EVIDENCE REVIEW: RELIGIOUS MARGINALITY AND COVID-19 VACCINATION - ACCESS & HESITANCY

SSHAP
Social Science in Humanitarian Action Platform

Religious minority affiliation or status can play a very important role in influencing people's access to vaccines as well as their willingness to undergo vaccination. Many studies focus on class, ethnicity and geographic location when examining how social inequalities impact vaccination programmes. However, religious marginality is often overlooked. Here we explore how being situated on the margins, on account of religious affiliation, shapes experiences of vaccine access and uptake. The issues addressed are important for COVID-19 vaccination roll out, but also contain lessons for all vaccination programmes and many other preventative health measures.

In this brief, we present key considerations for addressing differentials in access to and willingness to undergo vaccinations that are linked to religious minority status, experiences, authorities or doctrine. We explain why the study and awareness of religious marginality is crucial for the success of vaccination programmes broadly and specifically as they apply to COVID-19 vaccination. We also explore ways in which religious marginality intersects with other identity markers to influence individual and community access to vaccines. Finally, we examine vaccine hesitancy in relation to religious minorities and outline approaches to community health engagement that are socio-religiously sensitive, as well as practical, to enhance vaccination confidence.

In view of both the paucity of scholarly literature on religious marginality, in particular in its nexus with other forms of marginality, this brief is informed by academic sources and grey literature as well as an examination of the content of online webinars, conferences and lectures on both minorities and religion and COVID-19. It is part of the Social Science in Humanitarian Action Platform (SSHAP) series on social science considerations relating to COVID-19 vaccines, and was written by Mariz Tadros, (Professor of Politics and Development, Institute of Development Studies; Director, CREID, The Coalition for Religious Equality and Inclusive Development) and Claire Thomas (Deputy Director, Minority Rights Group; governing member of the steering committee of CREID). The brief draws on a broader project to understand ways in which socio-economic members of religious minorities have been affected politically, socially and economically by COVID-19. Further evidence can be accessed here www.creid.ac   This brief had expert input and review by colleagues at the UK FCDO, the Anthropology and Medicine Journal, Eurac Research, IDS and Anthrologica (see acknowledgments). The brief is the responsibility of SSHAP and is written for those involved in response/preparedness operations.

SUMMARY CONSIDERATIONS FOR IMPROVING VACCINE RESPONSE AMONG THE RELIGIOUSLY MARGINALISED

Ways of building vaccine confidence

1. **Work proactively and inclusively with faith leaders.** This has yielded positive results in overcoming vaccine hesitancy, historically and in the context of COVID-19. However, caution should be taken not to assume that all religious leaders can be recruited on a public health awareness campaign.
2. **Recognise that religious authority is one of many authoritative sources of knowledge and influence in the community.** Capitalise on the existence of multiple actors who are considered authoritative, for example, health professionals, women leaders, minority political and community leaders and community volunteers. Who these trusted individuals are will vary from one context to another. It is extremely important to find counter voices from within a

cohort whose leadership is seen as legitimate, and therefore whose counter-interpretations on the importance of vaccinations are considered credible.

