



Does video e-learning improve pharmacy teams' attitudes and preparedness towards suicide prevention?

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ABSTRACT

Background: Evidence on the role of pharmacy teams in suicide prevention is growing. To support pharmacy teams, a video e-learning was produced by the Centre for Pharmacy Postgraduate Education (CPPE) involving an 'on-the-sofa' style group interview with people with personal and professional experience of suicide and suicide research.

Objective: The objective was to measure any change in attitudes and preparedness for suicide prevention, following a video e-learning produced for pharmacy staff.

Methods: People working in any sector of pharmacy in England and who accessed the training video were invited to complete a pre- and post- training questionnaire, between September 2019 and March 2021. Question types included demographics, experiences, attitudes as measured by the Attitudes to Suicide Prevention (ASP) scale, and preparedness. Descriptive statistics were used to summarize demographics and experience and paired *t*-tests were used to compare pre- and post- questionnaire responses.

Results: Both questionnaires were completed by 147 people. Most worked in community pharmacy (88%) and were pharmacists (64%) or pharmacy technicians (20%). Attitudes to suicide prevention improved significantly (pre:31.20 (SD 6.04); post:28.40 (SD 6.50), $p < 0.0001$) after watching the video, as did self-reported preparedness.

Conclusions: Pharmacy teams' self-reported attitudes and preparedness for suicide prevention improved after watching this suicide awareness video compared to baseline. Suicide awareness training tailored to pharmacy teams may be valuable, but the longitudinal impact of any suicide prevention training requires further exploration.

1. Introduction

In their LIVE LIFE implementation guide, the World Health Organization (WHO) identify capacity building as a cross-cutting foundation to international suicide prevention efforts.¹ This could include pharmacists and their teams whose social, clinical and holistic role of suicide prevention, and involvement in means restriction, has been recognised in the UK,^{2,3} Australia,⁴⁻⁷ Canada,^{4-6,8} Ireland⁹ and the USA.^{10,11} The proportion of pharmacists and their teams who self-reported prior training in suicide prevention ranged from 9% - 12% in the USA,¹⁰ England,² Ireland⁹ and Canada⁶; and 29% in Australia.⁶

Notwithstanding the differences in data collection, which requires caution for between-country comparisons, suicide prevention training for pharmacy teams is not universal. Yet, pharmacy teams have expressed a clear desire for such training.^{2-4,6,10,12}

The types and content of training for pharmacists and pharmacy students in suicide prevention has been reviewed by researchers in the USA¹³, and recently updated to include other countries.¹⁴ In selected regions or settings worldwide, suicide prevention training for pharmacists has been encouraged or mandated. Since 2018 pharmacists in Washington state have been required to undertake suicide prevention training as a condition of their licensure.¹³ In England, Zero Suicide

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Alliance (ZSA) training was incentivized in the pharmacy remuneration system via the community pharmacy contract in England, with 72,000 patient-facing staff having completed this by March 2021.¹⁵ There are examples of suicide prevention training via continuing professional education for pharmacists in the USA,¹⁶ and Japan¹⁷; and as a component of Mental Health First Aid (MHFA) training in the USA and Australia for pharmacists,^{18,19} community pharmacy staff²⁰ and pharmacy students.¹⁸ Generally, studies report improved attitudes, knowledge or confidence in suicide prevention as self-perceived. At the time of this study, there were no suicide awareness e-learning videos specifically developed for pharmacy teams. Since this study, the Pharm-SAVES brief intervention with case study has been shown to improve pharmacy students' knowledge and self-efficacy in suicide prevention in the USA.²¹

Suicide prevention or awareness training for pharmacists and their teams in England has not been evaluated. Therefore, the objective was to measure any change in attitudes and preparedness for suicide prevention, following a video e-learning produced for pharmacy staff.

2. Material and methods

2.1. Data collection

A suicide awareness video e-learning was hosted by the Centre for Pharmacy Postgraduate Education (CPPE) and remains available for viewing.^{2,22} CPPE is funded by Health Education England (HEE) to provide educational solutions for the National Health Service (NHS) pharmacy workforce across in England to maximise its contribution to improving patient care. The video e-learning aimed to explain pharmacy's role in supporting suicide prevention, describing how to support people who are thinking of or affected by suicide; and suggest resources that they could use to support patients. It was a 30-min video based on an 'on-the-sofa' style interview between the CPPE host (HB) and 4 participants: a person with lived experience of suicidality, a suicide bereavement specialist, a research psychiatrist, and research pharmacist. The CPPE host (co-author, HB) produced a crib sheet of topics which shared with the interviewees ahead of the filming, along with which concepts each interviewee might cover. This was used as a guide, but the ultimate content was organic, conversational, and minimally edited. The supporting written content was produced by the team at CPPE and advised by an expert in suicide prevention in pharmacy (co-author, HG) and provided some brief contextual background and follow-up support resources. The video e-learning method was selected as a format of educational delivery that CPPE have extensive experience in and a convenient resource, enabling broad reach to busy professionals.

