14

Strategies for Managing Alcohol Intake and Refusing Offers of Alcoholic Drinks

Dominic Conroy and Richard O. de Visser

Introduction

In this chapter we discuss literature addressing how people manage their alcohol intake, and what they do to refuse offers of alcoholic drinks. The relevant literature contains quantitative studies and qualitative studies, and the majority comes from the discipline of psychology. We first discuss the types of knowledge, motivation, and skills that are involved in individuals' adherence (or not) to guidelines for low-risk drinking. We then consider key psychological constructs relevant to considering how alcoholic drinks are resisted or refused. Having contextualised "managing alcohol intake" we will consider specific quantitative and qualitative studies of managing alcohol and refusing offers of alcoholic drinks. We conclude with a section designed to consider how the literature on managing alcohol intake and refusing alcoholic drinks might be extended in future research and how it might be best applied in policy and practice.

D. Conroy (✉)
School of Psychology, University of East London, London, UK
e-mail: d.conroy@uel.ac.uk

R. O. de Visser
Brighton and Sussex Medical School, University of Sussex, Falmer, UK
e-mail: r.o.devisser@bsms.ac.uk

Alcohol-Related Harms: Terminology, Guidelines, and Policies

As noted elsewhere in this collection, there is considerable evidence that higher levels of alcohol consumption are associated with various negative consequences for individuals' physical and psychological well-being, and for the harmonious functioning of society (Klingemann & Gmel, 2001; Weitzman, 2004; Rehm, 2011; GBD 2016 Alcohol Collaborators, 2018). Risks of alcohol can be understood in different ways. There are short-term risks of heavier alcohol consumption, including poisoning, accidents, injury, and being the perpetrator or victim of violence. There are also longer-term risks of greater alcohol consumption. In the long term, heavier alcohol consumption increases the risk of harm to many organ systems, including several types of cancer (e.g. Wittmann, Paulus, & Roenneberg, 2010; Nelson et al., 2013). Prolonged heavier alcohol consumption is also associated with a greater risk of poor psychological well-being (Weitzman, 2004; Wittmann et al., 2010). Given this evidence confirming the range and severity of potential harm, it is clear that if people decide to drink alcohol, then it is important for them to be encouraged to do so in moderation.

Various terms have been used to describe consuming alcohol in moderation—for example, "moderate drinking," "sensible drinking," and "low-risk drinking." In this chapter, we use the term "low-risk drinking." Moving on from that, advising people to engage in "low-risk drinking" draws attention to the question: What is "low-risk drinking"? To ensure that drinkers, health professionals, policy-makers and researchers are all able to communicate clearly about alcohol use, accurately measure alcohol use, and then estimate associations between levels of alcohol use and related harm, there is a need for a standardised language for describing alcohol intake. Many governments and government agencies have developed guidelines for low-risk drinking (referred to from this point as "guidelines"), which commonly include recommended daily and/or weekly maximum intake expressed as numbers of "standard drinks" or "units of alcohol" (Furtwängler & de Visser, 2013). However, there is wide variation in how different countries define standard drinks, and in the recommended daily and weekly intake maxima (Furtwängler & de Visser, 2013). That variation is important to note, but it is not the focus of this chapter. Instead, we are interested in whether and how people adhere to such low risk guidelines, and their strategies for "managing alcohol intake": that is, attempting to drink alcohol in moderation in the face of different pressures to drink.

Despite the existence and promotion of guidelines, many people exceed them. For example, one large-scale study in Canada—involving over 40,000 people aged 15 and over—found that 27% of drinkers did not comply with weekly guidelines, and that 39% of drinkers did not comply with daily intake guidelines (Zhao, Stockwell, & Thomas, 2015). Nationally representative data from Australia reveal that many drinkers consume alcohol above national guidelines in ways that place them at risk of harm over their lifetime and/or on a single drinking occasion (Australian Institute of Health and Welfare, 2017).

There are various ways to encourage people to drink less. Some of these are whole-population approaches specified in legislation that affect all drinkers (and non-drinkers): laws related to legal age for purchase and unsupervised consumption of alcohol, restrictions on alcohol marketing and pricing, regulation of trading hours for licensed premises, laws prohibiting sale of alcohol to drunk people, and so on. Drink-driving laws are another example of population-level approaches. Other approaches are designed to encourage people to make healthier choices about alcohol. These include public education and health promotion campaigns run by governments and non-government organisations which may use gain-framed messages to emphasise the benefits of drinking less and/or loss-framed messages to emphasise the harms that arise from drinking too much (Rothman & Salovey, 1997; Quick & Bates, 2010). There is a need to consider psychological and behavioural features of the various strategies used to encourage moderate drinking: these are addressed in the next section.

Psychological Components of Managing Intake and Refusing Alcohol

In this section we outline an established theoretical framework that can help formalise discussion of a general process (managing alcohol intake) and how that general process might play out in specific situations (e.g. refusing alcoholic drink offers). If individuals are to drink within government guidelines for alcohol intake, then they must understand what the guidelines are, and be motivated to adhere to them. They also need to possess a range of behavioural skills. Skills are required to adhere to government guidelines for alcohol intake, and further skills are required to resist temptations, expectations, or pressure to drink alcohol.

The Information-Motivation-Behavioural Skills (IMB) model is a straightforward statement that all three of its eponymous components

Fig. 14.1 Information-motivation-behavioural skills model. (Adapted from Fisher et al., 2003)

influence behaviour change (Fisher, Fisher, & Harman, 2003). The model is presented in Fig. 14.1. It proposes that knowledge is an important pre-requisite for behaviour change: in the case of alcohol use, people cannot adhere to guidelines they do not know or do not understand. However, the model also argues that providing information is not enough, and it emphasises that people must be motivated to change their behaviour: in the context of alcohol use, many people know that heavy drinking leads to hangovers, but this knowledge in itself may not motivate them to change their behaviour. Providing information (or clarifying understand-ing) may induce motivation to change. For example, when a woman learns by how much she is exceeding government alcohol intake guide-lines, she may be motivated to change her behaviour. The IMB argues that in addition to possessing accurate information and being motivated to change, a person must have the behavioural skills required to carry out the new pattern of behaviour. In some domains of health-related behav-iour, the required skills may be easy to identify and few in number—for example, a person who learns that they are lactose intolerant will learn to read ingredient labels on packaged foodstuffs and ask staff in cafés or res-taurants for information on ingredients. In the context of alcohol use, the required behavioural skills are greater in number and more diverse in nature: people must develop skills to manage their own desire or tempta-tion to drink, they must learn how to space out their drinks and/or iden-tify low-alcohol or alcohol-free alternatives, and they must learn how to respond to social expectations to drink, as well as more direct peer influ-ences to drink. A key element of these skills is the ability to resist tempta-tions, expectations, or pressure to drink alcohol. In the next two sections we apply the IMB to alcohol use, addressing each element with reference to relevant research.

