REVIEW

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Youth involvement in alcohol and drug prevention: A systematic review

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Abstract

To review and analyse how youth involvement was conceptualised and applied in published alcohol and drug preventive interventions. A systematic review of the scientific literature on alcohol and drug prevention where young people (18–29 years old) participated at any stage of the intervention was conducted. We searched relevant bibliographic databases and online repositories for peer-reviewed studies published between 2001 and 2021. Twenty-seven articles reporting on studies in different countries and settings and using a variety of intervention strategies were eligible for inclusion. The analysis of the stages of youth involvement and the dimension of power sharing in decision-making showed that only a minority of studies could be considered genuinely youth-led whereas many involved young people merely as implementers of highly controlled research-led interventions. However, the few studies that promoted sustained youth involvement struggled with translating results into rigorously evaluated interventions, thus demonstrating a tension between adoption of effective interventions and support to genuinely participatory processes. Knowledge gaps and implications for practice and research are discussed from a participatory research perspective.

Please refer to the Supplementary Material section to find this article's Community and Social Impact Statement.

1 | INTRODUCTION

According to a largely dominant problem-focused perspective in public health, individuals—and young people in particular—tend to be either regarded as essentially passive and in need of protection or stigmatised for their (un) healthy behaviours (Hunt & Evans, 2008; Murray, 2014). Alcohol and drug use are a good example of this. Studies have shown that young adults go through a critical developmental phase where alcohol and other drug use tend to peak because many experiment with drugs and alcohol for the first time at this age (Arnett, 2005; Patrick, Terry-McElrath, Kloska, & Schulenberg, 2016). This is indeed a key public health issue as such behaviour exposes young people to a number of psychological, social and health risks (EMCDDA, 2011; Sørensen et al., 2021; Whiteford et al., 2013).

The greatest limitation of the problem-focused approach is that it tends to disregard young people as legitimate stakeholders who can meaningfully contribute to addressing health issues. As a consequence, young people are typically not partners in prevention initiatives but '*are rather considered passive recipients of interventions*' (Bulmer et al., 2016, p. 234). In reality, however, promoting health requires community action in setting priorities, making decisions, planning and implementing effective strategies to achieve better health outcomes (World Health Organisation, 1986). At the core of this process is the empowerment of individuals and communities resulting from '*greater participation in decision making which affects their lives and access to their fundamental rights*' (European Commission, 2010, p. 1).

Although alcohol and drug prevention is an important area of research and practice that could benefit from greater youth participation, a thorough examination of young adults' involvement in this field is still lacking. The present study addresses this gap by systematically reviewing the scientific literature on alcohol and drug preventive interventions where young people have been involved. Results will provide researchers and stakeholders in this field with methodological guidance and practical examples on how to conduct participatory health interventions with young adults.

1.1 | Participatory approaches in prevention

Over the past years a 'participatory' paradigm has received increasing recognition as an effective approach for analysing and addressing complex health and social problems (Palmer et al., 2019). This brought forward an increasing interest in methods for stakeholder co-production, citizen engagement and public participation to involve people with relevant lived experience in designing healthcare improvements and public health interventions (Hawkins et al., 2017; INVOLVE, 2012). Participation, however, has become a buzzword applied to a broad range of engagement processes, from mere consultation to involvement and leadership over time to address social inequalities, research health issues, and plan and evaluate health programmes (Ballonoff Suleiman, Soleimanpour, & London, 2006; Lai, 2008; Ozer, Afifi, Gibbs, & Mathur, 2018; Williams et al., 2020). Overall, calls for youth participation in public health reflect 'rights-based' or 'empirical' rationales. The former considers participation as necessary

to embody the democratic principles of equity and social inclusion, the latter stresses the idea that research and interventions resulting from participatory processes will be more effective, better contextualised and culturally appropriate (Ozer et al., 2018).

In methodological terms, participation refers to a number of approaches (Cook, Boote, Buckley, Vougioukalou, & Wright, 2017), such as Participatory Action Research (PAR), Community-Based Participatory Research (CBPR), and Participatory Health Research (PHR) and Youth-led Participatory Action Research (YPAR). These approaches have some key principles in common, including close and more equal collaboration between researchers and stakeholders as well as the people affected by the studied issues who act as co-researchers. Community members and young people are expected to become empowered, understand the determinants of good and poor health, and create change around the health issues they care about (Ballard & Syme, 2016; Ozer & Douglas, 2013). Recent reviews found evidence that participation of adolescents in YPAR is indeed associated with increases in sense of agency and leadership, social and interpersonal skills, critical thinking, and sense of community (Anyon, Bender, Kennedy, & Dechants, 2018; Shamrova & Cummings, 2017).

The overwhelming majority of published youth-led alcohol and substance preventive interventions involved school-aged adolescents (Ballonoff Suleiman et al., 2006; Gibbs, Kornbluh, Marinkovic, Bell, & Ozer, 2020; Gobat et al., 2021; Salerno Valdez et al., 2020; Sprague Martinez, Richards-Schuster, Teixeira, & Augsberger, 2018), while much less attention was devoted to young adults (Jacquez, Vaughn, & Wagner, 2013). This is unfortunate for at least two reasons. First, young adults differ from adolescents in many ways. For example, they generally demonstrate a relatively greater cognitive maturity, increased independence, autonomy, mobility and more developed identity achieved as they approach full adulthood (Arnett, 2014; Ballonoff Suleiman, Ballard, Hoyt, & Ozer, 2019). In practical terms, this means that young adults can conduct their work in collaborative processes more independently and have greater potential for generating significant impact. Second, family and school give way to other settings that are important to young people: academic, work, sport and leisure settings can contribute to shaping their behaviours. Therefore, higher education institutions, nightlife settings and youth organisations (i.e., youth associations, clubs and councils as well as student unions), can offer new opportunities for prevention (Aresi & Pedersen, 2016; Košir & Talić, 2015; Layland, Calhoun, Russell, & Maggs, 2019). For these reasons, prevention strategies that proved feasible and effective for adolescents may not be directly applicable to young adults.

The large amount of research on alcohol and drug preventive interventions targeting young adults across settings is predominantly characterised by a research-led approach (Cronce & Larimer, 2011; Davis, Smith, & Briley, 2017; O'Connor et al., 2020; Tanner-Smith & Lipsey, 2015). Thus, there is a need for a comprehensive examination of participatory interventions to better inform the work of health researchers and practitioners, policymakers, and youth organisations active in this field. This will ultimately foster young people's greater involvement in prevention.

2 | AIM

The aim of this review is to identify and analyse, from a participatory framework perspective, how youth participation is conceptualised and applied in published alcohol and drug preventive interventions.

3 | METHODS

We conducted a systematic review of the scientific literature on alcohol and drug prevention published between 2001 and 2021. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) methodology (Moher, Liberati, Tetzlaff, & Altman, 2009) was adopted. Prevention is generally understood as '*any activity that is aimed at preventing, delaying, or reducing alcohol/drug use, and/or its negative consequences*' (EMCDDA, 2011, p. 251).

The term 'intervention' refers to any programme, policy and practice aimed at improving health and well-being or at reducing harm (Gottfredson et al., 2015). Interventions that did not fall into the Institute of Medicine classification for prevention into 'universal', 'selective' and 'indicated' were excluded (e.g., treatment programmes; Institute of Medicine, 1994). We included studies where people aged 18–29 were involved. We used the term 'young adults' because it is widely used in Europe and by European Union institutions (e.g., Eurostat), albeit with a slightly different age-range (16–29 years). Eighteen was chosen because it is the age people become formally adult in most European countries. We adopted a flexible definition of youth participation ranging from having full control of the initiative (i.e., youth-led) to a minimum of having partnered with institutions and non-youth organisations at any stage of the intervention. The review protocol is available in the University of York Centre for Reviews and Dissemination PROS-PERO database (registration number CRD42021254214).

3.1 | Search strategy

To identify references, the research was conducted on five main search engines: PROQUEST, Medline, Web of Science, EBSCO and Scopus; references were also extracted from those of the included articles. Search criteria included a time span (2001–2021). Keywords were organised into four clusters: the first cluster was related to the study population, or target, such as 'young adult', 'emerging adult', 'youth'; the second cluster was related to substances use, namely 'alcohol', 'drugs', 'abuse'. The third cluster was associated to the participatory approach and included words as 'participative', 'youth-led', 'peer-delivered'; and the fourth cluster was linked to the intervention semantic, including words like 'randomized controlled trial', 'initiative', 'prevention', 'evaluation'. Terms included in a cluster were separated by the operator OR, whereas clusters were divided by AND. Titles and abstracts were searched.

