

Understanding COVID-19 vaccine hesitancy among health and social care workers during mass vaccination in Scotland



The importance of emotions, years of experience working in health and social care settings and risk perception in understanding vaccine hesitancy among health and social care workers

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INTRODUCTION

Health and social care workers (HSCWs) have an essential role in the uptake of the COVID-19 vaccine.

Vaccination has long been an emotionally charged issue and perceptions of risk associated with COVID-19 can contribute towards vaccine hesitancy (VH).

The aim of this study was to explore psychosocial factors associated with HSCWs' uptake of the COVID-19 vaccination.

DESIGN

A cross-sectional survey design using Qualtrics during the mass vaccination period in Scotland (Dec-March 2021). A multi-method approach to analysis was adopted.

METHODS

An online survey was conducted with HSCWs (N = 1189) aged 18 to 67 years (M = 44.09 yrs, SD = 11.48) during the third lockdown period of the COVID-19 pandemic.

Data relating to socio-demographical characteristics, vaccine uptake and intent, emotions associated with the vaccine and risk perception was collected. Open-ended free text data was also collected relating to HSCWs' views on the COVID-19 vaccine.

RESULTS

VH was prevalent in **16.03%** of the sample of HSCWs. There was no significant association between health and social care occupational groups and VH ($\chi^2(2, N = 956) = 2.4, p = .123$).

HSCWs who were VH associated more negative emotions with the vaccine, had lower scores on COVID-19 risk perception and less years of experience working in health and social care settings.

Years of experience was a predictor of VH; that is HSCWs with less years of experience in their working role were more likely to be VH.

Positive emotions predicted VH, that is HSCWs who reported positive emotions associated with the COVID-19 vaccine were less likely to be VH.

The regression model was statistically significant, $\chi^2(4) = 27.402, p < .0005$. The model explained 8.8% of the variance in VH and correctly classified 84.2% of cases.

Content analysis of HSCWs' reasons for VH included safety concerns, worries about side effects, questioning the effectiveness of COVID-19 vaccine, lack of evidence and information about the vaccine (see table 1).

TABLE 1

Categories of meaning (key categories) and example quotes	Number (%) of comments associated with category	Associated codes (sub-codes)
1 Concern about safety (e.g. "not sure how safe it is to use")	30 (22.1%)	Uncertainty as to its long term safety Concern about getting ill from it Vulnerability due to age Risk of the unknown Unsafe Fear Allergies
2 Worried about side-effects (e.g. "I might get ill from having it")	27 (19.8%)	Got ill after having it Side effects from other vaccines Bad reaction to it Adverse reaction Anaphylactic experience
3 Questioning the effectiveness of vaccine (e.g. "there are so many different strains I can't see how it will help")	19 (13.9%)	Questioning its effectiveness Questioning long term effects
4 Lack of evidence (e.g. "there are no outcomes from long term trials");	14 (10.29%)	Limited science No long-term trial outcomes Mass vaccination is an experiment
5 Lack of information (e.g. no one tell us how well or for how long we will be protected")	13 (9.5%)	Limited knowledge of vaccinations Unclear as to how it works Don't know what is in the vaccine No transparent information
6 Scaremongering (e.g. "The media scares people into getting it")	10 (7.3%)	Media creates fear Misinformation causes fear Constant bad news
7 Fertility concerns (e.g. "I'm trying to conceive so worried about it")	8 (5.9%)	Worried about pregnancy Effects on fertility
8 Natural immunity (e.g. "I don't have any underlying health concerns so don't feel I need it")	6 (4.4%)	Immune to it Exposure builds immunity
9 Conspiracy theories (e.g. "I think this has all been pre-planned")	5 (3.7%)	Created in a lab 5G is cause Pre-planned Lack of trust in experts
10 Pressure to accept it (e.g. "I feel coerced into having it")	4 (2.9%)	Pressure to promote it Coercion

DISCUSSION

This study is the first in Scotland to detail factors associated with COVID-19 VH among HSCWs' during the roll out of mass vaccination.

The findings suggests that, to increase vaccine coverage in HSCWs, the role of emotion and risk perception in communication strategies to address VH is crucial; this needs to be tailored to the requirements of the COVID-19 vaccine.

Targeting interventions to HSCWs who are less experienced in their working roles, given they are more likely to be VH is recommended.