Managing Alcohol Intake by Adhering to Guidelines for Low-Risk Drinking

Efforts to agree on standard drinks, and to agree recommended daily and weekly intake maxima are, as stated above, not the focus of this chapter. Our interest in this section is whether and how people use guidelines to manage their alcohol intake.

Information, Motivation, and Skills Relevant to Guidelines for Low-Risk Drinking

Information about guidelines appears to have reached most drinkers, but few have accurate knowledge of the guidelines (Coomber, Jones, Martino, & Miller, 2017; de Visser & Birch, 2012; de Visser, Brown, Cooke, Cooper, & Memon, 2017; McNally et al., 2019; Rosenberg et al., 2018;). Nor do many people feel familiar with the guidelines, and interestingly, self-reported familiarity with the guidelines is not a reliable indicator of actual knowledge of the guidelines (de Visser & Birch, 2012). One reason is that people tend to think of alcohol consumption in terms of glasses, bottles, and cans, rather than in units that do not always correspond with these measures. Qualitative research has also revealed that many people do not feel familiar with the guidelines despite being well aware of their existence, and that "units" or "standard drinks" are not intuitive or easy-to-use measures. For example, in a qualitative study of young people in the UK, one male interviewee noted: "I find the unit measurement actually quite cumbersome to work with in terms of judging what I am drinking," and a female participant said: "I find it quite hard to translate drinks to units. I kind of have looked into it and I always forget" (Furtwängler & de Visser, 2017b, p. 1705).

Motivation to adhere to guidelines can be conceptualised in various ways. One indicator is the perceived usefulness of the guidelines. Studies of students and non-student adults in the UK indicate that many drinkers do not perceive guidelines to be particularly useful (de Visser & Birch, 2012; de Visser, 2015; Lovatt et al., 2015; de Visser et al., 2017). In addition, daily recommended maxima are seen as irrelevant by those drinkers who tend not to drink every day, but instead engage in less frequent bouts of heavier drinking. Furthermore, drinkers tend not to be interested in changing their alcohol intake (de Visser, 2015; de Visser et al., 2017; Rosenberg et al., 2018). This unwillingness to change is perhaps more common among young

adults—many of whom engage in heavy episodic drinking (HED) with the intention of getting drunk, and therefore perceive low daily intake guidelines as being irrelevant. For example, in one qualitative study, a male university student said:

> The thing is, you can drink within the recommended daily amount of units, but you don't get drunk on that. So socially it's almost a wasted enterprise. (Furtwängler & de Visser, 2017b, p. 1704)

Using more direct measures, quantitative studies have found that motivation to adhere to guidelines is low. In multivariate analyses among university students in the UK, Furtwängler and de Visser (2017a) found that stronger motivation to adhere to guidelines was predicted by greater conscientiousness, greater perceived usefulness of guidelines, greater familiarity with guidelines and less frequent drunkenness in the last month. As suggested by the IMB, this indicates that one way to increase motivation to adhere to guidelines would be to increase understanding of them, but that such efforts may not be effective for all drinkers.

Behavioural skills related to guidelines are multi-faceted. People must be able to: know or find the unit content of different packaged drinks; know the unit content of drinks they pour for themselves or are poured by others; and keep track of how many units they have consumed even in situations in which they may be becoming increasingly intoxicated. Research with samples of non-student adult drinkers in the UK indicates that many people lack these skills (e.g. Boniface, Kneale, & Shelton, 2013). For example, when people are asked to pour "usual drinks," they tend to pour volumes substantially larger than one "unit" or one "standard drink," and they tend to underestimate the unit content of the "usual drinks" that they pour (de Visser, 2015; de Visser & Birch, 2012). When asked to estimate the unit content of various drinks, students and non-student adults tend not to give accurate reports (de Visser, 2015; de Visser & Birch, 2012; de Visser et al., 2017). Furthermore, people tend not to be able to give accurate reports of their own alcohol intake. For example, Furtwängler and de Visser (2017a) asked a sample of university students to report exactly what they drank during their most recent drinking occasion, and then estimate the number of UK units this represented. The researchers then computed the actual number of units consumed based on students' reports of what they drank and compared these to the students' estimated. They found that only 31% of students gave estimates of unit intake that were within ±10% of their computed unit intake, and that 35% underestimated their alcohol intake by at least 10%. These findings show that

people generally lack the skills required to accurately monitor their alcohol intake.

Enhancing Capacity to Adhere to Guidelines for Low-Risk Drinking

There is emerging evidence that interventions that address one or more elements of the IMB may increase people's capacity to adhere to guidelines. Although more generic (or less-focused) interventions may not produce significant intervention effects beyond greater awareness of guidelines (McNally et al., 2019), interventions more focused on how people use guidelines have been found to produce significant effects on antecedents of behaviour, and actual drinking behaviour. Two examples are summarised below.

In one intervention study in the UK, de Visser (2015) asked participants in the intervention group to pour their "usual drinks" of beer, wine, and spirits, and to estimate the unit content of each of them. Participants were also asked to pour what they thought were "units" of each of the three drink types. After the session, participants were provided with personalised feedback based on their performance in the drink pouring task, and their alcohol intake as reported in a questionnaire. The feedback reminded participants of government guidelines and the unit content of different drinks. It also indicated whether participants were drinking in excess of these guidelines. At two-month follow-up, the intervention group was compared to two other groups—people who did the drink pouring task but did not receive personalised feedback (this group allowed analyses of whether the drink pouring itself had an effect of the outcomes), and a control group which did not engage in the drink pouring task or get feedback on their alcohol intake. All participants had already completed a baseline survey that assessed their guideline-related knowledge and motivations as well as their patterns of alcohol use. Analyses revealed that the intervention produced several significant changes not observed in the other two groups: significant improvements in the accuracy of knowledge of the guidelines; significant reductions in alcohol units consumed per week; significant reductions in the number of days per week on which daily consumption maxima were exceeded. Although the intervention was successful in addressing both the "Information" and the "Behavioural skill" parts of the IMB model, it was rather resource-intensive given the time needed to conduct the pouring task and compile the personalised feedback. This suggested a need to identify and assess other means for helping people to better understand low-risk drinking guidelines and to calibrate their alcohol intake relative to such guidelines.