3.2 | Study selection

Search results were exported to an EndNote 20 database that automatically removed duplicates. The sifting process consisted of three stages (title, abstract and full-text reading) and involved two independent reviewers (first and second author). Double sifting occurred at each stage, with 15% of the papers being double sifted at first and second stage, and 30% at third stage. The second author acted as primary reviewer and screened all papers, whereas the first author acted as secondary reviewer and screened a randomly selected subgroup of papers. Disagreements on included/excluded documents were resolved through discussion within the research team, with arbitration by a third reviewer if necessary. Inter-rater reliability was assessed using percent agreement and Kohen's κ. Percent agreement (>80%) and Kohen's κ (>0.800) cut-off values were used to demonstrate substantial agreement between reviewers (McHugh, 2012).

3.3 | Data extraction

A data extraction form was piloted and designed in Excel. The form recorded study details as follows: authors, year of publication, country, study aims, study design, participant characteristics, intended outcomes, conceptual framework, setting and strategy implementation, monitoring and evaluation design and tools, stage(s) of youth involvement, and additional study information/researcher comments. Based on established guidelines, we divided interventions into four stages: formative research, intervention development, implementation and evaluation (Skivington et al., 2021). For each study, we first determined at which stage(s) youth participation took place. Second, the nature of participation at each stage was rated using an adapted version of the 'power sharing over major decisions' dimension from the YPAR Process Template (YPT; Ozer & Douglas, 2015). This dimension is aimed at
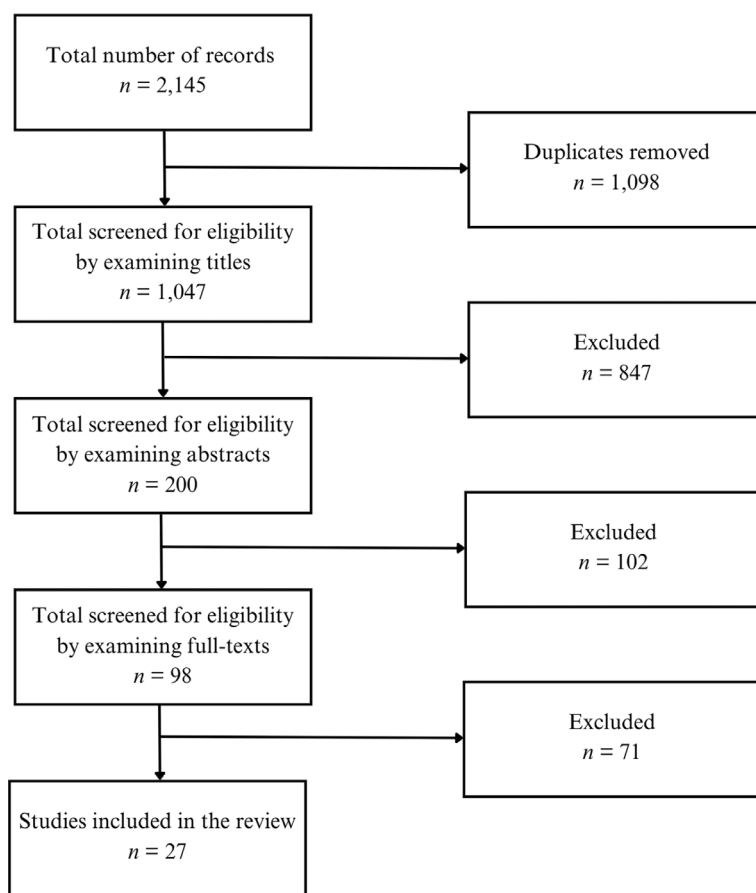
FIGURE 1 Flowchart of study selection process.

assessing how power is shared as decisions are made in YPAR projects. Scores were assigned on a three-point scale: Low (i.e., young people were given limited or no opportunity to make major decisions regarding the intervention), Medium (i.e., young people had opportunities to contribute to major decisions) and High (i.e., young people were clearly provided opportunities to share power in making the major decisions on the study and intervention). There was also a 'not applicable' option when information provided in the article was insufficient to make an informed decision or when participation did not occur at that stage. Fourteen studies (51.8%) were randomly selected to be independently rated by the first and second author. Inter-rater reliability was assessed using percent agreement and Kohen's κ (McHugh, 2012). Disagreements on ratings were resolved through discussion within the research team, with arbitration by a third reviewer if necessary. Lastly, the second author rated all remaining studies.

4 | RESULTS

A total of 2,145 references were retrieved; after duplicate removal ($N = 1,098$), the dataset included 1,047 references. At stage 1, references were screened by reading titles and 847 were excluded. Reviewers disagreed on 16.2% of cases ($κ = 0.637$). At stage 2, references were screened by reading abstracts and 102 were excluded. Reviewers disagreed on 9.6% of cases ($κ = 0.889$). At stage 3, 71 additional references were excluded by reading full texts.

TABLE 1 Characteristics of included studies ($N = 27$).

Study	Country	Setting(s)/ population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Abadi et al. (2020)	United States	University, Sororities fraternities. Study 1: $n = 437$; mean age 19.5 years (18-23)/study 2: $n = 361$; mean age 19.65 years (18-23)	Peer education	II (1)	Pre-post evaluation	Peer-led training programme 'voice of Reason'. Peers trained to have conversations with their friends on how to reduce the risks associated with drinking	Peers: Increases in alcohol knowledge, medical amnesty law awareness, protective behavioural strategies. Decreases in drinking and driving and riding with drinking drivers. Fraternity/ sorority members: Increase in medical amnesty law awareness and decrease in alcohol use
Adams, Evans, Shreffler, and Beam (2006)	United States	University. Undergraduate students. Focus groups: $n = 53$ (no age)/survey: $n = 400$ (no age)/ curriculum: $n = 34$ (freshman year students)	Peer education	FR (1), II (1)	Pre-post evaluation	Students participated in a campus need assessment to develop a peer-led alcohol education programme: Internet assignment and interactive education session facilitated by a trained undergraduate peer health educator	Decrease in positive attitudes towards alcohol use
Bonar et al. (2020)	United States	Online. $n = 955$ (age 16–24)	Interventions using new technologies	II (1)	RCT (protocol)	Facebook groups facilitated by Bachelor's/Master's-level therapist online coaches (peers) trained in motivational interviewing and cognitive behavioural therapy	Results on the effectiveness of the study not available
Borsari et al. (2016)	United States	University. Mandated students. $n = 598$ (undergraduate students age 18 years and older)	Brief interventions	II (1)	RCT	Peer-delivered 15-min brief advice (BA) session administered by a trained peer followed by professionally delivered brief motivational intervention	Lower-risk drinking exhibited by 20% of the BA session participants

(Continues)

TABLE 1 (Continued)

Study	Country	Setting(s)/population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Bulmer et al. (2016)	United States	University. Undergraduate students n = 48 (age 18–24) + 10 students in the research team	Participatory intervention development	FR (3), ID (3), II (3), IE (2)	CBPR (qualitative)	The student team participated in a CBPR in a college: Study design, data collection through focus groups, analysis and dissemination of results	No evaluation, but the CBPR determined local needs, facilitated student advocacy and policy change directed at improving students' health and safety
Cimini et al. (2009)	United States	University. Mandated students. n = 695 (no age)	Brief interventions	II (1)	RCT	Three peer-facilitated brief alcohol interventions: (a) small group motivational interviewing; (b) interactive theatrical presentation; (c) interactive alcohol-education programme	No statistically significant overall pre-post effects or treatment effects. Decreases in perceived norms and increases in use of protective behavioural strategies were associated with reductions in alcohol use and alcohol-related problems at follow-up
Diamond et al. (2009)	United States	Community. Urban youth ages 14–20	Community-based interventions	FR (1), ID (1), II (2)	Process evaluation	The 'Xperience' programme adopts a multilevel, community-based strategy to promote drug-and-alcohol free social activities, venues and norms among urban youth	The programme successfully involved youth in the creation of drug prevention products, reached a large number of young people, and built partnerships with community organisations
Donohue, Allen, Maurer, Ozols, and DeStefano (2004)	United States	University. Mandated students. n = 113 (mean age = 20.56 years)	Peer education	II (1)	RCT	Two interventions: (1) the interactive alcohol abuse prevention alcohol 101 CD-ROM; (2) peer-delivered cognitive-behavioural therapy (CBT) programme	Programmes were equally effective in reducing the number of alcohol drinks consumed by students per drinking occasion. High risk students benefited more from receiving the CBT programme

TABLE 1 (Continued)