Participants were invited to complete a pre-video questionnaire² and post-video questionnaire, hosted on the Qualtrics™ platform, when they accessed the suicide awareness e-learning. Awareness of the optional research associated with the e-learning package was generated in two ways: 1) through accessing the e-learning CPPE video; and 2) social media promotion of the CPPE e-learning video. The video and questionnaire were open to anyone who worked in pharmacy in England, in any sector, and in any role between September 2019 and March 2021. This was before and during the time period that ZSA was being completed by community pharmacy staff.¹⁵ Participation was optional, with those declining still able to access the materials, and there was no financial incentivization. To maintain anonymity and allow paired analyses, participants were required to keep the questionnaire open whilst watching the video on the CPPE platform and return to it after the video.

The Attitudes to Suicide Prevention (ASP) scale²³ was used. This scale has been validated in health professionals (Cronbach $\alpha = 0.77$) The possible ASP score range is 14–70 with lower aggregate score indicating more positive attitudes.²³ It comprises fourteen statements scored on a Likert scale with thirteen using strongly disagree to strongly agree, and the last item, "What proportion of suicide do you consider preventable" using none to all. Scores are summed, and the last item, along with item, "Working with suicidal patients is rewarding" are reverse scored.

Preparedness questions were adapted from those used by Painter et al.¹⁹ Demographic data, including age, gender, role, sector and personal experience; and questions on motivation for learning were also included. The study was approved by the School of Applied Sciences Science Research, Ethics, and Integrity Committee at the University of Huddersfield (SAS-REIC-19-0309-1).

2.2. Analysis

Data were managed and analysed using IBM SPSS® Statistics 26. Demographics and experiences were summarized using descriptives statistics and paired *t*-tests were used to compare pre- and post- questionnaire responses. Preliminary analyses ($n = 80$) have been published.²⁴

3. Results

3.1. Baseline characteristics

Of the 403 people who completed the pre-video questionnaire (previously published²), 147 (36.5%) completed the post-video questionnaire thus this analysis is restricted to this group. The baseline demographics of this group (Table 1) were not significantly different to the whole cohort.² During the timeframe, 1781 individuals accessed the programme resulting in a response rate of 22.6% (403/1781) for the initial questionnaire and 8.3% (147/1781) for the post-video questionnaire reported herein. Eighty-two percent were female, most worked in community pharmacy (88%) and were pharmacists (64%) or pharmacy technicians (20%). The most frequently cited motivations for training were awareness of suicide prevention training in the community pharmacy contract (43%) and as a national priority (40%). Personal experience, (21%) practice experience (18%), and recommendation by colleague (14%) were reasons given less often.

[^]will not sum to 100% as multiple options permitted *.

3.2. Attitudes to and preparedness for suicide prevention

Attitudes to suicide prevention improved significantly (pre:31.20 (SD 6.04); post:28.40 (SD 6.50), $p < 0.0001$) after watching the suicide awareness video (Table 2). This was consistent across individual measures except for 'making more funds available to appropriate health services would make no difference to the suicide rate' and 'people have the right to take their own lives'. Participants' self-reported preparedness significantly increased for each preparedness statement after watching the video.

4. Discussion

Immediately following a brief suicide awareness raising video e-learning, pharmacy teams reported improved attitudes and self-rated preparedness about suicide prevention. Motivations to view the video were awareness that suicide prevention is national priority and that it was included in the community pharmacy contract.

The video was intended to raise awareness of suicide, informed by evidence, rather than as evidence-based gatekeeper training. However, some of the themes covered had parallels with training programs for pharmacists and pharmacy students as summarized in Stover et al.'s scoping review.¹⁴ These included background and statistics, communication, and referral. Like the present study, most pharmacist or pharmacy student training on suicide prevention has been evaluated by pre- and post- self-assessment questionnaires with improvements shown in attitudes, knowledge or confidence relating to suicide prevention.^{16,25} The reductions in ASP score reported are comparable to those seen with other pharmacy-based suicide prevention training evaluations such as Cates et al. (pre: 33.1, (SD 4.3); post 30.0 (SD 6.6), $p < 0.001$)¹⁶ Pilbrow et al. reported improved attitudes and self-efficacy in suicide prevention

Table 1
Summary of baseline characteristics.

