Critical health response in the time of COVID-19: lessons from the past

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Abstract
This article examines the South African government’s response to COVID-19 by exploring the strong emphasis that has been placed on South Africans taking personal responsibility for good health outcomes. This emphasis is based on the principles of the traditional Health Belief Model which is a commonly used model in global health systems. More recently, there has been a drive towards other health behaviour change models, like the COM-B model and Behaviour Change Wheel (BCW); nonetheless, these remain entrenched within the principles of individual health responsibility. However, the South African experience with the HIV epidemic serves as a backdrop to demonstrate that holding people personally accountable for health behaviour changes has major pitfalls; health risk is never objective and does not take place outside of subjective experience. This article makes the argument that risk-taking health behaviour change in the South African context has to consider community empowerment and capacity building.

Keywords
Community action, COVID-19, critical health, health belief model, risk assessment

On 31 December 2019, the Wuhan Municipal Commission in the Hubei Province in China reported a cluster of pneumonia cases, identifying a novel strain of coronavirus (World Health Organization, 2020c). Very quickly an epidemic was identified and the World Health Organization (WHO) convened an Emergency Committee meeting under the International Health Regulations to assess whether the outbreak constituted a public health emergency that was of international concern. By 11 March 2020, the WHO (2020c) identified COVID-19 as a pandemic. Since then, countries across the globe have been racing to slow down and contain the spread of the virus. This has mainly been done by major lockdowns, carrying out contact tracing, limiting travel, quarantining citizens, cancelling large gatherings, social distancing, and the mandatory wearing of a face mask in public spaces. Even though scientists worked at breakneck speeds to develop and produce a vaccine, the rapid spread of the virus created devastating social, economic, and political crises.
As the morbidity and mortality rates of the COVID-19 pandemic quickly increased, the opinion that the pandemic had the potential of being a great social and structural equaliser, targeting all individuals irrespective of race, class, gender, quickly faded. It has, once again, become evident that existing forms of social categorisation continue to create overlapping systems of disadvantage and discrimination. Not only has the pandemic disproportionately affected the marginalised – but the additional burden of holding people personally responsible for their health behaviour and health outcomes has become concerning. It is necessary to take cultural, socio-economic, as well as structural inequalities into account in our response to this pandemic, rather than place the burden on individuals alone. In this context, it is imperative to continue to interrogate political leaders, public health officials, and policy makers who uncritically embrace the health directives from the WHO, or seek to uniformly apply them to countries with vastly different political structures, histories, health systems, and socio-economic resources. These do not always offer solutions within the complex context of a nation whose history is steeped in a colonial and Apartheid past, and contemporary socio-economic realities. These solutions, when left uninterrogated, serve to further maintain the status quo of privilege.

South Africa’s health response to pandemics: WHO determines health?

Like many other countries, South Africa’s approach to COVID-19 centred on taking personal responsibility for keeping oneself and others safe. This was reaffirmed and reinforced very strongly by South African President Cyril Ramaphosa during an address to the nation on 13 May 2020 (Ramaphosa, 2020, p. 3):

Most importantly, this new phase will require each of us to change our own behaviour in profound ways. There needs to be a fundamental shift in our thinking and our way of life. We need to take personal responsibility for our own health and the health of others . . . Our success in overcoming the coronavirus will ultimately be determined by the changes we make in our behaviour.

This very politically powerful and direct message by the President follows the same guidelines proposed by the WHO (2020a), a familiar global message about individual action to avoid becoming infected with COVID-19 and to curb its spread. In this kind of messaging it remains the responsibility of individuals to understand the seriousness of the threat of COVID-19 to their health and life. Moreover, every individual also has to carry the responsibility for the health and loss of life of others. In the course of action that is expected to be taken regarding your own and other’s health, it is put forward that preventive health behaviours will lead to avoidance of infection and slowing the spread of COVID-19 (World Health Organisation, 2020a).

