



Review

A systematic review of the reasons for quitting and/or reducing alcohol among those who have received alcohol use disorder treatment

Christiana Prestigiacomio, Lindsey Fisher-Fox, Melissa A. Cyders*

Department of Psychology, Indiana University Indianapolis, Indianapolis, IN, United States

HIGHLIGHTS

- Systematic review identified 21 themes for quitting or reducing alcohol use among individuals who have received treatment.
- Common reasons included physical health, misalignment with personal goals, and family and social factors.
- Unique themes included hitting rock bottom and avoiding disapproval, potentially linked to treatment.
- The measurement approach influenced the reasons reported, highlighting the need for standardized methods.

ARTICLE INFO

Keywords:

Alcohol use disorder
Abstinence
Quitting
Reducing
Treatment
Measurement

ABSTRACT

Research has primarily studied reasons for quitting and/or reducing alcohol use in non-treatment samples. This systematic review aimed to characterize the reasons for quitting and/or reducing alcohol use among those who have received treatment for AUD and examine how reasons endorsed differ across measurement methods used. Articles were identified through PsycINFO, Web of Science, PubMed, and CINAHL. Twenty-one articles met inclusion criteria. Thematic coding revealed 21 unique themes in reasons for quitting and/or reducing. Common reasons included physical health issues, misalignment with personal goals, family influence, and social factors—also noted in non-treatment populations. Unique themes like hitting rock bottom and avoiding disapproval were identified, potentially linked to treatment initiation or development. The measurement approach influenced the reasons reported, highlighting the need for standardized methods. Common reasons are fundamental and are not a result of treatment, while others are unique to individuals who have received AUD treatment, which may suggest that they are critical in leading one to seek treatment or may be developed during treatment. Assessing and tailoring treatment based on these reasons may enhance outcomes. Standardizing how we measure reasons for quitting or reducing alcohol is crucial for comparing studies and improving treatment. Future research should evaluate reasons over time, assess their importance at different treatment stages, and use varied assessment strategies for comprehensive insights.

1. Introduction

Alcohol is the seventh leading cause of preventable death and disease around the world, contributing to 3 million deaths per year (Witkiewitz et al., 2019). Globally, alcohol use contributes to several leading causes of death including tuberculosis, motor vehicle accidents, and self-harm (GBD, 2016; Alcohol Collaborators and Sheikh, 2018). Helping to facilitate long-term and stable remission from Alcohol Use Disorder (AUD) helps both individuals and society. However, more needs to be understood about reasons why someone may wish to reduce or quit using alcohol, as they may be leveraged to improve clinical engagement,

intervention, and recovery maintenance. The goals of this systematic review are to characterize the reasons for quitting and/or reducing alcohol use among those who have received treatment for AUD and to examine how reasons differ across measurement methods used.

The number and type of reasons for quitting and/or reducing alcohol vary widely across studies, spanning both internal (e.g., for one's own benefit) and external (e.g., because someone else wants them to) motivations. This research has primarily included non-treatment samples; common reasons include health concerns (Brady, 1993), money concerns (Bernards et al., 2009), legal concerns (Epler et al., 2009), lack of interest in alcohol or drinking (Huth et al., 2014), disapproval from

* Correspondence to: Department of Psychology, Indiana University Indianapolis, 402 N. Blackford St., Indianapolis, IN 46202, United States.
E-mail address: mcyders@iu.edu (M.A. Cyders).

others regarding drinking (Johnson and Cohen, 2004), and work difficulties (Tucker et al., 1994). Adults who resolved their drinking struggles independently most often endorse evaluating the pros and cons of their drinking, major lifestyle changes, and witnessing someone who was drunk/high as reasons for quitting and/or reducing their alcohol use (Cunningham et al., 1995). A recent systematic review found that lifetime abstainers most frequently endorsed disinterest and dislike of alcohol's effects, current abstainers most frequently endorsed disinterest and health reasons, and individuals with previous drinking struggles most frequently endorsed health reasons, lack of interest, and past drinking-related consequences (Rosansky and Rosenberg, 2020).

Those who receive AUD treatment, who reflect only a small proportion of individuals with AUD (Probst et al., 2015), likely have unique reasons for quitting and/or reducing their alcohol use. Those who enter treatment may have been unsuccessful in their use of self-change strategies, have more severe AUD (Kranitz, 2007), or be more motivated by hitting "rock bottom" (Cunningham et al., 1995). Additionally, while those who do or do not receive treatment may share common reasons, such as experiencing a traumatic event, those who seek treatment may endorse a greater number of reasons (Cunningham et al., 1995; Matzger et al., 2005). Overall, there is no consensus on which reasons are most prevalent, important, and influential for individuals who have received AUD treatment.

The lack of standardization in measuring reasons for quitting and/or reducing alcohol may account for differences in the types and numbers of reasons endorsed. First, various types of measures are used, including scales, such as the Reasons for Quitting Questionnaire (RFQ; McBride et al., 1994), that include a list of reasons for quitting and/or reducing, or qualitative open-ended questions that are thematically coded (Amodeo and Kurtz, 1998). Second, response formats on questionnaires vary, including Likert scale, dichotomous (i.e., yes/no), "select all that apply", and choose/list the "top three reasons" response strategies. Third, the way the question is worded varies, framing the question in terms of reasons for *quitting* (Kranitz, 2007), *reducing* (Beard et al., 2017), or *quitting and/or reducing* alcohol (Huang et al., 2010).

The central aim of this qualitative systematic review is to characterize the reasons for quitting and/or reducing alcohol use among those who have received AUD treatment. We focus specifically on those who had received treatment in order to fill the gap in the literature left by the previous review (Rosansky and Rosenberg, 2020) and to better inform how to leverage reasons in AUD intervention and recovery settings. We use a qualitative approach to data synthesis due to the heterogeneity in measurement strategy across studies, which allows us to include both qualitative and quantitative research. The first aim is to characterize the type (i.e., themes) and number of reasons for quitting and/or reducing alcohol use. The second aim is to examine whether measurement (e.g., scales versus open-ended questions, response format (e.g., top 3 reasons, yes/no, Likert scale), and reasons for *quitting* versus reasons for *reducing*) affected the type and number of reasons reported.

2. Methods

2.1. Literature Search

The systematic literature search was conducted using PsycINFO, Web of Science, PubMed, and CINAHL. The following search terms were used in each database: "(alcohol OR drinking) AND ("reasons" OR "motives") AND (abstinen* OR non-use OR abstain* OR quit* OR stop* OR reduc* OR cease OR sobriety) AND (treatment OR intervention OR therapy OR management OR rehabilitation OR patient OR inpatient OR outpatient OR "AA" OR "12 step" OR "SMART recovery" OR "support group" OR "Alcoholics Anonymous" OR program). Forward searches were conducted on included studies and backward searches were conducted on relevant reviews identified during the literature search. The last day of study inclusion was October 15, 2024. Citations were managed using Mendeley Reference Management Software (Mendeley,

2023) and imported into Covidence (Covidence, 2023) for article screening and coding. Covidence is a software tool that provides one location to screen for inclusion and exclusion, extract relevant data, and document each step of the review process.

2.2. Eligibility Criteria

Studies were included if they assessed specific reasons for quitting or reducing alcohol using open-ended questions or lists, involved a treatment sample or both treatment and non-treatment samples, and were published in English. Both peer-reviewed articles and unpublished works were eligible. Exclusions included studies without treatment data, not reporting reasons separately by treatment status, where less than 75 % of the sample had treatment, or where reasons were reported by third parties rather than the individuals themselves. Studies on general substance use were excluded unless they specifically reported on alcohol. After removing duplicates, titles and abstracts were screened then, full-text reviews determined final eligibility. Rejected studies were noted with reasons for exclusion, and studies missing data were excluded after authors could not provide additional information.

2.3. Study coding

Data were extracted on reasons for quitting/reducing alcohol, measure type, question wording, treatment population percentage, and study details (e.g., authors, publication year, treatment setting, sample demographics). Reasons were coded by number and type of reasons endorsed (e.g., percent of the sample that endorsed a theme), as well as the mean strength of endorsement of the theme in the sample when Likert-type scales were used (e.g., on a scale of 0=not at all to 5=very much so). Measures were coded by type (e.g., list, scale, open-ended), response format (e.g., top 3 reasons, yes/no, Likert scale), and question phrasing (e.g., quitting, reducing). Coding was done independently by the first and second authors, with 90 % inter-rater reliability, calculated as the number of agreements divided by the number of agreements plus disagreements. Any discrepancies were thoroughly discussed until consensus was reached.

2.4. Synthesis and reporting of results

Thematic coding followed a directed content analysis approach, such that prior research findings served as a guideline for initial codes (Hsieh & Shannon, 2005). Initial themes were generated from Rosansky and Rosenberg's (2020) recent relevant review: no interest, health, dislike effects, does not fit lifestyle, occupation/education impairment, dislike taste, family influence, past/potential drinking struggles, financial reasons, social influences, seen bad examples, religious/moral values, and legal concerns. Reasons for quitting and/or reducing that could not be coded into one of these initial codes were identified and analyzed to determine if they represented new categories or a potential subcategory of an existing code. Coding was then modified accordingly as new codes/subcodes were identified, and themes were combined when redundant to aid parsimony. Sample characteristics (age, gender, race, treatment setting) were described. For Aim 1, results were reported by the number of studies endorsing each theme, the range of endorsement within each study (e.g., between 4.1 % and 100 % within each study), including prediction intervals (e.g., 55.62–91.56 % of the total sample endorsed a given theme) to account for variations in reporting, and when available, the range of endorsement strength within each study (e.g., a given theme was, on average, reported at a strength between 2.6 and 4.8 within each study). For Aim 2, studies were categorized by measure type, response format, and question phrasing, with endorsement numbers and ranges reported for each measurement strategy.

3. Results

3.1. Study selection (Fig. 1)

The initial literature search yielded 6894 studies; 2354 duplicates were removed. Of the 4528 titles and abstracts screened, 4345 were excluded. The most common reason for exclusion was not pertaining to alcohol ($k=3056$). Of the 186 studies that underwent full-text screening, 165 studies were excluded for not meeting inclusion criteria. The most common reasons for exclusion were no treatment population ($k=77$) and no measure of reasons for quitting and/or reducing alcohol use ($k=66$). Six studies were excluded for insufficient information. One study was identified through backward searching of Rosansky and Rosenberg (2020). Twenty-one studies met final inclusion (Table 1).

