Changing minds: A behavioural approach to vaccine hesitancy

To the Editor: The roll-out of vaccines for COVID-19 in South Africa (SA) has been disappointingly slow. One of the reasons for these lower-than-desired rates is individual vaccine hesitancy. All the available data indicate that vaccine penetration rates >80% are required to effectively reduce COVID-19 to a mild-to-moderate respiratory illness and return society to some sort of new normal. At the time of writing, rates of complete vaccination among SA adults were ~41%.[1] However, these rates are not increasing fast enough to prevent a significant fourth wave of disease.

Current vaccination strategies include large-scale public information campaigns encouraging individuals to vaccinate. However, the messaging expressed in these campaigns does not address key factors driving vaccine hesitancy in an evidence-based manner. Our group made enquiries into reasons for vaccine hesitancy in a sample of women in Khayelitsha, Cape Town, being screened into a randomised controlled trial. More than 80% reported fear of side-effects as being the major obstacle to vaccination. Far less frequently (in <10% of instances) did participants report insufficient research on vaccines, disbelief in vaccine efficacy, and mistrust in government as reasons for not getting the vaccine.

How does our National Department of Health overcome these cognitive barriers? Mandated vaccination for persons using or entering public institutions or spaces may well be correct and appropriate, but it is unlikely to achieve the penetration (>80%) necessary, and certainly not in the required timeframe. Public messaging broadly targeted at persuading persons to vaccinate to avoid serious illness ('vaccinate' v. 'ventilate') are aversive strategies that are also unlikely to work, as they tend to polarise individuals into a resisted position against the messenger.

We propose that a clear and targeted strategy, aimed at the specific factors for vaccine hesitancy and informed by evidence-based behavioural techniques, is not only required but will be the only effective way forward. There is a huge literature supporting the use of Motivational Interviewing (MI) as an approach to facilitating a change in position in the minds of people who find themselves in either a pre-contemplative (no intention to change) or contemplative (accepting the need for change but not yet ready to change) state of mind about health behaviour.[2] At its core, MI requires that the messenger (or provider) adopts a collaborative, non-judgemental and empathic attitude towards the individual, not pushing the person into a corner where they become defensive and resistant to change, but rather working alongside that resistance to enable the individual to be an active participant in an approach that respects the reasons for their ambivalence. Crucially, the individual needs to be offered the opportunity to create healthy cognitive dissonance. Cognitive dissonance broadly speaks to suggesting that the future holds two scenarios for the individual: one *with* the intervention (in this case, the vaccine), and the other *without*. In the unique setting of vaccine hesitancy due to fear of side-effects, the MI approach must be tailored for the unique SA context, and then delivered across at least three levels: national education messaging, community health systems, and individual interactions. MI provides a platform for this to be achieved in a manner that respects the individual's autonomy and right to self-determination.

When MI is applied to address substance use disorders, the individual must first be guided to consider the option of stopping the use of the substance. This is an immediately challenging proposition, as the substance initially induces an internal state of reward. Thereafter, the individual is assisted (in thought experiment, as it were) in considering what life may look like in the absence of the substance or substances that are causing distress and impacting on functioning. This is usually framed as a desirable positive and fulfilling outcome, as opposed to the state where substance abuse persistently leads to a range of negative outcomes for persons and relationships. In the case of vaccine hesitancy due to fear of side-effects, the individual must be assisted through the first obstacle of avoiding the vaccine (the perceived reward here for *not* taking the vaccine is that side-effects won't be experienced). It is essential to link dealing with this first state of change by including the future scenario of living in a 'vaccinated state'.

A key approach to MI and using cognitive dissonance is to ensure that the messaging is positive and responsive to prevailing concerns impacting the current position. What are the positive angles to being vaccinated? For individuals, the current evidence indicates that the vaccinated state offers several positive outcomes: a significantly reduced risk of acquiring COVID-19 in the first instance, the prospect of spending time with other vaccinated people with a decreased need for masking and distancing, and the ability to move around freely in society, where vaccine mandates are likely to increase. As tempting as it may seem to include the data on reduced risk of developing severe COVID-19 disease (including hospitalisation and death), we argue that these are negative messages that will not increase uptake. They will result in automatically negative thoughts in the individual, which are likely to lead to avoidant thinking. This in turn will negatively impact the state of mind in which contemplating vaccination occurs.

To our knowledge, this approach has not been tested empirically, but it would seem urgent and important to do so. The approach needs to be tested qualitatively for its veracity, before empirical work can commence (say, where combined positive and negative messaging is compared with positive messaging only, on attitudes to vaccine uptake). Only thereafter could a broad approach be considered. At the national level, one-way messaging should rely on the positive aspects of being vaccinated, over the short-term annoyance of side-effects. Community-level interventions should adopt an interdisciplinary approach and involve groups from non-governmental organisations, taking advantage of captive communities such as churches and other social organisations. The communication in these forums should ideally involve some feedback and interaction. Finally, at an individual level, interventions using brief adapted MI with tailored cognitive dissonance need to be manualised, taught, and delivered by accessing non-specialist cadres such as community health workers and other providers. Time is limited, so this needs to be urgently considered. Staying positive in vaccine messaging will probably result in the best uptake and outcomes among South Africans.

Stephen Rollnick, one of the developers of MI, has made available a free handbook on the use of motivational interviewing to address vaccine hesitancy (https://drive.google.com/file/d/1Sl5xzMhKhQ9rAKapeXWwT5gVQtsUXHkT/view). In addition, a free course by Stephen Rollnick and colleagues on addressing vaccine hesitancy can be accessed (https://psychwire.com/motivational-interviewing/addressing-vaccine-hesitancy).

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