In a subsequent study, de Visser et al. (2017) assessed the impact of using glasses that were marked with the unit equivalent of different volumes of beer, wine, and spirit as well as statement of the guidelines. In the UK, such glasses are distributed by some local government public health teams as well as the industry-funded charity Drinkaware. All participants completed a baseline survey that assessed their guideline-related knowledge and motivations as well as their patterns of alcohol use. Participants assigned to the intervention group were given three of the plastic unit-marked glasses provide by Brighton & Hove City Council and asked to use them as much as possible for any alcoholic or non-alcoholic drinks. One month later, follow-up analyses comparing the intervention to a group control that only completed the baseline survey revealed that the intervention led to several significant changes: better knowledge of unit-based guidelines; better ability to estimate the unit content of various drinks; greater perceived usefulness of the guidelines; and more frequent counting unit intake. Unfortunately, the changes to alcohol intake observed following the drink-pouring feedback intervention were not found in this study. However, the fact that the glasses are relatively cheap suggests that they could be a useful part of broader efforts to increase people's capacity to drink according to guidelines for low-risk alcohol intake. It should be noted that more frequent use of the glasses was associated with larger changes in understanding and motivation. Furthermore, most participants were not concerned about changing their level of alcohol intake: the intervention may have been more effective among people who were already willing to change their behaviour.

Alternative strategies for enhancing people's capacity to adhere to guidelines include provision of information on labels on packaged alcohol products. In many countries, labels on packaged alcohol must contain specified information including its alcohol content by volume. For example, Regulation (EC) no. 110/2008 of the European Parliament and Council relates to labelling of spirits. However, if people are to adhere to guidelines stated in "units" or "standard drinks," then they may need specific information about "units" or "standard drinks" on labels. One Canadian study found that such information can help people to keep track of their alcohol intake relative to guidelines (Hobin et al., 2018). In that study, there was strong support for labels that included information about standard drink content of the container, and how this related to guidelines. Furthermore, providing labels that contained more information about standard drinks and guidelines was linked to participants' better ability to accurately monitor their alcohol intake relative to guidelines (see Chap. 19 for a detailed discussion of this topic).

The material discussed above is promising, but in any effort to motivate people to drink less, it must be acknowledged that drinkers commonly report strong motives for drinking—to aid socialising; for enhancement; to regulate emotions; to fit in—that may not be compatible by restricting intake to conform with guidelines (Cooper, 1994; Kuntsche, Knibbe, Gmel, & Engels, 2005). It is crucial to consider the importance to individuals of the motive to adhere to guidelines relative to the importance of these other motives.

Skills and Efficacy for Managing Alcohol Intake

In this chapter, we use the term "managing alcohol intake" to refer to the strategic management of alcohol consumption in the context of a range of pressures. These pressures may be internal (e.g. wanting to fit in), or external (e.g. being offered a drink). Strategic management can be understood to take place over different time scales. For example, management of alcohol intake could be explored over the course of an occasion (e.g. during a specific social event), or over a longer period (e.g. during a typical week). Research on managing these pressures is not novel: there is a long tradition of studies of how the temptation to drink might be successfully managed in people being treated for alcohol dependence (e.g. Marlatt & George, 1984; Hodgson, 1989; Solomon & Annis, 1990).

In contrast, research on managing alcohol intake from a public health promotion perspective is less prominent. This is perhaps surprising given the clear value of understanding how best to manage alcohol intake at the population level. However, the lack of emphasis on refusal/resistance strategies as a feature of public health promotion campaigns is also understandable given the degree of stigma associated with alcoholism and dependent drinking (Room, 2005; Schomerus et al., 2010; Hill & Leeming, 2014). Indeed, a health promotion approach geared towards managing drink intake might need to strike a fine line between bolstering drink management skills and not generating concern among individuals that they are stigmatised "problem drinkers."

Measurement of Drink Refusal Skills

As introduced above, literature on the ability to refuse alcoholic drinks had until the 1990s primarily focused on refusal skills in the context of controlled drinking and among individuals undergoing treatment for alcohol use

disorders. This is evident in research designed to explore how social skills training may help individuals diagnosed with alcoholism to refuse alcoholic drinks in different situations (e.g. Foy, Miller, Eisler, & O'Toole, 1976).

Social Cognitive Theory (SCT: Bandura, 1986) has provided a useful framework for considering how skills relevant to resisting alcohol intake might be conceptualised and measured. Two key constructs in SCT have guided understanding of factors underpinning an individual's ability to manage alcohol intake: outcome expectancies and self-efficacy. Outcome expectancies are the positive and/or negative outcomes that an individual expects to be associated with a given behaviour. For example, an individual may expect alcohol use to be associated with positive outcomes such as having good time and/or negative outcomes such as behaving badly (Leigh & Stacy, 1993). Within the SCT, outcome expectancies are theorised to influence motivation to engage in the behaviour: if their balance of expectancies is more positive than negative, then a person will have greater motivation to drink. Self-efficacy refers to an individual's belief in their capacity to achieve particular goals. In the context of alcohol use self-efficacy can be conceptualised as belief in one's capacity to manage alcohol intake in specific situations and/or in general. SCT has formed the basis for measures of self-efficacy for refusing or resisting alcohol. We will now explore the emergence and application of some of these.

One way to operationalise self-efficacy for managing alcohol intake is "situational confidence," which refers to an individual's ability to resist alcohol in high risk situations. The Situational Confidence Questionnaire (SCQ: Annis, 1986) was developed and tested in several relapse prevention studies during the 1980s. The SCQ was configured to gauge individuals' skills in resisting triggers to drink posed by varied situations. These situational characteristics included emotions (e.g. unpleasant emotions, or conversely, pleasant times with others), physical sensation (e.g. physical discomfort), cognitive phenomena (e.g. urges and temptations), and interpersonal interactions (e.g. conflict with others, or social pressure to drink). Typically, the SCQ has been used in the context of substance dependence (Sandahl, Lindberg, & Rönnberg, 1990; Higgins, 1998). However, using a measure similar to the SCQ, a study of Chinese university students found that self-efficacy for alcohol self-regulation was related to mood, situational social pressures, and personal social pressures, and that students who possessed greater self-efficacy for alcohol self-regulation consumed alcohol less frequently (Ding, Newman, Buhs, & Shell, 2018).

Contemporary research includes many studies of the links between drink refusal skills and actual alcohol intake: some have focused on the general population, but many have been restricted to samples of university students. Much of this research has used measures other than the SCQ that have been

derived directly from SCT. For example, the construct of Drink Refusal Self-Efficacy (DRSE: Baldwin, Oei, & Young, 1993) addresses capacity to manage alcohol intake in specific contexts. Usefully, the DRSE measure distinguishes between three different domains in which skills at refusing alcoholic drinks may be tested. The "Social pressure DRSE" sub-scale relates to skills for refusing alcohol under conditions of perceived or actual social pressure—for example, "I am able to refuse alcohol when someone offers me a drink." The "Emotional DRSE" sub-scale assesses the capacity to refuse alcohol under conditions of emotional strain—for example, "I am able to refuse alcohol when I am angry." The "Opportunistic DRSE" sub-scale relates to skills for refusing alcohol in circumstances in which there are opportunities to consume alcohol—for example, "I am able to refuse alcohol when I first arrive home". Psychometric studies have provided considerable support for the reliability and validity of various DRSE measures (Oei, Hasking, & Young, 2005; Young, Hasking, Oei, & Loveday, 2007; Patton et al., 2018).