3. **Create or reinforce broad-based partnerships** between health providers, religious and lay leaders from within a religious minority community that are perceived by that community to be legitimate and authoritative. This is key to successful outreach and building trust.
4. **Access to information about the availability of vaccinations and the criteria of eligibility is crucial.** For religious minorities who are isolated, linguistically distinct or socio-economically excluded, tailored outreach communication methods are needed. These may include working with religious leaders but not necessarily be exclusive to them.
5. **Avoid a one-size-fits-all approach to partnerships** with religious minorities and recognise the heterogeneity of religious minorities and their needs. The terms of these partnerships must be tailored to address the intersection of religious and socio-economic factors to address vaccine hesitancy in a community.
6. Where vaccine hesitancy is widespread within a religious minority, **capitalise on the cases of positive deviance** - women and men who defy the mainstream within the community and choose to be vaccinated and are happy for this to be publicly shared - which can be a very positive way of encouraging a domino effect and assuring religiously marginalised members that people like them have taken the vaccine and are well.
7. **Avoid generalisations about the influence of belief on vaccine practices** of whole religious minorities. Within each faith there are many different denominations whose leaders may have diverging views on vaccines. Further, individuals and households within each faith group will have different interpretations and make different choices.
8. **Do not assume a religious motive is the only factor influencing members of a religious minority.** Even when people identify with a particular faith, it does not mean that this is necessarily the only influential factor shaping their decision to vaccinate.
9. **It is challenging to counter conspiracy theories and misinformation without breaching freedom of speech.** However, where this strays into hate speech inciting discrimination against religious (or other) minorities, it must be challenged and removed.
10. **Countering hate speech about the relationship between the vaccine source and its intention to eradicate a people is a key priority** for preventing violence and mobilisation of hate. Such hate speech needs to be countered and perpetrators held accountable, even if they are members of another religious minority, for example Black Muslims belonging to the Nation of Islam espousing hate speech towards Jews.
11. **Where high levels of hesitancy remain despite all of the above,** great care must be taken in **constructing incentives or penalties linked to vaccine uptake.** The responses to mitigating against vaccine hesitancy in relation to minority communities (whether religious or otherwise) need to be informed by ethical, not only political, considerations. For example, making welfare benefits conditional upon vaccination may raise ethical issues of penalising the socio-economically excluded members of religious minorities - not the economically privileged who are shielded from any economic impact.

Ways of ensuring equity in access to vaccines

- Data regarding the proportions of populations who have benefited from vaccinations must be disaggregated by religion and where possible according to denominational belonging (not just belonging to which faith group). Focusing on wider ethnic or racialised minorities are valid for those groups but should not be taken to inherently address religious minorities.
- When lower rates of vaccination occur in one faith group or denomination it is important to determine whether this is as a result of a difference in demand or supply. Research must be conducted in a participatory manner with the full involvement and backing of the community in

question. This will allow the identification of supply problems, that may result from less developed health infrastructure in minority areas, as well as for the lower social status and political capital of minority groups, to be addressed.

- Budget allocations for health services between areas populated by different religious groups should be monitored. Proactive steps should be taken to consider any disparities in social connectedness, access to decision making, participation and influence between communities in different areas.
- Discrimination against members of (religious or other) minority communities by health workers (e.g., by refusing or delaying treatment, offering different treatment, or curtailing full consent procedures, etc.) must be investigated. Appropriate disciplinary action must be taken and reported to the community in question.

ACCESS TO VACCINATION FOR RELIGIOUS MINORITIES

Immunisation coverage depends on two main factors: demand and supply. Each of these is a wide-ranging topic with many facets. Religious minority status affects both, and it difficult to disentangle whether immunisation gaps or disparities affecting religious minority communities are the effect of one, the other or both acting simultaneously. Other social determinants of health and vaccine coverage (income, education, etc.) also correlate with minority religious status to varying extents, which further confuse the picture.

On the side of supply, religious minority communities have poorer access to health services in general,[1,2] and they spend less on health services.[3] However, the research and policy attention on religion and health access is limited. Far more attention is paid to race and ethnicity (at least in wealthier contexts). The intersection of access to immunisation services and religion is even more undervalued. For example, the WHO Global Vaccine Action Plan 2011-2020, states "The benefits of immunization are equitably extended to all people", including references to barriers concerning geographic location, age, gender, disability, educational level, socioeconomic level, ethnic group or work condition, remote, nomadic, historically marginalised, urban poor, and urban migrants" but does not include any mention of religion.[4]

Health services, including vaccinations, must be accessible, appropriate and affordable. However, coverage for religious minority populations, is lower (i) where religious minorities live in remote regions posing supply challenges with longer distances from home to clinics;[4,5] (ii) where there is conflict;[6] (iii) when these communities are less visible, represent a lower priority for health spending and have lower power to demand budget allocations, and (iv) when these communities are less involved in dialogue about health service configuration and prioritisation.[7]

Even in settings where quality services are available to all, some religious minorities may experience barriers to access, outcomes and quality of care due to language,[8] discrimination,[1] affordability of the time cost of travelling to and waiting for a service,[9] a low sense of entitlement or willingness to disclose problems,[10] difficulties accessing ID documents,[11] and lower access to information.[12] In rolling out the COVID-19 vaccination, these known barriers to health access in general for many religious minority communities must be considered.