The WHO strategic document on COVID-19 remains rooted in, and guided by, the fundamental principles of the Health Belief Model (HBM) – that knowledge, beliefs, and perceptions form an important part of health-seeking behaviour. The HBM was developed to understand the failure of people to participate in disease prevention programmes (Rosenstock, 1960, 1966, 1974) According to this model, there are four major interacting components that predict health outcomes. First, it is argued that individuals will take the appropriate action to avoid ill health if they believe that they are personally susceptible to falling ill. Perceived susceptibility, therefore, refers to the subjective element around the risk being taken, and individuals are believed to vary widely in their acceptance of personal susceptibility to a particular condition. This may range from an individual who, on one hand, may completely deny any possibility of an illness occurring, to the other extreme, where an individual may believe that they are in real danger of harm.
Second, the **perceived seriousness** of a health outcome is argued to be related to the degree of emotional arousal that may be created in the individual. This emotional arousal is related to the thoughts around a particular disease and also the kinds of difficulties that the individual believes may arise. Health issues are therefore perceived in relation to their clinical consequence. These may include fears around reduced physical or mental functioning. The fear may also be around the issue of dying and death. Perceived seriousness also includes broader implications such as the effects of the illness on the work environment, family life, or social relations. These health issues refer to social, psychological, and economic components that are important in the understanding of health and illness (Champion & Skinner, 2008; Rosenstock et al., 1988; Rosenstock, Strecher & Becker, 1994). Although **perceived susceptibility and perceived seriousness** both have an emotional dimension, they are based on the cognitive component and are partly dependent on knowledge. These two components, taken together, move the individual to take some kind of action. However, the course of action that is likely to be taken by the individual is related to the **perceived benefits and barriers to taking the action**. Behaviour around the **perceived benefits** depends on the individual’s perception of the relative effectiveness of the known available alternatives that will reduce the disease threat (Champion & Skinner, 2008; Rosenstock et al., 1988; Rosenstock, Strecher & Becker, 1994). **Perceived benefits** are more likely to be seen as beneficial to a person’s health outcome if the person believes it will reduce their susceptibility to the illness, or the seriousness of it. According to Rosenstock (1974), it is the individual’s subjective beliefs about the availability and effectiveness of the various courses of action, and not the objective facts about the effectiveness of action, that will determine the course of action that an individual will take in relation to their health. These subjectively held beliefs are in turn influenced by the norms and pressures of the person’s social environment. Hence, an individual may believe that a given action will be effective in reducing the threat of the disease, but at the same time they may see the action itself as being inconvenient, expensive, unpleasant, painful, or upsetting (Champion & Skinner, 2008; Rosenstock et al., 1988; Rosenstock, Strecher & Becker, 1994). Finally, these negative aspects serve as **barriers of action** and lead to conflicting motives of avoidance. According to the HBM, several resolutions to this conflict may be possible. Hence, if readiness to act is high and negative aspects are low, then action may be taken. However, if readiness to act is low while the potential negative aspects are seen as strong, then the negative aspects serve as barriers to prevent action. Where readiness to act as well as barriers to action are great, the conflict is more difficult to resolve (Champion & Skinner, 2008; Rosenstock et al., 1988; Rosenstock Strecher & Becker, 1994). Over the past two decades, the HBM has been expanded to include self-efficacy, a measure of an individual’s perception of their competence to organise and perform health-related behaviour. This has been used globally to identify risk behaviours and to support interventions that seek to change health behaviour and remains popular in mapping determinants of COVID-19-related risk behaviours (Carico, Sheppard & Thomas, 2020, Da Costa, 2020; Jose et al., 2021; Mukhtar, 2020).

### The health behaviour model: limitations and lessons

One of the central underlying assumptions of the health behaviour model, as well as more recent health behaviour change models like the COM-B model and Behaviour Change Wheel (BCW), is that individuals who know about and understand their health problems are likely to have better health outcomes than those who are less knowledgeable. A second assumption is that people are information processing units, rational free agents whose human action is volitional and restricted only by their ignorance about health and illness (Shingal & Rogers, 2003). The basis of these
models is found in cognitive and behavioural science research that attempts to identify patterns and ways in which people can assess various health beliefs, attitudes, perceptions, and motivations, as well as how people might respond to these (Johnson, 2014; Kelly & Barker, 2016). Furthermore, it proposes that if a number of perceptions and motivations are in place, individuals will then take the necessary steps to protect themselves. If the threat to oneself is perceived as having serious consequences and there is a belief that taking preventive action will be effective, and that the benefits will outweigh the costs, and the individual will take the appropriate actions to protect themselves (Johnson, 2014; Kelly & Barker, 2016).

