Vaccine hesitancy and access to psoriasis care during the COVID-19 pandemic: findings from a global patient-reported cross-sectional survey

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Dear Editor, COVID-19 vaccines protect against severe COVID-19 outcomes; however, many individuals remain unvaccinated.[1,2] Vaccine hesitancy (delayed acceptance or refusal of vaccination despite service availability) threatens public health. In the UK general population, vaccine hesitancy is higher in women, younger people and ethnic minority groups.[3,4] Individuals with psoriasis, particularly those taking systemic immunosuppressants, are prioritized for COVID-19 vaccination.[5] However, information on vaccine hesitancy and its contributing factors in patients with psoriasis is scarce.[6]

We used data from the global patient-reported PsoProtect*Me* survey[7] to explore the impact of organizational and individual factors on COVID-19 vaccine hesitancy. Data from 802 individuals with psoriasis from 89 countries were available (extracted 9 August 2021). Overall, 322 (40·1%) reported disrupted access to psoriasis care. These individuals were younger [median age 44 years, interquartile range (IQR) 33–56 vs. 54 years, IQR 42–64] and more likely to be of nonwhite ethnicity (13·8% vs. 10·2%) than those reporting no disruption. They had a shorter duration of psoriasis (median 23 years, IQR 10–36 vs. 31 years, IQR 17–44) and more severe psoriasis (6·1% vs. 2·8%). The proportion of participants taking systemic immunosuppressants was similar between those with and without disrupted access to care, but a smaller proportion with disrupted care were taking targeted immunosuppressants than those without disruption (72 of 131, 55·0% vs. 140 of 194, 72·2%).

In total, 611 (80·9%) of 755 participants had received at least one vaccine dose; 99 (16·2%) reported worsened psoriasis following vaccination, with 63 describing changes within 2 weeks. Sixty-three (8·3%) were vaccine hesitant. These individuals were younger (median age 36, IQR 30–50 vs. 52, IQR 39–63), and more likely to be of nonwhite ethnicity (20% vs. 7·2%), live outside the UK (14% vs. 5·1%), have a numerically lower body mass index (median 24·5 kg m^{-2}, IQR 21·7–28·3 vs. 26·5 kg m^{-2}, 23·2–30·9) and have a shorter disease duration (median 19 years, IQR 9–32 vs. 28 years, IQR 14–42) than those who were not hesitant (Figure 1a–c). They were less likely to be taking systemic immunosuppressants (26% vs. 45·3%). The most common reasons for hesitancy were concerns regarding side-effects, the vaccine being new and psoriasis worsening postvaccination.

In an unadjusted logistic regression model, strongly agreeing that psoriasis care was disrupted, was associated with vaccine hesitancy [compared with strongly disagreeing; odds ratio (OR) 2·97, 95% confidence interval (CI) 1·23–7·13, P = 0·015]. The direction of association remained after adjusting for age, sex and ethnicity, although this was not statistically significant (adjusted OR 1·90, 95% CI 0·72–5·05) (Figure 1d). In the imputed multivariate model (fitted due to missing demographic data), the association was stronger but not significant (adjusted OR 2·32, 95% CI 0·94–5·71). In total, 56 of 320 (17·5%) individuals taking standard, targeted or combination immunosuppressants were nonadherent. Nonadherence and vaccine hesitancy were not significantly associated (adjusted OR 2·96, 95% CI 0·77–11·3).

We observed an association between disrupted access to psoriasis care and COVID-19 vaccine hesitancy, partly mediated by confounding demographic variables. Individuals feeling disenfranchized by healthcare services were more likely to be vaccine hesitant. In keeping with this finding, higher vaccine hesitancy in the general population is observed in those with negative experiences of healthcare and negative perceptions of doctors.[4] Higher care expectations, sometimes seen in individuals with worse disease,[8] may also be contributory. Patients taking targeted immunosuppressants were less likely to report disrupted access to care, possibly due to more frequent monitoring in secondary care, which may have been prioritized during the pandemic.