Demographic	Pre-post matched questionnaire respondents' baseline characteristics (n = 147), n (%)
Gender	
Male	27 (18%)
Female	120 (82%)
Age band	
≤24	11 (8%)
25–34	31 (21%)
35–44	29 (19%)
45–54	38 (26%)
55–64	35 (24%)
≥65	3 (2%)
Sectors of pharmacy	
Community	129 (88%)
Hospital	11 (8%)
Specialist mental health services	4 (3%)
General practice	3 (2%)
Care home	0 (0%)
Academia	1 (1%)
Other	2 (1%)
Role	
Pharmacist	94 (64%)
Pharmacy Technician	29 (20%)
Dispensing/pharmacy assistant	14 (10%)
Counter assistant (do not dispense)	5 (3%)
Pre-registration Pharmacist	2 (1%)
Pre-registration Pharmacy Technician	1 (1%)
Other	2 (1%)
Own Mental Health Diagnosis	
Yes	36 (25%)
No	98 (67%)
Not disclosed	13 (8%)
Someone close has attempted or died by suicide	
Yes	50 (35%)
No	92 (63%)
Not disclosed	5 (2%)
Previous suicide prevention training	
Yes	17 (11.6%)
No	129 (88.4%)
Missing	1 (<1%)
Motivation to engage in suicide awareness learning	
Awareness that suicide prevention was mentioned in the new pharmacy contract	63 (43%)
Awareness that suicide prevention is a national priority	59 (40%)
Experience in personal life	33 (21%)
Experience in practice	27 (18%)
Recommended by a colleague	21 (14%)

immediately and 6 months after an online, synchronous suicide prevention training of pharmacists in Tasmania, Australia.²⁶ Witry et al.¹⁸ surveyed pharmacy students somewhere between 6 and 18 months after MHFA training and 44% had reported asking someone if they were thinking about suicide, although they did not report comparative pre-training data. However, it is difficult to understand the impact of such changes in scores, particularly as self-assessment has been shown to overestimate competence.²⁷ The role of community pharmacy teams in appropriately referring patients is central to this gatekeeper role and has been recognised.^{2–4} Pharmacists encounter patients who have risks for suicide and communication with patients about thoughts, plans, and attempts occur in the patient care process. In a survey of Australian and Canadian pharmacists, 66% of respondents indicated that a patient has directly indicated to them that they were having thoughts of suicide.⁶ Additionally, approximately 14% reported directly asking a patient based on clinical circumstances, and another 12% indicated that another person reported to them that a patient was having suicide-related thoughts. However, fewer respondents asked patients about plans (40%), intentions to carry out plans (42%), and access to means (36%).

Table 2
Self-reported attitudes and preparedness for involvement in suicide prevention before and after an awareness video.

	Pre-video (n = 147)	Post-video (n = 147)
Attitudes to suicide prevention scale items mean (standard deviation) [§]		
a. I resent being asked to do more about suicide	1.61 (0.90)	*1.44 (0.83)
b. Suicide prevention is not my responsibility	1.55 (0.74)	*1.45 (0.68)
c. Making more funds available to the appropriate health services would make no difference to the suicide rate	1.83 (1.10)	1.73 (1.17)
d. Working with suicidal patients is rewarding	3.70 (0.86)	*3.90 (0.96)
e. If people are serious about suicide, they don't tell anyone	2.89 (1.18)	*2.47 (1.19)
f. I feel defensive when people offer advice about suicide prevention	1.92 (0.86)	*1.74 (0.78)
g. It is easy for people not involved in clinical practice to make judgements about suicide prevention	3.42 (1.00)	*3.18 (1.06)
h. If a person survives a suicide attempt, then this was a ploy for attention	1.89 (1.03)	*1.75 (1.00)
i. People have the right to take their own lives	2.74 (1.17)	2.68 (1.12)
j. Since unemployment and poverty are the main causes of suicide, there is little than an individual can do to prevent it	1.67 (0.79)	*1.55 (0.74)
k. I don't feel comfortable assessing someone for suicide risk	2.77 (1.04)	*2.42 (1.06)
l. Suicide prevention measures are a drain on resources, which would be more useful elsewhere	1.54 (0.77)	*1.38 (0.61)
m. There is no way of knowing who is going to die by suicide	2.86 (1.09)	*2.56 (1.12)
n. What proportion of suicides do you consider preventable?	3.74 (0.77)	*3.95 (0.77)
Attitudes towards suicide prevention overall score [§]	31.20 (6.04)	*28.40 (6.50)
Perceived preparedness to ...[^]		
Identify signs of suicide	1.89 (0.69)	*2.47 (0.69)
Respond appropriately to people who have plans or thoughts of suicide	1.88 (0.74)	*2.58 (0.76)
To reassure people who talk about plans or thoughts of suicide	1.94 (0.77)	*2.64 (0.81)
To provide appropriate signposting or resources to someone who has plans or thoughts of suicide	2.16 (0.81)	*2.86 (0.83)
To decide whether intervention from another healthcare professional is necessary for someone who has plans or thoughts of suicide	2.18 (0.85)	*2.83 (0.77)