Underpinning these models is the belief that health behaviour can be reduced to a specific and discrete set of cognitions that are amenable to interventions and based on education. In other words, more information given to people around any health issue will lead to better lifestyle choices, as well as greater health self-advocacy (Shingal & Rogers, 2003). These models are deeply embedded at an individual level where, health risks remain a role responsibility (one’s body belongs to oneself), causal responsibility (health status is largely determined by personal behavioural choices), and a responsibility based on liability for costs and other undesirable consequences of one’s illness (what we do to ourselves and others if we do not behave in accordance with the stipulated health responsibilities). As such, gaps in knowledge, attitudes, perceptions, and behaviours then become the target for addressing health behaviour change policies and programmes (Hagger & Weed, 2019; Johnson, 2014; Kelly & Barker, 2016).

Studies have shown variable results for the effectiveness of these socio-cognitive models. In a meta-analysis carried out on the effectiveness of the HBM by Carpenter (2010), HBM constructs were found to vary in their effectiveness as predictors of behaviour. Similarly, in a systematic review, Jones et al. (2014) identified studies which used HBM as the theoretical basis for interventional impact and success. That review found that of the 18 eligible studies, only 6 used the HBM in its entirety and 5 different studies measured health beliefs as outcomes. Intervention success in these studies appeared to be unrelated to the HBM constructs, challenging the utility of this model as a theoretical basis for health adherence-enhancing interventions. Similarly, in a review of the use of the HBM by the School of Pharmacy at the University of London, weak predictive power was found in most areas of health-related behaviour (Taylor et al., 2007).

Studies that have been conducted using the HBM in understanding HIV-health outcomes have similarly shown varied results. Research has indicated that understanding the consequences and outcomes of becoming infected with HIV has helped to reduce high-risk behaviour (Tarkang & Zotor, 2015). Furthermore, a sense of perceived susceptibility and severity is necessary to change high-risk HIV-related behaviour (Noar, 2008). Self-efficacy is significantly associated with HIV-related risk behaviour (Khaumsaen & Stephenson, 2017). However, research on these success rates has to be read with caution. Despite the success achieved in prevention and treatment, by 2018 South Africa only reduced new infections by 44% (Avert, 2020). HIV infection risk remains high. Young people between the ages of 15 and 24 years make up the largest proportion of HIV-infected people in South Africa. This amounts to roughly 50%, while women account for nearly 63% of all new infections (Avert, 2020).

Of concern is that behaviour change communication strategies around HIV/AIDS are aimed mainly at the individual in relation to biomedical or psychological factors, and HIV-related interventions often overlook cultural and socio-political factors. Wand and Ramjee (2010) in their study suggested that risks for HIV infection are associated with a multitude of definable socio-demographic factors in rural and peri-rural communities. Airhihenbuwa and Webster (2004) have argued that culture can be used as an ally with strengths and attributes that can be helpful in looking at issues around HIV, where culture needs to be deconstructed and reconstructed for the forging of new health linkages. Similarly, Uwah (2013) argues that an interpretive analysis of cultural
phenomenon gives meaning to the experiences of those who live with HIV and subsequently their health-related behaviours.

In a study based on the results of a 2012 population-based national household survey, it was found that Black Africans in South Africa carried the highest burden of HIV. This coincided with high unemployment, lower educational levels, and higher levels of poverty, reflecting the structural disparities that define South African society (Mabaso et al., 2019). The ways in which HIV is framed and understood are also important to consider here. Initially, HIV was framed as a gay disease and later shifted in powerful ways to being constructed as an African disease, with the most marginalised people carrying the blame – the poor, women, and Black people. This applies particularly in the South African context where the Black population was historically represented and generalised as comprising oversexualised bodies with rampant, out-of-control sexualities in the service of racist ideologies (Shefer & Ratele, 2011). This legacy had profound implications in shaping the post-apartheid racialization of sexualities in relation to HIV (Settler & Engh, 2015). Given this history of structural inequality and racialization in South African society, can we learn from our experiences with HIV in ways that can help us face the massive challenges presented by COVID-19?

