



Face mask acceptability and usage after mass distribution in a refugee camp during the Covid-19 pandemic: mixed-methods study

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Introduction

- Cox Bazar hosts Rohingya refugees fleeing violence in Myanmar
- Crowded camps create risk environments for transmission
- March 2020: modelling predicted large-scale outbreak*
- July-August 2020: MSF distributed masks in 8 camps
- Uptake and factors influencing use not well understood

* Truelove SA, Abraham O, Altare C, Lauer SA, Azman A, Spiegel PB. The Potential Impact of COVID-19 in Refugee Camps in Bangladesh and Beyond: a modelling study [Internet]. Epidemiology; 2020 Mar



Study aim and ethics

Aim

- To provide evidence on use and perceptions of face masks following a mass distribution in a refugee camp during an outbreak of COVID-19

Ethics

- Approved by MSF Ethics Review Board and Office of the Civil Surgeon, Cox's Bazar, Bangladesh

Methods

**Multi-level
triangulation mixed-
methods study**

**Field
observations**

- Public spaces in four camps using KoBo collect
- Analysed by measuring the proportion using a mask correctly or incorrectly, niqab use, and association between surveyed camps/type of site and correct mask use.

**Social
media
photos**

- Twitter photos geotagged in Cox's Bazaar during March 2021
- Categorized by face mask/niqab use and gender

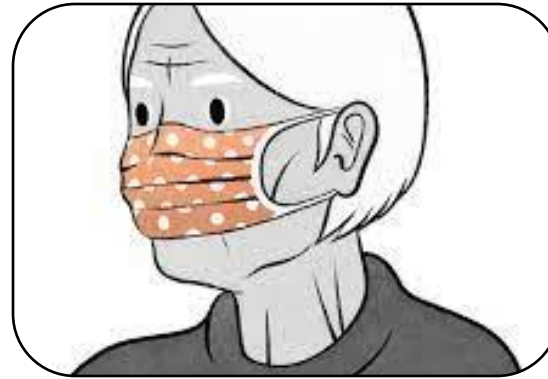
**Qualitative
interviews**

- In-depth face-to-face interviews to understand perceptions/barriers around mask use
- Data analysed thematically using NVivo

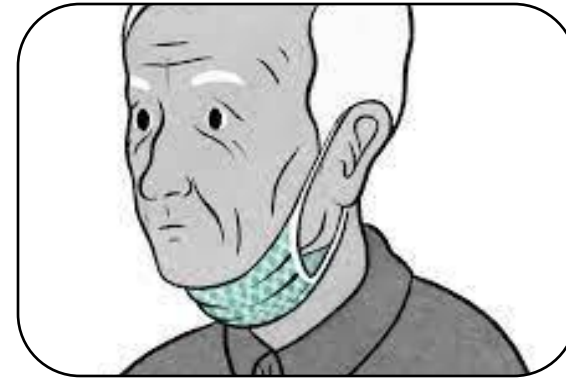
Face mask wearing



Inappropriate



Inappropriate



Inappropriate



Appropriate



Headscarf/niqab

Results : Observation

- 3,152 public observations
- 6% appropriate use
- 6.7% inappropriate use
- Men more likely to wear face mask appropriately
- Most women wearing niqab

Table 1: Type of observation by sex

Observation	Gender – n (%)		Total
	Female	Male	
Appropriate mask use	35 (4.5%)	155 (6.5%)	190 (6.0%)
Inappropriate mask use	33 (4.2%)	178 (7.5%)	211 (6.7%)
No face covering	151 (19.3%)	2018 (85.1%)	2169 (68.8%)
Wearing scarf/niqab over face	562 (72.0%)	20 (0.8%)	582 (18.5%)
Total	781	2371	3152

Results : Social media

- 20 relevant tweets identified
- In 17 photographs individuals wore no face covering and in 2 wore niqab
- One photograph showed one person wearing a mask correctly