Study	Country	Setting(s)/population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Fromme and Corbin (2004)	United States	University. Voluntary and mandated students. n = 156 (mean age 19.26)	Brief interventions	II (1)	RCT	Lifestyle management class is a brief peer-led intervention that incorporates elements of motivational enhancement and cognitive–behavioural training approaches	Decreases in heavy alcohol use and the frequency of drink and drive. Peer-led intervention was as effective as the professional-led version
Funk et al. (2012)	Canada	Community. Street involved youth n = 6 (age 19–24)	Participatory intervention development	FR (1)	Qualitative process evaluation	The youth injection prevention (YIP) project used youth-led focus groups to identify factors that prevent street-involved youth from moving into injection drug use	YIP was successful in engaging street-involved youth in participatory research. Results of effectiveness study not available
Goodhart et al. (2006)	United States	University. general student population. n = 75 (no age)	Participatory intervention development	FR (3)	Qualitative study	A student-led photovoice study was conducted to identify and discuss university environmental factors related to health behaviours (e.g., drug availability, drinking behaviour and advertising) with policy makers	Policy recommendations were developed by the research team to address the identified problems
Kröninger-Jungaberle, Nagy, von Heyden, and DuBois (2014)	Germany	Community. Youth (14–25 years old)	Community-based interventions	ID (2) II (1), IE (1)	Process evaluation	REBOUND is a movie-based life skills and risk education programme to reduce alcohol and drug use. The original films were produced by a group of young actors. It is facilitated by teachers and other professionals and supported by peer mentors	Effectiveness pilot study on adolescents demonstrated the intervention decreases the incidence of drunkenness and increases knowledge about psychoactive substances

(Continues)

TABLE 1 (Continued)

Study	Country	Setting(s)/ population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Larimer et al. (2001)	United States	University, first-year fraternity members. $n = 120$ (mean age 18.8 years)	Brief interventions	II (1)	RCT	Peer-delivered 1-hr individually tailored feedback session on alcohol use and fraternity house-wide feedback. Peers received ad hoc training and supervision	Reductions in alcohol use indicators. No difference in drinking-related consequences was observed. Peer- and professional-delivered interventions were equally effective
Li et al. (2021)	Hong Kong	Messaging app. $n = 134$ (25 years of age or younger)	Digitally delivered interventions	II (1)	RCT (protocol)	Peer-delivered brief motivational interviewing to reduce/quit drug use. Intervention delivered via interactive instant-messaging (e.g., WhatsApp)	Results of effectiveness study not available
Marko and Watt (2011)	Canada	Community. $n = 10$ multicultural youth	Social marketing campaign	ID (3), II (3), IE (1)	Qualitative process evaluation	A youth advisory group participated in intervention design, delivery and evaluation of a community-wide social marketing campaign to increase youth awareness and knowledge on the adverse effects of marijuana while driving	Results of effectiveness study not available. The results of process? Evaluation demonstrated that the project successfully promoted youth participation and empowered youth leaders in community action
Mastroleo (2008)	United States	University. First-year heavy drinking college students. $n = 238$ (mean age 18.12 years)	Brief interventions	II (1)	RCT	Peer-delivered BASICS intervention. Peer counsellors received training and supervision or just training	Reduction in total drinks per week, weekend drinking, peak BAC and heavy drinking episodes (but not alcohol-related problems) compared to the no treatment control group. Supervised and non-supervised peer counsellors were equally effective

TABLE 1 (Continued)

Study	Country	Setting(s)/population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Mastroleo, Magill, Barnett, and Borsari (2014)	United States	University. Mandated students. $n = 82$ (mean age 19.4 years)	Brief interventions	II (1)	RCT	Peer-delivered BASICS intervention. Peer counsellors received training and supervision, either as a group or as a group *and* individually	Enhanced individual supervision improved peer counsellors' motivational interview skills, though the intervention was equally effective in reducing alcohol use and problems
Mastroleo, Oakley, Eaton, and Borsari (2014)	United States	University. Study 1: $n = 82$ (mean age 19.39 years) first-year heavy-drinking volunteer. Study 2: $n = 156$ (mean age 18.12 years) mandated students	Brief interventions	II (1)	RCT	Peer-delivered brief motivational intervention. Peer counsellors were trained and received individual and group supervision	Both mandated and heavy-drinking volunteer students significantly reduced drinking behaviour at 3-month follow-up
McCalman et al. (2013)	Australia	Aboriginal community. $n = 2,409$ residents. The median age of aboriginal Residents is 21 years and half are aged 25 years or less	Participatory intervention development	FR (2), ID (3), II (3), IE (2)	CBPR (qualitative and quantitative)	Young people involved as co-researchers in a CBPR to assess needs and evaluate Beat da Binge, a community alcohol harm-reduction intervention (marketing awareness campaign based on short-term alcohol-free events)	Youth involvement helped in identifying local determinants of binge drinking and promoted a shift towards advocacy for youth mentoring in education, employment and training. Results of effectiveness study not available
Poland, Tupker, and Breland (2002)	Canada	Community. street-involved youth. $n = 6$ (no age)	Participatory intervention development	FR (3), ID (3), II (3), IE (2)	Process evaluation (participatory action research)	The street-involved youth harm reduction project hired street-involved youth to conduct research among their peers and develop drug education materials and a video to be distributed to health agencies and stakeholders	Results on the participatory process show members of the youth team reported the experience had been empowering. Results of effectiveness study not available

(Continues)

TABLE 1 (Continued)

Study	Country	Setting(s)/population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Quinton, Boyle, Lankford-Purnell, Lankford, and Boekeloo (2021)	United States	University. Second to fourth year, mostly African American students. Preliminary learning and research: $n = 94$/evaluation survey: $N = 53$ (mean age 23.6 years)	Participatory intervention development	ID (2), II (3)	Feasibility study. Pre-post evaluation	Peer-to-peer prevention messaging design lab: Peers developed public service announcements on marijuana and other drug prevention. By incorporating teams of hip hop, peers made sure the message was sensitive to African American youth popular culture	Increased perceived risk of marijuana use at the 1-year follow-up
Robison (2007)	United States	University, fraternity members. $n = 16$ alumni (22–31 years) and $n = 18$ Undergraduate (18–24 years)	Policy	FR (3), ID (3)	Ethnography	Alcohol-free college fraternity policies	Fraternity successful in maintaining its alcohol-free housing policy over time by maintaining a health culture, social cohesion, purposeful recruitment of new members, provision of alternative non-alcoholic social activities, and internal enforcement
Thomas et al. (2009)	United States	Native American Community. Native youth.	Participatory intervention development	FR (1), ID (1)	CBPR (qualitative)	The community pulling together project assessed needs and resources of a community through participatory research. Focus groups informed the intervention. The project employed a youth tribal member as peer youth educator	The intervention that followed the CBPR has not yet been implemented

TABLE 1 (Continued)

Study	Country	Setting(s)/ population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Tollison et al. (2008)	United States	University. First year students. $n = 67$ (mean age 18.34)	Brief interventions	II (1)	Pre-post evaluation	Peer-delivered BASICS intervention. Peers received ad hoc training and supervision	Decrease in drinking from baseline
Turrisi et al. (2009)	United States	University. Enrolling college students. $n = 1,275$ (mean age 17.92 years)	Brief interventions	II (1)	RCT	Peer-delivered BASICS intervention. Peers received ad hoc training and supervision. The intervention included personalised feedback on alcohol use, educational material, and a list of addiction services in the area. A group also received a parenting handbook intervention	Lower peak BAC, fewer drinks per weekend than control group
Wijer et al. (2016)	Canada	Online. $n = 65$ university and college students/ (study ongoing)	Digitally delivered interventions	ID (2)	RCT (protocol)	The digital mental health and substance use 'thought spot platform' intervention developed a digital map of all addiction and mental health services of the area. phase 1: Participatory research to engage young people in optimising the intervention. Phase 2: RCT to test effectiveness in improving self-efficacy for mental health help-seeking and health literacy	Results on effectiveness study not available

(Continues)

TABLE 1 (Continued)

Study	Country	Setting(s)/population(s)	Strategy	Youth involvement stage(s)[a]	Design	Strategy/intervention	Outcomes
Wright, Dietze, Crockett, and Lim (2016)	Australia	Online. Young people, $n = 40$ (18–20 years)	Digitally delivered interventions	ID (2), IE (1)	Process evaluation (mixed methods)	The mobile intervention for drinking in young people uses SMSs to assess alcohol use patterns during drinking events and provide tailored feedback to reduce harm. Young people contributed to intervention development, pilot tested the intervention, and participated to the feasibility and acceptability evaluation	Results on effectiveness study not available

Abbreviations: FR, formative research; ID, intervention development; II, intervention implementation; IE, intervention evaluation; BASICS, Brief Alcohol Screening and Intervention for College Students; BAC, Blood Alcohol Concentration; CBPR, Community-Based Participatory Research; RCT, randomised controlled trial.