Understanding risk in health behaviour

Lupton (1999, 2020) has made a consistent argument that health behaviour cannot be calculated at the level of individual behaviour using scientific measurements and knowledge only. Representing human action as logical and categorising risk-avoidance behaviour as rational – while conceptualising risk-taking behaviour as irrational and expecting individuals to follow strict prevention rules – overlooks the fact that people are not calculating and emotion-free actors. Risk is never objective and does not take place outside of subjective experiences and belief systems. The way that people manage illness is constantly constructed, reconstructed, and negotiated through meaning-formation and socio-cultural and political interaction. It becomes important to understand the subjective experiences of the various actors who are located in different contextual matrices and who therefore are likely to have competing views in our response to COVID-19. These include scientific and bureaucratic approaches to risk, political narratives, authority and expertise, cultural organisations, and different institutional processes in the development of risk governance that forces us to move from a passive form of acceptance to critical-active forms of health care organisation (Brown, 2020). Pandemics are socio-cultural and political phenomena where threats and experiences are public and shared. It is a collective adversity that must include social activism and solidarity. COVID-19 tells us that there are other possibilities in addressing collective action that can and must be explored (Matthewman & Huppatz, 2020).

Moving towards collective action, community empowerment, and social justice

Far from health outcomes being an individual effort, the process of community organisation – where community groups identify common problems and goals to mobilise resources and implement collective strategies – cannot be overlooked. HIV-related research has indicated that strong community relations, characterised by a sense of mutual support, reciprocity, and collective mobilisation around common concerns, are linked to better health outcomes (Pronyk et al., 2008). One example of this in South Africa can be drawn from the Amadiba community in Xolobeni, as a way of understanding how crucial it is for collective community action to be included in critical health care outcomes. The Amadiba community, in the northern area of Pondoland, has been deeply
engaged in a struggle around mining, land, and economic development. The Amadiba Crisis Committee (ACC) brought together community members and traditional leaders in a long-standing battle to fend off corporate mining and government collusion to mine titanium deposits in this area (Clarke, 2014). The proposed mine would have been the largest titanium mine in South Africa, creating 300 jobs. However, the environmental and community impact meant that over 200 families would be displaced and neighbouring communities would be cut off from their critical source of food and livelihoods. Through civil courage and social activism, the Xolobeni community won the legal rights to determine what would happen to their land (Clarke, 2014). Implicit in community empowerment and capacity building is that both individuals and communities can take control of their lives and their environment to ensure better health outcomes for themselves and the community, rather than being forced to become passive bystanders (Rappaport, 1981).

Having previously been ravaged by HIV, the Xolobeni community acted promptly when they heard about the COVID pandemic and used the ACC to mobilise every community member through their mining activism structures (Ellis, 2020). When the first hard lockdown came, the communities were self-sufficient in relation to their food needs having protected their land. They were also able to negotiate wages and financial returns through the Amadiba Coastal Community Development Trust (ACCODA) and were empowered to monitor their community in terms of their needs. Instead of relying on government, they were able to mobilise and get provisions for their own masks and sanitisers (Ellis, 2020).

The aim of community action in relation to health is to create a sustainable environment through both governmental and non-governmental sectors in partnership with the communities for public health policies, achieving high-level participation in community-driven projects and to ultimately reduce inequities and disparities between groups (Minkler & Wallerstein, 2002). Alongside this is the idea of community building rather than just community organisation. This implies that the people in the community engage in the process themselves (Van Vlaenderen, 2001). This approach draws on the notion of social justice. The link between individual, organisational, and community level empowerment calls very strongly for liberation and provides a process for transformation (Freire in Hope & Timmel, 2003). This in turn requires a critical look at what keeps people in a state of powerlessness. One of the major goals of community empowerment is for people who are marginalised to develop a critical understanding of the socio-political environment through collective participation and how social injustice increases the health burden in those who are marginalised.

From a community development perspective, it is critical that the response to COVID-19 be extended to include wellness, competencies, strengths, capabilities, and the impact of environmental influences on social problems and political power, to mitigate the devastating impact of the virus. This multi-layered process spreads the focus outwards from COVID-19 being regarded as merely a disease that can be identified and categorised, and where blame can be apportioned to individuals. It includes a process of changes in community structures that will address the effects of structural inequalities and it challenges both perceived and real powerlessness (Van Vlaenderen, 2001). The Amadiba people have shown that this is possible through critical dialogue, listening to the issues contained in their own experiences, understanding root problems, and devising strategies to transform their reality.