A key strength of the DRSE scale is that it provides a comprehensive account of the various contextual demands that individuals may encounter. A further strength is that there is no assumption that DRSE is global and unitary. For example, an individual may have no problems refusing alcohol when put under pressure in social situations, but may struggle to resist alcohol at a time/place where they are used to drinking alcohol—that is, this person is high in Social pressure DRSE, but low in Opportunistic DRSE. Determining sub-scale differences has practical value as this might indicate the specific skills an individual might need to strengthen to become better able to manage their alcohol intake in different scenarios.

DRSE has been widely explored in clinical and general population samples. One focus of early work was to determine differential predictive effects of DRSE among different drinker types (Baldwin et al., 1993; Lee & Oei, 1993; Oei, Fergusson, & Lee, 1998; Lee, Oei, & Greeley, 1999). For example, in a study of regular drinking adults in the USA, Lee et al. (1999) found higher scores on all DRSE sub-scales among lighter drinkers than heavy drinkers. Since this time, evidence has accumulated to show that DRSE scores predict drinking behaviour across different cultural contexts (e.g. Oei & Jardim, 2007), and in specific samples including dependent drinkers (Schomerus et al., 2011). Other studies have drawn attention to the synergies between DRSE and other psychological constructs, with a particular focus on DRSE as a meditating factor in the relationship between personality and alcohol consumption. For example, a study of college students in the USA found that although alcohol-related problems were significantly more common among people who had lower scores on measures of conscientiousness and higher

scores on measures of sensation-seeking, these links between personality variables and problematic drinking were weaker among those who had greater emotional and/or social pressure DRSE (Stevens, Littlefield, Blanchard, Talley, & Brown, 2016). In other research with undergraduates in the USA, the links between "drinking identity" (i.e. how identity-crucial an individual beliefs alcohol to be) and drinking practices were found to be partially mediated by both emotional DRSE and social pressure DRSE (Foster, Yeung, & Neighbors, 2014). Put another way, compared to other participants, people who reported that alcohol was central to their identity tended to drink more. However, if these people also had greater emotional and/or social DRSE, then the differences in alcohol intake were reduced. Further discussion of DRSE can be found in Chap. 4.

The Protective Behavioural Strategies scale (PBS: Martens et al., 2005) offers a different approach and an alternative framework for measuring capacity to manage alcohol intake or refuse drinks offers. The PBS originates from a harm reduction approach to alcohol consumption. Differing PBS measures have been used across studies but the range of protective behavioural strategies has commonly included: limiting alcohol consumption (e.g. stopping drinking at a predetermined time); specific drinking practices (e.g. avoiding drinking games); and reducing problems associated with alcohol consumption (e.g. refusing to travel in a car driven by someone who has been drinking). A recent comprehensive review drew attention to inconsistency between studies in terms of items included in PBS scales, and concerns about the psychometric properties of PBS measures (Pearson, 2013). Concerns that most PBS studies have been cross-sectional in design have been partly addressed in a study conducted in the USA that provided evidence that PBS sub-scales predict a range of negative alcohol-related consequences (e.g. social/interpersonal problems; poor self-care) at four- to six-week follow-up (Treloar, Martens, & McCarthy, 2015). An advantage of the PBS relative to other scales is its formulation of a broader range of context-related strategies relevant to understanding whether an individual is likely to be successful at refusing drinks.

Other refusal skills measures have been developed and empirically explored. For example, Shope et al.'s (1993) "refusal skill" scale placed emphasis on the tone and character of an individual's performance voice when refusing an alcoholic drink. This study focused on 14- to 19-year-old students in the USA, and data collection entailed participation in a brief acted out scene in which researchers would play the part of peers trying to pressure participants into drinking. Researcher ratings of how well the participant refused the offer to consume alcohol were then made. Some rating items were designed to

gauge the convincingness of an individual's effort to refuse (e.g. "Overall, considering what was said, and how it was said, how convincing was the student's refusal"). Other ratings drew attention to features of tone (e.g. "How firm was the student's voice?"). Some items in Shope et al.'s (1993) scale act as non-verbal/postural proxies for refusal (e.g. "Did the student make eye contact?"). One clear advantage of this measurement approach is that it accommodates differing rater viewpoints about how successfully an individual had refused alcohol drinks. A second advantage is the focus on linguistic and paralinguistic information which may be relevant to the success of an individual's refusal behaviour. Clearly, recording this volume of information about drink refusal brings practical disadvantages (e.g. obtaining inter-coder agreement about the quality of a refusal performance) but the approach provides an important shift away from conceptualising "drink refusal skills" at the purely intra-individual of self-report measures.

Qualitative Exploration of Drink Refusal Skills

The discussion of drink refusal measures above highlighted how individuals might be rated differently on pre-defined criteria. These measures have provided a useful way of distinguishing between different types of drink refusal strategies, and they are useful in two ways: first, for identifying individuals who may lack skills in particular domains; and second, for guiding the development of interventions designed to enhance drink refusal skills (see below). However, quantitative approaches do not necessarily allow an understanding of the experience of successfully or unsuccessfully attempting to manage alcohol intake and/or refuse alcohol in specific situations.

Qualitative research has also contributed understanding of strategies involved in managing alcohol intake and refusing drinks by drawing attention to how features of talk and interaction might be involved in successfully refusing alcohol drinks. Qualitative studies have been particularly useful in highlighting the relational dynamics involved in refusing drinks (e.g. how pressure to drink might emerge during everyday conversation). In this sub-section we provide illustrations of how qualitative studies have helped enhance understanding of drink refusal skills.

Some qualitative studies have focused on particular samples of individuals (e.g. Bartram, Eliott, & Crabb, 2017; Conroy & de Visser, 2014). For example, Conroy and de Visser's (2014) UK-based research has provided insights into refusal strategies used by young adults who do not drink alcohol: some lifelong abstainers, and some who became non-drinkers more recently.

