



**"It always has to come down to individual choice":**

**Vaccination decision-making among privileged parents in South Africa**

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BLMCHE002

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*A mini-dissertation submitted in partial fulfilment of the requirements for the Master of Public Health (Social and Behavioural Sciences) degree offered at the School of Public Health and Family Medicine, Faculty of Health Sciences*

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## DECLARATION

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Signature:

Date: 12/02/23

## Dedication

This thesis is dedicated to my children, Jesse and Sasha. Dream big my little loves.

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PART A:  
Research Protocol



**Vaccination decision-making during the COVID-19 pandemic in South Africa:  
A qualitative study of the experiences and perspectives of parents from privileged  
communities in the Western Cape**

A Proposal for Research

For a Minor Dissertation, in partial fulfilment of the requirements for the degree of Master in  
Public Health, in the School of Public Health and Family Medicine,  
University of Cape Town.

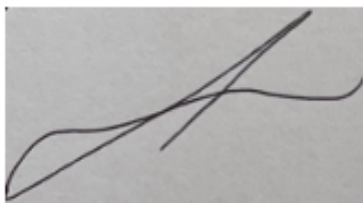
Dr Chevon Blumberg  
BLMCHE002

Supervisor: Assoc. Prof. Lucia Knight  
Co-supervisor: Dr Michael Deml

**PLAGIARISM DECLARATION:**

1. I know that plagiarism is a serious form of academic dishonesty.
2. I have read the document about avoiding plagiarism. I am familiar with the contents, and have avoided all forms of plagiarism mentioned there.
3. Where I have used the words of others, I have indicated this by the use of quotation marks.
4. I have referenced all quotations and properly acknowledged other ideas borrowed from others.
5. I have not and shall not allow others to plagiarise my work.
6. I declare that this is my own work.

**Signed:**

A handwritten signature in black ink on a light gray background. The signature is cursive and appears to read 'Chevon Blumberg'. It starts with a large, sweeping 'C' that loops back under the 'v', followed by 'e', 'v', 'o', 'n', 'B', 'l', 'u', 'm', 'b', 'e', 'r', 'g'. The 'B' is particularly large and prominent.

**Chevon Blumberg**

**Vaccination decision-making during the COVID-19 pandemic in South Africa:  
A qualitative study of the experiences and perspectives of parents from privileged  
communities in the Western Cape**

## **1) Introduction and background**

### **1.1) Purpose of the study**

Identified as a major gap in the vaccine hesitancy literature, this qualitative study aims to explore the lived experiences and perspectives of parents from privileged communities, in the context of the province of the Western Cape in South Africa. Performed in real time, during the COVID-19 pandemic vaccine roll-out, the study will explore the areas of routine childhood vaccination, influenza and human papillomavirus (HPV) vaccine, with particular focus on the COVID-19 vaccine. This research aims to qualitatively explore the underlying climate of general vaccination, including vaccine sentiment and vaccine uptake, both preceding and following the onset of the pandemic. The research will explore vaccine choices and vaccination hesitancy among lay individuals. This research also seeks to analyse the relationship between lay individuals' vaccination attitudes and uptake, with expressions of trust/mistrust in the agendas of science, healthcare workers, government, and pharmaceutical companies. Included in this analysis is an exploration of sentiment regarding official channels of management of the COVID-19 crisis, and vaccine rollout. The qualitative research design has the advantage of flexibility and adaptability, which is extremely useful in the context of the rapidly changing and evolving landscape of the novel COVID-19 virus pandemic and vaccination efforts.

### **1.2) Literature review**

#### ***Vaccine hesitancy and vaccine uptake preceding the COVID-19 pandemic***

Vaccination is hailed as one of the most important accomplishments of public health (1). It is an efficacious and cost-effective means of counteracting disease, with worldwide immunisation programmes preventing an estimated two to three million deaths annually (2). Vaccine hesitancy is defined by the World Health Organization (WHO) as "the reluctance or refusal to vaccinate despite the availability of vaccines" (2 p.1), and was declared one of the top ten major threats to global health (2). Vaccine hesitancy endangers the progress that has been made in fighting vaccine-preventable diseases, contributing significantly to the almost one and a half million lives that could be saved per year if vaccination uptake was optimised (2). In 2019, a 30% increase in measles cases globally, and the resurgence of wild poliovirus in some countries illustrate the severity of the threat of insufficient vaccination (2). The reasons for vaccine hesitancy have been shown to range from religious and scientific, to

political justifications (1). The “5C scale” was developed from research performed in high-income countries, and identifies the key psychological constructs of “confidence, complacency, constraints, calculation, and collective responsibility” as the drivers of vaccination decision-making (3). Despite these identified factors, there is no “universal algorithm” (1 p.2155) that neatly explains the complexity of the issue of vaccine hesitancy, as there are multiple factors at play that differ in strength and interdependence of influence across different contexts, populations, spaces and times, and varying from vaccination to vaccination (1).

There is an urgency to understand vaccine hesitancy. The introduction of increasing varieties and regimens of vaccinations, combined with non-traditional non-hierarchical and informal communication and information channels, has made the issue increasingly complex. Spotlighted as a popular debate, greater numbers of people are questioning the necessity of vaccination, or seeking alternative options, which can ultimately result in vaccine delay and refusal (1).

An integral piece of the puzzle of insufficient vaccine uptake is teasing out the important difference between vaccine hesitancy and reluctance from other factors that might lead to under-immunisation. Blanket-use of the term ‘vaccine hesitancy’ for all insufficient immunisation results in the concept being “used inaccurately as the explanation for under-vaccination in a population when the causes are related to pragmatics, competing priorities, access, or the failure of services or policies” (4 p. 6556).

In 2011, the WHO set a global target of 90% national coverage for all primary vaccines by 2020 (5). Despite significant gains in vaccination through the Expanded Programme on Immunisation of South Africa (EPI-SA), research performed in South Africa has shown that the country consistently failed to meet these targets (5,6). Vaccination coverage, as tracked by the measure of ‘fully immunised under one year old coverage’ (FIC) of the EPI-SA showed that coverage increased from 83.6% in 2012/2013, to almost reaching the target at 89.8% in 2014/2015, before dropping down to 82.3% in 2016/2017 (5). However, even these percentages may be an overestimation of the true picture of vaccination coverage in South Africa. Published population based studies, including a 2016 national FIC reporting only 52.7% vaccine coverage, as well as intermittent measles outbreaks, provides evidence for concerns regarding South Africa’s vaccination achievements (5). In contrast to high income countries, where vaccine hesitancy is recognised as the main barrier to population vaccination, in regions such as sub-Saharan Africa, a combination of vaccine accessibility and availability have historically been identified as the reasons for insufficient vaccination rates (7). A 2012 study published on the topic of barriers to the EPI-SA identified challenges that included health-care worker related challenges (poor knowledge on vaccinations) and health-care system related challenges (stockouts, financial constraints and human resource

limitations) (8). The study also identified health-care user related challenges, described as “anti-immunisation rumours” (8 p.1) and parental reluctance. This is corroborated with the fact that research has shown that vaccine hesitancy is on the rise in Africa (9). With most vaccine hesitancy research being performed in high income countries, there are major gaps in the knowledge for low income regions, including South Africa, regarding the nature, determinants and causes of vaccine hesitancy, as well as the extent of its role in insufficient vaccination coverage (9).

### ***COVID-19 Vaccine uptake and hesitancy***

As of October 2022, at least one dose of any COVID-19 vaccine has been administered to 68% of the global population, and almost five billion people, or 63.5% of the worldwide population is fully vaccinated (10). By comparison, only 22.7% of people living in low-income countries have received one dose of vaccine (10). At the start of the vaccine rollout, the South African government had set its sights on 67% national coverage (11). Currently, of the 60.6 million South Africans, only 19.4 million people (32%) are fully vaccinated, and 22.3 million (36.8%) have received at least one dose of a vaccine (10,12). Despite vaccine availability through the national vaccine rollout programme, with only 32.7 percent of the population being fully vaccinated to date (10), achieved rates of actual vaccination have fallen far below the projected target. Particularly in the context of South Africa’s low employment rates, and high HIV and TB incidence, it is crucial to understand the drivers of the low vaccination rates in South Africa in order to prevent further illness, death, and economic fallout (13).

As part of the Southern Africa Labour and Development Research Unit’s COVID-19 Vaccine Survey (CVACS) project, research surveys conducted between November 2021 and March 2022 showed high and entrenched levels of vaccine hesitancy over a diverse sample of vaccine-eligible respondents, with most (74%) showing no intention or desire to be vaccinated (13,14). Reasons for not vaccinating were varied, and included declarations of personal choice, low perceived personal risk to illness resulting from COVID-19 infection, presumed vaccine inefficacy and safety concerns, and governmental mistrust (13).

Vaccination access was not found to be a reason for not vaccinating amongst the most reluctant of these respondents (13). Other factors found to account for vaccine hesitancy in South Africa include vaccine literacy, flu vaccination status, and trust in the government’s capacity to safely and effectively roll out the COVID-19 vaccination programme (15). The CVACS research project found vaccine hesitancy to be higher amongst those participants who were better educated, and those with access to more resources (14).

### ***Social determinants of health and vaccine uptake***

The WHO defines social determinants of health as “the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and

age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems” (16). Social determinants of health emphasise the role that context and life circumstances play in the health of individuals, accounting for an estimated 30-55% of all health outcomes, making them more influential in individual health than access to health services or lifestyle choices (16). These determinants cover a vast range of systemic and individual level factors, both of which are crucial to health, and include food security, housing, education, employment, job security, income, non-discrimination and conflict (16). The inequitable distribution of socio-economic resources, including money, knowledge, power and social networks, results in gross inequalities in health and access to health care services (17). Inequity has such a profoundly ubiquitous impact on health outcomes. Those individuals who are privileged with access to resources are able to tap into the protective nature of these resources, under most circumstances and in the face of many risks, such as accessing healthcare services and adopting preventive and health-promotive strategies (17). This health privilege can be extended to the arena of vaccination, with the social determinants of health influencing vaccination decision-making processes at multiple levels.

### ***Understanding privilege***

Privilege can be defined as “unearned social and structural advantages which benefit dominant groups or those who occupy positions of power in society, at the expense of marginalised groups” (18 p. 83). Privilege is a state of normalised and invisible entitlement. Privileged individuals take these advantages for granted, with little, if any, recognition of the benefits bestowed upon them (18).

Privilege manifests in health behaviours in a number of ways. Much vaccine hesitancy research has focused on the specific area of parental vaccine hesitancy, describing these choices as a privileged parenting practice (19–27). Central to decisions framed from the perspective of parenting privilege is that those parents who have access to resources are easily able to access health care for their non-vaccinated children in the event of contracting a vaccine-preventable illness. These children and parents also benefit from a gratuitous and unearned protection from these illnesses, due to background herd immunity of the surrounding vaccinated population (26). Research done in America has shown that in privileged parenting circles decisions not to vaccinate are dictated purely by parental choice, but amongst underprivileged and African American mothers with low levels of education, non-vaccination results from reasons of inequity, including inadequate health care access, insufficient provision of health care services, inability to navigate the health system, and lack of health education (26). However, this dichotomous narrative is as beguiling as it is

simplistic. Polarising this nuanced and emotive topic leads to further muddying of the waters of a discourse that requires deep and sensitive exploration if it is to be understood.

### ***A gap in the knowledge***

Historically, the majority of studies performed on the topic of vaccine hesitancy have been conducted in Europe and America, high-income countries with established health care systems, including reliable and accessible vaccination services (1,9). Recently there has been an upsurge of research performed in South Africa exploring the topic of COVID-19 vaccine hesitancy (15,28–30). However, there remains a knowledge gap on the topic of vaccine decision making amongst privileged individuals in the context of middle and low income countries.