3.2. Study Characteristics

The review included 18 peer-reviewed articles and 3 dissertations with 8099 participants (Table 2). The average age was 38.7 years. Of the 20 studies reporting gender, 32.9 % of participants were female; of the 12 studies reporting race, 73.3 % were White. Nearly all participants (99.6 %) had received AUD treatment; however, three studies included a small percentage of individuals who had not received AUD treatment (12.5–22 % of sample). Ten studies included individuals who were fully abstinent from alcohol and 11 studies included mixed samples of those who did and did not currently use alcohol. Treatment setting was split between outpatient ($k=12$) and inpatient ($k=9$) settings. Most studies ($k=19$) included samples that engaged in treatment voluntarily and were in the United States ($k=11$).

3.3. Aim 1: Overall Characteristics of Reasons for Quitting and/or Reducing

We identified 244 reasons for quitting and/or reducing alcohol across the 21 included studies, with an average of 11.6 reasons per study. Eighteen studies provided data on the percentage of the sample that endorsed each reason and were used to calculate the prediction interval for the overall sample that endorsed a theme ($N=7548$). Endorsement of themes varied considerably across studies. Four studies reported mean strength of endorsement (scale of 1–5).

Thematic coding identified 21 themes of reasons for quitting or reducing alcohol among those in treatment (Table 3). This included 12 of the 13 themes from the Rosansky and Rosenberg (2020) review including no interest, health reasons, dislike the effects, does not fit the lifestyle, occupation/education impairment, family influence, past/potential drinking struggles, financial reasons, social influences, seen bad examples, religious/moral values, legal concerns, and nine new themes (Table 3).

3.3.1. Most Frequently Endorsed Themes

Themes appearing in more than 75 % of included studies are discussed here.

Physical Health Reasons. This category included concerns about how alcohol use affected physical health and functioning. This theme appeared in 20 out of the 21 studies reviewed (95 %). Examples included physical health, sexual functioning, needing surgery, withdrawal, hangover, and body image and weight concerns. In each study, the endorsement of this theme ranged from 4.1 % to 100 %. Between 55.58 % and 91.51 % of the total sample endorsed a physical health reason. Endorsement strength ranged from 2.6 to 4.8 (out of 5).

Does Not Fit Lifestyle/Who Want to Be. This category included reasons related to how drinking conflicted with personal goals, self-improvement, or ideal lifestyle, and the desire for better sense of self and purpose. This theme appeared in 18 out of 21 studies reviewed (85 %). Examples included concerns about self-esteem, life purpose, personal independence, major lifestyle change, feeling in control, and

improving self-image. In each study, the endorsement of this theme ranged from 2.46 % to 90.8 %. Between 70.31 % and 89.30 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 2.85 to 4.6 (out of 5).

Family Influence. This category included reasons related to how drinking negatively affected family relationships or the desire to improve family dynamics. This theme appeared in 18 out of 21 studies reviewed (85 %). Examples included marital relationships, wanting to be a better parent, family conflict, and not wanting to embarrass family. In each study, endorsement of this theme ranged from 1.2 % to 100 %. Between 47.59 % and 47.93 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 2.2 to 4.4 (out of 5).

Social Influences. This category included reasons related to the negative effects of drinking on one's friendships or being inspired by others who had quit or reduced alcohol. This theme appeared in 18 out of 21 studies reviewed (85 %). Examples included feeling grateful for support, conflicts with friends, knowing someone who had quit or reduced, and ending unhealthy relationships. Within each study, endorsement of this theme ranged from 5 % to 69.6 %. Between 46.93 % and 86.06 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 3.46 to 4.5 (out of 5).

3.3.2. New Themes Identified

Avoid Disapproval from Others. This category focused on reasons related to receiving an ultimatum or requests to quit or reduce alcohol use, often motivated by not wanting to disappoint important people in one's life by continuing to drink. This theme appeared in 12 out of the 21 studies reviewed (57 %). Examples included pressure or advice from significant others, warnings from a spouse, and hoping to reduce nagging from loved ones. In each study, endorsement of this theme ranged from 4.1 % to 100 %. Between 51.21 % and 85.39 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 2.4 to 4.5 (out of 5).

Mental Health Reasons. This category included reasons related to the negative impact of alcohol on mental health and functioning. This theme appeared in 9 out of the 21 studies reviewed (45 %). Examples included psychological health, anxiety, depression, impaired memory, lack of motivation. In each study, endorsement of this theme ranged from 2.2 % to 88.7 %. Between 55.07 % and 83.89 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 3.52 to 4.4 (out of 5).

Fear of Consequences/Behavior. This category included reasons based on fear of consequences or behaviors linked to alcohol use. This theme appeared in 9 out of the 21 studies reviewed (43 %). Examples included fear of death, addiction and being labeled "an addict", and dangerous behaviors like car accidents. In each study, endorsement of this theme ranged from 0.82 % to 70.4 %. Between 48.95 % and 82.74 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 3.45 to 5 (out of 5).

Will be Happier. This category included reasons related to enjoying life more, finding greater purpose, and achieving goals. This theme appeared in 7 out of the 21 studies reviewed (33 %). Examples included improved enjoyment of life, ease of living, and better goal achievement. In each study, endorsement of this theme ranged from 5 % to 58.6 %. Between 50.24 % and 80.82 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 3.63 to 4.07 (out of 5).

Traumatic Event. This category included reasons related to experiencing a traumatic event, personal crisis, or major life stressor. This theme appeared in 6 out of the 21 studies reviewed (29 %). Examples included existential or personal crises and traumatic experience. In each study, endorsement of this theme ranged from 10 % to 59.5 %. Between 4.86 % and 6.21 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from was 4.6 (out of 5).

Admission to Treatment. This category included reasons related to

Table 1 (continued)

Authors (Year)	Sample (N)	Treatment Seeking (%)	Treatment Setting	Study Location	Age Range	Method	Wording of Question	Reason (N)	Specific Reasons	Endorsement (%) & Strength of Reasons (M)	Themes of Reason (most to least %)
									-Health conditions, physical illness -Specific frightening, humiliating experiences -Positive “key events” -Work and/or financial struggles -Situational change -Conflicts with spouse, family, friends -Religious/spiritual experience -Negative role model/fear of labeling	10 % 5 % 25 % 5 % 10 % 5 %	-Financial reasons -Does not fit lifestyle/who want to be -Social influences -Avoid disapproval from others -Religious/moral reasons -Physical health reasons -Will be happier -Family influence -Seen bad examples -Fear of consequences/behavior
Connors et al. (1998)	65	100	Inpatient Outpatient	United States	>18	List/Scale, Likert Scale	Quitting	10	-Feeling bad emotionally -Feeling bad physically -Admission to treatment program -Others' intervention -Work consequences -Legal consequences -Marital/family conflict -Expected issues -Just decided to stop -Alcohol not available	43.1 % (4.3/4.4) 33.8 % (4/4.8) 6.2 % (4/4.7) 12.3 % (4.5/3.8) 4.6 % (4/5) 13.8 % (4.5/4.8) 29.2 % (4.4/4.4) 36.9 % (4.8/4.9) 61.5 % (4.1/4.1) 9.2 % (5/4)	-No interest in drinking -Does not fit lifestyle/who want to be -Mental health reasons -Fear of consequences/behavior -Physical health reasons -Family influence -Legal concerns -Social influences -Avoid disapproval from others -Alcohol not available -Admission to treatment - Occupation/education impairment
Cunningham et al. (1995)	16	100	Inpatient Outpatient Community groups	Canada	>18	List/Scale, yes/no to each reason and Likert scale	Quitting and/or reducing	10	-Pros and cons evaluation -Major Lifestyle change -Saw someone drunk/high -Traumatic event -Hit rock bottom -Knew someone quit/reduced -Health consequences -Warning from spouse/other -Religious experience -Physician warning	62.5 % (3.9) 37.5 % (4.6) 18.8 % (3.7) 50 % (4.6) 68.8 % (4.5) 37.5 % (3.5) 31.3 % (4) 50 % (2.4) 12.5 % (4.5) 31.3 % (2.6)	-Hit rock bottom -Does not fit lifestyle/who want to be -Traumatic event -Family influence -Avoid disapproval from others -Social influences -Physical health reasons -Seen bad examples -Religious/moral reasons

(continued on next page)

Table 1 (continued)

Authors (Year)	Sample (N)	Treatment Seeking (%)	Treatment Setting	Study Location	Age Range	Method	Wording of Question	Reason (N)	Specific Reasons	Endorsement (%) & Strength of Reasons (M)	Themes of Reason (most to least %)
Ekström and Johansson (2020)	38	100	Online	Sweden	26–74	Open-ended question, top reasons	Reducing	7	-Escalation over time -Medical or physical consequences -Felt bad/shame -Relationships -Work related -Curious/as an experiment -No special reason	NA	-Physical health reasons -Social influences -Does not fit lifestyle/who want to be - Occupation/ education impairment -Past/potential drinking struggles -Will be happier -No specific reason
Fernandes (2020)	15	100	Outpatient	United States	18–68	Open-ended question, top reasons	Reducing	11	-Health and health concerns -Personality changes -Physical pain -Feeling anxious or depressed -Alcohol withdrawal -Weight gain -Awareness of loss of control over drinking and related behaviors -Family history of addiction -Interpersonal conflict -Termination of unhealthy relationships -Financial stress and job-related consequences	100 % 6.7 % 40 % 20 % 26.7 % 6.7 % 46.7 % 13.4 % 33.4 % 20 % 46.7 %	-Physical health reasons -Past/potential drinking struggles - Occupation/ education impairment -Financial reasons -Social influences -Mental health reasons -Family influence -Does not fit lifestyle/who want to be
Frost et al. (2022)	27	100	VA	United States	22–69	Open-ended question, top reasons	Changing	4	-Recognition (drinking causing health, relationship, legal consequences) -Responsibilities/ goals -Family/friends also changing drinking or seeking help -Healthcare system encouraging help seeking	NA	-Physical health reasons -Social influences -Legal concerns -Family influence -Will be happier -Admission to treatment
Gudmundsdóttir (1997)	71	100	Inpatient	Iceland	18–65	List/Scale, yes/no to each reason	Quitting	10	-I often feel very bad -I had lost control over my drinking -I was very depressed -I was afraid that I had become addicted to alcohol -I was frightened -I was losing my memory -I had received warning -My working capacity had decreased -I neglected my children -I often had bad hangovers	88.7 % 87.3 % 83.1 % 70.4 % 59.2 % 54.9 % 52.1 % 49.3 % 46.6 % 46.6 %	-Mental health reasons -Past/potential drinking struggles -Fear of consequences/ behavior -Social influences -Avoid disapproval from others - Occupation/ education impairment -Family influence
Henges (2008)	8	87.5	Inpatient Outpatient	United States	62–72	Open-ended question, top reasons	Quitting	6	-Family conflict -Asked to quit by spouse or adult children	100 % 100 % 62.5 %	-Family influence -Avoid disapproval from others