Vaccine confidence is also linked to level of religious discrimination and perceptions of being a minority

On the demand side, a mapping of vaccine confidence across 149 countries between 2015-2019 suggested a multiplicity of factors influencing vaccine decisions. These included "trust in the importance, safety, and effectiveness of vaccines, along with compatibility of vaccination with religious beliefs". Very significantly, "when a link was found between individuals' religious beliefs and uptake, findings indicated that minority religious groups tended to have lower probabilities of uptake".[13] A nuanced understanding of the relationship between minority religions and vaccine uptake is required. This intersectional analysis is necessary to decrease individual, family and

community vulnerability to COVID-19 as well as for pandemic elimination efforts. For example, health workers of ethnic and racial minority backgrounds demonstrated lower vaccination uptake in a UK study.[14] Given the importance of health workers, both for vaccine outreach and containment of COVID-19, further intersectional analysis was needed to identify the factors among ethnic and racial minority health workers that led to lower uptake. Some of these reasons can be convenience (timing and place), safety, or possibly religious reasons, as will be demonstrated below.

Overlooking the role of religious inequalities and marginality may jeopardise the COVID 19 response and can undermine social and political stability. This will occur if scapegoating, spreading of malicious rumours and mobilisation of hate are some of the political responses to vaccination initiatives. Faith and social inequalities linked to religion are not the only drivers influencing the experiences and decisions of ethno-religious minorities, yet the universal and context-specific interpretations of faith and the social impacts of hierarchies of power and wealth linked to religion also need to be considered. Religious minorities have undoubtedly experienced inequalities which have made them experience greater susceptibility to COVID-19. However, with few exceptions,[15] religious minorities are subsumed within broader minority groupings in research findings: minority ethnic communities worldwide have a disproportionate risk of severe COVID-19.[16,17] The literature on access and outreach among religious minorities per se or specifically addressed within these wider groups is very limited.

Historic and systemic inequalities can put members of these communities at a higher risk of infection as well as creating mistrust between authorities and minorities. This mistrust of health services and the pandemic response in general has been amplified by higher COVID-19 infection rates among minorities. However, in these studies, the role of religion within this is rarely explicitly discussed. Previous experience of single vaccination campaigns targeting religious minority communities elicited important learning relevant to the COVID vaccination rollout. In these campaigns distrust between religious minorities and health authorities led to lower uptake which in turn resulted in increasingly punitive attempts to force polio vaccines on an unwilling minority community.[18]

Intersectionality of religious marginality and other social dimensions remain unexplored

There is a knowledge gap pertaining to the intersection of religious marginality with ethnicity, race, class, etc. Our review of events that were publicized that were associated with COVID-19 and minorities for this briefing has indicated that in 2020 and the first half of 2021, at least 321 seminars/webinars were held on minorities and COVID and/or vaccinations, and only 5 of them included interrogation between ethnic and religious marginality. Conversely there were 170 seminars on religion and vaccination, and only 8 specifically raised the question of minority religions and the intersection with belief or doctrine.

The oversight of religious minorities, or the subsumption of them under "ethnic minorities", is also reflected in many contexts on a policy level. For example, the UK government established a series of sub-groups whose role it was to advise on policy in relation to dealing with the COVID-19 pandemic as part of the Scientific Advisory Group for Emergencies (SAGE). One such group is referred to by the government as the “ethnicity subgroup”. Their mandate is to advise on COVID-19 risks and impacts for "minority ethnic groups". Members from within have shown how the aggregation of data for all ethnic minorities together has concealed the differences within and among different groups (Note, this also applies to data collection on the basis of race and ethnicity but not religious affiliation in the US Center for Disease Control and Prevention).[19] It would have been helpful to perhaps rename it "ethnic and religious minority groups" to also be cognisant of the intersections between ethnicity and religion that wield very different forms of exclusion or are driven by varied religious and non-religious reservations against vaccinations.

The experience and perceptions of marginality

It is important to note that religious marginality can be experienced in multiple ways: because individuals belonging to religious minorities can experience power very differently:

1. **A numerical minority that is socio-economically excluded may also be politically excluded**
   People can be both an ethnic and religious minority and experience severe socio-economic inequality in relation to the rest of the population. For example, the Christian sanitation workers in Pakistan experience extreme social discrimination linked to concepts of "untouchability", which have been known to impact on access to health services, even in an emergency.[20] Muslims living in Myanmar experience discrimination routinely, being unable to obtain ID documents, to move freely and access services.[11] Groups can experience inequality within their own broader religious community. For example, rumours concerning infertility as a consequence of vaccinations can impact girls and boys differently; women and men may have different sources of information, as may different age groups and different sects within one broad religion.