In-depth experiential interviews underscored key difficulties involved in successfully evading scrutiny over the decision not to drink while in the company of peers who do drink. Non-drinkers' accounts revealed that successfully managing drink offers could involve strategic switching between being direct (e.g. "No thanks, I don't drink alcohol") and being less direct by telling "white lies" (e.g. "I'm on antibiotics"). Interviewees also reported the importance of pre-emptive measures to close off rhetorical space for being pressured to drink or being pressured to give an account of oneself as a non-drinker. This is apparent in an extract from one of the interviews:

> I started to avoid drinking situations and going out with certain groups of people because I felt uncomfortable in those situations. A lot of the time I would give in to peer pressure and end up having a few drinks when I'd gone out with every intention not to. When I've quit smoking […] you know, just by sitting around other people smoking, or having people smoking, or people offering you a cigarette, it all puts pressure on you. (Conroy & de Visser, 2014, p. 545)

In this quote, Michelle identified various challenges faced by an individual when refusing to drink alcohol during a social situation. Speaking about her historical drinking practices, Michelle spoke to the particular vulnerability faced from the position of someone socially identifiable as a "moderate drinker" in a situation in that there will always be an expectation that they could drink more. Although moderate drinkers may face this pressure to drink, being identified as a non-drinker may mean being able to close down any perceived opportunities to be pressured to drink. Interviewees also referred to the value of having friends who are loyal and committed around them when refusing alcoholic drinks. These findings resonate with recent discussion of the reciprocal relationships between friendship quality and drinking practices (Conroy & MacLean, 2020).

Interventions to Enhance Drink Refusal Skills

Interventions designed to promote moderate drinking have sometimes been geared towards enhancing skills involved in managing alcohol intake or refusing drinks. In this section, we outline a selection of interventions that have employed drinks refusal measures.

Several studies in the health psychology literature have reported interventions involving mental imagery exercises designed to enhance motivation to drink in moderation (e.g. Conroy, Sparks, & de Visser, 2015; Hagger et al.,

2012). In such studies, people are encouraged to imagine and/or write about specific events, actions, or outcomes with the express purpose of increasing motivation toward a defined target action. For example, imagining and/or writing about specific strategies to be employed to successfully drink alcohol in moderation for the forthcoming week would be expected to increase motivation to drink in moderation. Conroy and Hagger (2018) conducted a systematic review of mental imagery interventions in the context of physical health behaviour, and Chap. 21 of this book addresses mental imagery interventions in the specific context of alcohol use. Here we outline the only study to have explored the impact of a "process" mental imagery exercise—that is, an intervention exercise specifically designed to encourage participants to imagine strategies that could be used to refuse alcohol (Conroy et al., 2015). In that study, university students were randomly allocated to a non-intervention control group, or a "process condition" in which they were directed to imagine and write about the strategies that they could use to reduce their alcohol intake during a situation involving alcohol consumption. Participants were then followed-up twice over a one-month period. The analyses revealed significant reductions in HED episodes among students in the process condition, but no such significant changes among the control group.

Other studies have included measures of drinks refusal (e.g. DRSE) as part of the measurement of capacity for refusing alcohol. For example, longitudinal studies of participants in the UK's "Dry January" have revealed that greater DRSE going into the one-month alcohol abstinence challenge is associated with a greater likelihood of completing the month of abstinence (de Visser, Robinson, & Bond, 2016). This is perhaps not surprising given the material covered above. However, abstinence challenges like Dry January also provide people with an opportunity to develop skills and confidence in managing potential opportunities to drink. Indeed, research has revealed that participants in Dry January experience increases in the social, emotional, and opportunistic domains of DRSE as well as improvements in general self-efficacy (de Visser et al., 2016; de Visser & Nicholls, 2020). Furthermore, research has also revealed positive feedback loops such that those who complete Dry January have larger improvements in DRSE than those who do not make it through the month without drinking. Structural equation modelling has shown that the observed increases in DRSE help to explain why people who successfully complete Dry January tend to drink less in the months following the end of the campaign (de Visser et al., 2016).

This material suggests that temporary abstinence challenges provide opportunities to develop skills and self-efficacy that persist. However, there is also emerging evidence that it is important to provide advice and support to

people undertaking temporary abstinence challenges (de Visser & Nicholls, 2020). For example, Dry January provides people with a supported opportunity to develop and practice the skills required to resist temptation, expectation or pressure to drink. The website and other supporting material provide suggestions to help people through a one-month abstinence challenge: alcohol-free socialising, finding satisfying alcohol-free drinks, managing cravings and set-backs. In addition to providing tips and advice, it also contains motivating information about the likely benefits of not drinking for sleep, psychological well-being, energy levels, appearance, and personal finances.

Despite the large volume of studies employing measures of DRSE, very few have used the DRSE construct as a basis for delivering drink refusal training interventions. One exception to this is a study that provided a drink refusal skills training module as part of a 16-week combined behavioural intervention among 776 alcohol-dependent individuals in the USA (Witkiewitz, Donovan, & Hartzler, 2012). The intervention focused on enhancing drink refusal skills under conditions of social pressure and was tailored to each individual's social circumstances. Study findings revealed that compared to the control group, participants who received drink refusal skills training drank on significantly fewer days during treatment and up to one year following treatment. An alternative approach to enhancing DRSE is exemplified in ongoing work on school-based alcohol education in the UK. Based on earlier quantitative and qualitative research highlighting the influence of DRSE on secondary school students' alcohol use (de Visser et al., 2014; Graber et al., 2016), de Visser et al. (2015); de Visser, Graber, Abraham, Hart, and Memon, (2020) developed and evaluated interactive alcohol education sessions. The lessons focused on helping people to enhance their DRSE by developing skills and strategies to manage temptations, expectation, and pressure to drink. Although the programme was well-received by students and teachers, a small-scale trial revealed non-significant intervention effects on DRSE and alcohol use. Although there appears to be some promise in interventions focused on DRSE, there is a need to explore how to maximise the short- and long-term impact of drink refusal skills training, and to expand this into studies of the general population.

Proposing a Stage-Based Approach to Managing Alcohol Intake

The range of material covered in this chapter demonstrates the value of developing conceptual models and empirical evidence to enhance understanding of the information, motivation, and behavioural skills required to manage

alcohol intake and to refuse alcohol. The empirical evidence discussed in this chapter clearly shows that people who are better informed, more motivated, and more highly skilled are less likely to consume alcohol in ways that are harmful to the health and well-being of themselves of others. However, if we want individuals to change their behaviour, then it is important to consider the processes through which behaviour change takes place.

Health psychology has offered several "processes of change" models that specify the different stages through which an individual would pass before longer-term behaviour change could be said to have occurred (e.g. Schwarzer, 1999). Process of change models include the "Transtheoretical Model" (TTM: Prochaska & DiClemente, 1984), the "Precaution Adoption Process Model" (PAPM: Weinstein, 1988) and the "Health Action Process Approach" (HAPA: Schwarzer & Luszczynska, 2008). The HAPA emphasises that health behaviours are adopted and maintained across distinctive motivational and volitional phases. It emphasises the importance of self-efficacy as an influential cognitive factor that is influential at all stages (Bandura 1986). The HAPA (Fig. 14.2) provides a useful theoretical and diagrammatic way of specifying how skills and capacities involved in refusing alcohol across situations cluster within particular stages. For example, "task self-efficacy"—incorporating DRSE and behavioural skills—would be required in order to deflect challenges to a decision not to drink alcohol during a specific social situation.

