Smartphone Apps and their effectiveness in supporting Alcohol Reduction

I was asked to evaluate the usefulness in these applications and how effective they may prove in aiding individuals to reduce alcohol consumption.

Traditional methods have relied upon face to face interventions with those trained in harm reduction strategies and usually supported by peer intervention groups (for example Alcoholics Anonymous).

It is important to consider that there is a clear distinction between an individual who recognises that their consumption may be harmful and thus seeks to actively reduce that consumption and an individual who exhibits alcohol dependence which can be regarded as a progressive disease, physical, psychological and 'spiritual' in nature. In the latter case it is highly unlikely that these apps would have any role given it usually takes sustained psychological intervention to get the individual to recognise the nature of the problem (and any underlying issues) and considerable ongoing support to maintain sobriety.

This paper is therefore solely confined to consider how effective these apps may be in aiding an individual to reduce alcohol consumption having recognised it may be having a detrimental effect upon their physical or psychological well-being or be part of conflicting relationships with others.

Apps available in UK

Drink Coach: Haringey advisory group on Alcohol -"with drink coach you will be able to"

- Keep track of units, calories and cost
- View and share seven-day summaries of your drinking
- Book a one-to-one session with a drinks coach
- Set location and time-based reminders
- Set and share goals
- Track hangovers, arguments cravings and accidents
- Watch mindfulness and breathing exercises to manage cravings.

One You Drink Free Days - Public Health England -"Make a pledge to take a few days off"

- Support in tracking and cutting down on booze
- Understand your risk levels
- Pledge and nominate drink free days

Drink Less: - UCL -"cut down on how much you drink"

- Keep track of drinking and see how it changes
- Set goals and obtain feedback
- Complete a daily mood diary
- Games designed to strengthen your resolve
- Create plans for dealing with situations

Drinkaware -Alcohol Education Charity – "must have lifestyle ap"

- Track units and calories
- Learn about health benefits
- Set goals
- Personalised feedback
- Track cost and savings
- Database of alcohol brands and risk locations.

Alcohol Tracker – Dr Melvyn Zhang – "self help application"

- Track total alcohol consumption
- Notification if NICE guidelines exceeded
- Information about dependence and medical complications
- Psychological interventions
- Audit questionnaire to determine if help needed

There are many others and the above just represent the 'top hits' when searching on an iphone.

There has been very little research into the effectiveness of these apps however I append information published by BMC in 2017 relating to the DrinkAware app which is probably the best known.

Background

Smartphone applications ("apps") offer promise as tools to help people monitor and reduce their alcohol consumption. To date, few evaluations of alcohol reduction apps exist, with even fewer considering apps already available to the public. The aim of this study was to evaluate an existing publically available app, designed by Drinkaware, a UK-based alcohol awareness charity.

Methods

We adopted a mixed-methods design, analysing routinely collected app usage data to explore user characteristics and patterns of usage. Following this, in-depth interviews were conducted with a sub-sample of app users to examine perceptions of acceptability, usability and perceived effectiveness, as well as to provide recommendations on how to improve the app.

Results

One hundred nineteen thousand seven hundred thirteen people downloaded and entered data into the app over a 13-month period. High attrition was observed after 1 week. Users who engaged with the app tended to be "high risk" drinkers and to report being motivated "to reduce drinking" at the point of first download. In those who consistently engaged with the app over time, self-reported alcohol consumption levels reduced, with most change occurring in the first week of usage. Our qualitative findings indicate satisfaction with the usability of the app, but mixed feedback was given regarding individual features. Users expressed conflicting views concerning the type of feedback and notifications that the app currently provides. A common preference was expressed for more personalised content.

Conclusions

The Drinkaware app is a useful tool to support behaviour change in individuals who are already motivated and committed to reducing their alcohol consumption. The Drinkaware app would benefit from greater personalisation and tailoring to promote longer term use. This evaluation provides insight into the usability and acceptability of various app features and contains a number of recommendations for improving user satisfaction and the potential effectiveness of apps designed to encourage reductions in alcohol consumption.

Reduction of alcohol usage requires behavioural change by an individual, psychologists, therapists and harm reduction counsellors are well versed in utilising behaviour change techniques (BCT's) in working with individuals to reduce/negate consumption. It is not my intention to outline these here (42 techniques have been identified) but research has found that many of these are lacking in smartphone apps. There has been a more detailed study of the DrinkAware app (only available in the UK) and the conclusions are as follows:

Summary of main findings

This mixed-methods evaluation of the Drinkaware app found that the app is disproportionately downloaded by higher risk drinkers (compared to UK averages), with high attrition observed after 1 week. Users who specifically intended to reduce their drinking, or those who self-reported consuming higher levels of alcohol prior to download, were more likely to engage with the app over time (i.e. to record drinks consistently over multiple weeks) and to utilise the main BCTs contained in the app (e.g. setting goals, self-monitoring drinking and setting up "weak spot" alerts).

Based on this uncontrolled quantitative analysis of routinely collected app usage data, we remain unable to conclude with any certainty that the alcohol consumption of engaged users actually reduced as a result of continued interaction with the app. Among users who completed interviews, however, and in line with existing qualitative findings in this area, a view was clearly expressed that the Drinkaware app had helped to raise awareness of the amount of alcohol consumed, facilitated self-monitoring of intake and encouraged more mindful drinking. A number of users explicitly stated that the app had facilitated changes in their drinking behaviour. We do, however, acknowledge that these findings are limited in their generalisability and do not necessarily represent the views and usage patterns of non-engaged users or of those not willing to participate in qualitative interviews.

My own view is that the key to reduction in alcohol consumption is the motivation of the individual and that there are three key elements:

1. Recognition that there is either (a) a problem that needs addressing – either as a result of own observed behaviour or intervention from others. Or (b) a clearly perceived health benefit in reducing consumption

2. Having acknowledged the above and deciding to seek support, apps may play a part in this (and provide anonymity which may be important to the individual given that it is often perceived as somewhat 'shameful' to acknowledge) however given the general usage of alcohol as a social tool, a relaxant or indeed a substitute for more effective behaviours it can be difficult to achieve unless the health benefits are clearly identified (education) or identification is achieved in seeing it as part of a problem rather than a solution (therapy/counselling).

3. Observing the benefits (feel fitter/more rested/better performance) or reduction in conflict with others (domestic situation, work environment etc). Ongoing 'performance feedback'.

Apps may support the above but, in my view, do not (yet) represent as effective a method as face-to face interventions although they may aid a self-motivated individual to achieve their goals as part of a broader strategy.

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