(continued on next page)

Table 1 (continued)

Authors (Year)	Sample (N)	Treatment Seeking (%)	Treatment Setting	Study Location	Age Range	Method	Wording of Question	Reason (N)	Specific Reasons	Endorsement (%) & Strength of Reasons (M)	Themes of Reason (most to least %)
Orford and Keddie (1985)	46	100	Outpatient	United Kingdom	>18	Open-ended question, top reasons	Reducing	6	-Intrapersonal negative-physical (e.g., after getting very drunk I feel bad physically, mentally) -Intrapersonal negative-emotional (e.g., feeling low) -Interpersonal positive (e.g., when happy, when had a good cry) -Interpersonal (e.g., family, friends) -Environmental (e.g., staying busy, shortage of money) -Professional (e.g., AA meetings)	10.9 % 2.2 % 8.7 % 65.2 % 45.7 % 2.2 %	-Social influences -Family influence -Financial reasons -Does not fit lifestyle/ who want to be -Physical health reasons -Mental health reasons -Admission to treatment
Schreiner et al. (2021)	366	100	VA	United States	21–56	Open-ended question, top reasons	Changing	17	-To have better health -Negative physical consequences (reduce hangovers, blackouts) -Dependence, addiction (less risk of having an AUD) -Financial -Social, interpersonal benefits -Time/energy -Cognitive effects -School/work functioning -Unspecified/other benefits -Weight loss -Mood-related reasons -Healthy lifestyle changes -Other -Legal consequences -Conflict avoidance -Image -Unspecified/other risk -Gain control -Learning to cope -Self-esteem/worth	36.61 % (3.53) 17.76 % (3.45) 0.82 % (5) 48.63 % (3.8) 31.15 % (3.54) 15.57 % (4.07) 13.66 % (3.88) 12.02 % (4) 11.2 % (3.63) 10.93 % (3.28) 7.38 % (3.52) 6.28 % (3.7) 4.37 % (3.63) 4.37 % (4.44) 4.1 % (3.2) 4.1 % (3.2) 4.1 % (3.07) 3.55 % (2.85) 3.28 % (3.17) 2.46 % (4.11)	-Financial reasons -Physical health reasons -Social influences -Fear of consequences/ behavior -Will be happier -Mental health reasons - Occupation/ education impairment -Does not fit lifestyle/ who want to be -No specific reason -Legal concerns -Avoid disapproval from others -Past/potential drinking struggles
Smith et al. (2010)	5155/ 642	100	Outpatient	United States	15–25	List/Scale, yes/ no to each reason	Quitting	26	-Think more clearly -Like yourself better if you quit -Memory will improve -Can get more things don during the day -More energy -Concerned using alcohol or drugs will shorten your life -Hair and clothes won't smell -Feel in control of your life -Alcohol or drug use is hurting your health -Won't burn holes in clothes or furniture -Concerned that you will have health consequences if you don't quit -Does not fit with your image -Prove to yourself that you are not addicted -Alcohol or drug use is becoming "less	64.2%/66.1 % 53.2%/54.6 % 62.3%/60.2 % 57.9%/58.6 % 56.2%/58.5 % 54.1 %/53.9 % 38.5%/36.8 % 61.6%/62.1 % 51.5%/49.7 % 29.8%/29.9 % 58 %/58.3 % 39%/42.9 % 66.1 %/61.8 % 21.1 %/22 % 32.7 %/31.9 % 56.1 %/57 % 79%/74.1 % 65.3 %/70.4 % 51.5%/45.8 % 60.8%/51.3 %	-Does not fit lifestyle/ who want to be -Financial reasons -Mental health reasons -Will be happier -Avoid disapproval from others -Physical health reasons -Fear of consequences/ behavior -Seen bad examples -Legal concerns -Family influence -Social influences - Occupation/ education impairment

(continued on next page)

Table 1 (continued)

Authors (Year)	Sample (N)	Treatment Seeking (%)	Treatment Setting	Study Location	Age Range	Method	Wording of Question	Reason (N)	Specific Reasons	Endorsement (%) & Strength of Reasons (M)	Themes of Reason (most to least %)
									cool" or socially acceptable -Won't have to leave social functions or other people's houses to drink or use -Known people with health consequences caused by alcohol or drugs -Show yourself you can quit if you really want to -Save money -Get praise from people you are close to -People you are close to will be upset if you don't quit -Don't want to embarrass your family -Close ones will stop nagging you if you quit -Someone close to you told you to quit or else -Will receive a special gift if you quit -Drug-testing policy in detention, probation, parole, or school -Legal consequences related to alcohol or drug use	53.9%/50.1 % 53.9%/45.3 % 35.1%/29.2 % 12.7%/11.2 % 52.2%/42.4 % 53.5%/53 %	
6 Souter (199)	486	100	Inpatient	Canada	19–67	List/Scale, Likert scale and top reasons	Changing	8	-Control -Self -Finances -Health -Others -Children -Legal -Work	(4) (3.14) (2.98) (3.33) (3.46) (2.2) (1.75) (1.55)	-Does not fit lifestyle/ who want to be -Social influences -Physical health reasons -Financial reasons -Family influence -Legal concerns - Occupation/ education impairment
Stasiewicz et al. (1997)	25	80	Inpatient Outpatient Community groups	United States	>18	List/Scale, yes/no to each reason	Quitting	14	-Hit rock bottom -Major lifestyle change -Weighed pros and cons -Received treatment for mental illness -Traumatic event -Health consequences -Warning from spouse/other -Obtained stable housing -Could no longer afford alcohol -Saw someone drunk/high -Religious experience -Physician warning -Knew someone quit/reduced -Other	60 % 52 % 48 % 44 % 44 % 36 % 32 % 24 % 24 % 20 % 16 % 12 % 8 % 36 %	-Hit rock bottom -Does not fit lifestyle/ who want to be -Admission to treatment -Traumatic event -Physical health reasons -Family influence -Avoid disapproval from others -Financial reasons -Seen bad examples -Religious/moral reasons -Social influences -No specific reason

(continued on next page)

Table 1 (continued)

Authors (Year)	Sample (N)	Treatment Seeking (%)	Treatment Setting	Study Location	Age Range	Method	Wording of Question	Reason (N)	Specific Reasons	Endorsement (%) & Strength of Reasons (M)	Themes of Reason (most to least %)
Ungar et al. (1998)	84	100	Outpatient	Canada	23–65	Open-ended question, top reason	Quitting	2	-Immediate drinking focused (e.g., lack of availability, physical sickness, lack of enjoyment, disgust of intoxication) -Personally meaningful goal	36 % 64 %	-Does not fit lifestyle/ who want to be -Alcohol not available -Physical health reasons -No interest in drinking -Dislike effects
Walton et al. (2017)	252	100	Outpatient	United States	14–20	List/Scale, yes/no to each reason	Quitting and/or reducing	34	-Having a legal record -Getting arrested/ going to jail -Paying fines/fees -DUI, OWI, DWI -Getting an MIP charge -Getting my license taken away -Incomplete school work -Missing classes or work -Suspension or expulsion -Bad grades -Neglecting responsibilities -Getting fired -Not motivated -Injuring self or others -Taking foolish risks -Unprotected sex, STD's -Unplanned pregnancy -Car accidents -Alcohol poisoning -Physical fights -Getting taken advantage of sexually -Arguments with others -Losing friendships -Losing others' trust -Disappointing others -Embarrassing myself or others -Losing privileges -Unable to be a good parent to my child -Drinking more than planned -Strong desire to drink -Puking in front of others -Getting a bad reputation -Needing to drink more and more -Unable to remember things (blackouts)	70.2 % 73.8 % 58.7 % 67.4 % 61.5 % 61.9 % 51.1 % 50.7 % 55.5 % 68.2 % 53.9 % 55.1 % 46.4 % 55.5 % 42 % 64.6 % 58.3 % 59.5 % 55.5 % 42.8 % 47.6 % 42.2 % 62.6 % 51.5 % 56.3 % 56.7 % 42.4 % 40.4 % 46.4 % 37.3 % 49.2 % 58.7 % 49.6 % 59.5 %	-Legal concerns - Occupation/ education impairment -Fear of consequences/ behavior -Social influences -Mental health reasons -Traumatic event -Avoid disapproval from others -Does not fit lifestyle/ who want to be -Financial reasons -Physical health reasons -Will be happier -Past/potential drinking struggles -Family influence