2. **Religious minorities may self-separate from the broader community**
   Religious minorities might not always experience intersecting inequalities in relation to the rest of the population, but they may be self-protective from external influences as a strategy to avoid assimilation – which can have implications for access to healthcare. This would apply to the Amish community in the US for example, who have self-separated and live an insular life that is in accordance with the Anabaptist religious precepts and way of life. They are not necessarily "targeted" through socio-economic exclusion measures, nonetheless they have a strong sense of belonging to a distinct minority faith that influences their position and situation within the broader community.

3. **A group that is not numerically a minority from an ethnic, racial or religious point of view may cognitively act as if it were a religious minority politically**
   Members of such a group may in fact be in a position of privilege from an ethnic/racial point of view. However, the group may have a cognitive sense of being a religious minority politically if they feel that the system of governance in place overlooks their religious concerns or identities. Intersection of drivers is relevant here as well, with an overlapping of religious and political factors influencing their rejection of vaccinations (see below).

Religion intersects with multiple potential exclusion factors

With the limited multi-factorial data available, it is a challenge to identify how religious affiliation intersects with class, caste, gender and geographic location to affect access to health services, including vaccination. For example, in India, the historic overlapping of caste and religious marginality suggested that Muslim households had lower vaccination coverage than children in Hindu families and infants from majority communities had better vaccination coverage than those from Scheduled Castes (e.g., Dalits) and Scheduled Tribes (e.g., Indigenous Peoples). The inclusion of religious marginality in its intersection with caste and poverty had likely increased the likelihood of vulnerability experienced by children in these households.[21] A more recent study identified low birth weight as the single most important determinant linked to delayed or incomplete immunisation.[22] In this study, being a Muslim, the age of the mother and low-income levels all increased the odds of incomplete or delayed immunisation, albeit to a lesser extent. India can be commended for gathering data disaggregated by religion, indigeneity and caste, which many other countries do not do.

Moreover, measures to address low vaccination uptake may overlook inequalities in access to health care, socio-economic marginalization and geographic outreach. For example, in Israel, a law was enforced in 2009 that denied parents welfare payments if children were not vaccinated.[23] The law was deemed to affect two minority communities who have historically been the most socially and economically marginalised, the Haredi Jews and Bedouins.[24] Sawsan Zaher, an attorney

representing Adalah, the legal centre for Arab minority rights in Israel, suggested then that such a policy represents a punitive measure against children in the unrecognised Bedouin villages who do not have access to preventative health care.[24] The law was scrapped two years after its enforcement, raising questions not only about its moral justification, but also efficacy.[23]

COVID-19 has disproportionality affected religious minorities in pockets in countries where their religious affiliation intersects with other factors. Economic marginality, social stigma and political exclusion all served to amplify the impact of COVID-19 on religious minorities, leading to their further ostracisation, and in some cases blame for the spread of the virus.[25] Where vaccination coverage or uptake within a particular community has been limited, it is important to ask whether framing that community as a 'problem group' would not feed into pre-existing prejudicial scapegoating. Social environments play a vital role in influencing health disparities. Areas with air pollution, poor sanitation, lack of access to medical care, sub-optimal housing and less healthy food availability, all contribute to morbidity in underprivileged communities, including religious minorities.[26]

The impact of higher COVID-19 infection rates and ill-health in some ethnic and religious minorities on pre-existing (and in many settings, higher) mistrust between those communities and health providers and information providers is not yet clear.[27] Yet, unless such medical distrust is actively remedied, it may impact on willingness to undergo vaccination.[28]

Do vaccine programmes prioritise those members of religious minorities that are especially vulnerable? The evidence is limited but, it seems that this is not guaranteed. In Pakistan, vaccinations were at first prioritised to frontline health workers and senior citizens. However, one group that should have been prioritised on account of their work (which included frontline services cleaning hospital wards and quarantine centres) is the sanitation workers. Here the intersection of religious affiliation (sanitation workers are mostly Christian in a Muslim majority context), caste (they are mostly considered to be of Dalit background), poverty and illiteracy meant that they were not the prime targets. Organisations have elicited commitments from programmes to prioritise vaccinations to these groups. However, on the ground progress was slow and without the strenuous efforts of rights organisations, the outcome would almost certainly have been different.