### **1.3) Research aim and research questions**

The aim of this research is to increase understanding of the vaccination decision-making processes of lay privileged individuals living in the Western Cape, South Africa, both for themselves, as well as for their children. Through qualitative enquiry, this study seeks to fill major identified gaps in knowledge and research, particularly pertaining to the phenomenon of vaccine hesitancy, through investigation of those individuals who may be considered to form part of the elite or privileged 'stable middle class' (31). There is no existing qualitative research on this topic, focusing on this particular social group, in South Africa. Therefore, this study seeks to explore the experiences and perspectives of these individuals regarding routine childhood vaccinations, non-routine vaccinations (including influenza and HPV), as well as COVID-19 vaccination.

Accordingly, this study seeks to answer the following research questions:

- (1) How do privileged individuals, living in the Western Cape, make decisions about vaccination?
- (2) What are these individuals reasons for choosing to vaccinate or not to vaccinate themselves against COVID-19?
- (3) What are these individuals reasons for choosing to vaccinate or not to vaccinate their children against COVID-19?

### **1.4) Conceptual Framework**

This study will frame the data within the structure of the socio-ecological model (SEM). Developed by Urie Bronfenbrenner (32–34), the SEM envisions the individual as existing at the centre of nesting circles, representing different system levels, including the microsystem, mesosystem, exosystem, macrosystem and chronosystem (34) (please see Appendix A). The SEM theorises that the health of individuals is determined by physical, social and political interactions between the individual and the defined circles of influence (35), with

effects occurring at multiple levels, including individual, inter-personal, organisational, community-based and governmental policy levels (36). The model emphasises that this influence occurs in a multi-directional manner, with the environment shaping individual behaviour, and reciprocally, individual behaviours having influence on, and thereby, shaping the environment (36). The microsystem, depicted closest to the individual within the first circle, has the strongest influence on the individual, and represents relationships existing within that individual's immediate environment. The mesosystem exists within the second circle, and represents direct but less immediate influences, including neighbourhood, school, work, and place of worship. The exosystem includes social networks and community factors that do not exert direct influence on the individual, but lead to indirect impacts on the individual. The macrosystem includes cultural and traditional values, religious belief systems and societal influences. The chronosystem is the outermost circle, and includes the influences of policy, time period and historical context (35). The model helps researchers to realise how different elements of an environment impact individual behaviour, with change occurring at multiple levels (36). It has been successfully adapted for use in various health promotion programmes through the understanding that in order to facilitate effective and sustained changes in health behaviours it is important to create conducive environments (35). This framework contributes to a richer understanding of vaccine research as through a multi-layered approach it alleviates the burden of intervention directed purely at the individual level (37). The framework provides researchers with a systematic approach to analysing determinants of vaccination uptake at the different levels of influence, as well as between these levels and across different populations (38,39). The SEM has been applied to research performed in the vaccine arena, exploring complex topics such as determinants of vaccine uptake, vaccine hesitancy and vaccine promotion, in Africa, Asia and the United States of America, for vaccine programmes ranging from routine childhood immunisation, to influenza vaccines, and the more novel H1N1 influenza and COVID-19 vaccinations (37–41).

## **2) Methodology**

This study will make use of secondary analysis of transcribed interviews, from previously collected data. The primary data used in this study were collected by the PI of this study and the author of this proposal in the context of the pre-approved research project by Dr Michael Deml entitled: "Vaccination decisions and rollout during the COVID-19 pandemic in South Africa: A qualitative study of community and health official experiences and perspectives" (HREC approval REF025/2022) (please see Appendix B). To better contextualise the analysed data, the methodology for the collection of the primary data is detailed in the methods section of this document.

## **2.1) Study Design**

This research aims to fill a major identified gap in the body of literature concerning vaccine hesitancy, by gaining insight into the vaccination choices and decision-making processes of individuals considered to form part of the stable middle class or higher, living in the province of the Western Cape in South Africa. The study was designed to explore vaccination in general, including routine, childhood and elective vaccinations, with a particular focus on the novel COVID-19 vaccination.

Collection of primary data, for the preapproved project, used an exploratory qualitative research design, utilising in-depth individual interviews. As a qualitative research tool, the in-depth interview is a popular choice used to understand individual perspectives and practice (42). By allowing participants the opportunity to communicate their experiences, opinions and feelings on a topic in an objective space, and as experts of their own individual experiences, this medium helps to give a “human face to research problems” (42 p.29). This design was also chosen due to the novel, oft-contentious and potentially sensitive nature of the research topic, which could result in hindrance to open discussion within a group setting (42). As primary data collection was performed as a component of an approved larger study, this study will analyse the collected data as a secondary analysis of the transcribed interviews (please see Appendix C). As a method, secondary analysis can be considered a “respected, common and cost-effective approach to maximising the usefulness of collected data” (43 p.408).

## **2.2) Characteristics of the study population**

Fourteen eligible participants were sampled in line with the following criteria:

- Number of participants: Approximately fifteen to twenty individual interviews conducted, or until attainment of data saturation.
- Inclusion criteria: individual persons; male or female; aged eighteen years or older, living in the Western Cape South Africa; parents to minor dependent child/children aged between twelve to eighteen years old; form part of the stable middle or upper socio-economic bracket. In light of the conceptual difficulties in defining and measuring the relative and abstract concept of ‘stable middle class’ and ‘privilege’, this group is loosely defined as individuals who are high-income earners and/or have achieved higher educational attainment, and according to self-report have not recently experienced major financial difficulties, due to the COVID-19 pandemic or other reasons, that resulted in an impact on standard of living, children’s educational institution choice, or healthcare access. This conceptualisation is rooted in empirical findings in South Africa. Estimates classify approximately one quarter of those living in South Africa as belonging to the stable middle class or elite (31).

- Exclusion criteria: individuals who are under the age of eighteen; not living in the Western Cape South Africa; individuals who are not eligible for COVID-19 vaccination, physically or mentally unwell, cognitively impaired, terminally or critically ill; individuals who may be considered vulnerable, including homelessness/housing insecurity, and incapacity to comprehend research and therefore inability to provide ethical consent.
- Interview location: Location was chosen as per participant preference, COVID-19 pandemic restrictions, and logistical considerations. Options offered included public settings (coffee shop, restaurant), participant private home or place of work, or virtual meeting.

### **2.3) Recruitment and enrolment**

Participants were recruited through the snowball sampling method. Snowball sampling, also referred to as chain referral sampling, is a form of purposive sampling, a strategy that selects participants according to predetermined study design criteria (42). Snowball sampling refers to the method of recruiting participants through known social networks for referral to the study (42). Considering the sensitive nature of the topic of vaccination hesitancy, this technique was deemed appropriate as it is often used to recruit from less accessible groups belonging to “hidden populations” (42 p.6). In this study, the author of this protocol utilised her own social networks for recruitment of participants. During recruitment, potential participants were supplied with a recruitment letter (please see Appendix D) summarising study purpose, participant eligibility, and details of the participation process. If requested, participants were also supplied with the question format of the semi-structured interview guide (please see Appendix E). Upon interview completion, participants were asked for suggestions of any individuals known to them who would be eligible and potentially interested in participating in the study. These suggestions were then followed up accordingly. Through this sampling method, fourteen individual participants were successfully recruited and enrolled in the study.

### **2.4) Research procedures and data collection methods**

With prior HREC authorisation, primary data was collected by the proposal author (N=13) and PI (N=1) during semi-structured, in-depth interviews with participants. Fourteen individual participants were successfully recruited, and interviews were conducted according to the interview guide. The questions covered a range of topics relevant to the study purpose, were qualitative and semi-structured in nature, and were asked in a neutral and open-ended manner. The questionnaire format was flexible, allowing for follow-up questions when clarification or elaboration was required. In the early stages of data collection, the interview guide was piloted, discussed amongst co-investigators, and found to be

appropriate for the purposes of the study. Therefore no amendments were deemed necessary. Each interview was audio-recorded on a password protected private cellular phone using the Voice Memos (44) software application, from beginning to end of the interview, so as to ensure that the information was preserved. On completion, the interviews were then uploaded onto a password protected computer. The audio recordings were transcribed verbatim both manually, and with the use of the password protected transcription software programme, Trint (45), with manual correction. According to participant preference, twelve interviews were conducted in-person face-to-face. Locations were chosen based on participants' comfort-levels and preferences, as well as privacy requirements, and took place either at home or in a private office. Two interviews were conducted virtually over Zoom (46), as per participant request. All interviews were conducted in English, as all participants spoke English as a first language. COVID-19 protective measures were strictly adhered to, including ensuring social-distancing measures, adequate ventilation, sanitising of any equipment used, such as pens, and mask-wearing according to participant preference.

## **2.5) Data Analysis**

Transcribed interviews will be analysed manually as a secondary data analysis. The thematic data analysis approach will be used to analyse the transcriptions. Broadly, thematic analysis approaches identify commonalities, differences and relationships within the data, in order to define themes, and ultimately draw conclusions that are descriptive and potentially explanatory in nature (47). In their original work, Braun and Clark (2006) define thematic data analysis as a flexible and practical “method for identifying, analysing, and reporting patterns (themes) within data” (48 p.79), that yields rich, complex, and detailed description and interpretation of collected data (48). This method is also capable of generating unexpected insights (49). Thematic data analysis is a commonly used qualitative analytical tool, the essence of which is to refine an entire set of data into its base parts, in order to seek meaning by identifying repeated running themes (48). The method is a systematic and iterative approach to analysis, that utilises continual familiarisation with the data, ultimately resulting in coding and theming of the data (48). Braun and Clarke (2006) describe a theme as “captur[ing] something important about the data in relation to the research question, and represents some level of patterned response or meaning with the data set” (48 p.82). Through this iterative process, the researcher is able to identify themes within the context of the purpose of the study, and aligned with the defined study aims (48).

Although this study is designed as a secondary data analysis, the proposal author has the distinct advantage of having collected the primary data, therefore lending a rich and layered context to the transcribed interviews. Innate in its flexibility as a tool, thematic data analysis is not enmeshed within a particular theoretical or conceptual framework, and therefore lends

itself to application within a multitude of frameworks (48). Thematic data analysis is the chosen analytical method for its ability to elicit data that is both rich and detailed in description, but also accessible to a wide ranged audience (48). This method was also deemed appropriate as it enables social explanations of the data (48), integral to the answering of the research questions posed by the study. In order to facilitate ease of discussion between research team members, analysis will be structured according to the principles of the Framework Method (50). Originally developed by Ritchie and Spencer (50), the Framework Method provides a structure for the systematic organisation of data within an output matrix, thereby methodically ordering reduced data, and facilitating identification of key themes across the entire data set (47). This study will make use of the inductive approach, a data-driven process in which themes are generated through a continuously and iteratively refined process of unrestricted coding “without trying to fit into a pre-existing coding frame” (48 p.83). Both thematic data analysis and the Framework Method lend themselves to an inductive approach to analysis (47).

## **2.6) Rigour**

Rigour is an essential component of good quality qualitative research, ensuring that this paradigm of research yields outcomes that are both useful and acceptable (49). This study will strive for rigour according to Lincoln and Guba’s criteria of trustworthiness, which include the four general criteria of credibility, dependability, transferability, and confirmability (51). Credibility is described as the degree of accuracy of the participants’ views and their reflected representation within the research, and will be achieved in this study through researcher triangulation, a process involving regular review with the research team and co-supervisors (49). Dependability refers to research that is clear, rational, trackable, and well-documented for the duration of the research process (49), and will be achieved by transparent audit trail, through meticulous note-keeping, including documentation of decisions, choices and rationales made throughout. Central to this process, the proposal author will engage in a continuously reflexive process through regular journal writing, as a continuation of the reflexivity process initiated during primary data collection, ensuring awareness of researcher bias in order to minimise impact on the research (49). Transferability refers to the generalisability of research findings (49). Although transferability is not a primary aim of qualitative research, through the use of rich and thick description readers of the research are able to assess the application to other settings (49). Confirmability is achieved when it can be shown that the research results are indisputably based upon the research data, through clearly articulated and methodically outlined rationale for the choices made throughout the entire study (49), and included in the note-taking

process. Confirmability is based on the successful establishment of the other three criteria, namely credibility, dependability and transferability (49).