[a]Power sharing over major decisions score.

There was a 9% disagreement between reviewers at this stage ($\kappa = 0.615$). Both percent agreement and Kohen's κ value ($\kappa > 0.600$) demonstrate at least acceptable agreement (McHugh, 2012) between reviewers at all stages. Reasons for exclusion were non-eligible target group (i.e., adolescents and underage people) or being not relevant to the issue of interest (e.g., did not have an explicit preventive approach). The final dataset consisted of 27 references included in the review. Included studies were also rated for level of youth participation at each intervention stage. Both percent agreement (88%) and Kohen's κ value ($\kappa = 0.808$) demonstrate substantial agreement. Figure 1 presents the study selection process and Table 1 describes each study's characteristics and themes.

5 | CHARACTERISTICS OF STUDIES

5.1 | Country and setting

Studies were conducted in the following countries: the United States ($N = 19$), Canada ($N = 4$), Australia ($N = 2$), Germany ($N = 1$) and Hong Kong ($N = 1$). Seventeen articles reported interventions that took place in university setting (Adams et al., 2006; Tollison et al., 2008) including three at fraternities or sororities (e.g., Robison, 2007), one included a component in a family setting (Turrisi et al., 2009), and one was mixed with other settings (Wright et al., 2016). Seven interventions were implemented in community settings (e.g., Diamond et al., 2009; Marko & Watt, 2011), two of which in native communities in Australia or Northern America (McCalman et al., 2013; Thomas et al., 2009). Two studies were delivered online (instant messaging, social networks; e.g., Bonar et al., 2020), and two were conducted both online and offline (e.g., Wiljer et al., 2016).

5.2 | Target population

Most included studies targeted college age populations (18–24 years old). In seven studies, participants were described merely as college students or more generally as 'youth'. Participants were fraternity and sorority members ($N = 3$), mandated college students ($N = 6$) who had violated campus alcohol policy (Cimini et al., 2009), street-involved or urban youth ($N = 3$; e.g., Funk et al., 2012) and native or ethnic minority youth ($N = 3$; e.g., McCalman et al., 2013). Lastly, young participants were identified among other community members in three studies.

5.3 | Evaluation design

Effectiveness evaluation was pre-post-test in 16 studies, nine of which were randomised control trials (RCT; e.g., Donohue et al., 2004; Mastroleo, Oakley, et al., 2014), three were RCT protocols and evaluation results were not yet available (e.g., Wiljer et al., 2016). Four studies were pre-post evaluation studies lacking control groups (e.g., Abadi et al., 2020). Six studies reported on results of process evaluation (Marko & Watt, 2011). The remaining five studies lacked any evaluation but consisted in CBPR or qualitative studies to assess needs and develop interventions (e.g., Robison, 2007).

5.4 | Intervention strategy

Nine studies reported adopting a brief intervention strategy such as the Brief Alcohol Strategies and Intervention for College Students (BASICS; Mastroleo, Magill, et al., 2014). This intervention is based on short, structured conversations that seek to motivate and support at-risk individuals to consider changing their alcohol and drug use behaviour

in order to reduce their risk of harm (Levy et al., 2016). Seven articles reported participatory research studies as part of intervention development efforts: three were reported as Participatory Action Research (PAR) and three as Community-Based Participatory Research (CBPR; e.g., Bulmer et al., 2016). Three articles described peer education programmes where trained peers were recruited to model positive behaviour among members of their own community or group (e.g., Donohue et al., 2004). Two studies were multicomponent community-based interventions that included community mobilisation and combined individual and environmental change strategies (e.g., policies, law enforcement and media campaigns) across multiple settings to address health outcomes in a defined local community (e.g., Kröninger-Jungaberle et al., 2014). One study described an alcohol-free policy intervention in a college fraternity (Robison, 2007). Lastly, four articles included in this review reported interventions delivered through apps, SMSs, social media and instant messaging services (Wiljer et al., 2016), while one included intervention study was a social marketing campaign that adopted marketing techniques such as market research, segmentation and targeted communication to create social change (Marko & Watt, 2011).

5.5 | Stage and level of young people's involvement

Included studies were categorised by number of involvement stages. Table 2 shows frequencies of youth involvement for each of the four intervention stages by groups. The most frequent stage where young people participated was implementation ($N = 22$, 46.8%), followed by development, formative research and evaluation. The level of youth involvement varied greatly across studies and categories. The following sections describe the nature of this involvement (i.e., power sharing over decisions dimension) for each category.

5.5.1 | Studies involving youth in one stage

More than half of the studies ($N = 16$; 59.2%) involved young people in one stage only, intervention implementation in most cases. The only two exceptions were the studies by Funk et al. (2012) on participatory intervention development with street-involved young people and by Wiljer et al. (2016) on digitally delivered intervention. Youth engagement took place at formative research and intervention development stages, respectively. The study by Funk et al. (2012) scored low (score = 1) in the power sharing dimension as youth contributed only by moderating focus groups with peers and validating the research findings and key decisions on research aims and design were largely in the hands of the research team. The study by Wiljer et al. (2016) scored medium (score = 2) because the intervention was described as a student-led innovation project focused on designing a digital map of addiction and mental health services to improve postsecondary students' access to, and navigation within, mental health and addiction services. A group of 65 students contributed to map production and were able to make a wide variety of decisions on issues such as the name of the project, logo, project management and product design.

Importantly, excluding Goodhart et al. (2006) photovoice study, none of the 16 single-stage-participation studies scored high (score = 3) in levels of participation and 14 (87.5%) were rated as low because young people were involved merely as implementers of highly controlled research-led interventions. An example of this type of intervention is included in the article by Fromme and Corbin (2004) who tested the comparative efficacy of a peer- versus a professional-delivered alcohol preventive brief intervention consisting of group meetings with students. The intervention was manualised and group leaders were instructed on how to deliver the intervention.

5.5.2 | Studies involving youth in two stages

There was variability in intervention strategies, stages and participation extent in this group of studies. Two studies described peer education interventions (Adams et al., 2006; Quinton et al., 2021), one a participatory intervention

TABLE 2 Distribution of studies across number of youth involvement and intervention stages.

	Studies by number of youth involvement stages				
Stage of involvement	One (N = 16)	Two (N = 5)	Three (N = 3)	Four (N = 3)	Total
FR	2	2	1	3	8
ID	1	4	3	3	11
II	13	3	3	3	22
IE	0	1	2	3	6
Total	–	–	–	–	47

Abbreviations: FR, formative research; ID, intervention development; IE, intervention evaluation; II, intervention implementation.

development (Thomas et al., 2009), one a policy intervention (Robison, 2007) and one a digitally delivered intervention (Wright et al., 2016). The study by Robison (2007) represents a unique case of intervention (i.e., alcohol-free college fraternity policy) that was developed, implemented and sustained solely by young people. Indeed, the author used ethnography to examine a pre-existing policy and identify key factors of success in enforcing the policy over time. The studies by Thomas et al. (2009) and Quinton et al. (2021) represent, instead, two examples of how youth participation can be differently conceptualised. The participatory intervention development study by Quinton et al. (2021) involved young people in the development of public service announcements on drug prevention during the Peer-to-Peer Prevention Messaging. Interestingly, the study scored medium and high in levels of power sharing at intervention development and implementation, respectively. Following an initial training on basic information on the three types of substance use and related health effects among college students, young people conducted their own additional research on the issue and ultimately decided which drug they wanted the campaign to focus on.

Conversely, in spite of being described as a Community-Based Participatory Research (CBPR), the study by Thomas et al. (2009) scored low in levels of participation at both formative research and intervention development stages. The study aimed at developing a culturally sensitive substance abuse prevention programme for native youth. Young people took part in the research group with one representative (i.e., a peer youth educator) and contributed along with other community representatives, namely to approve material designed by the research team (e.g., interview protocols and intervention curriculum). It is important to note that, at the time of the article publication, the project was still ongoing and authors envisioned greater youth participation in the following stages. However, to our knowledge, no information about the following stages has been published. Lastly, the ecological momentary assessment and brief intervention for young people described by Wright et al. (2016) through mobile phones during drinking events scored medium in participation level at development stage (i.e., young people contributed to the redesign of a pre-selected intervention) and low at evaluation stage (i.e., young people tested the intervention and offered feedback during interviews).