Fig. 14.2 Health action process approach. (Retrieved from http://www.hapa-model.de)

However, additional resources and skills would be required to maintain moderate drinking over a longer period: this is reflected in the construct "maintenance self-efficacy" and its associated skills. Furthermore, "recovery self-efficacy" and its associated skills would be required to resume moderate drinking or non-drinking after a setback or relapse. Recognising distinctions between these stage-specific psychological constructs is important because it demonstrates how different beliefs and skills may be required at each stage. Exploring distinct DRSE influences at each HAPA stage as an individual attempts to shift from habitual harmful drinking to habitual moderate alcohol consumption could be one avenue for future research. Stage models also help to explain why some people are able to initiate changes to their drinking in the short term, but fail to translate this into sustained longer-term behaviour change.

The HAPA usefully acknowledges temporally-orientated dimensions of SCT constructs. For example, it distinguishes between the influence of "maintenance self-efficacy" at the action planning phase and "recovery self-efficacy" at the action phase. This approach contrasts with many other health psychology models, which take a linear approach to predicting behaviour. The TTM—also referred to as the "Stages of Change" Model—takes this a step further by modelling behaviour change as a potentially cyclical process (Prochaska & DiClemente, 1984). The early part of the model is linear: people who are unaware of the need to change their unhealthy or risky behaviour are in the "pre-contemplation" stage. When people become aware of the need to change their behaviour, they enter the "contemplation" stage in which they weigh up the benefits and drawbacks of their current behaviour and of new patterns of behaviour. Those who decide that it is best to change then enter the "preparation" or "planning" stage in which they think about how they will enact their planned behaviour change. Once they are ready to change, people enter the "action" stage, and from here the linear model becomes (potentially) cyclical. People who are able to establish a new pattern of behaviour enter the "maintenance" stage. Those who are unable to establish a new pattern of behaviour and relapse to earlier behaviour may return to either (a) "contemplation"—in which they re-consider the benefits and drawbacks of behaviour change as well as their capacity to change, or (b) "planning"—in which they think about how they can better prepare themselves to enact their planned behaviour change.

We now revisit the IMB introduced earlier in this chapter. It provided a framework for encapsulating the different elements identified as relevant to "managing alcohol intake"—that is, holding accurate information, being

motivated to change, and possessing the behavioural skills required to drink alcohol in moderation. There are some synergies between the TTM and the IMB. The "Information" part of the IMB could be likened to a shift from pre-contemplation to contemplation, the "Motivation" part of the IMB could be likened to a shift from contemplation to planning, and the "Behavioural skills" part of the IMB could be likened to the progression from planning to action and potential maintenance of behaviour change. The value of the TTM compared to many other psychological models of behaviour and behaviour change is that it explores and explains processes of change, and there is evidence for its value in explaining recovery from problematic alcohol use (Heather et al., 2009).

One limitation of the TTM (applicable to most stage-based and social-cognitive approaches) is the failure to account for less deliberative or unconsciously driven behaviour. Dual-process models overcome this issue by taking into account controlled and automatic process pathways underpinning drinking behaviour (Deutsch & Strack, 2006; Moss & Albery, 2009; Strack & Deutsch 2004). Such models acknowledge that in many cases, behaviour is influenced by reasoned action based on rational decision making, but they also emphasise that in many situations, behaviour is influenced by habitual patterns of behaviour and automatic responses triggered by situational cues and affective states. The extent to which behaviour is reasoned rather than automatic is determined by "boundary conditions," including emotional states and the modifying influence of intoxicants such as alcohol. In the case of alcohol use, much behaviour may be "habitual" at an individual or social level—for example, an after-work drink, a drink with dinner; celebration of milestones or transitions. Furthermore, intoxication tends to result in behaviour being influenced less by reasoned processes, and more by habitual processes or affective states. Dual-process models therefore acknowledge that the processes of change outlined above are influenced by people's habits, internal emotional states, and micro-social contexts. See Chap. 3 for further discussion of dual-process models as applied to drinking behaviours.

Discussion above has highlighted that encouraging longer-term behaviour change is likely to require success in addressing multiple relevant components (e.g. enhancing motivation, developing drink refusal skills). Discussion also emphasises the advantages of adopting a cyclical, stage-based approach to thinking about these features of managing alcohol intake—indeed, recognising that "the best-laid plans" may come unstuck may be critical to developing intake management skills that endure in the longer-term.

Conclusion

The material presented in this chapter has focused on research concerning managing alcohol intake in the context of wide-ranging pressures to drink. Understanding how alcohol intake is managed requires recognition of several distinct components: navigating guidelines for alcohol intake; acquiring and deploying the skills required to refuse alcohol; enhancing and maintaining motivation to drink moderately. Future work, including the application of stage-based models, could usefully expand on what is known by considering how best to support people to initiate and maintain changes to their alcohol intake.

References

Annis, H. M. (1986). *A relapse prevention model for the treatment of alcoholics*. New York, NY: Pergamon.

Australian Institute of Health and Welfare. (2017). *National drug strategy household survey 2016: Detailed findings* (Drug statistics series no. 31. Cat. No. PHE 214). Canberra, Australia: AIHW.

Baldwin, A. R., Oei, T. P., & Young, R. (1993). To drink or not to drink: The differential role of alcohol expectancies and drinking refusal self-efficacy in quantity and frequency of alcohol consumption. *Cognitive Therapy and Research, 17*, 511–530.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bartram, A., Eliott, J., & Crabb, S. (2017). 'Why can't I just not drink?' A qualitative study of adults' social experiences of stopping or reducing alcohol consumption. *Drug and Alcohol Review, 36*, 449–455.

Boniface, S., Kneale, J., & Shelton, N. (2013). Actual and perceived units of alcohol in a self-defined "usual glass" of alcoholic drinks in England. *Alcoholism: Clinical & Experimental Research, 37*, 978–983.

Conroy, D. & de Visser, R.O. (2014). Being a non-drinking student: an interpretative phenomenological analysis. *Psychology & Health, 29*, 536–551.

Conroy, D., Sparks, P., & de Visser, R.O. (2015). Efficacy of a non-drinking mental simulation intervention for reducing student alcohol consumption. *British Journal of Health Psychology, 20*, 688–707.

Conroy, D., & Hagger, M. S. (2018). Imagery interventions in health behavior: A meta-analysis. *Health Psychology, 37*(7), 668–679.

Conroy, D. E., & MacLean, S. (2020). Friendship and alcohol use among young adults: A cross-disciplinary perspective. In D. E. Conroy & F. Measham (Eds.), *Young Adult Drinking Styles: Current Perspectives on Research, Policy and Practice* (pp. 153–172). London, UK: Palgrave-Macmillan.