Closely related to the concept of empowerment is the notion of community capacity building where a community has the ability to identify, mobilise, and address social and public health problems (Minkler & Wallerstein, 2002). Community capacity has multiple dimensions of active participation, leadership, support networks, skills, resources, critical reflection, a sense of community, understanding of their history and articulation of values, and access to power (Minkler & Wallerstein, 2002). In addition, it includes various community members who are able to
collaborate effectively to identify problems and needs in the community, to achieve a working consensus of goals and priorities, to agree on ways and means to implement the agreed-upon goals, and to collaborate in the required actions (Van Vlaenderen, 2001). Nguyen et al. (2007) put forward a compelling argument that people living with no social security and with minimal or no medical care are often faced with being ostracised, victimised, deserted, left destitute, and face death alone. The question is always, who will benefit from limited resources and who will be left to become ill and die? The impact of COVID-19 can be viewed as a product of both macro- and micro-political processes. To turn the pandemic around, one would have to take a careful look at power relationships, community structures, and political processes.

Finally, the notion of social capital is useful when engaging with the impact of COVID-19. Social capital is broadly understood as connections between individuals and social networks. An integrative view of social capital includes micro-, meso-, and macro-institutional co-existence, with recognition that the capacity of various social groups to forge important ties across communities (Cullen & Whiteford, 2001; Harpham, 2008). Empowering individuals and communities through civic associations, reinforced advocacy and activism, and challenging political systems may also be useful in moving towards a more radical health care response. The Amadiba community’s very early community-driven response to COVID-19 is a reflection of this process of community engagement in drawing on social capital through micro- and macro-systems to ensure maximum health outcomes for the community during this COVID-19 pandemic. The community actively engaged in critical dialogue, looked at and listened to the issues within their own experiences, and devised strategies to transform their lives (Ellis, 2020). There is a multiple dimension of active participation, leadership, rich support networks, skills, resources, critical reflection, a sense of community, understanding of their history, articulation of values, and access to power.

While the WHO’s (2020a) COVID-19 Strategy document uses participatory community action intervention discourse, it simultaneously lulls us into a state of complacency as it remains very clear that structures in society are co-opted and empowered to enforce and monitor personal compliance through the knowledge, behaviours, and perceptions model rather than by embracing community health principles. In keeping with this document, South African Minister of Health, Dr Zweli Mkhize, announced that the South African government would work closely with community organisations (Mkhize, 2020). Although it would appear that the politics of COVID-19 health intervention is inclusionary of local government, civil society, religious organisations, and community-based organisations, one has to interrogate the impact and extent of this lest we get dangerously close to losing another moment in history to balance the scales of justice.