COVID-19 amplified structural inequalities that have long been affecting Haredi Jews in Haredi neighbourhoods in Jerusalem, London, Salford and New York.[29] Over-crowding associated with large family sizes and economic deprivation enabled the speedy transmission of COVID-19, more so than among Jews living in non-Haredi neighbourhoods with very different socio-economic profiles. This meant that messages on COVID-19 vaccination recognised these inequalities and were tailored to ensure that access to information.

Moreover, it must be noted that the experience of one religious minority group in a community cannot serve as a proxy for other religious minorities in the same country or same region. For example, the experience and factors affecting Ahmadis, Christians, Hindus, Shia Muslims and Sikhs in Pakistan will all be very different; the experience of a Somali Muslim resident in Mandera will be different from a Swahili Muslim resident in Mombasa. The experience of an Alevi Kurdish refugee from Syria resident in Turkey will be different from an Alevi Kurd who is a Turkish national.

It must be noted that cost effectiveness decisions often promote services to "low hanging fruit" and those who are easier to reach. The 2030 SDG agenda commitment to "leave no one behind" and to "reach the furthest behind first" involve accepting that cost per vaccination ratios may be higher for population groups who experience additional barriers, and likewise the time it takes to achieve a certain number or proportion of vaccinations may be higher. Equity in provision of services across groups must run alongside and be given at least equal weighting with cost efficiency and rapid deployment considerations. For example, alternative ways of registering should be considered, especially ones that do not require form filling (to take illiteracy into account), the holding of ID documents, internet access (not everyone is connected) or phone use (can be costly). These will need to be tailored, being mindful of the intra-group inequalities within the same religious minority. Instances where vaccine delivery methods are unsafe (e.g., re-using syringes), which also disproportionately affect the poor, must also be considered, including the distrust in health systems that results for those who are unable to afford to buy their own equipment.[30]

Data are also missing on the experiences of indigenous communities who have their own distinct spiritual norms and beliefs.[31] Indigenous movements in the USA, Canada, New Zealand and Brazil[32] among many others have historically had reason to be suspicious of vaccines on account of the lack of consent, experimentation, abuse and exploitation during colonialism. A recent example of these concerns was a clinical trial of the HPV vaccination carried out in Andhra Pradesh and Gujarat in India from 2009. Many of the girls involved were of indigenous or Adivasi backgrounds. The Indian government suspended the trial in 2010 among allegations that the required informed consent forms were not being obtained and that, in particular, school headmasters were signing consent forms on behalf of many pupils.[33] The violation of consent was possible because of the low status of the girls' indigenous parents and their beliefs. Had the girls had high caste Hindu parents, the substitution of headmasters' consent for parents' would never have been attempted. The incident is considered to have set back the roll out of the HPV vaccine in India by almost a decade.[34]

The intersection of norms and beliefs with indigenous identity have rarely been explored to ensure that access, outreach and communication of vaccination is appropriate. This is despite the fact that the nexus of indigenous identity, spirituality and conceptions of wellbeing are particularly important to indigenous community members.[35]

The links between vaccine hesitancy and religion, discussed in the next section, are more explicit and obvious than the links between barriers to access and religion. However, one must not assume that religious minorities are not receiving vaccines because they do not come forward or decline a service offered to them. Unless and until the barriers in access to vaccines are better understood and the results of poverty and geography are disentangled from religious identity, attributing disparities at the door of religious vaccine hesitancy may result in ineffective efforts being made to address them. This would involve show that everyone everywhere has been offered vaccination and that it is available. Without this it is too easy to fall into a trap of attributing gaps to the differences or choices of minorities, when in fact the gaps result from prioritisation decisions or health service failures.