Coomber, K., Jones, S. C., Martino, F., & Miller, P. G. (2017). Predictors of awareness of standard drink labelling and drinking guidelines to reduce negative health

effects among Australian drinkers. *Drug & Alcohol Review, 36*, 200–209. https://doi.org/10.1111/dar.12383

Cooper, M. L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological Assessment, 6*, 117–128.

de Visser, R. O. (2015). Personalized feedback based on a drink-pouring exercise may improve knowledge of, and adherence to, government guidelines for alcohol consumption. *Alcoholism: Clinical & Experimental Research, 39*, 317–323.

de Visser, R. O., & Birch, J. D. (2012). My cup runneth over: Young people's lack of knowledge of low-risk drinking guidelines. *Drug & Alcohol Review, 31*, 206–212.

de Visser, R. O., Brown, C. E., Cooke, R., Cooper, G., & Memon, A. (2017). Using alcohol unit-marked glasses enhances capacity to monitor intake: Evidence from a mixed-method intervention trial. *Alcohol & Alcoholism, 52*, 206–212.

de Visser, R.O., Graber, R., Abraham, S.C.S., Hart, A., Memon, A. (2020). Resilience-based alcohol education: Developing an intervention; evaluating feasibility and barriers to implementation using mixed methods. *Health Education Research.*

de Visser, R. O., Graber, R., Hart, A., Abraham, C., Scanlon, T., Watten, P., & Memon, A. (2015). Using qualitative methods within a mixed-methods approach to developing and evaluating interventions to address harmful alcohol use among young people. *Health Psychology, 34*, 349–360.

de Visser, R. O., Hart, A., Abraham, C., Graber, R., Scanlon, T., & Memon, A. (2014). How alike are young non-drinkers, former-drinkers, low-risk drinkers, and hazardous drinkers? *Addictive Behaviors, 39*, 1258–1264.

de Visser, R. O., & Nicholls, J. (2020). Temporary abstinence during dry January: Predictors of success; impact on well-being and self-efficacy. *Psychology & Health, 35*, 1293–1305.

de Visser, R. O., Robinson, E., & Bond, R. (2016). Voluntary temporary abstinence from alcohol during "Dry January" and subsequent alcohol use. *Health Psychology, 35*, 281–289.

Deutsch, R., & Strack, F. (2006). Reflective and impulsive determinants of addictive behavior. In R. W. Wiers & A. W. Stacy (Eds.), *Handbook of implicit cognition and addiction* (pp. 45–57). London, UK: Sage.

Ding, L., Newman, I. M., Buhs, E. S., & Shell, D. F. (2018). Influence of peer pressure and self-efficacy for alcohol self-regulation on Chinese university physical education students' drinking behaviour. *Advances in Physical Education, 8*, 46–57.

Fisher, W. A., Fisher, J. D., & Harman, J. (2003). The information-motivation-Behavioral skills model: A general social psychological approach to understanding and promoting health behavior. In J. Suls & K. A. Wallston (Eds.), *Social psychological foundations of health and illness* (pp. 82–106). London, UK: Blackwell.

Foster, D. W., Yeung, N., & Neighbors, C. (2014). I think I can't: Drink refusal self-efficacy as a mediator of the relationship between self-reported drinking identity and alcohol use. *Addictive Behaviors, 39*, 461–468.

Foy, D. W., Miller, P. M., Eisler, R. M., & O'Toole, D. H. (1976). Social-skills training to teach alcoholics to refuse drinks effectively. *Journal of Studies on Alcohol, 37*, 1340–1345.

Furtwängler, N., & de Visser, R. O. (2017a). Motivation to adhere to unit-based guidelines for alcohol consumption and ability to do so is limited among university students. *Drugs: Education, Prevention and Policy, 24*, 418–425.

Furtwängler, N. A., & de Visser, R. O. (2017b). University students' beliefs about unit-based guidelines: A qualitative study. *Journal of Health Psychology, 22*, 1701–1711.

Furtwängler, N. A. F. F., & de Visser, R. O. (2013). Lack of international consensus in low risk drinking guidelines. *Drug & Alcohol Review, 32*, 11–18.

GBD 2016 Alcohol Collaborators. (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*, 1015–1035.

Graber, R., de Visser, R. O., Abraham, C., Memon, A., Hart, A., & Hunt, K. (2016). Staying in the 'sweet spot': A resilience-based analysis of the lived experience of low-risk drinking and abstention among British youth. *Psychology & Health, 31*, 79–99.

Hagger, M. S., Lonsdale, A., & Chatzisarantis, N. L. (2012). A theory-based intervention to reduce alcohol drinking in excess of guideline limits among undergraduate students. *British Journal of Health Psychology, 17*(1), 18–43.

Heather, N., Hönekopp, J., Smailes, D., & The UKATT Research Team. (2009). Progressive stage transition does mean getting better: A further test of the transtheoretical model in recovery from alcohol problems. *Addiction, 104*, 949–958.

Higgins, B. D. (1998). *Situational confidence, affect intensity and object relations in alcohol and cocaine-dependent men*. Unpublished doctoral dissertation, Columbia University, USA.

Hill, J. V., & Leeming, D. (2014). Reconstructing 'the alcoholic': Recovering from alcohol addiction and the stigma this entails. *International Journal of Mental Health & Addiction, 12*, 759–771.

Hobin, E., Vallance, K., Zuo, F., Stockwell, T., Rosella, L., Simniceanu, A., … Hammond, D. (2018). Testing the efficacy of alcohol labels with standard drink information and national drinking guidelines on consumers' ability to estimate alcohol consumption. *Alcohol & Alcoholism, 53*, 3–11.

Hodgson, R. J. (1989). Resisting temptation: A psychological analysis. *British Journal of Addiction, 84*, 251–257.

Klingemann, H., & Gmel, G. (Eds.). (2001). *Mapping the social consequences of alcohol consumption*. Dordrecht, The Netherlands: Kluwer.

Kuntsche, E., Knibbe, R., Gmel, G., & Engels, R. (2005). Why do young people drink? A review of drinking motives. *Clinical Psychology Review, 25*, 841–861.

Lee, N. K., & Oei, T. P. (1993). The importance of alcohol expectancies and drinking refusal self-efficacy in the quantity and frequency of alcohol consumption. *Journal of Substance Abuse, 5*, 379–390.

Lee, N. K., Oei, T. P., & Greeley, J. D. (1999). The interaction of alcohol expectancies and drinking refusal self-efficacy in high and low risk drinkers. *Addiction Research, 7*, 91–102.

Leigh, M. C., & Stacy, A. W. (1993). Alcohol outcome expectancies: Scale construction and predictive utility in higher order confirmatory models. *Psychological Assessment, 5*, 216–229.

Lovatt, M., Eadie, D., Meier, P. S., Li, J., Bauld, L., Hastings, G., & Holmes, J. (2015). Lay epidemiology and the interpretation of low-risk drinking guidelines by adults in the United Kingdom. *Addiction, 110*, 1912–1919.