## **2.7) Data safety and monitoring plan**

Following each interview, audio recordings were uploaded onto a password protected laptop computer. Audio recordings were then uploaded onto the secure, encrypted UCT OneDrive server, as well as to the password protected Trint (45) transcription software programme. Once uploaded, recordings were removed from the laptop's internal storage and audio recorder software. Interviews transcribed in the software programme were manually edited in the programme, uploaded to the UCT OneDrive server on completion as Word.docx files, and subsequently removed from the transcription programme.

Once transcribed into text and edited, all identifying information about participants, including names of participant, family members or friends, schools and companies, was removed from the text and replaced with a simple relational explanation in parentheses. The name of the participant was replaced with a code. This code will also be used for all processing of data, including transcriptions, and analysis coding. Access to all study files and folders held on the secure server will be continually regulated, with access granted through hierarchical rights, at the discretion of the co-investigators, and ultimately overseen by the study co-supervisor. Due to the dual role of the proposal author as principal data collector for the relevant component of the primary study, the ethical and confidentiality concerns intrinsic to the sharing of qualitative data for the purposes of secondary data analysis (52) are therefore significantly reduced. Data will be securely stored in the academic server for a stipulated duration, as outlined by the rules and regulations of the University of Cape Town. All data arising from the primary data collection, including recordings, transcriptions, and analyses, will be password protected, saved in encrypted UCT OneDrive databases, and secured within UCT accounts. In data dissemination, direct speech quotations will make use of pseudonyms, and all identifying information will be coded to protect participant's identities.

## **3) Description of potential risks, discomfort and benefits**

This study did not pose physical risk to any of the participants. As a universal concern, COVID-19 prevention and protective measures were strictly adhered to throughout all face-to-face interactions.

Particularly considering the context of interviewing participants during the COVID-19 pandemic and real-time vaccination rollout, as well as considering the generally contentious and potentially emotionally triggering content of the topic of vaccination, this study may have elicited discomfort and emotional distress in some participants.

### **3.1) Risk classification**

There was minimal risk for study participants.

### **3.2) Minimising risk**

Prior to initiation of data collection a distress protocol was designed. This protocol ensured that in the unlikely event of significant distress resulting from study participation, the concerned participant would be referred to psychosocial support services on offer in the Western Cape (<https://www.westerncape.gov.za/directories/services/1039>). Considering the sensitive nature of the topic of vaccination choices, and to maximise participant comfort, mitigation measures included participant determined interview context, including date, time and location. During the interviews, the proposal author made concerted efforts to ameliorate potential discomfort that could be elicited from discussions of this nature, by the use of a sensitive and engaged interviewing style. Participants were reassured that withdrawal was possible at any time, and that there was no obligation to answer any questions that created discomfort. The proposal author maintained vigilance for signs of participant discomfort throughout the interaction. Due to these mitigation efforts, and the predetermined minimal risk classification of the study, no participant displayed or communicated discomfort, no participants withdrew from the interviews, and the distress protocol was not activated. COVID-19 protective measures were strictly adhered to, including ensuring social-distancing measures, adequate ventilation, sanitising of any equipment used, such as pens, and mask-wearing according to participant preference.

### **3.3) Potential benefits**

Participants did not directly benefit from study participation. However, it should be noted, that indirectly, participation in scientific studies generally facilitate the advancement of scientific knowledge. Therefore participation in this study allows for deeper understanding of vaccination decision-making processes, as well as insight into the COVID-19 vaccination rollout process, potentially benefiting society through the improvement of future vaccination programmes.

### **3.4) Alternatives to participation**

Other than participation refusal, there were no alternatives to participation offered.

### **3.5) Harm:benefit ratio**

Participants were not harmed during this study. COVID-19 protective measures were strictly instituted.

#### **4) Informed consent process**

##### **4.1) Process**

During the recruitment process, potential participants were supplied with a recruitment letter summarising study purpose, participant eligibility, and details of the participation process. If requested, participants were also supplied with the question format of the research interview guide. Once recruited, and prior to initiation of individual interviews, as an essential part of the informed consent process, the study purpose and research questions were clearly detailed and explained to participants. As part of the informed consent process, participants were asked to read through an information sheet and informed consent form (please see Appendix F). Information included research purpose, participation expectations, risks and benefits, and plans for data usage. Participants were reassured that participation was purely voluntary, and that withdrawal from the study at any point in the study was possible, and would bear no consequence for participants. All questions that arose resulting from this process were addressed prior to the interview. All fourteen participants completed the informed consent process, and no participants withdrew from the interviews.

##### **4.2) Capacity to consent**

Although initially designed to exclude participants who displayed lack of capacity to fully assent to informed consent, no participants were excluded on these grounds. All participants displayed full comprehension of the process and implications of informed consent.

##### **4.3) Comprehension of information**

Although initially designed to exclude participants who displayed lack of comprehension of the study information, no participants were excluded on these grounds. All participants displayed full comprehension of the study material, content and questions.

##### **4.4) Withholding information**

Study participants will have access to all information, as no information will be purposively withheld. Participants who requested feedback from study results will receive this information on dissemination of data.

##### **4.5) Consent forms**

All participants completed informed consent forms.

#### **4.6) Privacy and confidentiality**

As per the informed consent, confidentiality and anonymity was ensured by the removal of all potentially identifying information. These details will remain coded in all formats of data dissemination, including academic reports, publications, and presentation at conferences or other public fora. Once transcribed into text and edited, all identifying information about participants, including names of participant, family members or friends, schools and companies, was removed from the text and replaced with a simple relational explanation in parentheses. The name of the participant was replaced with a code. This code will also be used for all processing of data, including transcriptions, and analysis coding. Access to all study files and folders held on the secure server will be continually regulated, with access granted through hierarchical rights, at the discretion of the co-investigators, and ultimately overseen by the study co-supervisor. Data will be securely stored in the academic server for a stipulated duration, as outlined by the rules and regulations of the University of Cape Town. All data arising from the primary data collection, including recordings, transcriptions, and analyses, will be password protected, saved in encrypted UCT OneDrive databases, and secured within UCT accounts. In data dissemination, direct speech quotations will make use of pseudonyms, and all identifying information will be coded to protect participant's identities.

#### **4.7) Reimbursement for participation**

Participants did not receive reimbursement for taking part in the study.

#### **4.8) Emergency care and insurance for research-related injuries**

Not applicable to this study.

### **5) What happens at the end of the study?**

During the informed consent process, participants who wished to receive findings from the study indicated as such on the informed consent form. Following completion, those participants who stipulated interest will be sent, and have access to, lay and scientific information, including, but not restricted to, summary pamphlets, documentary videos and presentations, regular associated website updates, and resultant scientific publications. Collected data shall remain secured on the University of Cape Town's password protected OneDrive database. After a period of five years from last accepted publication, following research project completion and dissemination of results (including publication in scientific, peer-reviewed journals, and conference presentation), all collected study data will be destroyed.

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## **Appendices**

**Appendix A:** Image of Socio-Ecological Model

**Appendix B:** HREC approval REF025/2022 for “Vaccination decisions and rollout during the COVID-19 pandemic in South Africa: A qualitative study of community and health official experiences and perspectives” by Dr Michael Deml

**Appendix C:** Approval for Chevon Blumberg to analyse secondary data for the project: “Vaccination decisions and rollout during the COVID-19 pandemic in South Africa: A qualitative study of community and health official experiences and perspectives” (HREC REF 025/2022)

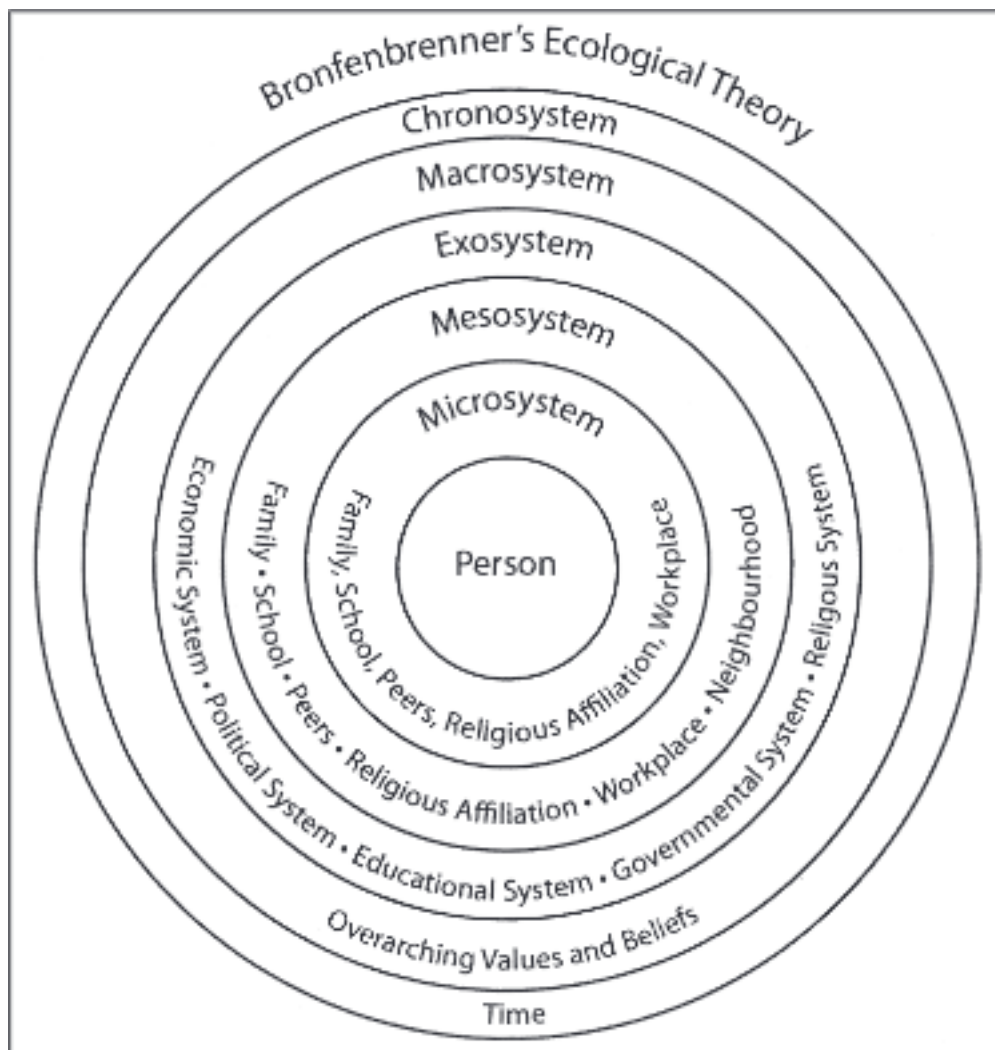
**Appendix D:** Recruitment letter

**Appendix E:** (1) Interview guide  
(2) Demographic data sheet

**Appendix F:** Information sheet and informed consent form

**Appendix G:** HREC approval REF675/2022 for “Vaccination decision-making during the COVID-19 pandemic in South Africa: A qualitative study of the experiences and perspectives of parents from privileged communities in the Western Cape” by Dr Chevon Blumberg

**Appendix A**: Image of Socio-Ecological Model (53 p.169)



**Appendix B:** HREC approval REF025/2022 for “Vaccination decisions and rollout during the COVID-19 pandemic in South Africa: A qualitative study of community and health official experiences and perspectives” by Dr Michael Deml



UNIVERSITY OF CAPE TOWN  
Faculty of Health Sciences  
Human Research Ethics Committee



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09 February 2022

**HREC REF: 025/2022**

**Dr M Deml**  
Division of Social & Behavioural Sciences  
3<sup>rd</sup> Floor, Falmouth Building-FHS  
Email: [Michael.deml@uct.ac.za](mailto:Michael.deml@uct.ac.za)

Dear Dr Deml

**PROJECT TITLE: VACCINATION DECISIONS AND ROLLOUT DURING THE COVID-19 PANDEMIC IN SOUTH AFRICA: A QUALITATIVE STUDY OF COMMUNITY AND HEALTH OFFICIAL EXPERIENCES AND PERSPECTIVES**

Thank you for your response letter, addressing the issues raised by the Faculty of Health Sciences Human Research Ethics Committee (HREC).