VACCINE HESITANCY AMONG THE RELIGIOUSLY MARGINALISED

Vaccine hesitancy is a global phenomenon that comprises both people of religion and no religion, of different class, education, gender and racial backgrounds.[13] It is important to consider two caveats when discussing religious marginality and vaccine hesitancy. First, we know that religious doctrine and norms can be a major factor underpinning vaccine hesitancy. This is critically important as it may inform the conduct of people who are living on different continents but are bound by an affiliation to the same religious group's beliefs. The way in which vaccine confidence is built is critical, as enforcement may present in some instances moral quandaries with respect to violating people's freedom of religion or belief, where their objection to vaccination is on religious grounds.

The second caveat is that there are many other reasons, other than religious norms, which lead to vaccine hesitancy within a given population, independently of whether individuals are of a faith or non-faith background. Hesitancy in racial and ethnic minority participants has been driven by concerns related to long-term safety and fear of adverse reactions, in addition to mistrust of the medical system, lack of representation in clinical trials, speed of roll-out and hesitancy due to disproportionate effects of the pandemic.[36]

Wellcome Global Monitor undertook a large study involving 140 countries regarding people's thoughts about science and health challenges. Religion proved to be a significant variable, with 64 per cent of people saying they would believe in religion over science when there's a disagreement.[37] Whilst many other factors are involved, there is a broad spectrum of people of different backgrounds for whom religious doctrine, in relation to vaccinations, does play a role. For example, the Amish in the US believe in divine and alternative healing and percentages of vaccination uptake are minimal.[38] Measles outbreaks (with more than 12,000 cases and nine deaths) were identified between 1985 and 1994 in religious groups opposing vaccination. Polio, pertussis, and rubella outbreaks have been recorded in Amish populations in the US. In 2019 Rockland County, Ohio, reported the highest cases

of measles (314) in 10 years. The largest measles outbreak in recent years was in the unvaccinated Amish Communities of Ohio.[39] While the community has been affected by COVID-19 (scale unknown in the absence of religious demographic data), COVID-19 vaccination rates have been, up to mid-2021, minimal.[40]

The gulf between religious adherents and scientists in some countries does not lend Itself to positive relationships of cooperation and trust. One study that investigated why children are not vaccinated grouped the following reasons into one group, feeling that no further distinctions would be helpful: "Religious/cultural/social beliefs, norms, rumours".[41]

Ideology and vaccination

When COVID-19 vaccines first appeared, people of Abrahamic faiths, regardless of if they belonged to a majority or minority religion, were concerned about the presence of abortive material or stem cells in the manufacture of the vaccine. Cultures derived from the foetus of voluntary abortion or dead foetal remains were used. Leaders from all Abrahamic faiths issued statements clearing the use of these derivatives in COVID-19 vaccination, including, for example, Pope Frances, the National Muslim Task Force on COVID-19 and the National Black Muslim COVID Coalition.[42] However, this does not necessarily mean that these figures were considered authoritative, or more authoritative, than other religious sources that were preaching an opposing message. Legitimacy is in the eyes of the believer, and not all sources of religious authority carry equal weight among adherents from the same faith. Likewise, whilst a religion may mandate a particular cure (prayer at a particular shrine, holy water), followers of that religion may opt to augment or even replace such measures with treatments from conventional medical sources.[43–45]

Some Jews and Muslims were concerned whether the COVID-19 vaccine contained traces of porcine products. These concerns are not new to COVID. Smallpox, polio and chickenpox vaccines were also mistrusted, and some thought vaccines could lead to sterility.[44,46] For example, in 2018, the Ulema Council in Indonesia declared that measles and rubella vaccines are haram due to gelatine and while they said it is possible to use the vaccine, since there is no halal alternative. Nonetheless their fatwa, though not legally binding, had a far-reaching effect in dissuading many from vaccinating their children. This led to Indonesia having the third-highest measles rate in the world.[47] It Is unclear the extent to which Muslim and specific denominational Jews globally have been affected.