Marlatt, G. A., & George, W. H. (1984). Relapse prevention: Introduction and overview of the model. *British Journal of Addiction, 79*, 261–273.

Martens, M. P., Ferrier, A. G., Sheehy, M. J., Corbett, K., Anderson, D. A., & Simmons, A. (2005). Development of the protective behavioral strategies survey. *Journal of Studies on Alcohol, 66*, 698–705.

McNally, K., Noonan, L. L., Cameron, M., Phillips, K., Baidoobonso, S., & Sabapathy, D. (2019). Public awareness of low-risk alcohol use guidelines. *Health Promotion Practice, 20*, 905–913.

Moss, A. C., & Albery, I. P. (2009). A dual-process model of the alcohol–behavior link for social drinking. *Psychological Bulletin, 135*, 516–530.

Nelson, D. E., Jarman, D. W., Rehm, J., Greenfield, T. K., Rey, G., Kerr, W. C., … Naimi, T. S. (2013). Alcohol-attributable cancer deaths and years of potential life lost in the United States. *American Journal of Public Health, 103*, 641–648.

Oei, T. P., Fergusson, S., & Lee, N. K. (1998). The differential role of alcohol expectancies and drinking refusal self-efficacy in problem and nonproblem drinkers. *Journal of Studies on Alcohol, 59*, 704–711.

Oei, T. P., Hasking, P. A., & Young, R. M. (2005). Drinking refusal self-efficacy questionnaire-revised (DRSEQ-R): A new factor structure with confirmatory factor analysis. *Drug and Alcohol Dependence, 78*, 297–307.

Oei, T. P., & Jardim, C. L. (2007). Alcohol expectancies, drinking refusal self-efficacy and drinking behaviour in Asian and Australian students. *Drug and Alcohol Dependence, 87*(2–3), 281–287.

Patton, K., Connor, J. P., Rundle-Thiele, S., Dietrich, T., Young, R. M., & Gullo, M. J. (2018). Measuring adolescent drinking-refusal self-efficacy: Development and validation of the drinking refusal self-efficacy questionnaire-shortened adolescent version (DRSEQ-SRA). *Addictive Behaviors, 81*, 70–77.

Pearson, M. R. (2013). Use of alcohol protective behavioral strategies among college students: A critical review. *Clinical Psychology Review, 33*, 1025–1040.

Prochaska, J. O., & DiClemente, C. C. (1984). *The transtheoretical approach: Towards a systematic eclectic framework*. Homewood, IL: Dow Jones Irwin.

Quick, B. L., & Bates, B. R. (2010). The use of gain- or loss-frame messages and efficacy appeals to dissuade excessive alcohol consumption …. *Journal of Health Communication, 15*, 603–628.

Rehm, J. (2011). The risks associated with alcohol use and alcoholism. *Alcohol Research & Health, 34*, 135–143.

Room, R. (2005). Stigma, social inequality and alcohol and drug use. *Drug & Alcohol Review, 24*, 143–155.

Rosenberg, G., Bauld, L., Hooper, L., Buykx, P., Holmes, J., & Vohra, J. (2018). New national alcohol guidelines in the UK: Public awareness, understanding and behavioural intentions. *Journal of Public Health, 40*, 549–556.

Rothman, A. J., & Salovey, P. (1997). Shaping perceptions to motivate healthy behavior: The role of message framing. *Psychological Bulletin, 121*, 3–19.

Sandahl, C., Lindberg, S., & Rönnberg, S. (1990). Efficacy expectations among alcohol-dependent patients: A Swedish version of the situational confidence questionnaire. *Alcohol & Alcoholism, 25*, 67–73.

Schomerus, G., Corrigan, P. W., Klauer, T., Kuwert, P., Freyberger, H. J., & Lucht, M. (2011). Self-stigma in alcohol dependence: consequences for drinking-refusal self-efficacy. *Drug and Alcohol Dependence, 114*(1), 12–17.

Schomerus, G., Lucht, M., Holzinger, A., Matschinger, H., Carta, M. G., & Angermeyer, M. C. (2010). The stigma of alcohol dependence compared with other mental disorders: A review of population studies. *Alcohol & Alcoholism, 46*, 105–112.

Schwarzer, R. (1999). Self-regulatory processes in the adoption and maintenance of health behaviors. *Journal of Health Psychology, 4*, 115–127.

Schwarzer, R., & Luszczynska, A. (2008). How to overcome health-compromising behaviors: The health action process approach. *European Psychologist, 13*, 141–151.

Shope, J. T., Copeland, L. A., Maharg, R., Dielman, T. E., & Butchart, A. T. (1993). Assessment of adolescent refusal skills in an alcohol misuse prevention study. *Health Education Quarterly, 20*(3), 373–390.

Solomon, K. E., & Annis, H. M. (1990). Outcome and efficacy expectancy in the prediction of post-treatment drinking behaviour. *British Journal of Addiction, 85*, 659–665.

Stevens, A. K., Littlefield, A. K., Blanchard, B. E., Talley, A. E., & Brown, J. L. (2016). Does drinking refusal self-efficacy mediate the impulsivity–problematic alcohol use relation? *Addictive Behaviors, 53*, 181–186.

Strack, F., & Deutsch, R. (2004). Reflective and impulsive determinants of social behavior. *Personality and Social Psychology Review, 8*, 220–247.

Treloar, H., Martens, M. P., & McCarthy, D. M. (2015). The protective behavioral strategies Scale-20: Improved content validity of the serious harm reduction subscale. *Psychological Assessment, 27*(1), 340–346.

Weinstein, N. D. (1988). The precaution adoption process. *Health Psychology, 7*(4), 355.

Weitzman, E. R. (2004). Poor mental health, depression, and associations with alcohol consumption, harm, and abuse in a national sample of young adults in college. *Journal of Nervous and Mental Disease, 192*, 269–277.

Witkiewitz, K., Donovan, D. M., & Hartzler, B. (2012). Drink refusal training as part of a combined behavioral intervention: Effectiveness and mechanisms of change. *Journal of Consulting and Clinical Psychology, 80*, 440.

Wittmann, M., Paulus, M., & Roenneberg, T. (2010). Decreased psychological well-being in late 'chronotypes' is mediated by smoking and alcohol consumption. *Substance Use & Misuse, 45*, 15–30.

Young, R. M., Hasking, P. A., Oei, T. P., & Loveday, W. (2007). Validation of the drinking refusal self-efficacy questionnaire—Revised in an adolescent sample (DRSEQ-RA). *Addictive Behaviors, 32*, 862–868.

Zhao, J., Stockwell, T., & Thomas, G. (2015). An adaptation of the yesterday method to correct for under-reporting of alcohol consumption and estimate compliance with Canadian low-risk drinking guidelines. *Canadian Journal of Public Health, 106*, e204–e209.