A minority (8%) of our sample reported vaccine hesitancy. This finding supports current limited data on vaccine hesitancy among patients with psoriasis.[6] In contrast to a prior report in psoriasis,[6] but in keeping with general population trends,[4] hesitancy was more prominent among younger people. Our study was conducted after the COVID-19 vaccine rollout commenced, addressing a limitation of studies characterizing intention rather than actual behaviour.[6] In keeping with other studies, our findings also indicate greater hesitancy in individuals of nonwhite ethnicity; however, there were no differences by sex.[4]

We are unable to directly compare our global psoriasis dataset to the general population or groups with other diseases due to a lack of control samples. Participants were mostly from the UK, female and of white ethnicity, limiting generalizability. Proportionally more patients reported receiving targeted vs. standard immunosuppression, indicating ascertainment bias. Directions of associations cannot be definitively ascertained due to the cross-sectional study design. Impacts on care and/or vaccine uptake may have been underestimated as individuals participating in health surveys may be more engaged with healthcare and vaccination services. PsoProtect*Me* was updated 1 year following its launch to include COVID-19 vaccine hesitancy and questions regarding access to care, hence the current sample may not be representative of the original larger sample.[7]

Taken together, these data indicate that only a minority of individuals with psoriasis have vaccine hesitancy hence our findings are promising for current and future COVID-19 vaccine uptake. Identifying individuals who are disenfranchized by healthcare services and addressing their concerns regarding COVID-19 vaccination will help mitigate risks from the ongoing pandemic.