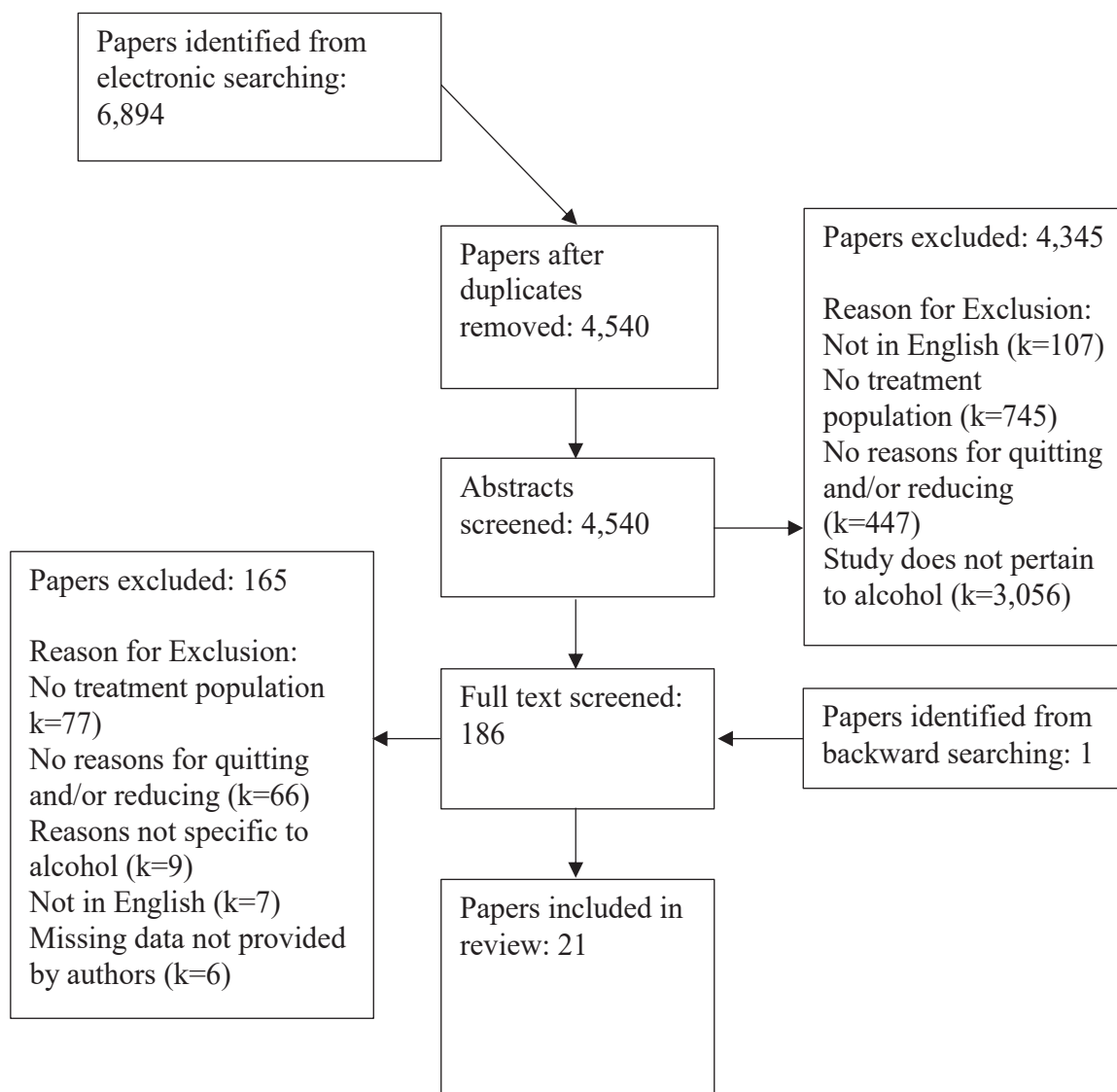


Fig. 1. PRISMA Flow Chart.

Table 2
Study Characteristics.

Studies	21
Sample (N)	8099
Mean Age (k=17)	38.7
% Female (k=20)	32.9
% White (k=11)	73.3
% Treatment	99.6
Continued alcohol use	1
Abstinent	10
Mixed continued use and abstinent	11
VA	2
Inpatient treatment	9
Outpatient treatment	12
Community groups (e.g., AA)	3
Online treatment	3
Not specified	1
Mandated treatment	1
United States	11
Canada	3
United Kingdom	2
Sweden	2
Iceland	1
Germany	1
Australia	1

starting or being advised to seek treatment. This theme appeared in 5 out of the 21 studies reviewed (24 %). Examples included joining a treatment program or starting to attend AA meetings. In each study, endorsement of this theme ranged from 2.2 % to 44 %. Within the total sample, 0.44 % endorsed a reason related to this theme. Endorsement strength ranged from 4 to 4.7 (out of 5).

No Specific Reason. This category included responses where participants reported that they were quitting and/or reducing their drinking, but did not have a specific or clear reasons for doing so. This theme appeared in 4 out of the 21 studies reviewed (19 %). Examples included no special reason and unspecified. In each study, endorsement of this theme ranged from 4.1 % to 36 %. Between 0.42 % and 0.62 % of the total sample endorsed a reason related to this theme. Endorsement strength ranged from 3.07 to 3.63 (out of 5).

Hit Rock Bottom. This category included reasons where hitting a low point motivated changed. This theme appeared in 3 out of the 21 studies reviewed (14 %). Responses in this category included mention of hitting rock bottom. In each study, endorsement of this theme ranged from 60 % to 68.8 %. Within the total sample 4.07 % endorsed a reason related to this theme. Endorsement strength was 4.5 (out of 5).

Alcohol Not Available. This category included reasons related to not having access to alcohol due to one’s location. This theme appeared in 3 out of the 21 studies reviewed (14 %). Examples included being in

Table 3
Reasons for Quitting and/or Reducing Identified in the Review.

Broader Theme	Rosansky and Rosenberg, (2020) Themes	Studies that Endorse Theme (K)	Range of total sample (k=17) (N=7548) endorsement (%)	Within study range of endorsement (k=17) (%)	Within study range of endorsement strength (k=4) (M out of 5)
Physical health reasons	X	20	55.58–91.51	4.1–100	2.6–4.8
Does not fit lifestyle/who want to be	X	18	70.31–89.30	2.46–90.8	2.85–4.6
Family influence	X	18	47.59–47.93	1.2–100	2.2–4.4
Social influences	X	17	46.93–86.06	5–69.6	3.46–4.5
Occupation/education impairment	X	12	43.47–44.57	4.6–68.2	1.55–5
Avoid disapproval from others		12	51.21–85.39	4.1–100	2.4–4.5
Financial reasons	X	10	55.81	12.5–70.4	2.98–3.8
Mental health reasons		9	55.07–83.89	2.2–88.7	3.52–4.4
Fear of consequences/behavior	X	9	48.95–82.74	0.82–70.4	3.45–5
Legal concerns		8	44.60–80.88	4.1–73.8	1.75–4.8
Will be happier		8	50.20–80.74	5–58.6	3.63–4.07
Past/potential drinking struggles	X	7	2.80–4.48	0.82–87.3	5
Seen bad examples	X	6	45.44	5–57	3.7
Traumatic event		6	4.86–6.21	10–59.5	4.6
No interest in drinking	X	5	1.45	9.4–61.5	4.1
Religious/moral reasons	X	5	2.60	10–43	4.5
Admission to treatment		5	0.40	2.2–44	4–4.7
No specific reason		4	0.42–0.62	4.1–36	3.07–3.63
Hit rock bottom		3	4.07	60–68.8	4.5
Alcohol not available		3	0.65	9.2–36	4–5
Dislike effects	X	1	0.40	36	x

Note: X denotes a reason previously identified by the Rosansky and Rosenberg, (2020) review.

jail or a living situation where alcohol isn't available. In each study, endorsement of this theme ranged from 9.2 % to 36 %. Within the total sample 0.65 % endorsed a reason related to this theme. Endorsement strength ranged from 4 to 5 (out of 5).

3.4. Aim 2: Effect of Measurement Strategy on Reasons for Quitting and/or Reducing

3.4.1. Type of Measure

The number of studies reporting each theme was similar across measure utilized, although a greater number of themes were endorsed in studies using list/scales versus open-ended questions (Table 4). Twelve studies utilized open-ended questions, reporting 116 total reasons with an average of 9.67 reasons per study. Nine studies used a scale or provided list of reasons, reporting 128 total reasons with an average of 14.22 reasons per study. However, themes varied across type of measures. The most common theme endorsed by open-ended questions was "physical health reasons" (k=11), while the most prevalent themes for lists/scales (k=9) were "physical health reasons," "family influence," and "social influences." Themes of "will be happier" and "no interest in drinking" were more common in studies using open-ended questions. Conversely, themes like "avoid disapproval from others" and "hit rock bottom" appeared more frequently in studies using scales/lists. The theme "hit rock bottom" was only reported in studies that used lists/scales.

3.4.2. Response Format

There were differences in how studies that used lists/scales measured responses, how many reasons were endorsed, and which themes were endorsed. Studies using lists/scales utilized five different response formats (Table 4): indicate top reasons (k=10), respond yes/no to each (k=6), indicate one top (k=3), Likert scale response style (k=2), and using both a Likert scale and indicating the top reasons (k=1). Studies that used top reasons and yes/no to each reported a greater number of reasons (111 total reasons with 11.1 reasons per study and 100 total reasons with 16.7 per study, respectively) than those that used other

response formats: Studies asking for top reasons reported a total of 111 reasons across 19 themes, with an average of 11.1 reasons per study. Studies that used yes/no responses reported a total of 100 reasons across 18 themes, with an average of 16.7 reasons per study. Studies that asked for one top reason reported a total of 15 reasons across 10 themes, with an average of 5 reasons per study. Studies that used a Likert scale reported a total of 20 reasons across 16 themes, with an average of 10 reasons per study. The one study that used both a Likert scale and asked for top reasons included 8 reasons across 7 themes.

Only three themes – physical health reasons, does not fit lifestyle/who want to be, family influence – were endorsed across all five response formats. For studies asking for top reasons, "physical health reasons" was the most common theme. For studies using a yes/no response, "physical health reasons," "family influence," and "social influences" were the most common themes. For studies using a Likert scale, "physical health reasons," "family influence," "social influences," and "does not fit lifestyle/who want to be" were the most common themes. For studies asking for one top reason, "no interest in drinking" was the most common theme. The formats with the highest within-study range of endorsement for each theme were responding with top reasons and yes/no responses.