5.5.3 | Studies involving youth in three stages

Three studies encompassed youth participation in three different intervention stages. Two were community-based interventions (Diamond et al., 2009; Kröninger-Jungaberle et al., 2014), one was a Social Marketing campaign (Marko & Watt, 2011). In the study by Diamond et al. (2009), young people were involved at the formative research, intervention development and implementation stages of Xperience, a prevention programme to promote drug-and-alcohol free social norms among urban youth. This programme empowered young people to become peer leaders and role models of drug-free behaviour with their friends by designing drug- and alcohol-free social activities. Although the formative research and intervention development phases were predominantly research- and adult-led

(i.e., young people participating in group interviews expressed their desire for more drug-free entertainment in their communities), participation level was higher (medium score) during implementation as young people were involved in all aspects of the show production and the following citywide social marketing and branding strategy. Another example is the study on the 'Why Drive High?' Social Marketing Campaign by Marko and Watt (2011). This is a highly participatory study where a youth advisory group contributed to developing and implementing the campaign. The group took many important decisions during intervention development and implementation (e.g., leading the design and delivery of the messages with minimal input from the adults), but participation levels dropped to low levels during evaluation as they passively participated to the evaluation led by the research team.

5.5.4 | Studies involving youth in four stages

Three studies involved young people at all intervention stages scoring high in the shared power over decision dimension in most stages. The studies by Bulmer et al. (2016) and by Poland et al. (2002) scored highest, with high levels in the first three stages and medium levels in intervention evaluation. The Street-Involved Youth Harm Reduction Project (Poland et al., 2002) hired street-involved youth to conduct research among their peers and develop drug education materials and a video to be distributed to health agencies and stakeholders. Participants were given a great degree of control over the direction of the study. However, the evaluation protocol scored medium because it was not, strictly speaking, fully participatory as young people did not conduct the data collection or analyse the data pertaining specifically to the evaluation. The study by Bulmer et al. (2016) aimed at gaining insights into excessive alcohol consumption among students in a college community and develop appropriate preventive interventions. Young research team members were recruited among the student population. The team developed research questions, designed methods and carried out some of the tasks associated with data collection, analysis and dissemination. Lastly, McCalman et al. (2013) conducted a CBPR study to assess needs and evaluate Beat da Binge, an aboriginal community alcohol harm-reduction intervention based on a marketing awareness campaign and alcohol-free events. Co-researcher youth contributed to identifying local determinants of binge drinking at formative research stage, to developing and realising alcohol-free events, and to designing the baseline evaluation survey. Effectiveness evaluation results have not been published, though data collected by young people and researchers ultimately promoted a shift from the issue originally decided by the research team (alcohol and drug prevention) towards a more holistic approach to fostering young people's health and wellbeing through advocacy on youth mentoring in education, employment and training.

6 | DISCUSSION

This article presents the results of a systematic review of studies encompassing youth involvement in alcohol and drug preventive interventions. Reviewed studies' interventions range from group brief interventions to CBPR and participatory intervention development. Geographic distribution is highly skewed towards the United States, Canada and Australia, thus demonstrating an underrepresentation of youth participation in published studies from Europe and other world regions, at least in the academic literature in English. Studies were conducted in a plurality of settings including universities and colleges, youth organisations (i.e., fraternities), online settings and local communities.

Despite clear differences in form of youth participation, these studies demonstrate that young adults can play a role in promoting health by participating in preventive interventions. This is in contrast with the dominant problem-focused perspective in public health whereby young people are considered merely as passive recipients of prevention (Hunt & Evans, 2008; Murray, 2014). The analysis of youth involvement at the four stages of preventive interventions (i.e., formative research, intervention development, implementation and evaluation; Skivington et al., 2021) and the fundamental dimension of power sharing (Ozer & Douglas, 2015) highlighted how participation was differently

conceptualised and practised across studies. Importantly, only a minority of studies involved young people in more than one stage and just a few can be considered genuinely youth-led. In addition to a rather unique example of policy intervention that was developed, implemented and sustained solely by members of a youth organisation (i.e., college fraternity; Robison, 2007), the few highly participatory studies displayed three key characteristics (e.g., Bulmer et al., 2016; Poland et al., 2002) that are consistent with key principles of participatory approaches (e.g., PAR, YPAR; Cook et al., 2017): (a) Young people were involved as co-researchers starting from the formative research stage and their involvement continued throughout the intervention; (b) As demonstrated by scores in the power sharing dimension, young people were included as co-researchers and had a voice in shaping the direction of the project (e.g., in designing data collection instruments, decide what the project should focus on next); (c) The study provided a structure for participation by promoting the constitution of a youth advisory group that contributed to the unfolding of the project. In accordance with the literature (Anyon et al., 2018; Shamrova & Cummings, 2017), results of studies' process evaluations showed increases in youth empowerment and advocacy skills as a result of the participatory process (e.g., Bulmer et al., 2016; Poland et al., 2002). However, reviewed studies also highlighted some of the complexities in conducting genuinely youth-led studies, in particular when it comes to conducting effectiveness evaluations. Indeed, way too often studies fell short on intervention implementation and evaluation and did not publish results on these stages. McCalman et al. (2013), for example, described how young people were involved in a CBPR but no study on the effectiveness of actions taken was available. Similarly, studies by Poland et al. (2002) and Bulmer et al. (2016) lacked effectiveness evaluation, thus leaving unanswered questions on the potential effectiveness of these interventions. Reasons behind failure to publish follow-up studies are unclear. We speculate this might be due, among other things, to lack of long-term funding or difficulties in implementing publishable effectiveness studies in community settings (e.g., including a control group) and demonstrating solid results (Ross et al., 2010).

Conversely, in this review there are many examples of studies on evidence-based prevention strategies such as brief interventions and peer-education programmes (e.g., Abadi et al., 2020; Mastroleo, Oakley, et al., 2014). Brief interventions, for example, have rather specific theoretical grounds (e.g., cognitive-behavioural theories), are individualised (e.g., rely on personalised feedback), brief and focused, are relatively simple in terms of mechanisms and components, and are therefore more easily evaluated using rigorously experimental designs (i.e., RCT). This may explain their overrepresentation in the scientific literature and hence in our review. However, from a participatory research perspective, their greatest limitation lies in considering young people as 'mere' deliverers (e.g., peer-delivered brief interventions) of predefined standardised interventions (e.g., Mastroleo, Magill, et al., 2014; Mastroleo, Oakley, et al., 2014; Turrisi et al., 2009). In the majority of cases youth involvement happened at the intervention implementation stage only with little or no involvement in the other intervention stages. This approach reflects, to its extreme, an 'empirical rationale' of youth participation (Cargo & Mercer, 2008; Jagosh et al., 2015; Wehn et al., 2021): most studies stressed the benefits of participation for research and intervention implementation and face validity from the perspective of the intended beneficiaries. Some articles' authors stated the rationale for including peer counsellors was to reduce costs partly related to hiring professionals and increase intervention sustainability (Borsari et al., 2016; Cimini et al., 2009; Mastroleo, 2008). In other words, from a strict definition, these would be hardly considered participatory interventions (Ozer et al., 2018).

Only a few studies described above as highly participatory were clear in describing the rationale for youth participation as an empowerment strategy. Poland et al. (2002), for example, mentioned issues around promoting youth empowerment by giving them as much control as possible and avoiding '"power-over" dynamics associated with imposing an evaluation protocol' (p. 345). As we have seen, conceptualising youth participation as an empowerment and social inclusion strategy (i.e., 'rights-based' rationale) broadens the expected benefits beyond intervention effectiveness. Meaningful involvement can therefore represent an empowering experience for young people that fosters greater awareness of alcohol and drug issues and further mobilisation towards health promotion, thus bearing value in young people's lives in a broader sense (Ballard & Syme, 2016; Ozer & Douglas, 2013). It can also contribute to supporting long-term processes that foster change on the health issues young people care about (Ballard & Syme, 2016; Ballonoff Suleiman et al., 2006; Lai, 2008; Ozer & Douglas, 2013; Williams et al., 2020) and can

represent a commitment to democratic social change (Brydon-Miller, Greenwood, & Maguire, 2003). For these reasons, it is important to move beyond conceptualising participation as something that merely leads to better research and practice and, instead, try to understand intervention success in terms of individual and community empowerment, as well as in terms of societal institutions responsiveness to community demands and the triggering of changes in social and environmental conditions (Campbell & Murray, 2004).