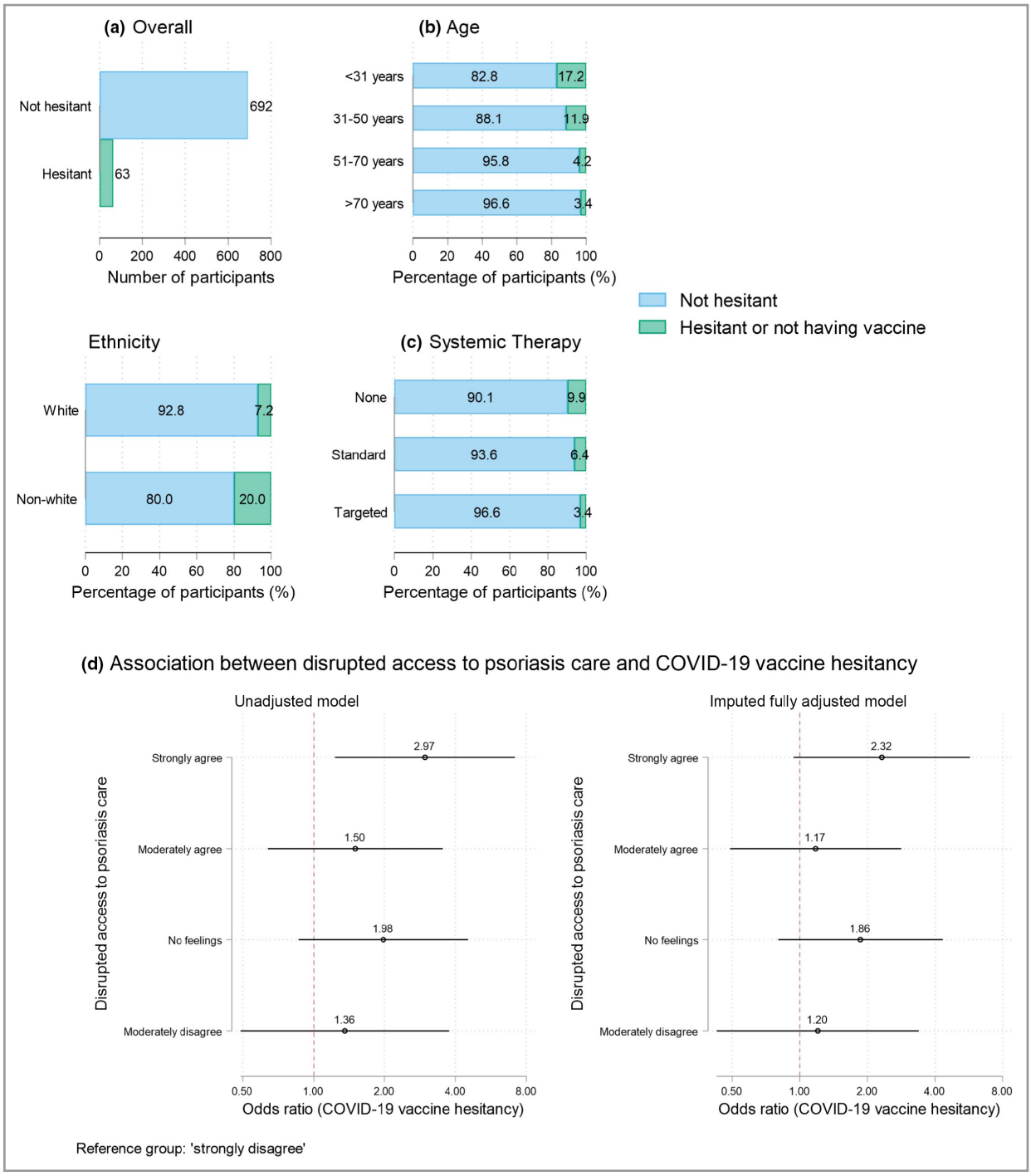

Figure 1 COVID-19 vaccine hesitancy in individuals with psoriasis: (a) overall count, (b) by age and ethnicity (age < 31 years n = 93, 31–50 years n = 219, 51–70 years n = 261, > 70 years n = 58; white ethnicity n = 559, nonwhite ethnicity n = 70) and (c) by systemic immunosuppressant therapy (no therapy n = 406, standard therapy n = 110, targeted therapy n = 207). (d) Association between disrupted access to psoriasis care and COVID-19 vaccine hesitancy.

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Funding sources: (Appendix S2) and conflicts of interest statements (Appendix S3) can be found in the Supporting Information.

Data availability: the data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Appendix S1 Full list of affiliations.

Appendix S2 Funding sources.

Appendix S3 Conflicts of interest.

Validation of the Danish version of the Quality of Life in Hand Eczema Questionnaire (QOLHEQ)

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Dear Editor, Health-related quality of life (HRQOL) measurements are important patient-reported outcomes when evaluating treatment responses and the effect of interventions in patients with hand eczema (HE). In recent years, the disease-specific Quality of Life in Hand Eczema Questionnaire (QOLHEQ) has been increasingly used and validated in different languages.[1–3] However, a Danish validation is missing. Thus, our objective was to assess the validity of single scores and the internal consistency of the Danish version of the QOLHEQ.

We translated the English version of the QOLHEQ into Danish by forward and backward translations in accordance with previously published guidelines.[4] The QOLHEQ comprises 30 items grouped in four domains: symptoms, emotions, functioning, and treatment and prevention. The total score has a range from 0 to 127, with higher scores indicating higher impairment in HRQOL. In this cross-sectional study, patients with HE were recruited from the dermatological outpatient clinic at Bispebjerg Hospital between March and December 2018, and between August and December 2019. They were asked to complete the QOLHEQ and reference instruments. The reference instruments were the EuroQol 5 Dimensions 3 Levels (EQ-5D-3L), which is a generic HRQOL questionnaire with five domains (mobility, self-care, usual activities, pain/discomfort, anxiety/depression) and EQ-VAS, which is a visual analogue scale (VAS) for self-rated health ranging from 0 to 100, with 100 indicating 'best imaginable health state'. In addition to the patient-administered questionnaires, a trained physician assessed the patients' HE severity with the Physician