Figure 1: Example of a relevant tweet/ photograph



Results : In-depth interviews; **perceptions of mask distribution and use**

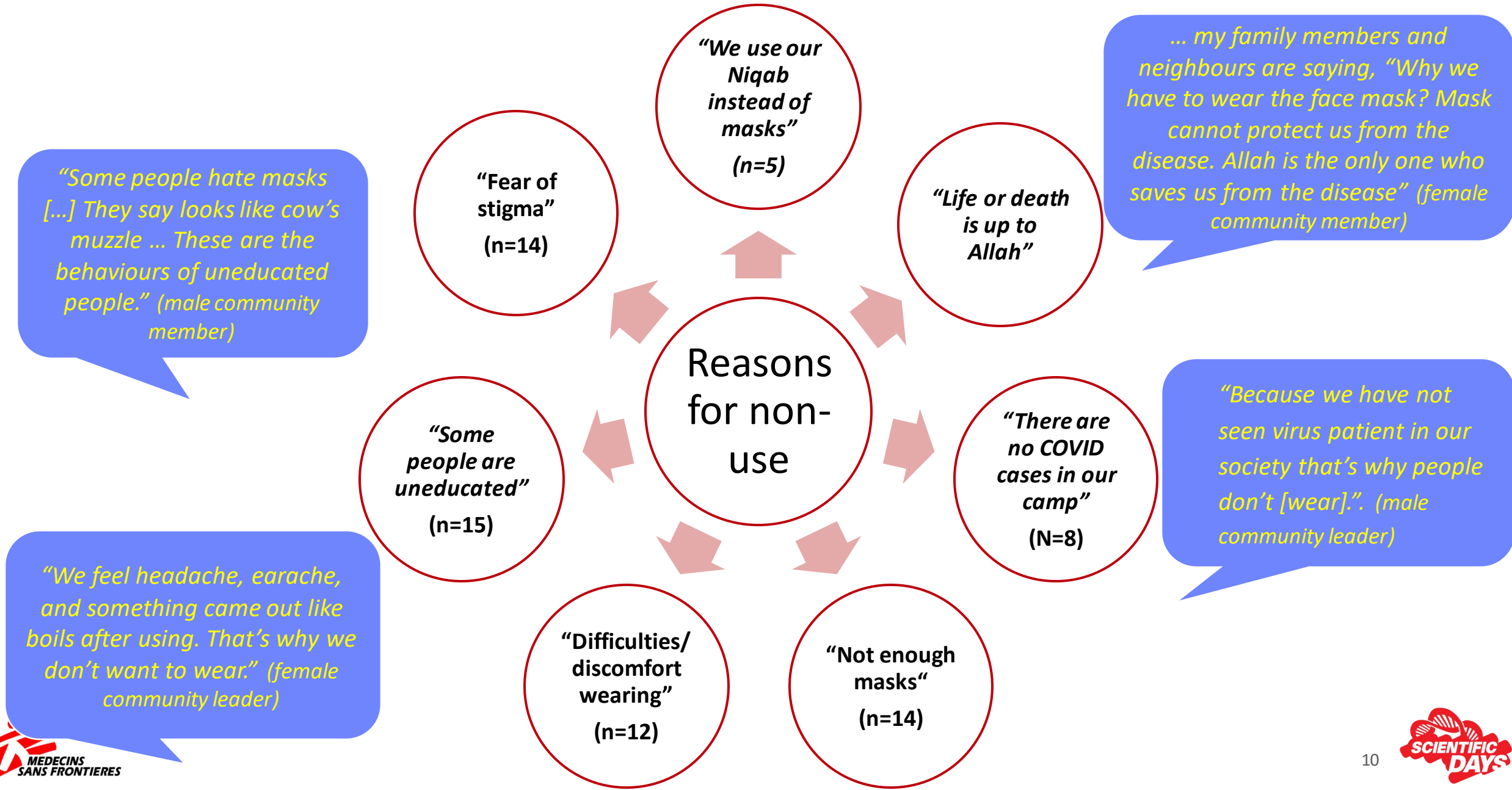
- **Almost all participants described the importance of using face masks to prevent COVID-19 transmission, including how to wear and care for them correctly**

“We must maintain many measures to get protected from this virus [...] We must wear the mask, we must maintain social distance, we, the whole family must stay clean, and we must wash our hands regularly...”
(female community leader)

“I heard so many countries highly affected due to Coronavirus and we could die [...] If I wear face mask I will be protected from the disease, if we don't wear face mask, I can get infected.”
(male community leader)

- Mask distributions positively perceived; house-to-house distribution preferred
- Importance of other preventative measures (social distancing, handwashing) also emphasised

Results : In-depth interviews; reasons for not wearing masks



Results : In-depth interviews; *'If there aren't enough masks...'*

Poor treatment by authorities (n=4)

“When we cross the police check-post, policemen ask, “Where is your mask?”. If we do not have mask, they beat us with a stick”

(female community leader)

Difficulties accessing healthcare (n=4)

“If I need to [get] medicine from hospital and don't have mask, I will not get the medicine [...] If they stop mask distribution, we will face problems.”

(female community member)

Unable to receive distributions (n=10)

“When we go to rice distributor, they don't give rice who don't wear mask.” (male community leader)

Worried will get COVID (n=4)

“The people who got the masks can get sick from those who have not received masks. When they cough and germs are transmitted, someone can be affected.” (male community member)

Results : In-depth interviews; ***‘We need more masks... and we need more than masks’***

“... overcrowding makes social distancing difficult. We all are in one room living together because the shelter is small - so how we can maintain the distance such as in a tarpaulin tent!”

(female community member)

“Only masks wearing is not enough [...] The NGOs give us very small shelter, and now we are staying 15 family members. If the children get ill we can't keep them separately. Mosquitoes and insects are biting too – and one net is not enough to cover us. We need many other things to be safe – like soap to wash hands and face. Do you understand sister? **Everyone comes to talk about masks wearing [...]** If they cannot distribute us everything we need, **please don't distribute masks and it will be better [...]. We have many difficulties to live like this in shelter.**” (female community leader)



“Some people say they don't need to use masks. They say that [...] being without a country is the same as feeling that they are already dead. They say ‘We don't want to wear mask but we want to die’”.

(female community leader)

Limitations

- Delay in study implementation
- Niqab use may under-estimate mask use
- Use of Twitter
- Risk of social desirability bias

Strengths

- Mixed-methods approach
- Observations across multiple locations
- In-depth understanding of issues surrounding mask use
- Reliability of interview data



Conclusions

- In March 2021, mask use was low; multiple reasons given for non-adherence
- Awareness high; (non-)use linked with lack of masks and low perceived transmission risk
- An increase in COVID-19 cases may lead to increase in perceived risk, and so mask use; currently unmet by mask availability
- Challenging to interpret findings in context of COVID-19 outbreak in Cox Bazar
- Repeat/ sustainable distributions recommended combined with information sharing & engagement with community/religious leaders
- Further work needed on:
 - role of niqab in preventing transmission
 - sustainable options for prolonged mask use

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