6.1 | Limitations

Some limitations of this review are related to the search strategy, that was limited to the academic literature written in English, and data extraction, as one reviewer extracted data while another checked that reviewer's work rather than two reviewers independently extracting the data. Both are not an ideal procedure and may account for the limited loss and/or misrepresentation of data. A publication bias may account for a predominance of studies reporting results of brief interventions and, in general, studies reporting positive outcomes. A further limitation relates to the countries (i.e., United States) and settings (i.e., universities and fraternities) where studies were conducted, which may limit the potential transferability of results to other countries, settings and populations (e.g., non-students). For instance, cultural differences can play a role in the acceptability of restrictive policies, such as alcohol banning, and preventive interventions (Aresi et al., 2020; Aresi & Bloomfield, 2021; Stock et al., 2009). Conversely, methods and key components of studies conducted in community settings with the general youth population (e.g., Bulmer et al., 2016; Marko & Watt, 2011) or at-risk subpopulations (e.g., Funk et al., 2012) may be more easily applicable elsewhere following local and cultural adaptation.

6.2 | Implications for research and practice

Findings of this review contribute to the understanding of how youth participation was conceptualised and put in practice in recent published alcohol and drug prevention studies, highlighting gaps and opportunities for future research in this field and in participatory health promotion in general.

First, the range of reviewed preventive interventions offers practical examples of how young people can be meaningfully engaged in prevention. Among these, spontaneous alcohol and drug policies developed within youth organisations are an area of research that deserves more attention (Košir & Talić, 2015). The example of a self-developed, self-enforced alcohol-free policy intervention in a college fraternity provided by Robison (2007) demonstrates that young adults and youth organisations can display a great deal of autonomy in conducting health promotion initiatives. School-aged adolescents have been the privileged target of youth-led prevention so far but their long-term engagement is made difficult by their relatively limited level of autonomy (Ballonoff Suleiman et al., 2019). Future research could examine whether involving more mature young adults compared to adolescents leads to more sustainable interventions requiring limited support from researchers and community health practitioners.

Second, from a methodological perspective, this review points to an existing polarisation between youth-led studies and more research-based interventions (e.g., brief interventions, peer-education). Youth-led studies reflect key principles of participatory approaches (e.g., CBPR, PAR, YPAR) and a 'rights-based' rationale for participation with a strong emphasis on empowering young people to be active agents in addressing health needs that concern them (Ozer et al., 2018). Their greatest shortcoming, however, is that they struggle to focus (or report) on to the implementation and evaluation phases of interventions. Research-based interventions, on the other hand, use more rigorously evaluated approaches that offer more solid evidence on effectiveness at individual level but fail to address the broader social, community and policy factors underlying health risks. They also reflect a rationale for participation that clashes with a youth-led approach where young people are deliverers of predefined standardised interventions. Popular system approaches to developing community coalitions in the alcohol and drug field such as Communities

that Care (CTC; Brown, Hawkins, Arthur, Briney, & Fagan, 2011) and Getting to Outcomes (GTO; Wandersman, 2003) offer guidance on how to reconcile the tension between adopting interventions with documented effectiveness and sustaining genuinely participatory processes that involve young people as important stakeholders.

7 | CONCLUSIONS

Over the past years, the 'participatory' paradigm has received increasing recognition as an effective approach to studying and addressing complex health and social problem. By highlighting key issues in this field from a participatory research perspective, this review contributes to our understanding of how young adults can play a role in promoting health by participating in preventive interventions. Results can inform the work of health researchers and practitioners, policymakers and youth organisations active in this field, ultimately fostering a greater involvement of young people in prevention in the future.

CONFLICT OF INTEREST STATEMENT
The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT
No human subject participant was involved, thus ethical approval from an institutional review board was not required.

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REFERENCES
Abadi, M. H., Shamblen, S. R., Thompson, K. T., Richard, B. O., Parrino, H., & Hall, M. T. (2020). Peer-led training to reduce alcohol misuse and related harm among Greek-affiliated students. *Substance Use & Misuse*, *55*(14), 2321–2331. https://doi.org/10.1080/10826084.2020.1811342

Adams, T. B., Evans, D. R., Shreffler, R. M., & Beam, K. J. (2006). Development and evaluation of theory-based alcohol education programs. *Journal of Alcohol and Drug Education*, *50*(3), 21–30.

Anyon, Y., Bender, K., Kennedy, H., & Dechants, J. (2018). A systematic review of youth participatory action research (YPAR) in the United States: Methodologies, youth outcomes, and future directions. *Health Education & Behavior*, *45*(6), 865–878. https://doi.org/10.1177/1090198118769357

Aresi, G., & Bloomfield, K. (2021). Cultural differences in alcohol consumption: The state of the art and new perspectives on drinking culture research. In R. Cooke, D. Conroy, E. L. Davies, M. S. Hagger, & R. de Visser (Eds.), *The Palgrave handbook of psychological perspectives on alcohol consumption* (pp. 159–184). Basingstoke, UK: Palgrave Macmillan.

Aresi, G., Cleveland, M. J., Vieno, A., Beccaria, F., Turrisi, R., & Marta, E. (2020). A mixed methods cross-cultural study to compare youth drinking cultures in Italy and the USA. *Applied Psychology: Health and Well-Being*, *12*, 231–255. https://doi.org/10.1111/aphw.12181

Aresi, G., & Pedersen, E. R. (2016). "That right level of intoxication": A grounded theory study on young adults' drinking in nightlife settings. *Journal of Youth Studies*, *19*(2), 204–220. https://doi.org/10.1080/13676261.2015.1059931

Arnett, J. J. (2005). The developmental context of substance use in emerging adulthood. *Journal of Drug Issues*, *35*(2), 235–254. https://doi.org/10.1177/002204260503500202

Arnett, J. J. (2014). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.

Ballard, P. J., & Syme, S. L. (2016). Engaging youth in communities: A framework for promoting adolescent and community health. *Journal of Epidemiology and Community Health*, *70*(2), 202–206. https://doi.org/10.1136/jech-2015-206,110

Ballonoff Suleiman, A., Ballard, P. J., Hoyt, L. T., & Ozer, E. J. (2019). Applying a developmental lens to youth-led participatory action research: A critical examination and integration of existing evidence. *Youth & Society*, *53*(1), 26–53. https://doi.org/10.1177/0044118X19837871

Ballonoff Suleiman, A., Soleimanpour, S., & London, J. (2006). Youth action for health through youth-led research. *Journal of Community Practice*, *14*(1–2), 125–145. https://doi.org/10.1300/J125v14n01_08

Bonar, E. E., Schneeberger, D. M., Bourque, C., Bauermeister, J. A., Young, S. D., Blow, F. C., ... Walton, M. A. (2020). Social media interventions for risky drinking among adolescents and emerging adults: Protocol for a randomized controlled trial. *JMIR Research Protocols*, *9*(5), e16688. https://doi.org/10.2196/16688

Borsari, B., Magill, M., Mastroleo, N. R., Hustad, J. T. P., Tevyaw, T. O. L., Barnett, N. P., ... Monti, P. M. (2016). Mandated college students' response to sequentially administered alcohol interventions in a randomized clinical trial using stepped care. *Journal of Consulting and Clinical Psychology*, *84*(2), 103–112. https://doi.org/10.1037/a0039800

Brown, E. C., Hawkins, J. D., Arthur, M. W., Briney, J. S., & Fagan, A. A. (2011). Prevention service system transformation using communities that care. *Journal of Community Psychology*, *39*(2), 183–201. https://doi.org/10.1002/jcop.20426

Brydon-Miller, M., Greenwood, D., & Maguire, P. (2003). Why action research? *Action Research*, *1*(1), 9–28. https://doi.org/10.1177/14767503030011002

Bulmer, S. M., Barton, B. A., Liefeld, J., Montauti, S., Santos, S., Richard, M., ... Lalanne, J. (2016). Using CBPR methods in college health research: Exploring excessive alcohol consumption. *Journal of Adolescent Research*, *31*(2), 232–258. https://doi.org/10.1177/0743558415584012

Campbell, C., & Murray, M. (2004). Community health psychology: Promoting analysis and action for social change. *Journal of Health Psychology*, *9*(2), 187–195. https://doi.org/10.1177/1359105304040886

Cargo, M., & Mercer, S. L. (2008). The value and challenges of participatory research: Strengthening its practice. *Annual Review of Public Health*, *29*, 325–350. https://doi.org/10.1146/annurev.publhealth.29.091307.083824

Cimini, M. D., Martens, M. P., Larimer, M. E., Kilmer, J. R., Neighbors, C., & Monserrat, J. M. (2009). Assessing the effectiveness of peer-facilitated interventions addressing high-risk drinking among judicially mandated college students. *Journal of Studies on Alcohol and Drugs Supplement*, (s16), 57–66. https://doi.org/10.15288/jsads.2009.s16.57

Cook, T., Boote, J., Buckley, N., Vougioukalou, S., & Wright, M. (2017). Accessing participatory research impact and legacy: Developing the evidence base for participatory approaches in health research. *Educational Action Research*, *25*(4), 473–488. https://doi.org/10.1080/09650792.2017.1326964

Cronce, J. M., & Larimer, M. E. (2011). Individual-focused approaches to the prevention of college student drinking. *Alcohol Research & Health*, *34*(2), 210–221.