Conclusion

As COVID-19 morbidity and mortality rates continue to increase, this pandemic has radically changed South Africans’ lives. It has also become clear that it is having a disproportionate impact on those who are marginalised. What South Africa’s painful history with HIV has demonstrated is that in a country with large socio-economic disparities, an over-reliance on HBM principles to change health-related behaviour can be severely limiting, and their unreflexive use by practitioners, researchers, and policy developers may even contribute to maintaining inequality. It is crucial that we find a balance in ensuring that communities are involved in their own decision-making processes to build their capacity for mobilisation and to advocate for more empowered health outcomes. Our relationship with HIV activism has given us this platform, but we need to do more through the use of community intervention principles to strengthen our communities and our national response to COVID-19.
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References
Airhihenbuwa, C. O., & Webster, J. D. (2004). Culture and African contexts of HIV/AIDS prevention, care and support. *Journal of Social Aspects of HIV/AIDS, 1*, 4–13.
Avert. (2020). *HIV/AIDS in South Africa*. https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/south-africa
Brown, P. (2020). Studying COVID-19 in light of critical approaches to risk and uncertainty: Research pathways, conceptual tools, and some magic from Mary Douglas. *Health, Risk and Society, 22*(1), 1–14. https://doi.org/10.1080/13698575.2020.1745508
Carico, R., Sheppard, J., & Thomas, C. (2020). Community pharmacists and communication in the time of COVID-19: Applying the health belief model. *Research in Social and Administrative Pharmacy, 17*(1), 1984–1987. https://doi.org/10.1016/j.sapharm.2020.03.017
Carpenter, C. J. (2010). A meta-analysis of the effectiveness of health belief model variables in predicting behaviour. *Health Communication, 25*(8), 661–669. https://doi.org/10.1080/10410236.2010.521906
Champion, V. L., & Skinner, C. S. (2008). The health belief model. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research and practice* (4th ed., pp. 45–65). Jossey-Bass.
Clarke, J. (2014). AmaDiba moment: How civil courage confronted state and corporate collusion. In G. Khadiagala, P. Naidoo, D. Pillay, & R. Southall (Eds.), *New South African review: A fragile democracy, twenty years on* (pp. 136–149). Wits University Press.
Cullen, M., & Whiteford, H. (2001). The interrelations of social capital with health and mental health. *The Commonwealth of Australia.
Da Costa, M. F. (2020). Health belief model for coronavirus infection risk determinants. *Revista de Saúde Pública, 54*, 1–12.
Ellis, E. (2020, April 21). HIV taught us a lesson we will never forget – Amadiba community on beating Covid-19. *Daily Maverick*. https://www.dailymaverick.co.za/article/2020-04-21-hiv-taught-us-a-lesson-we-will-never-forget-amadiba-community-on-beating-covid-19/#gsc.tab=0
Hagger, M. S., & Weed, M. E. (2019). DEBATE: Do interventions based on behavioral theory work in the real world? *International Journal of Behavioral Nutrition and Physical Activity, 16*, Article 36. https://doi.org/10.1186/s12966-019-0795-4
Harpham, T. (2008). The measurement of community social capital through surveys. In I. Kawachi, S.V. Subramanian, & D. Kim (Eds.), *Social capital and health* (pp. 51–62). Springer.
Hope, A., & Timmel, S. (2003). *Training for transformation: A handbook for community workers*. ITDG.
Johnson, J. D. (2014). Health-related information seeking: Is it worth it? *Information Processing & Management, 50*(5), 708–717.
Jones, C. J., Smith, H., & Llewellyn, C. (2014). Evaluating the effectiveness of health belief model interventions in improving adherence: A systematic review. *Health Psychology Review, 8*(3), 253–269. http://doi.org/10.1080/17437199.2013.802623
Jose, R., Narendran, M., Bindu, A., Beevi, N., Manju, L., & Benny, P. V. (2021). Public perception and preparedness for the pandemic COVID 19: A Health Belief Model approach. Clinical Epidemiology Global Health, 9, 41–46. https://doi.org/10.1016/j.cegh.2020.06.009

Kelly, M. P., & Barker, M. (2016). Why is changing health-related behaviour so difficult? Public Health, 136, 109–116.

Khaumsaen, N., & Stephenson, R. (2017). Beliefs and perception about HIV/AIDS, self-efficacy, and HIV sexual risk behaviours among young Thai men who have sex with men. AIDS Education and Prevention, 29(2), 175–190.

Lupton, D. (1999). Theorising risk. Routledge.

Lupton, D. (2020). Sociology and the coronavirus (Covid-19) pandemic. Health Sociology Review, 29, 111–112. https://doi.org/10.1080/14461242.2020.1790919

Mabaso, M., Makola, L., Naiddoo, I., Mlangeni, L. L., Jooste, S., & Simbayi, L. (2019). HIV prevalence in South Africa through gender and racial lenses: Results from a 2012 population-based national household survey. International Journal for Equity in Health, 18(167), 1–11. http://doi.org/10.1186/s12939-019-1055-6

Matthewman, S., & Huppatz, K. (2020). A sociology of Covid-19. Journal of Sociology, 56(4), 675–683. https://doi.org/10.1177/1440783320939416

Minkler, M., & Wallerstein, N. B. (2002). Improving health through community organisation and community building. In K. Glanz, B. K. Rimmer, & F. M. Lewis (Eds.), Health behaviour and health education: Theory, research and practice (pp. 287–312). John Wiley.