[^]Maximum of 147 individuals as not all participants answered all questions. N = 143 in the ASP overall score.

[§] Attitudes to suicide prevention (ASP) overall score (Herron et al.)²⁴ is the sum of the individual items. Scale: 1 = strongly disagree - 5 = strongly agree for all items apart from item "n", where the scale is 1 = none - 5 = all. Items "d" & "n" are score inverted for inclusion in the aggregate score.

* Statistically significant at $p < 0.05$ level in paired comparison.

There is a need to understand the impact of suicide prevention training on appropriate referrals to relevant services, and the importance of further developing pharmacy team roles in suicide prevention in means restriction cannot be overstated when juxtaposed with data regarding intentional medication ingestions and the experience of pharmacy teams. Medications are a commonly used in self-poisoning accounting for one-fifth of suicides in England and Wales.²⁸ Tailoring of training to the pharmacy setting with emphasis on roles including means restriction may be helpful for pharmacy staff to understand the applicability to pharmacy contexts.

Measuring the effectiveness of any suicide prevention training is challenging. The WHO describes gatekeepers as prominent individuals in a community and/or those likely to meet suicide people.¹ These are wide ranging groups as well as health and education workers including but not limited to, emergency service workers, public transport workers, religious leaders and finance officials. There has been the suggestion that core-competencies for gatekeeper training should include: knowledge, skills and abilities, attitudes and self-efficacy; and that minimum

standards need to be determined.²⁹ Future training should reflect any developing standards. Further, association between training and suicide outcomes is difficult to measure and attribute to a single intervention, particularly against an appropriate backdrop of multi-faceted interventions.³⁰

4.1. Strengths and limitations

This is the first exploration of the self-reported impact on attitudes and preparedness to suicide prevention of a suicide awareness e-learning video, targeted towards all pharmacy staff across all sectors in England. Only 147 of the 403 initial questionnaire respondents completed the post-video questionnaire. This might have been due to the time taken to watch the 30-min video and then complete another questionnaire, but more likely to the cumbersome process of changing between the video (CPPE) and questionnaire (Qualtrics™) platforms which was necessary to maintain anonymity. This is likely to mean the highly motivated subset of the self-selecting group who engaged in the video and the questionnaire were included in this paired analysis, thus introducing selection bias. Although, it is reassuring that the demographics of this subset were comparable to all respondents including the proportion with prior suicide prevention training. The validated ASP was used to measure changes in attitudes however preparedness was measured using adapted questions where the clinical relevance of any statistically significant change in result is unknown. In the adapted questions, preparedness rather than confidence was used in wording due to challenges in estimating one's confidence, but further psychometric testing of the adapted items would be beneficial. It is important to understand the longitudinal impact of any awareness raising on future suicide prevention activity, something that was not possible to measure in this study. Given the emotive nature of the topic, it is plausible that there may be social desirability bias amongst respondents.

5. Conclusions

Pharmacy teams' self-reported attitudes and preparedness for suicide prevention improved after watching a suicide awareness video e-learning compared to baseline. This provides an example of how tailored suicide prevention training would likely provide further benefit to pharmacy teams. However, better understanding of how this translates to practice impact, to benefit patients and the public is needed. The impact of suicide prevention training needs to be measured tangibly and longitudinally, not only for pharmacy teams, but all gatekeepers to improve the knowledge base in this area.

Declaration of Competing Interest

HCG & HJB were involved in the production of the suicide awareness learning video in which the survey was hosted (by CPPE) and HCG is program guardian for this learning. HJB is employed by CPPE. None of the other authors have any declarations of interest. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. Preliminary results from this study were mentioned in Gorton HC, O'Reilly C, Berry HJ, Gardner D, Murphy A, Chapter 6 - Understanding pharmacy staff attitudes and experience relating to suicide. In: Babar Z-U-D (ed). *Pharmacy Practice Research Case Studies*; Elsevier Academic Press; 2021. p. 111–131.

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