Davis, J. P., Smith, D. C., & Briley, D. A. (2017). Substance use prevention and treatment outcomes for emerging adults in non-college settings: A meta-analysis. *Psychology of Addictive Behaviors*, *31*(3), 242–254. https://doi.org/10.1037/adb0000267

Diamond, S., Schensul, J. J., Snyder, L. B., Bermudez, A., D'Alessandro, N., & Morgan, D. S. (2009). Building Xperience: A multilevel alcohol and drug prevention intervention. *American Journal of Community Psychology*, *43*(3–4), 292–312. https://doi.org/10.1007/s10464-009-9,230-3

Donohue, B., Allen, D. N., Maurer, A., Ozols, J., & DeStefano, G. (2004). A controlled evaluation of two prevention programs in reducing alcohol use among college students at low and high risk for alcohol related problems. *Journal of Alcohol and Drug Education*, *48*(1), 13–33.

EMCDDA. (2011). *European drug prevention quality standards. A manual for prevention professionals*. Luxembourg: Publications Office of the European Union.

European Commission. (2010). *The European social funds and social inclusion*. Retrieved from https://ec.europa.eu/employment_social/esf/docs/sf_social_inclusion_en.pdf

Fromme, K., & Corbin, W. (2004). Prevention of heavy drinking and associated negative consequences among mandated and voluntary college students. *Journal of Consulting and Clinical Psychology*, 72(6), 1038–1049. https://doi.org/10.1037/0022-006X.72.6.1038

Funk, A., Van Borek, N., Taylor, D., Grewal, P., Tzemis, D., & Buxton, J. A. (2012). Climbing the "ladder of participation": Engaging experiential youth in a participatory research project. *Canadian Journal of Public Health*, 103(4), e288–e292.

Gibbs, L., Kornbluh, M., Marinkovic, K., Bell, S., & Ozer, E. J. (2020). Using technology to scale up youth-led participatory action research: A systematic review. *Journal of Adolescent Health*, 67(Suppl 2), S14–S23. https://doi.org/10.1016/j.jadohealth.2019.10.019

Gobat, N., Littlecott, H., Williams, A., McEwan, K., Stanton, H., Robling, M., … Evans, R. (2021). Developing a whole-school mental health and wellbeing intervention through pragmatic formative process evaluation: A case-study of innovative local practice within The school Health Research network. *BMC Public Health*, 21(1), 154. https://doi.org/10.1186/s12889-020-10,124-6

Goodhart, F. W., Hsu, J., Baek, J. H., Coleman, A. L., Maresca, F. M., & Miller, M. B. (2006). A view through a different lens: Photovoice as a tool for student advocacy. *Journal of American College Health*, 55(1), 53–56. https://doi.org/10.3200/JACH.55.1.53-56

Gottfredson, D. C., Cook, T. D., Gardner, F. E. M., Gorman-Smith, D., Howe, G. W., Sandler, I. N., & Zafft, K. M. (2015). Standards of evidence for efficacy, effectiveness, and scale-up research in prevention science: Next generation. *Prevention Science*, 16(7), 893–926. https://doi.org/10.1007/s11121-015-0555-x

Hawkins, J., Madden, K., Fletcher, A., Midgley, L., Grant, A., Cox, G., … White, J. (2017). Development of a framework for the co-production and prototyping of public health interventions. *BMC Public Health*, 17(1), 689. https://doi.org/10.1186/s12889-017-4,695-8

Hunt, G., & Evans, K. (2008). "The great unmentionable": Exploring the pleasures and benefits of ecstasy from the perspectives of drug users. *Drugs*, 15(4), 329–349. https://doi.org/10.1080/09687630701726841

Institute of Medicine (1994). Reducing risks for mental disorders: Frontiers for preventive intervention research. In R. J. Haggerty & P. J. Mrazek (Eds.), *Committee on prevention of mental disorders, division of biobehavioral sciences and mental disorders*. Washington, DC: National Academy Press.

INVOLVE. (2012). *Briefing notes for researchers: involving the public in NHS, public health and social care research*. Eastleigh, UK: National Institute for Health Research.

Jacquez, F., Vaughn, L. M., & Wagner, E. (2013). Youth as partners, participants or passive recipients: A review of children and adolescents in community-based participatory research (CBPR). *American Journal of Community Psychology*, 51(1–2), 176–189. https://doi.org/10.1007/s10464-012-9,533-7

Jagosh, J., Bush, P. L., Salsberg, J., Macaulay, A. C., Greenhalgh, T., Wong, G., … Pluye, P. (2015). A realist evaluation of community-based participatory research: Partnership synergy, trust building and related ripple effects. *BMC Public Health*, 15(1), 725. https://doi.org/10.1186/s12889-015-1949-1

Košir, M., & Talić, S. (2015). *Engagement of youth organisations in prevention interventions in the field of alcohol policy*. Ljubljana, Slovenia: Institute for Research and Development "Utrip". Retrieved from https://www.letithapyn.eu/data-si/file/D_01_Youth%20organisation_prevention_UPDATED_02.pdf

Kröninger-Jungaberle, H., Nagy, E., von Heyden, M., & DuBois, F. (2014). REBOUND: A media-based life skills and risk education programme. *Health Education Journal*, 74(6), 705–719. https://doi.org/10.1177/0017896914557097

Lai, F. C. (2008). Health promotion and participatory action research: The significance of participatory praxis in developing participatory health intervention. In P. Reason & H. Bradbury (Eds.), *The SAGE handbook of action research* (2nd ed., pp. 534–549). London, UK. https://doi.org/10.4135/9781848607934

Larimer, M. E., Turner, A. P., Anderson, B. K., Fader, J. S., Kilmer, J. R., Palmer, R. S., & Cronce, J. M. (2001). Evaluating a brief alcohol intervention with fraternities. *Journal of Studies on Alcohol*, 62(3), 370–380. https://doi.org/10.15288/jsa.2001.62.370

Layland, E. K., Calhoun, B. H., Russell, M. A., & Maggs, J. L. (2019). Is alcohol and other substance use reduced when college students attend alcohol-free programs? Evidence from a measurement burst design before and after legal drinking age. *Prevention Science: The Official Journal of the Society for Prevention Research*, 20(3), 342–352. https://doi.org/10.1007/s11121-018-0877-6

Levy, S. J., & Williams, J. F. (2016). Substance use screening, brief intervention, and referral to treatment. *Pediatrics*, 138(1). https://doi.org/10.1542/peds.2016-1211

Li, W. H. C., Xia, W., Ho, L. L. K., Cheung, A. T., Leong, Q. K. I., & Liang, T. (2021). A medical peer-delivered intervention comprising brief motivational interviewing via instant-messaging interaction to reduce drug misuse among youth in Hong Kong: A protocol for a randomised controlled trial. *Addiction Science & Clinical Practice*, 16(1), 32. https://doi.org/10.1186/s13722-021-00241-x

Marko, T.-L., & Watt, T. (2011). Employing a youth-led adult-guided framework: "Why drive high?" social marketing campaign. *Family & Community Health*, 34(4), 319–330. https://doi.org/10.1097/FCH.0b013e31822b5482

Mastroleo, N. R. (2008). *Comparison of supervision training techniques in a motivational enhancement intervention on college student drinking*. State college: The Pennsylvania State University.

Mastroleo, N. R., Magill, M., Barnett, N. P., & Borsari, B. (2014). A pilot study of two supervision approaches for peer-led alcohol interventions with mandated college students. *Journal of Studies on Alcohol and Drugs*, 75(3), 458–466. https://doi.org/10.15288/jsad.2014.75.458

Mastroleo, N. R., Oakley, W. C., Eaton, E. M., & Borsari, B. (2014). Response of heavy-drinking voluntary and mandated college students to a peer-led brief motivational intervention addressing alcohol use. *Journal of Substance Abuse Treatment*, 47(5), 321–328. https://doi.org/10.1016/j.jsat.2014.06.005

McCalman, J., Tsey, K., Bainbridge, R., Shakeshaft, A., Singleton, M., & Doran, C. (2013). Tailoring a response to youth binge drinking in an aboriginal Australian community: A grounded theory study. *BMC Public Health*, 13(1), 726. https://doi.org/10.1186/1471-2458-13-726

McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica*, 22(3), 276–282.