Where vaccines contain ingredients or use processes that are incompatible with a religious belief, full transparency is essential. Allegations against the suitability of a vaccine on religious grounds are not uncommon. These may include conspiracy theories that doubt official sources of information. This mistrust can cross borders through the networks that link members of a religious community around a common set of norms and beliefs. Conspiracy theories stating COVID-19 causes infertility, sterility and impotence are the result of the very same "conditions" that were associated with vaccinations against polio, measles and smallpox. Conspiracy theories can bypass religion (e.g., those that centre on political ideological differences), but many also centre on the purported aim of one religion to overcome, subdue or even exterminate another. Thus, these theories centre on religious difference as a primary motivation and clearly identify one religious community as the target and/or the beneficiary. Lack of transparency or attention to religious rules in vaccine manufacture or contents feeds into the lack of trust in the authorities. This mistrust will fuel the spread of such misinformation in future cases. One successful strategy in the past, which has again been adopted in COVID-19 vaccination production and supply, is to ensure that vaccines are produced in diverse religious contexts.

Misinformation, conspiracy theories and hate speech

Conspiracy theories can also be informed by ideologies of hate. A member of another religious minority began to circulate that COVID-19 vaccination causes homosexuality. According to ultra-orthodox Rabbi Daniel Asor, ‘any vaccine made using an embryonic substrate, and we have evidence of this, causes opposite tendencies.’[48] The danger is when the belief in these conspiracy theories becomes the basis for spreading hate speech directed at religious minorities. For example,

the Nation of Islam took to social media to spread false information about the COVID-19 vaccine. This included false cures and antisemitic rhetoric about the origins of the virus. Wesley Muhammad, a member of the Nation of Islam, stated that COVID-19 was on account of the 'sins of Israel', that it was a 'Jewish disease' and that the pandemic is to depopulate the Black community.[49]

Countering conspiracy theories and misinformation can be complex and may risk breaching freedom of speech. However, where it strays into hate speech inciting discrimination, it must be challenged and removed. Social media company algorithms should not reinforce conspiracy theories and must provide access to alternative viewpoints. Disinformation should be monitored across languages and contexts, with pro-active and rapid response strategies put in place to provide alternative sources which are authoritative to communities where misinformation uptake is high. The approach should not be one of simply the collation and sharing of alternative information. The channel, the source and the framing must be sufficiently tailored to reach and be trustworthy for the group at hand.

Perceptions of religious discrimination and vaccine hesitancy

Disaggregated data on religious affiliation must be collected. This will identify pockets of vulnerability in access and outreach to vaccines that may not necessarily be visible on an aggregate level. The political sensitivity of this disaggregation must be considered. Where religious demography information is collected, it should also seek to capture information within and among different groups. Studies should also be longitudinal.[50]

Understanding the intertwining of religious affiliation with other social dimensions is crucial to capture religious communities that perceive themselves as religious minorities even if they do not share the political or socio-economic underprivilege that one associates with a numerical religious minority. In other words, it is crucial to recognise that cognitive perceptions of being treated politically as a minority are just as important to take account of as measurements of exclusion. For example, in the US, White evangelical Protestants stand out as the most likely to say they will refuse to get vaccinated against COVID (26 per cent), with an additional 28 per cent who are hesitant. Vaccine hesitancy here is best explained when we add political affiliation to the intersection of race and religion. The majority of White Protestants who refused vaccination voted Republican and were influenced by the rhetoric of particular Republican pastors.[51] In this cohort, there is a perception that their religious identity and needs are overlooked, and they see themselves as a political minority vis-à-vis the government and the COVID-19 response, even if from most perspectives they form part of the dominant ethnic majority.

It is also important to note that a history of public authorities' unethical and sometimes life-threatening experimentation of cures on ethnic, racial, religious minorities and indigenous peoples without their consent influences perceptions of trustworthiness. Unfortunately, today anti-vaccination campaigners instrumentalise this historical legacy when targeting religious and ethnic minorities, arguing why they should not trust the vaccination programmes (see targeting of Jews and Black Americans in Western countries). Conversely, incidents of clergy benefitting from selling cures to much feared diseases to congregations at rates that vastly outweigh their costs are not unknown. Thus, doubting both official and religious sources of information is not in and of itself a strategy without a basis given empirical evidence of past misconduct.

Claims that the vaccination programme is a "White man-Jewish conspiracy" represent hateful speech towards Jews, which, in a context of global heightened anti-Semitism, should be one of the vaccination-related political phenomena to which the world needs to pay attention. If the propagation of anti-vaccination propaganda is going to be appropriated to spread hate against a religious minority, then policy interventions need to deal with this as a political and security matter, not only a health one.

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