3.4.3. Wording of Question

The wording of the questions was related to differences in the number of reasons endorsed, as well as the types of themes endorsed. Included studies utilized four different styles of wording the question (Table 4): "reasons for quitting" (k=11), "reasons for reducing" (k=4), combined "reasons for quitting and/or reducing" (k=2), and "reasons for changing" (k=4). Studies that used "quitting" reported more reasons (125 reasons, with an average of 11.36 reasons per study) than studies that used other wording. Studies that used "reducing" reported a total of 34 reasons across 16 themes, with an average of 8.5 reasons per study. Studies that used "quitting and/or reducing" reported a total of 44 reasons across 16 themes, with an average of 22 reasons per study. Studies that used "changing" reported a total of 41 reasons across 14 themes, with an average of 10.25 reasons per study.

Table 4
Themes by Measurement Strategy.

Broader Theme	Measure (K) % range of endorsement within studies		Response (K) % range of endorsement within studies					Question (K) % range of endorsement within studies			
	Open-ended (k=12)	List/scale (k=9)	Top Reason (k=3)	Top Reasons (k=10)	Y/N Each (k=6)	Likert Each (k=2)	Likert And top reason(s) (k=1)	Quitting (k=11)	Reducing (k=4)	Combined (k=2)	Changed (k=4)
Physical health reasons	(11) 4.1–100	(9) 12–73.5	(2) 14.1–75.3	(10) 4.1–100	(6) 12–73.5	(2) 31.3–33.8	(1) x	(10) 5–75.3	(4) 6.7–100	(2) 31.3–55.5	(4) 4.1–15.11
Does not fit lifestyle/who want to be	(10) 2.46–62.5	(8) 24–90.8	(2) 14	(9) 2.46–68	(5) 24–90.8	(2) 37.5–62.5	(1) x	(9) 5–90.8	(3) 6.7–68	(2) 37.5–62.5	(4) 2.46–45.7
Family influence	(9) 1.2–100	(9) 29.2–69.6	(2) 1.2–3	(8) 5–100	(6) 32–69.2	(2) 29.2–50	(1) x	(10) 1.2–100	(3) 13.4–65.2	(2) 40.4–50	(3) X
Social influences	(8) 5–65.2	(9) 8–69.6	(0)	(9) 5–65.2	(6) 8–69.2	(2) 12.3–37.5	(1) x	(7) 5–69.6	(4) 20–65.2	(2) 37.5–62.6	(4) 31.15
Occupation/education impairment	(6) 5–46.7	(6) 4.6–68.2	(0)	(4) 5–46.7	(4) 42.4–68.2	(1) 4.6	(1) x	(6) 4.6–52.2	(2) 46.7	(1) 50.7–68.2	(3) 12.02
Avoid disapproval from others	(5) 4.1–100	(7) 12–60.8	(0)	(6) 4.1–100	(5) 12–60.8	(2) 12.3–50	(0)	(7) 8.3–100	(1) 32–38	(2) 31.3–58.7	(2) 4.1
Financial reasons	(6) 12.5–48.63	(4) 24–70.4	(0)	(6) 12.5–48.63	(3) 24–70.4	(0)	(1) x	(5) 12.5–70.4	(1) 46.7	(1) 58.7	(3) 45.7–48.63
Mental health reasons	(4) 2.2–41.7	(5) 43.1–88.7	(0)	(4) 2.2–41.7	(4) 54.9–88.7	(1) 43.1	(0)	(5) 41.7–88.7	(2) 2.2–20	(1) 46.4–59.5	(1) 7.38–13.66
Legal concerns	(3) 4.1–8.3	(5) 13.8–73.8	(0)	(3) 4.1–8.3	(3) 42.1–73.8	(1) 13.8	(1) x	(4) 8.3–53.5	(0)	(1) 61.5–73.8	(3) 4.1
Fear of consequences/behavior	(5) 0.82–19	(4) 29.8–70.4	(1) 19	(4) 0.82–17.76	(3) 29.8–70.4	(1) 36.9	(0)	(6) 5–70.4	(0)	(1) 42–64.6	(2) 0.82–17.76
Will be happier	(5) 5–30	(2) 53.9–62.1	(0)	(5) 5–30	(2) 53.9–62.1	(0)	(0)	(3) 5–62.1	(1) x	(1) 53.9	(2) 11.2–15.57
Past/potential problem drinking	(5) 0.82–46.7	(2) 37.3–87.3	(1) 14	(4) 0.82–46.7	(2) 37.3–87.3	(0)	(0)	(2) 14–87.3	(2) 46.7	(1) 37.3–49.6	(2) 0.82
Seen bad examples	(2) 5	(4) 18.8–57	(0)	(2) 5–37	(3) 18.8–57	(1) 18.8	(0)	(4) 5–57	(1) 37	(1) 18.8	(0)
Traumatic event	(2) 10–35	(4) 44–59.5	(0)	(3) 10–45	(3) 44–59.5	(1) 50	(0)	(3) 10–44	(1) 45	(2) 47.6–59.5	(0)
No interest in drinking	(4) 9.4–36	(1) 61.5	(3) 9.4–36	(1) 13.3	(0)	(1) 61.5	(0)	(5) 9.4–61.5	(0)	(0)	(0)
Religious/moral reasons	(2) 10–11.7	(3) 12.5–43	(0)	(3) 10–43	(2) 12.5–16	(1) 12.5	(0)	(3) 10–16	(1) 43	(1) 12.5	(0)
Admission to treatment	(3) 2.2–7	(2) 6.2–44	(1) 4–7	(2) 2.2	(1) 44	(1) 6.2	(0)	(3) 4–44	(1) 2.2	(0)	(1) x
No specific reason	(3) 4.1–7	(1) 36	(1) 7	(2) 4.1–4.37	(1) 36	(0)	(0)	(2) 7–36	(1) x	(0)	(1) 4.1–4.37
Hit rock bottom	(0) 60–68.8	(3) 67	(0)	(1) 67	(2) 60–68.8	(1) 68.8	(0)	(1) 60	(1) 67	(1) 68.8	(0)
Alcohol not available	(2) 14–36	(1) 9.2	(2) 14–36	(0)	(0)	(1) 9.2	(0)	(3) 9.2–36	(0)	(0)	(0)
Dislike effects	(1) 36	(0)	(1) 36	(0)	(0)	(0)	(0)	(1) 36	(0)	(0)	(0)

Ten themes appeared across all four question wordings: “physical health reasons,” “social influences,” “does not fit lifestyle/who want to be,” “occupation/education impairment,” “family influence,” “past/potential drinking struggles,” “financial reasons,” “mental health reasons,” “avoid disapproval from others,” and “will be happier.” “Physical health reasons” was the mostly commonly endorsed theme overall, regardless of wording. For studies that used “quitting”, the most common themes were “physical health reasons” and “family influence”. For studies that used “reducing”, the most common themes were “physical health reasons” and “social influences.” For studies that used “quitting and/or reducing”, the most common themes were “physical health reasons,” “does not fit lifestyle/who want to be,” “family influence,” “social influences,” “avoid disapproval from others,” and “traumatic event.” For studies that used “changing”, the most common themes were “physical health reasons,” “does not fit lifestyle/who want to be,” and “social influences.” Only studies using “quitting” reported the themes “no interest in drinking,” “no specific reason,” “alcohol not available,” and “dislike effects.” Studies that used “quitting” had the highest within-

study range of endorsement for each theme, while studies that used “changing” had the lowest within-study range of endorsement for each theme.

4. Discussion

This review identified 21 themes in reasons for quitting and/or reducing alcohol among those who have received AUD treatment. Overall, some reasons people want to quit and/or reduce their alcohol use are similar whether or not they have received treatment. The four most prevalent themes identified in this review—physical health issues, wanting to change one’s lifestyle, family pressures, and social influences—were also identified in the previous review of individuals who have not been in treatment (Rosansky and Rosenberg, 2020). This suggests that these reasons are fundamental and are not a result of treatment alone. We also identified nine new themes not previously identified, which may be unique to individuals who have received AUD treatment and may suggest that they are critical in leading one to seek treatment or

may be developed during treatment. The type of measure used (open-ended questions versus lists/scales), response format (e.g., top three, yes/no, Likert), and question wording (e.g., quitting versus reducing) all impacted the type and number of reasons endorsed.

Physical health reasons were the most common reasons for quitting and/or reducing alcohol use in this review. This aligns with [Rosansky and Rosenberg's \(2020\)](#) findings that health issues were a major theme for individuals with previous drinking struggles, who may be similar to treatment populations. Alcohol is strongly linked to serious health conditions ([Witkiewitz et al., 2018](#)), such as cardiovascular disease, liver disease, and high blood pressure ([Chapman et al., 2015](#)), which can motivate people to seek treatment ([Davies et al., 2017](#)). Since heavy drinking significantly increases the risk of health issues and mortality ([Laramée et al., 2015](#); [Wood et al., 2018](#)), highlighting the health benefits of reducing and/or quitting alcohol use could effectively encourage both those in and out of treatment to make changes.

Three themes common in this review that were more prominent than in the [Rosansky and Rosenberg \(2020\)](#) review were that alcohol use no longer fits a person's lifestyle, goals, or identity; family influence; and social influences. Internal motivation, like recognizing that alcohol no longer fits one's life, may be more important for those who have received treatment. Internal motivation relates to better treatment involvement and retention ([Ryan et al., 1995](#)), which may facilitate treatment initiation ([Groszkova, 2010](#)) and longer-term change ([Diclemente et al., 1999](#)). Alternatively, this difference in prevalence may reflect the development of internal motivation through engaging in treatment ([Dubrow, 2020](#)). Similarly, AUD runs in families and affects families through issues like financial strain and emotional distress ([Greenfield et al., 2016](#)). Strong family bonds encourage individuals to seek treatment ([Bischof et al., 2016](#)) and increase treatment success ([McCrary and Flanagan, 2021](#)). The focus on family reasons might reflect more family conflict in those seeking treatment ([Rumpf et al., 2002](#)) or improved family relationships through treatment ([McCrary & Epstein, 2013](#)). Finally, social support from friends or others in recovery improves treatment outcomes and helps maintain sobriety ([Moon et al., 2019](#)). This stronger focus on social influences in those who have received treatment may reflect more social conflict among those with severe drinking struggles ([Schmidt et al., 2016](#)), or the development of social influence reasons through treatment ([Pettersen et al., 2019](#)). Seeing others who have successfully quit or reduced their alcohol use ([Cunningham et al., 1995](#)) and ending unhealthy relationships ([Pettersen et al., 2019](#)) support sustained sobriety.