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

**This approval is subject to strict adherence to the HREC recommendations regarding research involving human participants during COVID -19, our letter dated 02 February 2022 provides guidance found on our website:**  
<http://www.health.uct.ac.za/fhs/research/humanethics/forms>

**Approval is granted for one year until the 28 February 2023.**

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms))

**Please quote the HREC REF 025/2022 in all your correspondence.**

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

Yours sincerely

**PROFESSOR M. BLOCKMAN**  
**CHAIRPERSON, FACULTY OF HEALTH SCIENCES HUMAN RESEARCH ETHICS COMMITTEE**

**Appendix C**: Approval for Chevon Blumberg to analyse secondary data for the project:

“Vaccination decisions and rollout during the COVID-19 pandemic in South Africa: A qualitative study of community and health official experiences and perspectives” (HREC REF 025/2022)

October 11, 2022

**Approval for Chevon Blumberg to analyse secondary data for the project: “Vaccination decisions and rollout during the COVID-19 pandemic in South Africa: A qualitative study of community and health official experiences and perspectives” : HREC REF 025/2022**

To whom it may concern,

I am writing to confirm that Chevon Blumberg has my authorization to analyse secondary data from the project “Vaccination decisions and rollout during the COVID-19 pandemic in South Africa.” The project has previously received HREC approval (REF025/2022), and Chevon Blumberg has collected data through qualitative interviews with eligible parents as outlined in the HREC submission. She will be analysing the qualitative data (i.e. interview transcripts) for her MPH research.

Please feel free to get in touch with me if you have any questions about Chevon Blumberg’s involvement in the project or the secondary data analysis.

Sincerely,



**Michael J. Deml, PhD, MA**

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**Appendix D:** Recruitment letter



## Study on Vaccination Decision-Making in the Western Cape during the COVID-19 Pandemic

### What is the study about?

This study concerns the COVID-19 vaccine rollout and vaccine decision-making in the Western Cape, and seeks to understand people's vaccination decision-making processes during the ongoing COVID-19 pandemic, both for themselves and for their children. The research focuses on routine vaccinations, such as childhood vaccinations and the influenza vaccine, as well as COVID-19 vaccination. Specifically, the study seeks to understand how people make vaccination decisions, and how the pandemic may have had an impact on how people think and make decisions about vaccination and disease prevention.

### Who is eligible to participate?

People who:

- are 18 years or older
- live in the Western Cape
- have completed high school (or its equivalent) or higher
- have at least one child between the ages of 12 and 18 years
- have not experienced any major financial struggles affecting their living standards or access to healthcare since the beginning of the COVID-19 pandemic

### What does participation entail?

Participation in this study involves partaking in a one-on-one interview with a trained researcher who will ask open-ended questions about your and your family's background, health, experiences with vaccination, and how you make vaccination-related decisions. The interview can take place online (for example via Zoom) or in-person (while strictly adhering to COVID-19 hygiene measures) at a time and place that is convenient for you. Interviews are expected to last around 45 minutes. The interview will be audio-recorded, but all information will remain confidential and anonymous.

### How do I participate?

If you are interested in being interviewed for this study or have any questions, please feel free to contact the study's Principal Investigator, Michael J. Deml, PhD at the University of Cape Town ([michael.deml@uct.ac.za](mailto:michael.deml@uct.ac.za)).

**Appendix E:** (1) Interview guide

## **Interview guide for component 2**

To account for the broader context of vaccine attitudes in a pandemic scenario, this research assesses childhood vaccination, influenza vaccine, and COVID-19 vaccine sentiment and uptake since the beginning of the COVID-19 pandemic. Specifically, the research exploratively analyzes how lay people's vaccination (childhood, influenza, and COVID-19) attitudes and uptake are linked to sentiment about officials' handling of the COVID-19 crisis, VH in relation to each vaccine, and levels of (dis)trust in science, health workers, government, and pharmaceutical companies. This research also examines COVID-19 vaccination rollout from the perspectives of public health and governmental officials, with a content focus on the role of the government in creating and implementing vaccination policy and programming.

### **Background/demographic information**

- While recording, fill out: PARTICIPANT DEMOGRAPHIC DATA SHEET
- Do you consider your lifestyle to be healthy? Why or why not?
- Could you talk about your health status? Do you have any health issues? Do you have any comorbidities that might put you at a greater risk for health consequences related to COVID-19?

### **Life during the pandemic**

- Could you talk about your experiences with COVID-19 before the vaccination became available? What has the pandemic meant for you in your everyday life?

### **Views on vaccination before the pandemic**

- Before the COVID-19 pandemic, how did you feel about vaccination?
- Have you had childhood vaccinations as a child (i.e. childhood vaccinations, such as polio, mumps, measles, rubella etc)?
- Do you get the influenza vaccine? Annually? Why or why not?
- Have you had your children vaccinated with routine childhood vaccinations? Why or why not? Have you chosen to exclude any vaccinations? Which ones and why?
  - [Ask about these vaccines specifically: MMR, chickenpox, HPV]
- What have your experiences been like discussing vaccination with your children's healthcare providers?

- Do you use complementary or alternative medicine (i.e. Aromatherapy, Ayurveda, Homeopathy, Essential oils, Traditional Chinese Medicine, Unani Tibb and Western Herbal Medicine)? If so, do you feel like this impacts your views on vaccination?
- Do you consider nutrition to be an important component of health? Do you subscribe to any particular food philosophy (vegetarianism, veganism, macrobiotics, keto, paleo, etc.)? Which one and why? Does your family also subscribe to the same way of eating?

### **Information sources about COVID-19 and COVID-19 vaccination**

- Where have you been getting information about COVID-19 and vaccination?
- Have you received any COVID-19 related information from the South African government? What did you think about the quality of this information?
- Did you discuss COVID-19 vaccination with friends or family? What did you talk about? How did you feel during and after these conversations? Did these conversations impact your decision-making?
- Did you discuss COVID-19 vaccination with any healthcare professionals? What did you think about the quality of these discussions? How did you feel during and after these conversations? Did these conversations impact your decision-making?

### **COVID-19 vaccination experiences**

- Have you been vaccinated against COVID-19?
  - If yes:
    - Why did you choose to vaccinate?
    - Could you talk me through your experience of signing up for the vaccination and then going to get the jab? What did you think about the process?
    - Could you talk about your COVID-19 vaccination experience? Which vaccine did you get? Did you have any side effects? How many doses have you had?
    - Have you had any booster injections? How do you feel about them for the future? Do you plan to get them? Why/why not?
    - Has being vaccinated against COVID-19 changed anything for you in your everyday life? If so, what is different now?
  - If no:
    - Why not?
    - How do you feel about not being vaccinated? Do you talk about it with family/friends? What do you say to them?

- How do you think about issues related to collective responsibility or herd immunity in relation to your choice to not be vaccinated?
  - Is there anything that might change your mind about getting vaccinated?
- Have you vaccinated your eligible children (aged 12-18 years old) against COVID-19?
  - If yes: why?
    - Why did you choose to get them vaccinated?
    - Did you have any reluctance before deciding to go ahead with vaccinating your children? Why or why not?
    - Do your children have opinions about vaccination that are different from your own? Did this influence your decision to have them vaccinated?
  - If no:
    - Why not?
    - Does the child's other parent/your partner have opinions about vaccination that are different from your own? Did this influence your decision to vaccinate them?
    - Do your children have opinions about vaccination that are different from your own? Did this influence your decision to not have them vaccinated?
    - Is there anything that might change your mind about getting your children vaccinated?
- Given that SA is a very stratified and inequitable society, I'd like to explore your opinion regarding those people living in less fortunate circumstances, with a lower socio-economic status. What do you think might be some of the challenges in accessing the vaccine for those people living in poverty, and with less financial means, should they want to be vaccinated?

### **Recommendations and concluding remarks**

- Based upon your experiences so far with the COVID-19 pandemic and in obtaining information about COVID-19 vaccination and/or getting the vaccine, do you have any recommendations for improving anything related to the COVID-19 vaccination (access to information, access to vaccination etc)?
- Is there anything you would like to clarify? Anything you would like to add?

**Appendix E:** (2) Demographic data sheet

DEMOGRAPHIC DATA SHEET

NAME:				
AGE:				
GENDER:	MALE	FEMALE	OTHER (specify)	
RACE:				
DOMICILE:	Suburb	City	Province	
HIGHEST EDUCATIONAL ATTAINMENT:				
Matric		Tertiary Education Details		
PROFESSIONAL BACKGROUND:				
Title		Roles/Responsibilities		
CIVIL STATUS:				
Single	Married	Divorced	Widowed	In a relationship
Details of partner/co-parent:				
Age	Gender	Educational Attainment	Profession	Civil status (if not in relationship with participant)
CHILDREN: How many?				

AGE Child 1	AGE Child 2	AGE Child 3	AGE Child 4	AGE Child 5
INHABITANTS OF HOUSE:				
LIFESTYLE:				
HEALTH STATUS:  Comorbidities:				

**Appendix F:** Information sheet and informed consent form

## **Information sheet**

Project Title: Vaccination decisions and rollout during the COVID-19 pandemic in South Africa:

A qualitative study of community and health official experiences and perspectives

Research Team Contact: Principal Investigator: Michael J. Deml, PhD:

[michael.deml@uct.ac.za](mailto:michael.deml@uct.ac.za)

### **What is this study about?**

This study is being led by Dr. Michael J. Deml, PhD from the University of Cape Town. The study concerns COVID-19 vaccine rollout and COVID-19 vaccine decision-making in South Africa, with a specific context focus on the Western Cape province. This research benefits from a qualitative study design which will allow the research to be flexible and adaptable to the rapidly changing vaccination landscape. To account for the broader context of vaccine attitudes in a pandemic scenario, this research assesses childhood vaccination, influenza vaccine, and COVID-19 vaccine sentiment and uptake since the beginning of the COVID-19 pandemic. Specifically, the research exploratively analyzes how lay people's vaccination (childhood, influenza, and COVID-19) attitudes and uptake are linked to sentiment about officials' handling of the COVID-19 crisis, VH in relation to each vaccine, and levels of (dis)trust in science, health workers, government, and pharmaceutical companies. This research also examines COVID-19 vaccination rollout from the perspectives of public health and governmental officials, with a content focus on the role of the government in creating and implementing vaccination policy and programming.

### **What will I be asked to do if I agree to participate?**

You will be asked to participate in either a one-on-one interview or a focus group discussion with conducted by a trained researcher. During the interview or focus group discussion, you will be asked questions about your experiences with the COVID-19 pandemic and COVID-19 vaccination. The interview and/or focus group discussion will take place during a time and at a location that is convenient for you. The interviews and/or focus group discussions are expected to last between 45 and 90 minutes. However, the length of the interviews and/or focus group discussions depend on the length of the responses provided during data collection. Interviews and focus group discussions will be audio recorded and all resulting files will be kept in a secured, password protected location for study purposes only.

### **Would my participation in this study be kept confidential?**

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, all the information you provide will be kept confidential by the interviewers, the data managers, and the investigators. Interviews and focus group discussions will be transcribed verbatim into text and analyzed. When transcribed into text, all identifying information about participants will be coded with a table linking real identity to pseudonyms which will be used in all subsequent documents. Pseudonyms will also be used for any further data processing, including audio file transcriptions, coding, and inclusion of quotes in data dissemination. All recordings, transcriptions, and analyses will be password protected and saved in encrypted OneDrive databases, secured in UCT accounts. Pseudonyms will be used in any data dissemination, and information will be coded to protect the identities of study participants.

### **What are the risks of this research?**

All human interactions and talking about yourself or others carry some risk. We will endeavour to minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise, during the process of your participation in this study. Please do make us aware if you need assistance, a break, or would like to end the interview. In the unlikely event that you experience distress as a result of your participation in this study, we are able to refer you to psychosocial support services available in the Western Cape: <https://www.westerncape.gov.za/directories/services/1039>.

### **What are the benefits of this research?**

Participants do not directly benefit from participating in this study. That said, their participation allows for the advancement of knowledge on the topic of vaccination and understanding vaccination decision-making and COVID-19 vaccination rollout. This could potentially benefit society through improved vaccination efforts in the future.

### **Do I have to be in this research and may I stop participating at any time?**

Participation in this research is entirely voluntary, and you are under no obligation to answer any of the questions asked during your participation. You may choose not to participate in the research. You may decide to withdraw from the study at any time with no consequences for yourself.

### **What if I have questions?**

If you have any questions about this study, please feel free to contact the study's Principal Investigator, Dr. Michael J. Deml, PhD at the University of Cape Town and/or the research

with whom you are interacting for participation in the study. Michael Deml can be contacted at the School of Public Health and Family Medicine, Tel: 076 387 5449 or [michael.deml@uct.ac.za](mailto:michael.deml@uct.ac.za).

If you have any complaints or questions about your rights and welfare as a research subject, you can contact the University of Cape Town Human Research Ethics Committee (HREC), Tel: 021 650 1236 or [hrec-enquiries@uct.ac.za](mailto:hrec-enquiries@uct.ac.za).

### **Informed Consent Form**

Project Title: Vaccination decisions and rollout during the COVID-19 pandemic in South Africa:

A qualitative study of community and health official experiences and perspectives

Research Team Contact: Michael J. Deml, PhD: [michael.deml@uct.ac.za](mailto:michael.deml@uct.ac.za)

If you have any complaints or questions about your rights and welfare as a research subject, you can contact the University of Cape Town Human Research Ethics Committee (HREC), Tel: 021 650 1236 or [hrec-enquiries@uct.ac.za](mailto:hrec-enquiries@uct.ac.za).

This form is for you to state if you agree to take part in the study. Please read and answer every question. If there is anything you do not understand, or if you would like more information, please ask the researcher.

Have you read and understood the information sheet about the study?

Yes  No

Have you had the opportunity to ask questions about the study?

Yes  No

Do you understand that the information you provide will be held in confidence by the research team?

Yes  No

Do you understand that you may withdraw from the study for any reason, at any time, without any consequences for you?

Yes  No

Do you agree to the use of anonymised/pseudonymised quotes for scientific presentation of the results (for example, academic presentations, reports, or scientific publications)?

Yes  No

Do you agree to take part in the study?

Yes  No

Do you agree to the interview or focus group discussion being audio recorded, on the condition that any identifying information will be removed for data analysis and in any scientific outputs/publications?

Yes  No

Would you like to receive study results?

Yes  No

If yes, please indicate your email address:

\_\_\_\_\_

Family Name: \_\_\_\_\_ First Name:

\_\_\_\_\_

Signature: \_\_\_\_\_ Date:

\_\_\_\_\_

Interviewer's Name: \_\_\_\_\_ Interviewer's signature:

\_\_\_\_\_

**Appendix G:** HREC approval REF675/2022 for “Vaccination decision-making during the COVID-19 pandemic in South Africa: A qualitative study of the experiences and perspectives of parents from privileged communities in the Western Cape” by Dr Chevon Blumberg



**UNIVERSITY OF CAPE TOWN**  
**Faculty of Health Sciences**  
**Human Research Ethics Committee**



Room 45 E-52-E-Floor- Old Main Building  
Groote Schuur Hospital  
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Telephone [021] 406 6492  
Email: hrec-submissions@uct.ac.za

Website: <https://health.uct.ac.za/home/human-research-ethics>

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14 November 2022

**HREC REF: 675/2022**

**Prof L Knight**

School of Public Health & Family Medicine  
Falmouth Building -FHS  
Email: [Lucia.knight@uct.ac.za](mailto:Lucia.knight@uct.ac.za)  
Student: [blmche002@myuct.ac.za](mailto:blmche002@myuct.ac.za)

Dear Prof Knight

**PROJECT TITLE: VACCINATION DECISION-MAKING DURIN THE COVID-19 PANDEMIC IN SOUTH AFRICA: A QUALITATIVE STUDY OF THE EXPERIENCES AND PERSPECTIVES OF PARENTS FROM PRIVILEGED COMMUNITIES IN THE WESTERN CAPE-SUB-STUDY LINKED TO 025/2022-9MASTERS CANDIDATE-DR CHEVON BLUMBERG)**

Thank you for your response letter, addressing the issues raised by the Faculty of Health Sciences Human Research Ethics Committee (HREC).

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

**Approval is granted for one year until the 30 November 2023.**

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms))

***The HREC acknowledge that the student: Dr Chevon Blumberg will also be involved in this study.***

**Please quote the HREC REF 675/2022 in all your correspondence.**

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

Hrec ref-675 2022

PART B:  
Journal Manuscript

(Target journal: *Social Science & Medicine*)

"It always has to come down to individual choice":  
Vaccination decision-making among privileged parents in South Africa

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#### Highlights

- Qualitative interviews with parents with privilege in South Africa
- Privilege impacts vaccination decision-making and outcomes at multiple levels
- Three broad categories of parental vaccination decision making are defined

#### Abstract

With most vaccine hesitancy research being performed in high income countries, little is understood about the phenomenon in low- and middle-income regions, including South Africa. Seeking to understand a gap in vaccine hesitancy research, this qualitative study examined the lived experiences and perspectives on vaccination, of parents from privileged communities, in the Western Cape, South Africa. Privilege was defined as individuals who have an educational level above high school, and through self-report had experienced no major financial difficulties, due to the COVID-19 pandemic or other reasons, that would have resulted in impact on standard of living, children's educational institution, or healthcare access. Conducted during the South African COVID-19 vaccine roll-out, from March to June 2022, the study explored how these parents make decisions about vaccination, including routine childhood vaccination, influenza and human papillomavirus vaccines, focusing on

the COVID-19 vaccine. Analysis of transcripts from 14 semi-structured individual interviews was performed. Data were analysed using thematic analysis and framed within the structure of the socio-ecological model. Results of the study demonstrate that although privilege does not dictate whether or not an individual chooses to vaccinate, privilege impacts vaccination decision making and outcomes in both explicit and implicit ways, including lifestyle, accessibility, insight into the experience of less privileged individuals, and the entitlement of choice. Analysis of the data resulted in the classification of participants into three broad categories of vaccination decision-making processes: (1) the dutiful parent, (2) the sceptical parent, and (3) the uncertain parent. Within these categories, privilege occupies a particular place in the variable and nuanced differences in parents' vaccination decision-making processes. It is crucial to understand how privileged individuals determine health care choices, as these decisions can have far-reaching impacts on less privileged communities with more limited access to resources and health care.

#### Keywords

Vaccination; Immunisation; Privilege; COVID-19; Vaccine hesitancy; Vaccination decision-making; Qualitative research; South Africa

#### 1. Introduction

Vaccination is one of the most efficacious public health interventions to date (Larson et al., 2014). A cost-effective means of counteracting disease, worldwide immunisation programmes prevent an estimated three million deaths annually (WHO, 2019). As a public health intervention, vaccines are at the point of convergence of the most global of health interests with the most intimate of personal health care and parental health choices, varying widely throughout the world, across different populations, and over time (Leach & Fairhead, 2007). Vaccine hesitancy (VH) is defined by the World Health Organization (WHO) as “the reluctance or refusal to vaccinate despite the availability of vaccines” (WHO, 2019 p.1). In 2019 VH was listed as one of ten threats to global health, for endangering the progress that has been made in fighting vaccine-preventable diseases, with a 30% increase in measles cases globally, and the resurgence of wild poliovirus in some countries illustrating the severity of the threat of insufficient vaccination (WHO, 2019).

VH is complex. Concerns and debates around vaccination have existed since the development of the technology (Leach et al., 2022). Despite the accepted WHO definition, studies have suggested that VH should be defined independently of behavioural outcome, and rather as a “psychological state of being undecided” regarding a vaccination decision (Bussink-Voorend et al., 2022 p.1639). There is an urgency to understand VH, as the key to any immunisation programme’s success in reducing disease is a sufficiently high uptake (Bryden et al., 2019). The reasons for VH range from religious and scientific, to political justifications (Larson et al., 2014). The “5C *scale*”, developed in high-income countries (HIC), identifies the key psychological constructs of “confidence, complacency, constraints, calculation, and collective responsibility” as the drivers of vaccination decision-making (Betsch et al., 2018 p.1). Increasing types and regimens of vaccinations, combined with non-traditional, non-hierarchical, informal communication and information channels, has made the issue increasingly complex. Spotlighted as a popular debate, greater numbers of people are questioning the necessity for vaccination, or seeking alternative options, ultimately resulting in vaccine delay and refusal (Larson et al., 2014). This phenomenon has become increasingly evident in the wake of the COVID-19 pandemic (Wysong et al., 2022). When considering insufficient vaccine uptake it is important to consider the distinction between VH and other factors that might lead to under-immunisation, such as insufficient accessibility or health system failures (Bedford et al., 2018).

In 2011, the WHO set a global target of 90% national coverage for all primary vaccines by 2020 (Burnett et al., 2019). Despite significant gains in vaccination through the Expanded Programme on Immunisation (EPI), South Africa (SA) has consistently failed to meet these targets (Burnett et al., 2019; Machingaidze et al., 2013). In contrast to HIC, where VH is recognised as the main barrier to vaccination, in low- and middle-income countries (LMIC), including those in sub-Saharan Africa (SSA), a combination of vaccine availability and accessibility have historically been identified as the reasons for insufficient vaccination (Bussink-Voorend et al., 2022). A 2012 study identified challenges including poor knowledge of health-care workers, and system challenges, such as stockouts, financial constraints and human resource limitations (Wysong et al., 2012). The study also identified health-care user related challenges, including parental reluctance and “anti-immunisation rumours” (Wysong et al., 2012 p.1). This is corroborated by research which shows that VH is on the rise in Africa (Cooper et al., 2018). With most VH research being performed in HIC, there are major gaps in

the knowledge of LMIC, including SA, regarding the nature, determinants, causes, and extent of VH, including its role in insufficient vaccination coverage (Cooper et al., 2018; Deml & Githaiga, 2022).

By January 2023, over five billion people worldwide were fully vaccinated, and at least one dose of any COVID-19 vaccine had been administered to 69% of the global population, compared to only 26% of people in LMIC (Our World in Data, 2023). In SA, vaccine rollout started in early 2021 with plans to reach 67% national coverage (Jeckermann, 2021). As of January 2023 only 32% of all South Africans were fully vaccinated (DOHSA, 2023). Despite vaccine availability SA has achieved rates of actual vaccination far below target. The Southern Africa Labour and Development Research Unit's COVID-19 Vaccine Survey (CVACS) showed high and entrenched levels of VH over a diverse sample of vaccine-eligible respondents, with 74% showing no intention or desire to be vaccinated (Eyal, 2022; Maughan-Brown et al., 2022). Reasons for not vaccinating varied, including personal choice, low perceived personal risk, presumed vaccine inefficacy and safety concerns, and governmental mistrust. Vaccination access was not found to be a reason amongst the most reluctant of these respondents. Other factors accounting for VH in SA include vaccine literacy, and trust in the government's capacity to safely and effectively roll out the COVID-19 vaccination programme (Engelbrecht et al., 2022). CVACS showed vaccine hesitancy was highest amongst those participants with higher levels of education and access to more resources (Maughan-Brown et al., 2022).

SA is one of the most unequal countries in the world (World Population Review, 2023). In SA, privilege and disadvantage result from the inherited legacies of Colonialism and Apartheid, systems that were deeply rooted in racial, spacial and economic inequality (Stoddard, 2022). The effects of privilege and disadvantage are evident throughout SA society, impacting everything from housing and education, to job opportunities and health (Stoddard, 2022). The inequitable distribution of socio-economic resources, including money, knowledge, power and social networks, results in gross inequalities in access to health care services and outcomes (Phelan et al., 2010). Those individuals who are privileged with access to resources are able to tap into their protective nature, under most circumstances and in the face of many risks, such as accessing services and adopting preventive and health-promotive strategies (Phelan et al., 2010). This health privilege can be extended to the arena of vaccination, with the social determinants of health (SDOH) influencing vaccination decision-making processes at multiple levels.

Privilege has been defined as “unearned social and structural advantages which benefit dominant groups or those who occupy positions of power in society, at the expense of marginalised groups” (Bozalek, 2015 p.83). Privilege is a state of normalised and invisible entitlement, with privileged individuals taking these advantages for granted, with little, if any, recognition of the benefits bestowed upon them (Bozalek, 2015). Privilege as a construct can be understood as a SDOH (Brown & White, 2020), and manifests in health behaviours in a number of ways. Much vaccine hesitancy research has focused on the specific area of parental vaccine hesitancy, described as a privileged parenting practice (Attwell et al., 2017; Deml et al., 2020; Reich, 2014, 2016a, 2016b). Central to privileged vaccine decisions is that those parents with resources are able to access health care for their non-vaccinated children in the event of contracting a vaccine-preventable illness. These children and parents also benefit from background herd immunity from the vaccinated population (Reich, 2016a). In the United States, research has shown that in privileged parenting circles decisions not to vaccinate are dictated by parental choice, but amongst underprivileged mothers with low levels of education, non-vaccination results from reasons of inequity, including inadequate health care access, inability to navigate the health system, and lack of health education (Reich, 2016a). However, this polarised narrative is overly simplistic, and requires deeper exploration.

Historically, the majority of studies performed on the topic of VH have been conducted in HICs, in regions with established health care systems and overall reliable and accessible vaccination services (Cooper et al., 2018; Deml & Githaiga, 2022; Larson et al., 2014). Recently there has been an upsurge of research performed in SA exploring the topic of COVID-19 VH (Burger et al., 2022; Engelbrecht et al., 2022). However, there remains a knowledge gap on the topic of vaccine decision making amongst privileged individuals in low- and middle-income countries (LMICs). This qualitative study explores the lived experiences and perspectives on vaccination of parents from privileged communities in the province of the Western Cape, SA. Understanding how parents experience making vaccination choices for their children is vital if one is to understand vaccination uptake generally, as this perspective is too often overshadowed by the technicalities of biomedical and politico-policy conceptions of vaccination issues (Leach & Fairhead, 2007). An integral piece of the puzzle of understanding insufficient vaccine uptake is teasing out the important difference between vaccine hesitancy and reluctance from other factors that might lead to under-immunisation (Bedford et al., 2018). Therefore, through the focus on privileged parents, this study aims to extract attitudinal

barriers to vaccination, rather than those socio-economic barriers that exist at system level. Due to the vast variation in attitudes to vaccination, research in this arena requires grounding in specific contexts and demographic populations (Leach & Fairhead, 2007). This study explores vaccination decision-making as it pertains to routine childhood vaccination, influenza and human papillomavirus (HPV) vaccine, with particular focus on the COVID-19 vaccine. The aim of this research is to qualitatively explore parents' experiences with and attitudes to vaccination, including vaccine sentiment and vaccine uptake, both preceding and following the onset of the pandemic. The research investigates vaccine choices and VH among lay individuals, analysing the impact that the dual perspective of both parenting and privilege has on these decision-making processes.

## 2. Methods

Data collection benefited from an exploratory qualitative research design, utilising in-depth individual interviews. Qualitative research design has the advantage of flexibility and adaptability, which is extremely useful in the context of the rapidly changing and evolving landscape of the novel COVID-19 virus pandemic and vaccination efforts. The in-depth interview is a popular choice used to understand individual perspectives and practices (Mack et al., 2005). This design was chosen due to the novel, oft-contentious and potentially sensitive nature of the research topic, which could result in hindrances to open discussion within a group setting (Mack et al., 2005). All interviews were conducted in the Western Cape, between the period of 21 March and 21 June 2022, coinciding with the SA government COVID-19 vaccine roll-out (DCISRSA, 2021). Therefore, as a reflection of the COVID-19 climate, it is important to acknowledge that this research was conducted at a time when COVID-19 vaccination was at the forefront of current affairs.

Participants were recruited through the snowball sampling method, in line with predetermined inclusion and exclusion criteria. Inclusion criteria included being parents of any child/children aged between 12 and 18 years old, residing in the Western Cape, and forming part of the *stable middle class* of SA. This group was loosely defined as individuals who have achieved education beyond high school level, and according to self-report had not experienced major financial difficulties, due to the COVID-19 pandemic or other reasons, that would have resulted in an impact on standard of living, children's educational institution choice, or healthcare access. This conceptualisation is rooted in

empirical findings in SA, with recent estimates classifying approximately 25% of SA's inhabitants as composing the *stable middle class* (Schotte et al., 2018). Interviews took place as per participant preference, and included participant private home and place of work (N=12), or virtual meeting (N=2), in the Western Cape. Potential participants were recruited with study flyers, and by word of mouth. Three potential participants refused to partake in the study on the grounds of not wanting to engage in discussion on the topic, with one person expressing concern for potential misuse of information that might result in stigmatization and negative personal consequences. One potential participant was excluded as he did not reside in the Western Cape.

Interviews were conducted by Author1 (N=13) and Author3 (N=1) during semi-structured, in-depth interviews with participants, and with support of a predetermined interview guide. The interview guide was based on previous vaccine hesitancy literature and research experiences (Deml et al., 2022) and adapted to the SA context. In the early stages of data collection, the interview guide was piloted, and found to be appropriate for the purposes of the study. It was designed to allow us to answer the following research questions: (1) How do privileged individuals in the Western Cape make decisions about vaccination?; (2) How do they choose whether or not to vaccinate themselves against COVID-19?; (3) How do they choose whether or not to vaccinate their children against COVID-19? Interview guides included questions related to demographics, personal health and vaccination history, children's vaccination history, COVID-19 vaccination status and opinions, and views on vaccination equity in the SA context. Questions were asked in a neutral and open-ended manner. The semi-structured interview format was flexible, allowing for follow-up questions when clarification or elaboration was required. All interviews were conducted in English. Each interview was audio-recorded on a password protected device. On completion, the interviews were then uploaded onto a password protected computer, and transcribed verbatim both manually, and with the use of the password protected transcription software programme, Trint (Trint Limited, 2022).

Thematic analysis was used to analyse the interview transcriptions (Braun & Clarke, 2006). Thematic analysis approaches identify commonalities, differences and relationships within the data, to draw conclusions that are descriptive and potentially explanatory in nature, yielding rich, complex, and detailed interpretation of the data. The method is a systematic and iterative approach to analysis, utilising continual familiarisation with the data, ultimately resulting in coding and theming of the data, aligned with the defined study aims. Thematic data analysis was the chosen analytical method for its

ability to elicit data that is both rich and detailed, but also accessible to a wide ranged audience. This method was appropriate as it enables social explanations of the data, integral to the answering of the research questions posed by the study. This study used the inductive approach, a data-driven process in which themes are generated through a continuously and iteratively refined process of unrestricted coding (Braun & Clarke, 2006). A codebook was developed manually, which was then collated into themes relevant to answering the research questions.

This study frames the results within the structure of the socio-ecological model (SEM). Developed by Urie Bronfenbrenner, the SEM envisions the individual as existing at the centre of nesting circles, representing different system levels (Bronfenbrenner, 1989). These levels include the *microsystem, mesosystem, exosystem, macrosystem, and chronosystem*, ranging from those factors existing in the individual's immediate environment and therefore influencing the individual directly, through to progressively indirect and contextual influences (Kilanowski, 2017). The SEM theorises that the health of individuals is determined by physical, social and political interactions between the individual and the defined circles of influence. The SEM has been adapted for use in various health promotion programmes through the understanding that in order to facilitate effective and sustained changes in health behaviours it is important to create conducive environments (Kilanowski, 2017). This framework contributes to a richer understanding of vaccine research as through a multi-layered approach it alleviates the burden of intervention directed purely at the individual level, providing researchers with a systematic approach to analysing determinants of vaccination uptake at and between different levels of influence, and across different populations (Kolff et al., 2018; Kumar et al., 2011; Olaniyan et al., 2021). The SEM has been applied to research around vaccine decision-making, which allowed researchers to explore determinants of vaccine uptake, vaccine hesitancy and vaccine promotion in Africa, Asia and the United States (Al-Jayyousi et al., 2021; Amit et al., 2022; Kolff et al., 2018; Kumar et al., 2011; Olaniyan et al., 2021).

Throughout the research process author1 engaged in reflexive journal writing. As a medical doctor trained in the biomedical tradition, this was especially important to ensure that any bias did not influence data collection.

The local ethics committee, the Human Research Ethics Committee (HREC) at the University of Cape Town approved the conduct of the study (HREC approval :REF 675/2022). We obtained informed consent from all participants. Pseudonyms are used for all participants.

### 3. Results

This section contains the main findings of the study. It opens with a description of the demographics, as well as a brief description of the vaccination status of participants. This is followed by an in-depth look at the two main identified themes of privilege and vaccination decision-making classification. Finally, findings are framed within the SEM.

#### 3.1 Demographics

Fourteen participants took part in the study. Eleven participants were female, and three participants were male, with ages ranging from 40 to 54 years old. Participants had between one to four children. At least one of all participants' children were eligible for COVID-19 vaccination. Additional information about study participants can be found in Table 1.

Table 1: Participant demographics

Gender (age)	Marital status	Children: number,	gender (age)
Female (44)	Married	3	Female (13) Male (11) Female (8)
Male (48)	Married	1	Female (14)
Female (48)	Married	2	Male (16) Male (13)
Male (43)	Married	2	Male (13) Male (10)
Female (47)	Married	2	Male (16) Male (13)
Female (49)	Divorced	2	Male (17) Female (14)
Female (48)	Divorced	2	Male (14) Male (12)
Female (42)	Married	2	Male (16) Male (14)
Female (51)	Married	2	Male (19) Male (16)
Female (54)	Married	2	Female (14) Male (11)
Male (45)	Married	3	Female (14) Female (10) Male (4)
Female (40)	Divorced	3	Male (20) Male (16) Female (13)
Female (53)	Divorced	1	Female (15)
Female (54)	Married	4	Female (24) Male (22) Female (13) Male (12)

### 3.2 Vaccination status

For the purposes of this study, it is relevant to have an understanding of the vaccination status of participants and their children in order to contextualise participant perspectives on vaccination. All 14 participants were fully vaccinated for childhood vaccinations. Eleven participants were fully vaccinated against COVID-19. Two participants had received a COVID-19 booster dose. With the exception of one participant's child who was only partially vaccinated, all other children had been fully vaccinated as per the relevant childhood immunisation programmes. Of the 25 children eligible for COVID-19 vaccination, twelve had been vaccinated. Additional information on participants' and children's vaccination status can be found in table 2 (Part C Appendix 3).

### 3.3 Privilege and Vaccination decision-making classification

The data analysis identified two key results. The first was about how privilege, as a social construct, impacted vaccination decision making processes and outcomes. Throughout the interviews, the thread of privilege was clear. The importance of this finding becomes clear when contextualised within the framework of the SEM, which demonstrates the crucial influential role that those with privilege play within a system.

Within the context of vaccination hesitancy, the second main result was the classification of participants regarding vaccination decision-making processes. Our analysis allowed us to identify three broad categories underlying these processes: (1) the *dutiful parent*, (2) the *sceptical parent*, and (3) the *uncertain parent*. Within these categories and between these participants there are highly variable and nuanced differences in opinion and process.

#### 3.3.1 Privilege

Privilege was evident throughout all the interviews and amongst all participants, in both explicit and implicit forms. The theme was apparent in almost all subjects covered, including health choices, access and lifestyle, childhood immunisation, reasons for COVID-19 vaccination, COVID-19 vaccine accessibility, and discussions on COVID-19 vaccine equity.

Participant descriptions of the ways in which they managed illness and maintained health demonstrated their easy access to healthcare and medication, as well as alternative supplementary

therapies. One participant described unconventional treatment that she had sought for her family to treat COVID-19:

*So then they both had ivermectin... zithromax, which also has antiviral properties even though it's an antibiotic, and then all the vitamin cocktail, and betadine mouthwash... It was probably a bit overkill because it was Omicron, and didn't need all that. (Simone, Female, 48)*

This illustrates good access to both health care providers as well as medication through private means not available within the public health system. There was also evidence of consumption of alternative preventive healthcare products and practices. Another participant described his use of vitamins and alternative therapies:

*I go regularly for ozone sauna therapy... a high dose of vitamin C I.V. ... [I also take] B-12, omega, Vitamin C, vitamin D, zinc, etc. (Peter, Male, 43)*

Whilst most aspects of privilege remain implicit and unacknowledged by the participants, one specifically identified her privilege when discussing her approach to illness in her children:

*And that was something that I held from [my GP]... is it's not a bad thing to be sick... It was like the fever in and of itself is not going to kill... If they're uncomfortable, give them Panado [paracetamol], and do what you need to do... I put that with my health privilege. (Neve, Female, 47)*

Therefore this participant feels confident in the knowledge of this privilege, so that acute illness is not harmful or dangerous for her child, and will not lead to chronic ill-health or disability.

A participant described how he personalised his child's childhood immunisation program by selectively cherry-picking:

*When it's something that you can die from... have an irreversible impact from, then we would vaccinate... So she's had like oral polio... so the MMR, she hasn't had that. She's had one of them... there was more risk, especially getting all three of them... let's say there's 15 to get, she would get like 4 or 5. (David, Male, 48)*

This was an example of the impact of privilege and the way it influences ability to make choices that go against the norm. Another participant described how she was able to space her children's routine vaccination schedules according to her preferences:

*I was aware of also when I could separate them... I did... I was like ok, well can we just have this one today, and then I'll do the next one, and instead of getting them all in one go. So I had a sense at the time of, [being] very thankful for vaccinations existing, but I did feel I didn't want to bombard their little systems. (Neve, Female, 47)*

This participant is tapping into both transport and health care resources, which allowed her to return to see her provider for appointments and facilitated the spacing of injections.

Regarding COVID-19 vaccination specifically, one participant described how she was able to access the vaccination prior to it becoming available in SA:

*But I know for sure that they were not available at the time through the South African government for people my age. So that's why I went to France in very early July 2020. And then, I had my vaccines done over there in France. (Claudia, Female, 54)*

Participants who chose to vaccinate against COVID-19 decided for multiple reasons, which included prevention of illness, and playing a part in obtaining herd immunity. However, there were other reasons for vaccination which related directly to privilege, and included, purposes of travel and accessibility. One participant described how her daughter insisted on the COVID-19 vaccination in order to facilitate international travel:

*Well, she drove it because she wants to travel... I know this is like 'first world problems', but it might actually land up becoming an issue, if we did want to travel as a family. (Naomi, Female, 54)*

Another participant, who described lack of clarity and some scepticism regarding the COVID-19 vaccination, expressed relief at receiving COVID-19 vaccination for fear of being denied access to places and events:

*I went to the art fair, so having to show my vaccination card gave me access, and I became aware of, like... I don't want to be denied access. And I don't have the energy or the inclination to be so vehemently against that I'm going to fight it. That's the truth... I knew I don't want to be denied access. (Neve, Female, 47)*

The interview guide included a question about participants' opinions on barriers to access to the vaccine for those belonging to less privileged communities in SA. There were mixed opinions

regarding the equitable distribution of vaccinations in SA. One father explained how he felt that the COVID-19 vaccine was universally accessible:

*I think because they've opened up sites everywhere... they've just closed off various sites because it wasn't utilised... But initially it was available everywhere. You could walk out of your door, and get your vaccine. (Joel, Male, 45)*

Another participant expressed an awareness of social inequity, and potential barriers to access to COVID-19 vaccination for less privileged individuals:

*I think it boils down to the economies of scale. So someone who doesn't have money to put bread on the table is not going to waste money to get in a taxi to go get a vaccine. Though it may be free, they have to spend their time and money to go and get it. That same person may not have someone to watch their child. They're not going to leave their kid at home, spend money in a taxi, and go sit in the queue the whole day. (Pam, Female, 42)*

Such comments illustrate the varying opinions regarding vaccine accessibility. Interestingly, participants' perspectives on equity and access of vaccinations in the SA context did not appear to correlate with their own vaccination attitudes.

### 3.3.2 Vaccination decision-making classifications

When analysing the data, it was evident that there are identifiable decision-making patterns when it comes to vaccination, both for personal vaccination choices, as well choices made for children. Analysis of our data allowed us to identify three classifications of participants based upon these patterns: (1) the *dutiful parent*, (2) the *sceptical parent*, and (3) the *uncertain parent*. However, although delineated, the boundaries of these classifications are blurred, with participants' opinions often crossing over between categories. It is important to note that decision-making classifications as defined for personal vaccination did not necessarily imply the same pattern when it comes to decision-making for participants' children. Likewise, acceptance or refusal of one vaccination did not result in the same outcome for other vaccinations. Privilege runs as a golden thread throughout all of the interviews, and although the impact that privilege has on these processes is multidirectional and sometimes unpredictable, the ultimate impact of privilege is the sentiment, expressed and implied, of the entitlement to choice.

The *dutiful parent* can be understood as the parent who places trust in the healthcare authorities, and therefore vaccinates according to stipulated recommendations and schedules. One mother explained her reasons for choosing to have the COVID-19 vaccination:

*...for my own health and that I don't spread it to other people. Would be my two main... that I don't get sick and god forbid die, or give it to someone in my household or my mom, someone else. Like an elderly person. I think is the main thing.* (Lara, Female, 44)

The processes underpinning decision-making for COVID-19 vaccination of children were more complex. As one mother explained:

*And then I did a fair amount of engaging with... the paediatrician for my kids... Because we went from: it's only good for adults to... it's fine for kids, like a month apart... so that made me nervous... It's just a different level of thought making when you are doing it to your kids.*  
(Pam, Female, 42)

Despite her unquestioning enthusiasm to have the COVID-19 vaccination herself, this participant expressed more reflection, investigation and decision-making when it came to vaccinating her children, both of whom were ultimately vaccinated.

The *sceptical parent* can be understood as the parent who is most likely to question health and governmental authorities, and therefore refuse vaccination. One mother expressed scepticism regarding the science of the COVID-19 vaccination, while placing emphasis on the importance of individual choice. The following excerpt also highlights how some parents did not view COVID-19 vaccination similarly to the more established routine childhood vaccinations:

*I don't see this is a vaccine... So people would call me an anti-vaxxer. I'm not an anti-vaxxer, because I've had all the vaccines that have been recommended over the years. I don't believe this is a vaccine... It always has to come down to individual choice.* (Simone, Female, 48)

Amongst other reasons for choosing not to vaccinate against COVID-19, one participant expressed concern regarding the motives and reasoning for the vaccination programme, listing governmental control, financial gains and civil unrest as her primary concerns:

*For me, it's all about control... trying to force people on a vaccine... For me it was a money-making thing... causing such a division amongst people... the vaccinated and unvaccinated... It's like one ethnic [group] to another. (Marie, Female, 53)*

Similar to Simone, Marie emphasised the importance of choice in vaccine decision-making, specifically regarding the COVID-19 vaccination:

*People must do what they think is right for them. But just don't force me to do it. (Marie, Female, 53)*

The *uncertain parent* is the parent who is caught in a state of indecision, which leads to a state of inaction, which in this case refers to non-vaccination. One mother described a state of decision-making paralysis when it came to vaccinating her children, as well as being highly impressionable regarding her health care choices. This indecision resulted in her children not being vaccinated against COVID-19 at the time of interview:

*I felt terribly guilty as a mom, not doing it, and fearful. And then fearful to do it... And, as we're talking about it, like I'm getting a bit anxious about, like should I have done it?... You know, I'm going through that, that sort of just not knowing... I'm quite influenced by people. So it sort of depends where I'm sitting... who I'm sitting with. (Jenna, Female, 48)*

### 3.4 Socio-ecological model

The SEM emphasises that the health of individuals is dependent upon interactions occurring at and between different levels of influence surrounding the individual. This influence occurs in a multi-directional manner, with the environment shaping individual behaviour, and reciprocally, individual behaviours having influence on, and thereby, shaping the environment (Glanz & Bishop, 2010). From participants' descriptions of vaccination decision-making processes it was clear that there are multiple levels of influence impacting the individual. Direct influences included personal belief systems, discussions with family members, friends and health care providers, and attitudes experienced in neighbourhood interactions. Indirect influences included recommendations and programmes existing at schools and places of work, messages broadcast from religious institutions, information expounded on social networks, local and national governmental policies, and international guidelines.

One of the most important levels of direct individual influence is that of the family unit (Kilanowski, 2017). Differing of opinions within a family system can result in confusion for family members, especially impressionable children. One participant describes the difficulty her daughter experienced having parents with conflicting views on vaccination. This contradiction in parental opinions contributed to her daughter's decision not to get vaccinated against COVID-19:

*I think being 14 and hearing your mom speak pro the vaccine... And then she hears her dad say otherwise... I think it's hard for a 14 year old... to make that decision herself... Who do you listen to? (Cindy, Female, 49)*

Cindy also describes a lack of peer influence to be vaccinated within her daughter's social circle, which added to her daughter's uncertainty regarding COVID-19 vaccination:

*I think most of [her friends] aren't [vaccinated]... she definitely got input from her friends. I think it was confusing for her. (Cindy, Female, 49)*

Another participant described work pressure to be vaccinated. Although not mandated, the nature of her industry entailed attracting an international clientele. As a business owner she had the responsibility of ensuring that she and her staff were COVID-19 vaccinated. This illustrates how an international economic driver impacted the individual, and in turn how her influence then affected her local employees:

*If I wanted it to work, I had to vaccinate... clients were asking us... are people vaccinated? And it became a selling point... We're all vaccinated here, come back to South Africa! It became quite a contentious issue in the industry because... if you don't vaccinate, then you can't work... And we were making unilateral decisions on people's rights as to whether they wanted to vaccinate or not vaccinate. (Alicia, Female, 51)*

This example is a depiction of how people with privilege, and as an employer of others, can directly impact and influence their surrounding socio-economic networks.

In discussion on COVID-19 boosters, one participant describes the importance of governmental public health messaging, and the role it can play in individual health choices. In this case, Joel discusses a lack of government driven messaging promoting COVID-19 boosters:

*I think there is a lot of people that are out there which are not really keen on getting the booster shot, because we're not really convinced that it is necessary. And there hasn't been a lot of drive around getting your booster. (Joel, Male, 45)*

A good example of these levels of influence can be found in this participant's description of her fear and reaction to the possibility of COVID-19 vaccination services being offered at her children's school:

*And it was very scary when the government was saying children can choose for themselves... my son's school sent a letter saying there's going to be a... vaccination truck at the school. And then it's scary because you think, 'My kid can decide, "I'm going because my friend's going"... So I wrote a very strong letter to the school, and it actually never happened.*

(Simone, Female, 48)

This excerpt depicts how governmental actions can impact personal decision-making through policy that facilitates accessibility. It equally shows the interplay of influences, and how the individual has the potential to impact the system. The most crucial element of this systemic example is how the circle of influence from that individual's action has the potential to impact others, through altering their access to a health service, in this case vaccination. The thread of privilege is also evident, as parents of children attending private school are likely to exert far more influence and pressure on school governance bodies than those who attend public schools.

#### 4. Discussion

Understanding privilege within the context of vaccine decision-making goes far beyond simply trying to understand the role that it might play in vaccine hesitancy. As has been shown in this study, privilege is evident throughout all the interviews that were conducted, providing a backdrop for individual perspective, regardless of participants' inclination and choices to vaccinate or not to vaccinate. Therefore, although there is no evidence showing that privilege dictates what decision an individual will ultimately make, this study shows that privilege plays a role in how those decisions may be made. This is important when attempting to understand vaccination-decision making for the individual, however it is crucial when one considers the role of privileged individuals within a community and a society.

This study echoes previous findings on the subject by Leask et al. (2012), who identified a framework of five distinct groups pertaining to parental vaccination decision-making positions: the 'unquestioning acceptor', the 'cautious acceptor', the 'hesitant' vaccinator, the 'late or selective vaccinator', and the 'vaccination refuser' (Leask et al., 2012 p.4). They concluded that health care workers play a crucial

role in vaccination advocacy, and can use this identified framework to gain parental trust by approaching discussions on vaccination with sensitivity and respect (Leask et al., 2012). The distinction between these categories is important as it allows not only for a tailored clinical approach (Leask et al., 2012), but also for a calculated concentration of health care resources and efforts. Although echoing similar categorisation of participants, this study emphasises the complexity of the topic, as participants' opinions, and therefore categorisations, varied depending on vaccination and vaccination subject. This highlights the need for active and open engagement on the topic of vaccination, as inflexible and presumptive pre-categorisation of individuals can lead to further polarisation in a highly emotive and subjective arena of health care.

The SEM portrays the individual as existing at the centre of a multi-levelled interactive system of influences. Crucial to this model is the idea that within the complex interplay of influences exerted on the individual, the individual is capable of exerting their influence on the system. This understanding is highlighted in the context of privilege. Research has consistently shown that the SDOH play an integral part in shaping individuals' health outcomes (Phelan et al., 2010; WHO, 2022). It is also well understood that privilege generally results in better health, wellbeing, quality of life, and increased access to resources and health care (Brown & White, 2020). Therefore, if we recognise and understand privilege as a SDOH (Brown & White, 2020), not just for the individual but also within the system that the individual lives, works and socialises, we will be better able to understand the role it plays in the health of those who are privileged, as well as the impact this state of privilege might have on those who are less privileged, and living within the socio-ecological sphere of influence of these individuals. As this study has shown, those individuals who have privilege, playing significant societal roles as professionals, employers, and captains of industry, exert far-reaching influence within their individual socio-ecological networks, including families, workplaces and school communities. It is within the construction of privilege as a social influence that the importance of this study becomes most apparent. The framing of the results against the backdrop of the SEM was important in this regard because it shows the extent to which environmental influences affect individual decision-making processes, and reciprocally how individuals are able to affect and even alter their environment. When an understanding of systemic influences is combined with the idea of privilege as a SDOH, it lays the foundation for a powerful model of public health promotion and intervention. In

this way, privilege can be viewed as a potentially influential resource that can be tapped into and used to the benefit of future public health programmes.

This research contributes important additions to the current body of knowledge on vaccination decision-making. To our knowledge there are no other qualitative studies that have been conducted in SA on this topic, and therefore this study aids in bridging the gaps in empirical data on privileged populations' views and attitudes on vaccination, as well as their vaccination behaviours and outcomes, specifically in the context of LMICs. We suggest that these findings could play a valuable role if applied to the arena of public health, particularly in light of recent quantitative research conducted in SA that has found VH to be most common amongst privileged individuals (Maughan-Brown et al., 2022). Although this study did not investigate VH specifically, it explored vaccination decision making holistically, establishing classifications of these choices, and making connections with privilege. Therefore, it builds upon previous literature on privilege and VH in other contexts that has shown vaccine refusal to be a phenomenon of privileged parenting (Reich, 2014) that needs to be researched and understood if it is to be addressed at policy level (Ward et al., 2017).

The discussion on privilege is incomplete without the inclusion of its counterpart, responsibility. In this context, responsibility can be seen as the interrogation of privilege, and the acknowledgement of the individual role in the continuation of societal inequity and injustice. It includes the "willingness to act" (Bozalek, 2015 p.84) in order to identify where needs may lie, and how to rectify social wrongs (Bozalek, 2015). Therefore, through this research we begin to understand the nature of the responsibility of privileged individuals in the development of a society, and health care systems, that are more just and equitable (Bozalek, 2015). There is also an opportunity for the public health sector to present more targeted health messaging when designing health intervention programmes (Bryden et al., 2019), by taking into consideration privileged individuals spheres of influence, and fostering a sense of responsibility in those individuals. More research is needed to better understand this complex interplay of factors, and the role of privilege in health inequity, particularly in SA.

## 5. Limitations

A limitation of this study is its relatively small sample size. Generally, qualitative research tends to make use of small samples as a necessary means of ensuring that the work produced is richly

textured and steeped in detail, as is crucial to this area of research (Vasileiou et al., 2018). Although this study defined a loose measure to operationalise privilege, it is acknowledged that there are challenges in conceptualising this construct within the SA context. Whilst not a limitation, and rather a function of study design, it is important to note that by targeting a defined privileged population, this study lacks perspective regarding other communities. The limitations inherent to this target population result not only in an inability to compare discourses between privileged and less privileged parents, but may also inadvertently result in the conflation of privilege with the capacity to action choices. It is likely that the aspirations of choice is not the sole domain of the privileged, and is more ubiquitous than is reflected in this paper, but that this particular group has greater access to resources enabling fulfilment of those choices. Future research should expand upon this by examining the opinions of those belonging to underprivileged communities, including a focus on the interplay between these communities, through the investigation of the circles of influence of those belonging to privileged communities. There is a need for investigating how the COVID-19 vaccination rollout and programme might have affected perception of vaccination generally, retrospectively, as well as any future vaccination endeavours. The study interview was designed with a broad scope for investigating vaccination in general, but could have benefited from a more narrow focus by concentrating on one specific vaccination.

## 6. Conclusion

Vaccination decision-making is a complex area of public health. To fully understand this multidimensional construct, it is necessary to consider all possible spheres of influence, including psychological, emotional, social, spiritual, cultural and political factors (Dube et al., 2013), as well as the lived experience that informs the individual perspective. This study specifically investigates the vaccination decision making processes of a previously understudied yet influential demographic group, that of individuals living with privilege in South Africa. When the understanding of how privilege impacts vaccination decision-making is combined with a classification of how parents make vaccination choices for themselves and for their children, and is visualised within a model in which circles of influence become apparent, the result is a foundation to a powerful framework for understanding vaccination. The framing of study results within the SEM demonstrates that vaccination decisions are not made in a unidirectional manner, and can have far-reaching consequences.

Decisions made by privileged individuals are shaped by influences within their socio-economic environments, through personal interactions and contextual factors. Through their decision-making, privileged individuals affect their environments, and this impact can potentially affect the vaccination decisions of others, especially those with less privilege. Through appreciation of the complexity of personal health care decision making, and the role of privileged individuals within a system, it is possible to develop tailored policies, programs, and public health messaging that will ultimately lead to improved vaccination acceptance and uptake.

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PART C:  
Appendices

## **Appendices**

**Appendix 1** Acknowledgements

**Appendix 2** List of acronyms

**Appendix 3** Table 2: Vaccination Status of Participants

**Appendix 4** Turnitin report signed by Supervisor

**Appendix 5** Instructions for authors for the target journal: *Social Science & Medicine*

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## **Appendix 2** List of acronyms

- (CVACS) COVID-19 Vaccine Survey
- (WHO) World Health Organization
- (HIC) High-income countries
- (HPV) Human papillomavirus
- (HREC) Human Research Ethics Committee
- (LMIC) Low- and middle-income countries
- (MMR) Measles, Mumps, Rubella vaccine
- (SA) South Africa
- (SDOH) Social determinants of health
- (SEM) Socio-ecological model
- (VH) Vaccine hesitancy

**Appendix 3** Table 2: Vaccination Status of Participants

PARTICIPANT					CHILD/CHILDREN		
Pseudonym	Childhood	Flu	COVID19	Booster	Childhood	HPV	COVID19
Lara	V	PX	V	U	V	V	V
					V	U	(N/E)
					V	(N/E)	(N/E)
David	V	X	X	X	V(P)	X	X
Simone	V	X	X	X	V	X	X
					V	X	X
Peter	V	X	V (VR)	X	V	U	X
					V	(N/E)	(N/E)
Neve	V	X	V	U	V	I	V (VR)
					V	I	X
Cindy	V	PX	V	I	V	X	X
					V	I	X
Jenna	V	X	V	X	V	I	U
					V	I	U
Pam	V	X	V	X	V	I	V
					V	I	V
Alicia	V	PX	V	X	V	I	V
					V	I	V
Naomi	V	PX	V	V	V	V	V
					V	I	(N/E)

PARTICIPANT					CHILD/CHILDREN		
Pseudonym	Childhood	Flu	COVID19	Booster	Childhood	HPV	COVID19
Joel	V	PX	V	X	V	V	V
					V	(N/E)	(N/E)
					V	(N/E)	(N/E)
Leanne	V	X	V	X	V	X	V
					V	X	X
					V	X	X
Marie	V	X	X	X	V	X	X
Claudia	V	V	V	V	V	X	V
					V	V	V
					V	I	V
					V	I	I

V- Vaccinated; V(P)- Partially vaccinated; PX- Previously vaccinated; U- Undecided; X- Not vaccinated; I- Intention to vaccinate; (N/E)- Not eligible for vaccination; (VR)- Vaccination regret

# Appendix 4 Turnitin report signed by Supervisor


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## **Appendix 5** Instructions for authors for the target journal: *Social Science & Medicine*



# **SOCIAL SCIENCE & MEDICINE**

## **AUTHOR INFORMATION PACK**

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### **DESCRIPTION**

*Social Science & Medicine* provides an international and interdisciplinary forum for the dissemination of **social science** research on **health**. We publish original research articles (both empirical and theoretical), reviews, position papers and commentaries on health issues, to inform current research, policy and practice in all areas of common interest to social scientists, health practitioners, and policy makers. The journal publishes material relevant to any aspect of health from a wide range of social science disciplines (anthropology, economics, epidemiology, geography, policy, psychology, and sociology), and material relevant to the social sciences from any of the professions concerned with physical and mental health, health care, **clinical practice**, and **health policy** and organization. We encourage material which is of general interest to an international readership.

The journal publishes the following types of contribution:

- 1) Peer-reviewed original research articles and critical analytical reviews in any area of social science research relevant to health and healthcare. These papers may be up to 9000 words including abstract, tables, figures, references and (printed) appendices as well as the main text. Papers below this limit are preferred.
- 2) Systematic reviews and literature reviews of up to 15000 words including abstract, tables, figures, references and (printed) appendices as well as the main text.
- 3) The *Health Psychology* section of the journal will also consider short communications of between 2000 and 4000 words, where a brief, focused dissemination of topical research findings is warranted and the scope and design of the research is appropriate for a shorter report. Please note that other sections do not publish Short Communications.
- 4) Submitted or invited commentaries and responses debating, and published alongside, selected articles.
- 5) Special Issues bringing together collections of papers on a particular theme, and usually guest edited.

Please see our [Guide for Authors](#) for information on article [submission](#).

The journal has also launched three specialist titles that authors are welcome to submit to: [SSM - Population Health](#)[SSM - Mental Health](#)[SSM - Qualitative Research in Health](#)

## AUDIENCE

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Social scientists (e.g. medical anthropologists, health economists, social epidemiologists, medical geographers, health policy analysts, health psychologists, medical sociologists) interested in health, illness, and health care; and health-related policy makers and health care professionals (e.g. dentists, epidemiologists, health educators, lawyers, managers, nurses, midwives, pharmacists, physicians, public health practitioners, psychiatrists, surgeons) interested in the contribution of the social sciences.

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- 4) Submitted or invited commentaries and responses debating, and published alongside, selected articles.
- 5) Special Issues bringing together collections of papers on a particular theme, and usually [guest edited](#).

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