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7), e1000097. https://doi.org/10.1371/journal.pmed.100009710.1371/

Murray, M. (2014). *Critical health psychology*. New York: Macmillan International Higher Education.

O'Connor, E., Thomas, R., Senger, C. A., Perdue, L., Robalino, S., & Patnode, C. (2020). Interventions to prevent illicit and nonmedical drug use in children, adolescents, and young adults: Updated evidence report and systematic review for the US preventive services task force. *Jama*, 323(20), 2067–2079. https://doi.org/10.1001/jama.2020.1432

Ozer, E. J., Afifi, R., Gibbs, L., & Mathur, R. T. (2018). Youth engagement and participation: Field-building across research and practice. *Journal of Adolescent Health*, 63(6), 671–672. https://doi.org/10.1016/j.jadohealth.2018.09.011

Ozer, E. J., & Douglas, L. (2013). The impact of participatory research on urban teens: An experimental evaluation. *American Journal of Community Psychology*, 51(1–2), 66–75. https://doi.org/10.1007/s10464-012-9,546-2

Ozer, E. J., & Douglas, L. (2015). Assessing the key processes of youth-led participatory research: Psychometric analysis and application of an observational rating scale. *Youth & Society*, 47(1), 29–50. https://doi.org/10.1177/0044118x12468011

Palmer, V. J., Weavell, W., Callander, R., Piper, D., Richard, L., Maher, L., … Robert, G. (2019). The participatory zeitgeist: An explanatory theoretical model of change in an era of coproduction and codesign in healthcare improvement. *Medical Humanities*, 45(3), 247–257. https://doi.org/10.1136/medhum-2017-011398

Patrick, M. E., Terry-McElrath, Y. M., Kloska, D. D., & Schulenberg, J. E. (2016). High-intensity drinking among young adults in the United States: Prevalence, frequency, and developmental change. *Alcoholism: Clinical and Experimental Research*, 40(9), 1905–1912. https://doi.org/10.1111/acer.13164

Poland, B. D., Tupker, E., & Breland, K. (2002). Involving street youth in peer harm reduction education. *Canadian Journal of Public Health*, 93(5), 344–348. https://doi.org/10.1007/BF03404566

Quinton, S. L., Boyle, M., Lankford-Purnell, K., Lankford, G., & Boekeloo, B. (2021). The need for marijuana perceived risk interventions targeting college students at a historically black college and university. *J Psychoactive Drugs*, 53(4), 319–328. https://doi.org/10.1080/02791072.2021.1899347

Robison, A. (2007). *Case study analysis of a college fraternity utilizing alcohol-free housing*. West Lafayette, IN: Purdue University.

Ross, L. F., Loup, A., Nelson, R. M., Botkin, J. R., Kost, R., Smith, G. R., & Gehlert, S. (2010). The challenges of collaboration for academic and community partners in a research partnership: Points to consider. *Journal of Empirical Research on Human Research Ethics*, 5(1), 19–31. https://doi.org/10.1525/jer.2010.5.1.19

Salerno Valdez, E., Skobic, I., Valdez, L., Garcia, D. O., Korchmaros, J., Stevens, S., … Carvajal, S. (2020). Youth participatory action research for youth substance use prevention: A systematic review. *Substance Use & Misuse*, 55(2), 314–328. https://doi.org/10.1080/10826084.2019.1668014

Shamrova, D. P., & Cummings, C. E. (2017). Participatory action research (PAR) with children and youth: An integrative review of methodology and PAR outcomes for participants, organizations, and communities. *Children and Youth Services Review*, 81, 400–412. https://doi.org/10.1016/j.childyouth.2017.08.022

Skivington, K., Matthews, L., Simpson, S. A., Craig, P., Baird, J., Blazeby, J. M., … Moore, L. (2021). A new framework for developing and evaluating complex interventions: Update of Medical Research Council guidance. *BMJ*, 374, n2061. https://doi.org/10.1136/bmj.n2061

Sørensen, H. J., Manzardo, A., Just-Østergaard, E., Penick, E. C., Becker, U. M. D., Mortensen, E. L., & Knop, J. (2021). Young adult predictors of alcohol dependence to age 53: A 44-year prospective cohort study of Danish men. *Addiction*, 116(4), 780–787. https://doi.org/10.1111/add.15209

Sprague Martinez, L., Richards-Schuster, K., Teixeira, S., & Augsberger, A. (2018). The power of prevention and youth voice: A strategy for social work to ensure youths' healthy development. *Social Work*, 63(2), 135–143. https://doi.org/10.1093/sw/swx059

Stock, C., Mikolajczyk, R., Bloomfield, K., Maxwell, A. E., Ozcebe, H., Petkeviciene, J., ... Krämer, A. (2009). Alcohol consumption and attitudes towards banning alcohol sales on campus among European university students. *Public Health*, *123*(2), 122–129. https://doi.org/10.1016/j.puhe.2008.12.009

Tanner-Smith, E. E., & Lipsey, M. W. (2015). Brief alcohol interventions for adolescents and young adults: A systematic review and meta-analysis. *Journal of Substance Abuse Treatment*, *51*, 1–18. https://doi.org/10.1016/j.jsat.2014.09.001

Thomas, L. R., Donovan, D. M., Sigo, R. L. W., Austin, L., Alan Marlatt, G., & The Suquamish, T. (2009). The community pulling together: A tribal community–university partnership project to reduce substance abuse and promote good health in a reservation tribal community. *Journal of Ethnicity in Substance Abuse*, *8*(3), 283–300. https://doi.org/10.1080/15332640903110476

Tollison, S. J., Lee, C. M., Neighbors, C., Neil, T. A., Olson, N. D., & Larimer, M. E. (2008). Questions and reflections: The use of motivational interviewing microskills in a peer-led brief alcohol intervention for college students. *Behavior Therapy*, *39*(2), 183–194. https://doi.org/10.1016/j.beth.2007.07.001

Turrisi, R., Larimer, M. E., Mallett, K. A., Kilmer, J. R., Ray, A. E., Mastroleo, N. R., ... Montoya, H. (2009). A randomized clinical trial evaluating a combined alcohol intervention for high-risk college students. *Journal of Studies on Alcohol and Drugs*, *70*(4), 555–567. https://doi.org/10.15288/jsad.2009.70.555

Wandersman, A. (2003). Community science: Bridging the gap between science and practice with community-centered models. *American Journal of Community Psychology*, *31*(3–4), 227–242. https://doi.org/10.1023/A:1023954503247

Wehn, U., Gharesifard, M., Ceccaroni, L., Joyce, H., Ajates, R., Woods, S., ... Wheatland, J. (2021). Impact assessment of citizen science: State of the art and guiding principles for a consolidated approach. *Sustainability Science*, *16*(5), 1683–1699. https://doi.org/10.1007/s11625-021-00959-2

Whiteford, H. A., Degenhardt, L., Rehm, J., Baxter, A. J., Ferrari, A. J., Erskine, H. E., ... Vos, T. (2013). Global burden of disease attributable to mental and substance use disorders: Findings from the Global Burden of Disease Study 2010. *The Lancet*, *382*(9904), 1575–1586. https://doi.org/10.1016/S0140-6736(13)61611-6

Wiljer, D., Abi-Jaoude, A., Johnson, A., Ferguson, G., Sanches, M., Levinson, A., ... Voineskos, A. (2016). Enhancing self-efficacy for help-seeking among transition-aged youth in postsecondary settings with mental health and/or substance use concerns, using crowd-sourced online and mobile technologies: The thought spot protocol. *JMIR Research Protocols*, *5*(4), e201. https://doi.org/10.2196/resprot.6446

Williams, O., Sarre, S., Papoulias, S. C., Knowles, S., Robert, G., Beresford, P., ... Palmer, V. J. (2020). Lost in the shadows: Reflections on the dark side of co-production. *Health Research Policy and Systems*, *18*(1), 43. https://doi.org/10.1186/s12961-020-00558-0

World Health Organisation. (1986). *Ottawa Charter for Health Promotion: First International Conference on Health Promotion Ottawa, 21 November 1986*. Retrieved from https://www.healthpromotion.org.au/images/ottawa_charter_hp.pdf

Wright, C. J. C., Dietze, P. M., Crockett, B., & Lim, M. S. C. (2016). Participatory development of MIDY (mobile intervention for drinking in young people). *BMC Public Health*, *16*(1), 184. https://doi.org/10.1186/s12889-016-2,876-5

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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