The current review identified nine new reasons for quitting and/or reducing alcohol use that were not reported by those who had not received treatment ([Rosansky and Rosenberg, 2020](#)). The identification of additional themes suggests that those who have received AUD treatment report a greater number of reasons for changing their alcohol use ([Cunningham et al., 1995](#)). This could reflect greater motivation for change, or that treatment helps people develop and solidify additional reasons for changing their alcohol use.

Two themes reflected a separation from related themes. First, this review separated "avoid disapproval from others" from other family and social influence reasons identified previously ([Rosansky and Rosenberg, 2020](#)). Ultimatums reflect society's unique view on addiction ([Hall, 1993](#)) and increase, rather than decrease, risk of returning to use ([Cage and Kluck, 2010](#)). While ultimatums may prompt someone to enter treatment, developing personal reasons to *stay* in treatment is likely more important for long-term recovery. Second, this review also separated "mental health reasons" from the broader theme of "health reasons" identified previously ([Rosansky and Rosenberg, 2020](#)). Although mental and physical health are strongly linked ([Ohrnberger et al., 2017](#)), separating the two themes is important as mental health issues ([Kathryn McHugh & Weiss, 2019](#)) and associated stigma strongly impact alcohol use and treatment ([Overton and Medina, 2008](#)). People with AUD have higher rates of anxiety, mood, and thought disorders ([Castillo-Carniglia et al., 2019](#)), which increases the likelihood of attempting to quit

([Chiappetta et al., 2014](#)), as drinking can further exacerbates existing mental health issues ([Castillo-Carniglia et al., 2019](#)). However, comorbid mental health conditions decrease the odds of successfully quitting and/or reducing alcohol use post-treatment ([Chiappetta et al., 2014](#)). Integration of general mental health treatment into AUD treatment has found modest positive effects ([McHugh & Weiss, 2019](#)). Separating themes may reduce parsimony; however, we concluded that avoiding disapproval from others and mental health reasons reflected unique reasons for quitting and/or reducing alcohol that may be particularly important for those who have received AUD treatment and retained them as separate themes.

Three new themes reflected avoiding negative consequences and approaching positive life changes. First, hitting rock bottom was identified as a theme in the current review; although fewer studies reported this theme, it was strongly endorsed when it appeared. Initial work has begun to operationalize the idea of "hitting rock bottom" ([Kirouac and Witkiewitz, 2017](#)). Hitting rock bottom is an important concept in 12-step approaches ([Alcoholics Anonymous, 2001](#)) and 75 % of individuals in recovery from AUD and who engaged in Alcoholics Anonymous report that hitting rock bottom was necessary for their recovery ([Klingemann, 2011](#)). Rock bottom is an individual experience that can be related to different factors, including physical, mental, and emotional health struggles; environmental or situational struggles; and social influences ([Kirouac et al., 2015](#)). Thus, rock bottom may only be identified by lists because it be specific to those engaged in Alcoholics Anonymous or it may be reflected in the other more specific individual themes identified in the review.

Second, fear of negative consequences was identified. Avoidance of negative outcomes prompts behavior change ([Schultz, 2015](#)) and reduces stress ([Deutsch et al., 2015](#)), especially in the early stages of change ([Michaelsen & Esch, 2021](#)). Third, wanting to be happier was also identified. Maintaining long-term change benefits more from approach motivation, which fosters sustained commitment and enjoyment of new and healthy behavior ([Michaelsen & Esch, 2021](#); [Van Cappellan et al., 2018](#)). Happiness is linked to better health outcomes and reinforces commitment to quitting alcohol use ([Heizomi et al., 2015](#)). Integrating happiness-focused interventions with avoidance of consequences could enhance motivation and support recovery.

Three novel themes reflected external or non-specific reasons related to quitting and/or reducing alcohol use. Admission to treatment was identified as one theme. Motivation for treatment and for change are related, but distinct ([de Weert-van Oene et al., 2015](#)). Motivation to change relates to increased treatment seeking, attendance, and retention ([Diclemente et al., 1999](#); [de Weert-van Oene 2015](#)) and treatment boosts motivation to change ([Fiabane et al., 2017](#)). Alcohol not being available also emerged as a theme. Treatment often requires abstinence ([Fiabane et al., 2017](#)), and settings such as jail or supported living environments make alcohol unavailable. Unavailability of alcohol may be helpful in early treatment stages; however, developing additional reasons is crucial to maintain long-term behavior change ([Javed et al., 2020](#)). Finally, a "no specific reasons" theme emerged, especially in studies using open-ended questions, which might suggest not being able to pinpoint reasons without a prompt. However, this theme also appeared in studies with a list or scale, suggesting that individuals might struggle to identify specific motivations. This could reflect a lack of insight into one's reasons, which may negatively impact recovery ([Raftery et al., 2020](#)), insufficient effort in answering open-ended questions ([Miller & Dumford, 2014](#)), or gaps in existing scales.

This review found that the type of measure, response format, and question wording affect the reasons, which may lead to inconsistencies across studies. To better synthesize findings and understand these reasons, standardizing measurement methods is crucial. However, given the relatively early state of this work, using diverse and comprehensive approaches can provide a fuller picture and guide future standardization efforts. Research often favors scales and closed-ended questions for their ease and standardization ([Baburajan et al., 2021](#); [Converse, 1984](#)), while

open-ended questions may yield more detailed and valid insights but often result in more missing data (Allison et al., 2002). Using both scales and open-ended questions, along with various response formats, can provide a broader understanding and help develop a standardized measure. Most studies in this review asked about reasons for "quitting" alcohol, emphasizing abstinence as a recovery marker. However, recent definitions, like the NIAAA's (Hagman et al., 2022), focus on symptom remission rather than abstinence. Using varied question wordings may provide a more complete view of reasons for change.

The majority of studies included in this review were conducted in the United States and Canada, excluding other countries and regions around the world where there is also a heavy impact of AUD (Díaz et al., 2020; GBD, 2016 Alcohol Collaborators and Sheikh, 2018; Jasilionis et al., 2020). Differing views towards drinking in different parts of the world may impact an individual's motivations for quitting and/or reducing their alcohol use. For example, in some European countries social attitudes towards alcohol are more lax, which may make individuals less likely to change due to family/social reasons. It is the authors' hope that this review catalyzes further research exploring motivations to quit or reduce alcohol consumption in areas where the impact of alcohol use is high yet understudied.

Methodological differences between this review and the Rosansky and Rosenberg (2020) review could also contribute to differences in themes identified: First, the Rosansky and Rosenberg (2020) review had additional exclusion criteria, excluding studies with fewer than 20 participants and requiring participants to be abstinence from alcohol. Second, Rosansky and Rosenberg (2020) standardized ratings and assigned a quality rating to each study that influenced how much weight each study carried in the overall synthesis. On one hand, these methodological choices may have led to more robust findings, but, on the other hand, they may have also limited identifying all reasons that exist, especially in the case of smaller studies that may provide more depth but in a much smaller or targeted sample.

Motivational interviewing and interventions directly targeting motives for using alcohol or expectations related to alcohol use are effective in reducing alcohol consumption (Scott-Sheldon et al., 2012; Vasilaki et al., 2006). Motivational interviewing seeks to help individuals explore their reasons to continue or not continue their alcohol use, with the goal of helping them tip the scales in the direction of reducing and/or quitting using alcohol, thus fostering change talk and action. Expectancy challenge interventions directly challenge alcohol expectancies, for example, challenging one to see that alcohol does not make them more social. Thus, there is good reason to think that enhancing reasons to quit or reduce alcohol may enhance intervention effects. Although this idea is still in its infancy, using identified reasons to not drink or to reduce drinking, and asking individuals to provide further evidence or support for such reasons, may complement existing motivational interventions. This would be an important avenue of future exploration.

The review findings have limitations. First studies predominantly featured White samples, which may not reflect the experiences of minoritized and under-resourced groups who have lower treatment access due to medical mistrust (Williamson and Bigman, 2018), stigma (Chartier et al., 2016), and lack of representation in treatment settings, including groups such as Alcoholics Anonymous (May et al., 2019). Second, reasons for quitting and/or reducing alcohol use were measured at various times, making it unclear if reasons influenced the decision to seek treatment, changed during treatment (Blevins et al., 2020; Blevins and Stephens, 2016), or varied across treatment stages. This variability complicates understanding of the causal direction between reasons and treatment. Finally, the range of endorsement for each theme varied widely between studies, complicating the assessment of theme prevalence. Differences in reporting methods, such as open-ended questions versus scales, likely contributed to this variability.

5. Conclusion

This review is the first to characterize reasons for quitting and/or reducing alcohol among those who have received AUD treatment. Common reasons included physical health issues, misalignment with personal goals, family influence, and social factors—also noted in non-treatment populations. Unique themes like hitting rock bottom and avoiding disapproval were identified, potentially linked to treatment initiation or development. The measurement approach influenced the reasons reported, highlighting the need for standardized methods. Assessing and tailoring treatment based on these reasons may enhance outcomes. Standardizing how we measure reasons for quitting or reducing alcohol is crucial for comparing studies and improving treatment. Future research should track reasons throughout treatment to refine interventions and understand which types of reasons (e.g., internal vs. external) are most effective at different treatment stages and for long-term recovery.

Author contribution statement

CP and MAC conceptualized the review and designed review methods. CP conducted primary review search and coding. LFF provided supplemental coding. CP drafted the initial manuscript, and LFF and MAC provided editing to the manuscript. All authors approved the final manuscript for submission and agree to be accountable for accuracy and integrity of the work. Each author certifies that their contribution to this work meets the standards of the International Committee of Medical Journal Editors.

Funding

This work was supported in part by a 5T32AA007462 (PI: Czachowski) supporting CP, (under the mentorship of MAC) and a National Science Foundation Graduate Research Fellowship to LFF (under the mentorship of MAC).