Mkhize, Z. (2020, May 14). Zweli Mkhize: Time has come to look forward the horizon and take bold steps to beat the virus. News24. https://www.news24.com/news24/columnists/guestcolumn/zweli-mkhize-time-has-come-to-look-toward-the-horizon-and-take-bold-steps-to-beat-the-virus-20200514

Mukhtar, S. (2020). Mental health and emotional impact of COVID-19: Applying health belief model for medical staff to general public of Pakistan. Brain Behaviour and Immunity, 87, 28–29. https://doi.org/10.1016/j.bbi.2020.04.012

Nguyen, V. K., Ako, C. Y., Niamba, P., Sylla, A., & Tiendrebeogo, I. (2007). Adherence as therapeutic citizenship: Impact of the history of access to antiretroviral drugs on adherence to treatment. AIDS, 21(5), S31–S35. http://doi.org/10.1097/01.aids.0000298100.48990.58

Noar, S. M. (2008). Behavioural interventions to reduce HIV-related sexual risk behaviour: Review and synthesis of meta-analytic evidence. AIDS Behaviour, 12, 335–353. http://doi.org/10.1007/s10461-007-9313-9

Pronyk, P. M., Harpham, T., Morison, L. A., Hargreaves, J. R., Kim, J. C., Phetla, G., Watts, C. H., & Porter, J. D. (2008). Is social capital associated with HIV risk in rural South Africa? Social Science & Medicine, 66, 1999–2010. https://doi.org/10.1016/j.socscimed.2008.01.023

Ramaphosa, C. (2020). Statement by President Cyril Ramaphosa on South Africa’s response to the coronavirus pandemic. COVID 19 online resource and news portal. https://sacoronavirus.co.za/2020/05/13/statement-by-president-cyril-ramaphosa-on-south-africas-response-to-the-coronavirus-pandemic-13-may-2020/

Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. American Journal of Psychology, 9(1), 1–25. http://doi.org/10.1007/BF00896357

Rosenstock, I. M. (1960). What research in motivation suggests for public health. American Journal of Public Health, 50, 295–301.

Rosenstock, I. M. (1966). Why people use health services. Milbank Memorial Fund Quarterly, 44, 94–124.

Rosenstock, I. M. (1974). Historical origins of the health belief model. In M. H. Becker (Ed.), The health belief model and personal health behavior (pp. 328–335). Charles B. Slack.

Rosenstock, I. M., Strecher, V., & Becker, M. H. (1994). The health belief model and HIV risk behaviour change. In R. J. DiClemente & J. L. Peterson (Eds.), Preventing AIDS: Theories and methods of behavioural interventions (pp. 5–24). Plenum Press.

Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social learning theory and the health belief model. Health Education Quarterly, 15, 175–135.
Settler, F., & Engh, M. H. (2015). The black body in colonial and postcolonial discourse in South Africa. *Alternation Special Edition, 14*, 126–148.

Shefer, T., & Ratele, K. (2011). Racist sexualisation and sexualised racism in narratives on apartheid. *Psychoanalysis, Culture & Society, 16*, 27–48. https://doi.org/10.1057/pcs.2010.38

Shingal, A., & Rogers, E. M. (2003). *Combating AIDS: Communication strategies in action*. SAGE.

Tarkang, E. E., & Zotor, F. B. (2015). Application of the health belief model (HBM) in HIV prevention: A literature review. *Central African Journal of Public Health, 1*(1), 1–8.

Taylor, D., Bury, M., Campling, N., Carter, S., Garfied, S., Newbould, J., & Rennie, T. (2007). *A review of the use of the health belief model (HBM), the theory of reasoned action (TRA), the theory of planned behaviour (TPB) and the trans-theoretical model (TTM) to study and predict health related behaviour change*. https://warwick.ac.uk/fac/sci/med/study/ugr/mbchb/phase1_08/semester2/healthpsychology/nice-doh_draft_review_of_health_behaviour_theories.pdf

Uwah, C. (2013). The role of culture in effective HIV/AIDS communication by theatre in South Africa. *Sahara Journal, 10*(3–4), 140–149. http://doi.org/10.1080/17290376.2014.903809

Van Vlaanderen, H. (2001). Psychology in developing countries: People centred development and local knowledge. *Psychology in Society, 27*, 88–108.

Wand, H., & Ramjee, G. (2010). Targeting the hotspots: Investigating spatial and demographic variations in HIV infection in small communities in South Africa. *Journal of the International AIDS Society, 13*, Article 41.

World Health Organization. (2020a). *2019 – Novel Coronavirus (2019 – nCov): Strategic preparedness and response plan*. https://www.who.int/docs/default-source/coronaviruse/srp-04022020.pdf

World Health Organization. (2020b). *Global Health Observatory (GHO) data: HIV*. https://www.who.int/data/gho/data/themes/hiv-aids

World Health Organization. (2020c). *Rolling updates on coronavirus disease (COVID-19)*. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen