite score)	0.8 (1.7)	0.9 (1.6)	3.0 (2.9)	<0.001

^a Low score (LOW) =<3, intermediate score (MOD) = 3 – 5, high score (HIGH) = >5 on a 7-point Likert scale

^b P-value obtained from Anova tests.

Table 3 Association between intention to participate in TSGs post-discharge detox versus independent variables

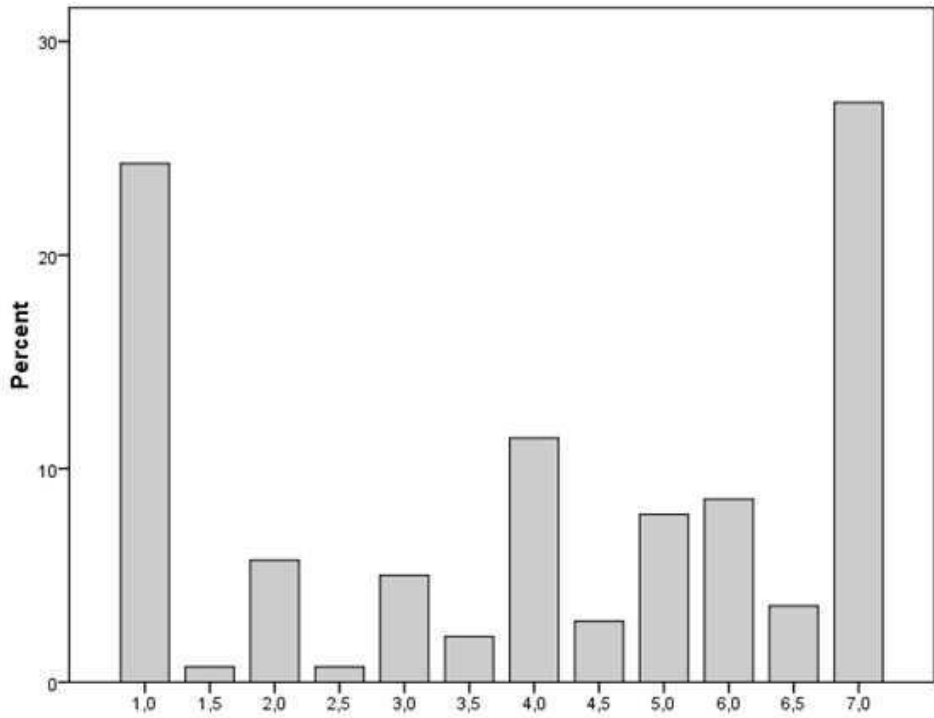
Multinomial logistic regression analysis showing OR and 95% CI for LOW and HIGH groups versus the MODERAT group (reference)^a, N=139.

	<i>Independent variables^b</i>	Adjusted OR (CI)	P- value
<i>Low intention (vs. moderate intention)</i>	Earlier involvement in TSGs (AAAS composite score)	1.41 (1.03 – 1.95)	0.035
	Perceived drug problem severity	0.50 (0.22 – 1.21)	0.093
	Perceived benefits of TSGs	0.32 (0.11 – 0.96)	0.042
	Perceived barriers towards TSGs	3.03 (1.24 – 7.40)	0.015
<i>High intention (vs. moderate intention)</i>	Earlier involvement in TSGs (AAAS composite score)	1.27 (0.98 – 1.64)	0.069
	Perceived drug problem severity	0.77 (0.36 – 1.87)	0.512
	Perceived benefits of TSGs	4.34 (1.44 – 13.01)	0.009
	Perceived barriers towards TSGs	0.91 (0.42 – 1.97)	0.818

^a Low score (LOW) =<3, intermediate score (MOD) = 3 – 5, high score (HIGH) = >5 on a 7-point Likert scale

Figure legend

Figure 1 Intention to participate regularly in AA/NA at least twice a month following detoxification treatment (N=139); scoring is 1 = low to 7 = high intention



Appendix

The 12 steps of Alcoholics Anonymous¹²

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we *understood Him*.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God *as we understood Him*, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs.

¹² Reprinted from: Alcoholics Anonymous World Services. This is AA – An introduction to the AA recovery program.

http://www.aa.org/pdf/products/p-1_thisisaa1.pdf (05.07.2011)

The 12 traditions of Alcoholics Anonymous¹³

1. Our common welfare should come first; personal recovery depends upon AA unity.
2. For our group purpose there is but one ultimate authority—a loving God as He may express Himself in our group conscience. Our leaders are but trusted servants; they do not govern.
3. The only requirement for AA membership is a desire to stop drinking.
4. Each group should be autonomous except in matters affecting other groups or AA as a whole.
5. Each group has but one primary purpose—to carry its message to the alcoholic who still suffers.
6. An AA group ought never endorse, finance, or lend the AA name to any related facility or outside enterprise, lest problems of money, property, and prestige divert us from our primary purpose.
7. Every AA group ought to be fully self-supporting, declining outside contributions.
8. Alcoholics Anonymous should remain forever non-professional, but our service centers may employ special workers.
9. AA, as such, ought never be organized; but we may create service boards or committees directly responsible to those they serve.
10. Alcoholics Anonymous has no opinion on outside issues; hence the AA name ought never be drawn into public controversy.
11. Our public relations policy is based on attraction rather than promotion; we need always maintain personal anonymity at the level of press, radio, and films.
12. Anonymity is the spiritual foundation of all our traditions, ever reminding us to place principles before personalities.

¹³ Reprinted from: Alcoholics Anonymous World Services. This is AA – An introduction to the AA recovery program. http://www.aa.org/pdf/products/p-1_thisisaa1.pdf (05.07.2011)