CRediT authorship contribution statement

Melissa Cyders: Writing – review & editing, Writing – original draft, Funding acquisition, Conceptualization. **Lindsey Fisher-Fox:** Writing – review & editing, Writing – original draft, Formal analysis. **Christiana Prestigiacomo:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The authors have no conflicts to report.

References

- Alcoholics Anonymous. (2001). *Alcoholics Anonymous, 4th edition*. A.A. World Services.
- Allison, L.D., Okun, M.A., Dutridge, K.S., 2002. Assessing volunteer motives: a comparison of an open-ended probe and likert rating scales. *J. Community Appl. Soc. Psychol.* 12 (4), 243–255. <https://doi.org/10.1002/CASP.677>.
- Amodeo, M., Kurtz, N.R., 1998. Coping methods and reasons for not drinking. *Subst. Use Misuse* 33 (8), 1591–1610. <https://doi.org/10.3109/10826089809058946>.
- Ashton, M., Rigby, A., Galletly, C., 2013. What do 1000 smokers with mental illness say about their tobacco use? *Aust. N. Z. J. Psychiatry* 47 (7), 631–636. <https://doi.org/10.1177/0004867413482008>.
- Baburajan, V., De Abreu E Silva, J., Pereira, F.C., 2021. Open-ended versus closed-ended responses: a comparison study using topic modeling and factor analysis. *IEEE Trans. Intell. Transp. Syst.* 22 (4), 2123–2132. <https://doi.org/10.1109/TITS.2020.3040904>.
- Beard, E., Brown, J., Kaner, E., West, R., Michie, S., 2017. Predictors of and reasons for attempts to reduce alcohol intake: a population survey of adults in England. *PLoS ONE* 12 (3), e0173458. <https://doi.org/10.1371/JOURNAL.PONE.0173458>.
- Bernards, S., Graham, K., Kuendig, H., Hettige, S., Obot, I., 2009. I have no interest in drinking: a cross-national comparison of reasons why men and women abstain from alcohol use. *Addiction* 104 (10), 1658–1668. <https://doi.org/10.1111/J.1360-0443.2009.02667.X>.

- Bischof, G., Iwen, J., Freyer-Adam, J., Rumpf, H.J., 2016. Efficacy of the Community Reinforcement and Family Training for concerned significant others of treatment-refusing individuals with alcohol dependence: a randomized controlled trial. *Drug Alcohol Depend.* 163, 179–185. <https://doi.org/10.1016/J.DRUGALCDEP.2016.04.015>.
- Blevins, C.E., Stephens, R.S., 2016. The impact of motives-related feedback on drinking to cope among college students. *Addict. Behav.* 58, 68–73. <https://doi.org/10.1016/J.ADDBEH.2016.02.024>.
- Blevins, C.E., Marsh, E.L., Stein, M.D., Schatten, H.T., Abrantes, A.M., 2020. Project CHOICE: Choosing healthy options in coping with emotions, an EMA/EMI plus in-person intervention for alcohol use. *N. Pub: SAGE* 42 (4), 569–576. <https://doi.org/10.1080/08897077.2020.1806182>.
- Brady, M., 1993. Giving away the grog: an ethnography of Aboriginal drinkers who quit without help. *Drug Alcohol Rev.* 12 (4), 401–411. <https://doi.org/10.1080/09595239300185501>.
- Cage, E.A., Kluck, A.S., 2010. The path to treatment: does it matter? relapse and the reason for seeking treatment. *Curr. Res. Psychol.* 6 (1), 29–34 (www.psychdata.com).
- Castillo-Carniglia, A., Keyes, K.M., Hasin, D.S., Cerdá, M., 2019. Psychiatric comorbidities in alcohol use disorder. *Lancet Psychiatry* 6 (12), 1068. [https://doi.org/10.1016/S2215-0366\(19\)30222-6](https://doi.org/10.1016/S2215-0366(19)30222-6).
- Chapman, C., Slade, T., Hunt, C., Teesson, M., 2015. Delay to first treatment contact for alcohol use disorder. *Drug Alcohol Depend.* 147, 116–121. <https://doi.org/10.1016/J.DRUGALCDEP.2014.11.029>.
- Chartier, K.G., Miller, K., Harris, T.R., Caetano, R., 2016. A 10-year study of factors associated with alcohol treatment use and non-use in a U.S. population sample. *Drug Alcohol Depend.* 160, 205–211. <https://doi.org/10.1016/J.DRUGALCDEP.2016.01.005>.
- Chiappetta, V., García-Rodríguez, O., Jin, C.J., Secades-Villa, R., Blanco, C., 2014. Predictors of quit attempts and successful quit attempts among individuals with alcohol use disorders in a nationally representative sample. *Drug Alcohol Depend.* 141, 138–144. <https://doi.org/10.1016/J.DRUGALCDEP.2014.05.019>.
- Connors, G.J., Maisto, S.A., Zywiak, W.H., 1998. Male and female alcoholics' attributions regarding the onset and termination of relapses and the maintenance of abstinence. *J. Subst. Abus.* 10 (1), 27–42. [https://doi.org/10.1016/S0899-3289\(99\)80138-2](https://doi.org/10.1016/S0899-3289(99)80138-2).
- Converse, J.M., 1984. Strong arguments and weak evidence: the open/closed questioning controversy of the 1940s. *Public Opin. Q.* 48 (1B), 267–282. <https://doi.org/10.1093/POQ/48.1B.267>.
- Covidence. (2023). *Covidence Systematic Review Software*. Veritas Health Innovation.
- Cunningham, J.A., Sobell, L.C., Sobell, M.B., Kapur, G., 1995. Resolution from alcohol problems with and without treatment: Reasons for change. *J. Subst. Abus.* 7 (3), 365–372. [https://doi.org/10.1016/0899-3289\(95\)90029-2](https://doi.org/10.1016/0899-3289(95)90029-2).
- de Weert-van Oene, Gerdien H., Gongora, Vanesa, von Sternberg, Kirk, de Jong, Cor A.J., 2015. Motivation for Treatment and Motivation for Change in Substance-Dependent Patients with Co-Occurring Psychiatric Disorders. *Journal of Psychoactive Drugs* 47, 393–400. <https://doi.org/10.1080/02791072.2015.1079669>.
- Díaz, L.A., Roblero, J.P., Bataller, R., Arab, J.P., 2020. Alcohol-related liver disease in Latin America: local solutions for a global problem. *Clin. Liver Dis.* 16 (5), 187–190. <https://doi.org/10.1002/CLD.1025>.
- Diclemte, C.C., Bellino, L.E., Neavins, T.M., 1999. Motivation for change and alcoholism treatment. *Alcohol Res. Health* 23 (2), 86. <https://pubmed.ncbi.nlm.nih.gov/10066428/>.
- Ekström, V., Johansson, M., 2020. Choosing internet-based treatment for problematic alcohol use—why, when and how? users' experiences of treatment online. *Addict. Sci. Clin. Pract.* 15. <https://doi.org/10.1186/s13722-020-00196-5>.
- Epler, A.J., Sher, K.J., Piasecki, T.M., 2009. Reasons for abstaining or limiting drinking: a developmental perspective. *Psychol. Addict. Behav.* 23 (3), 428–442. <https://doi.org/10.1037/A0015879>.
- Fernandes, C., 2020. Psychosocial factors associated with reduced alcohol consumption before treatment. *Diss. Abstr. Int. Sect. B: Sci. Eng.* 81 (s 5-B) <https://www.ulib.iupui.edu/cgi-bin/proxy.pl?url=https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2020-04054-254&site=ehost-live>.
- Fiabane, E., Ottonello, M., Zavan, V., Pistorini, C., Giorgi, I., 2017. Motivation to change and posttreatment temptation to drink: a multicenter study among alcohol-dependent patients. *Neuropsychiatric Disease and Treatment* 13, 2497–2504. <https://doi.org/10.2147/ndt.s137766>.
- Frost, M.C., Matson, T.E., Richards, J.E., Lee, A.K., Achtmeyer, C.E., Bradley, K.A., Williams, E.C., 2022. Barriers and facilitators to changing drinking and receiving alcohol-related care: interviews with veterans health administration primary care patients who indicated interest but did not enroll in an alcohol care management intervention trial. *Subst. Abus.* 43 (1), 1197–1206. <https://doi.org/10.1080/08897077.2022.2074602>.
- GBD 2016 Alcohol Collaborators, Sheikh, A., 2018. Alcohol use and burden for 195 countries and territories, 1990–2016: a systematic analysis for the global burden of disease study 2016. *Lancet* 392 (10152), 1015.
- Greenfield, T.K., Karriker-Jaffe, K.J., Kerr, W.C., Ye, Y., Kaplan, L.M., 2016. Those harmed by others' drinking in the US population are more depressed and distressed. *Drug Alcohol Rev.* 35 (1), 22–29. <https://doi.org/10.1111/DAR.12324>.
- Groshkova, T., 2010. Motiv. Subst. Misuse Treat. 18 (5), 494–510. <https://doi.org/10.3109/16066350903362875>. <http://dx.doi.org/10.3109/16066350903362875>.
- Gudmundsdóttir, A., 1997. The self-image and social situation of alcoholic women: implications for treatment. *Eur. Addict. Res.* 3 (1), 3–10. <https://doi.org/10.1159/000259141>.
- Hall, J.M., 1993. What really worked? a case analysis and discussion of confrontational intervention for substance abuse in marginalized women. *Arch. Psychiatr. Nurs.* 7 (6), 322–327. [https://doi.org/10.1016/0883-9417\(93\)90049-3](https://doi.org/10.1016/0883-9417(93)90049-3).
- Henges, L.N., 2008. The lived experiences of older adults who abuse alcohol: Why and how they became sober. *Diss. Abstr. Int. Sect. A: Humanit. Soc. Sci.* 68 (s 11-A) <https://www.ulib.iupui.edu/cgi-bin/proxy.pl?url=https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2008-99090-233&site=ehost-live>.
- Huang, J.H., Dejong, W., Schneider, S.K., Towvim, L.G., 2010. Endorsed reasons for not drinking alcohol: a comparison of college student drinkers and abstainers. *J. Behav. Med.* 2010 34:1 34 (1), 64–73. <https://doi.org/10.1007/S10865-010-9272-X>.
- Huth, C., Siegert, N., Meisinger, C., König, J., Kääh, S., Wichmann, H.E., Döring, A., Löwel, H., Illig, T., Holle, R., John, J., 2014. Individ. Very Low. Alcohol Consum.: A Heterog. Group 68 (1), 6–10. <https://doi.org/10.15288/JSAD.2007.68.6>. <https://doi.org/10.15288/JSAD.2007.68.6>.
- Jasilionis, D., Leon, D.A., Pechholdová, M., 2020. Impact of alcohol on mortality in Eastern Europe: trends and policy responses. *Drug Alcohol Rev.* 39 (7), 785–789. <https://doi.org/10.1111/DAR.13167>.
- Javed, S., Chughtai, K., Kiani, S., 2020. Substance Abuse: From Abstinence to Relapse. *Life and Science* 1, 4. <https://doi.org/10.37185/Ins.1.1.94>.
- Johnson, T.J., Cohen, E.A., 2004. Coll. Stud. ' Reasons Not. Drink. Not. Play. Drink. Games 39 (7), 1137–1160. <https://doi.org/10.1081/JA-120038033>. <http://dx.doi.org/10.1081/JA-120038033>.
- Kathryn Mchugh, R., Weiss, R.D., 2019. Alcohol use disorder and depressive disorders. *Alcohol Res.: Curr. Rev.* 40 (1), e1–e8. <https://doi.org/10.35946/ARCR.V40.1.01>.
- Kirouac, M., Witkiewitz, K., 2017. Identifying "hitting bottom" among individuals with alcohol problems: development and evaluation of the noteworthy aspects of drinking important to recovery (NADIR). *Subst. Use Misuse* 52 (12), 1602. <https://doi.org/10.1080/10826084.2017.1293104>.
- Kirouac, M., Frohe, T., Witkiewitz, K., 2015. Toward the operationalization and examination of "hitting bottom" for problematic alcohol use: a literature review. *Alcohol. Treat. Q.* 33 (3), 312–327. <https://doi.org/10.1080/07347324.2015.1050934>.
- Klingemann, J.I., 2011. Lay and professional concepts of alcohol dependence in the process of recovery from addiction among treated and non-treated individuals in Poland: a qualitative study. *Addict. Res. Theory* 19 (3), 266–275. <https://doi.org/10.3109/16066359.2010.520771>.
- Kranitz, L. (2007). Reasons for not drinking among veterans seeking treatment for alcohol dependence.
- Ludwig, A.M., 1972. On and off the wagon: Reasons for drinking and abstaining by alcoholics. *Q. J. Stud. Alcohol* 33 (1-A), 91–96 <https://www.ulib.iupui.edu/cgi-bin/proxy.pl?url=https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=1974-01342-001&site=ehost-live>.
- Matzger, H., Kaskutas, L.A., Weisner, C., 2005. Reasons for drinking less and their relationship to sustained remission from problem drinking. *Addiction* 100 (11), 1637–1646. <https://doi.org/10.1111/J.1360-0443.2005.01203.X>.
- May, C., Nielsen, A.S., R., Bilberg, i., 2019. Barriers to treatment for alcohol dependence. *J. Drug Alcohol Res.* 8 (2), 1–17 <https://www.ashdin.com/abstract/barriers-to-treatment-for-alcohol-dependence-44594.html>.
- McBride, C.M., Curry, S.J., Stephens, R.S., Wells, E.A., Roffman, R.A., Hawkins, J.D., 1994. Intrinsic and extrinsic motivation for change in cigarette smokers, marijuana smokers, and cocaine users. *Psychol. Addict. Behav.* 8 (4), 243–250. <https://doi.org/10.1037/0893-164X.8.4.243>.
- McCready, B.S., Flanagan, J.C., 2021. The Role of the Family in Alcohol Use Disorder Recovery for Adults. *Alcohol Res.: Curr. Rev.* 41 (1). <https://doi.org/10.35946/ARCR.V41.1.06>.
- Mendeley. (2023). *Mendeley Reference Manager* (Version 2.125.1).
- Miller, A.L., Dumford, A.D., 2014. Open-Ended Survey Questions: Item Nonresponse Nightmare or Qualitative Data Dream? *Survey Practice* 7, 1–11. <https://doi.org/10.29115/sp-2014-0024>.
- Moon, T.J., Mathias, C.W., Mullen, J., Karns-Wright, T.E., Hill-Kapturczak, N., Roache, J.D., Dougherty, D.M., 2019. The role of social support in motivating reductions in alcohol use: a test of three models of social support in alcohol-impaired drivers. *Alcohol: Clin. Exp. Res.* 43 (1), 123–134. <https://doi.org/10.1111/ACER.13911>.
- Ohrnberger, J., Fichera, E., Sutton, M., 2017. The relationship between physical and mental health: a mediation analysis. *Soc. Sci. Med.* 195, 42–49. <https://doi.org/10.1016/J.SOCSCIMED.2017.11.008>.
- Orford, J., Keddie, A., 1985. Gender differences in the functions and effects of moderate and excessive drinking. *Br. J. Clin. Psychol.* 24 (Pt 4), 265–279. <https://doi.org/10.1111/j.2044-8260.1985.tb00659.x>.
- Overton, S.L., Medina, S.L., 2008. The stigma of mental illness. *J. Couns. Dev.* 86 (2), 143–151. <https://doi.org/10.1002/J.1556-6678.2008.TB00491.X>.
- Petersen, H., Landheim, A., Skeie, I., Biong, S., Brodahl, M., Oute, J., Davidson, L., 2019. How social relationships influence substance use disorder recovery: a collaborative narrative study. *Subst. Abus.: Res. Treat.* 13, 1178221819833379. <https://doi.org/10.1177/1178221819833379>.
- Probst, C., Manthey, J., Martinez, A., Rehm, J., 2015. Alcohol use disorder severity and reported reasons not to seek treatment: a cross-sectional study in European primary care practices. *Subst. Abus.: Treat., Prev., Policy* 10 (1), 1–10. <https://doi.org/10.1186/S13011-015-0028-Z/FIGURES/3>.
- Raftery, D., Kelly, P.J., Deane, F.P., Baker, A.L., Ingram, I., Goh, M.C.W., Lubman, D.I., Carter, G., Turner, A., Dean, O.M., Sinclair, B.L., McKetin, R., 2020. Insight in substance use disorder: A systematic review of the literature. *Addictive Behaviors* 111, 106549. <https://doi.org/10.1016/j.addbeh.2020.106549>.
- Rosansky, J.A., Rosenberg, H., 2020. A systematic review of reasons for abstinence from alcohol reported by lifelong abstainers, current abstainers and former problem-drinkers. *Drug Alcohol Rev.* 39 (7), 960–974. <https://doi.org/10.1111/DAR.13119>.
- Rumpf, H.J., Bischof, G., Hapke, U., Meyer, C., John, U., 2002. The role of family and partnership in recovery from alcohol dependence: comparison of individuals

- remitting with and without formal help. *Eur. Addict. Res.* 8 (3), 122–127. <https://doi.org/10.1159/000059381>.
- Ryan, R.M., Plant, R.W., O'malley, S., 1995. Initial motivations for alcohol treatment: relations with patient characteristics, treatment involvement, and dropout. *Addict. Behav.* 20 (3), 279–316.
- Schmidt, T., Roser, P., Juckel, G., Brüne, M., Suchan, B., Thoma, P., 2016. Social cognition and social problem solving abilities in individuals with alcohol use disorder. *J. Clin. Exp. Neuropsychol.* 38 (9), 974–990. <https://doi.org/10.1080/13803395.2016.1180346>.
- Scott-Sheldon, L.A.J., Terry, D.L., Carey, K.B., Garey, L., Carey, M.P., 2012. Efficacy of expectancy challenge interventions to reduce college student drinking: a meta-analytic review. *Psychol. Addict. Behav.* 26 (3), 393–405. <https://doi.org/10.1037/A0027565>.
- Stasiewicz, P.R., Bradizza, C.M., Maisto, S.A., 1997. Alcohol problem resolution in the severely mentally ill: A preliminary investigation. *J. Subst. Abus.* 9, 209–222. [https://doi.org/10.1016/S0899-3289\(97\)90017-1](https://doi.org/10.1016/S0899-3289(97)90017-1).
- Tucker, J.A., Vuchinich, R.E., Gadsjo, J.A., 1994. Environmental events surrounding natural recovery from alcohol-related problems. *J. Addict. Nurs.* 6 (4), 117–128. <https://doi.org/10.3109/10884609409021737>.
- Ungar, J., Hodgins, D.C., Ungar, M., 1998. Purposeful goals and alcoholic recovery: a correlational study. *Int. Forum Logother.* 21 (2), 72–77 <https://www.ulib.iupui.edu/cgi-bin/proxy.pl?url=https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2014-04942-002&site=ehost-live>.
- Vasilaki, E.I., Hosier, S.G., Cox, W.M., 2006. The efficacy of motivational interviewing as a brief intervention for excessive drinking: a meta-analytic review. *Alcohol. Alcohol.* 41 (3), 328–335. <https://doi.org/10.1093/ALCALC/AGL016>.
- Williamson, L.D., Bigman, C.A., 2018. A systematic review of medical mistrust measures. *Patient Educ. Couns.* 101 (10), 1786–1794. <https://doi.org/10.1016/J.PEC.2018.05.007>.
- Witkiewitz, K., Kranzler, H.R., Hallgren, K.A., O'Malley, S.S., Falk, D.E., Litten, R.Z., Hasin, D.S., Mann, K.F., Anton, R.F., 2018. Drinking risk level reductions associated with improvements in physical health and quality of life among individuals with alcohol use disorder. *Alcohol.: Clin. Exp. Res.* 42 (12), 2453–2465. <https://doi.org/10.1111/ACER.13897>.
- Witkiewitz, K., Litten, R.Z., Leggio, L., 2019. Advances in the science and treatment of alcohol use disorder. *Sci. Adv.* 5 (9). <https://doi.org/10.1126/SCIADV.AAX4043/ASSET/D9BBBFA4-87BD-48D6-B3D0-569E1F4D7AF4/ASSETS/GRAPHIC/AAX4043-F1.JPEG>.