



## **The Context for Constrained Choice: A Case of Cardiovascular Diseases in Johannesburg, South Africa**

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## The context for constrained choice: A case of cardiovascular diseases in Johannesburg, South Africa

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### **Abstract**

Cardiovascular diseases (CVD) among the working age population in South Africa is increasing despite evidence that positive health behaviours prevent mortality and morbidity. Examining constrained choice in the context of South Africa's quadruple burden of disease is therefore timely. Using a psychosocial framework, this paper explores the nexus between the socio-environment and health behaviours among lay retail pharmacy workers in Johannesburg. It further questions individual decision-making regarding health and help-seeking behaviours in the era of neoliberal consumerism. A mixed methods study (survey:  $N=400$ ; interviews:  $N=60$ ) yielded multifaceted understandings of constrained choice. Narratives on the lived experiences of lay individuals with different socio-demographic profiles revealed nuanced perceptions and discourses about CVD, risk, health and illness. Constraints for health improvement included personal and workplace challenges, financial difficulty, cultural ideologies, family responsibilities and time limitations. These influenced how workers gave meaning to their overall health and choice of care. There are several underlying factors embedded in constrained choice in an ever-changing South African risk society. The findings of this research has potential to develop contextual health promotion interventions and disease prevention programs.

**Keywords:** cardiovascular diseases, food consumption, health behaviours, Integrative Model of Behavioural Prediction, risk perception

### **Introduction**

Cardiovascular diseases (CVD) among the working age population in South Africa is increasing despite evidence that positive health behaviours prevent mortality and morbidity (Mayosi *et al.* 2012). It is estimated that by the year 2030, the number of CVD-related deaths will rise significantly (Spires *et al.* 2016). The South African situation is unlike other countries, compounded by the rising prevalence of HIV, AIDS, tuberculosis and pre-existing or pregnancy-related conditions such as hypertension and diabetes that impact maternal mortality (Maredza *et al.* 2011).

Adding to the complexity, urbanisation and globalisation spur obesity, tobacco use, physical inactivity, inappropriate alcohol consumption and unhealthy diets which pose further risks for CVD (Micklesfield *et al.* 2013). Although healthy eating and physical activity are widely promoted, little attention is paid to the socio-environmental constraints South Africans are faced with. The rates of morbidity and mortality will continue to rise if people continue to engage in negative lifestyle choices without perceiving themselves to be at risk for CVD.

Clearly, the rise of CVD goes beyond the individual-level in a context of constrained choice in South Africa. The problem is that because CVD is a lifestyle-related condition, it becomes misleading and implies a purely individual responsibility for one's poor heart health and that people intentionally make irrational choices (Stuckler *et al.* 2011). The emphasis on the individual does not necessarily take into account the social, economic, political, geographic and physical constraints that people and families may experience which pushes them to unhealthy behaviours or limits their choices of healthy ones.

Another problem is that CVD is located within the dominant biomedical paradigm which often fails to fully account for the underlying environmental, psychological and social factors that lead to lifestyle-related diseases. The body interacts with the environment to further shape material, social and cultural meanings that play vital roles in determining how an individual interprets and manage their dietary and lifestyle choices and risks. The convergences of NCDs with infectious diseases present greater challenges and new opportunities for changes in policy and future research.

In an attempt to understand the South African CVD situation, this paper explores chronic NCDs by focusing on the psychosocial, behavioural and social-environmental contexts. Understanding the patterns and processes associated with disparities in CVD in South Africa is valuable for exploring what constrains health improvement behaviours and contributes to perceptions of risk. Unfortunately, interventions target individual-level risk behaviours which often assume individual responsibility, agency and autonomy to make rational and informed decisions about behaviour change (Airhihenbuwa *et al.* 2014).

Undoubtedly, the rise of CVD goes beyond the individual-level in the context of constrained choice in South Africa. There are important interactions between social networks, social support systems and social norms that shape health and health behaviours (Van der Hoeven *et al.* 2012). Through this, the body is influenced by the environment to further characterise material, social and cultural meanings which play key roles in determining how an individual interprets and manages their dietary and lifestyle choices and risks (BeLue *et al.* 2009). The community, work and family contexts can thereby have unintentional effects that either motivate or pose barriers to healthy behaviours and health outcomes (Figure 1).

**Figure 1.** Conceptualisation of constrained choice



Source: adapted from Bird & Rieker (2008, p. 64)

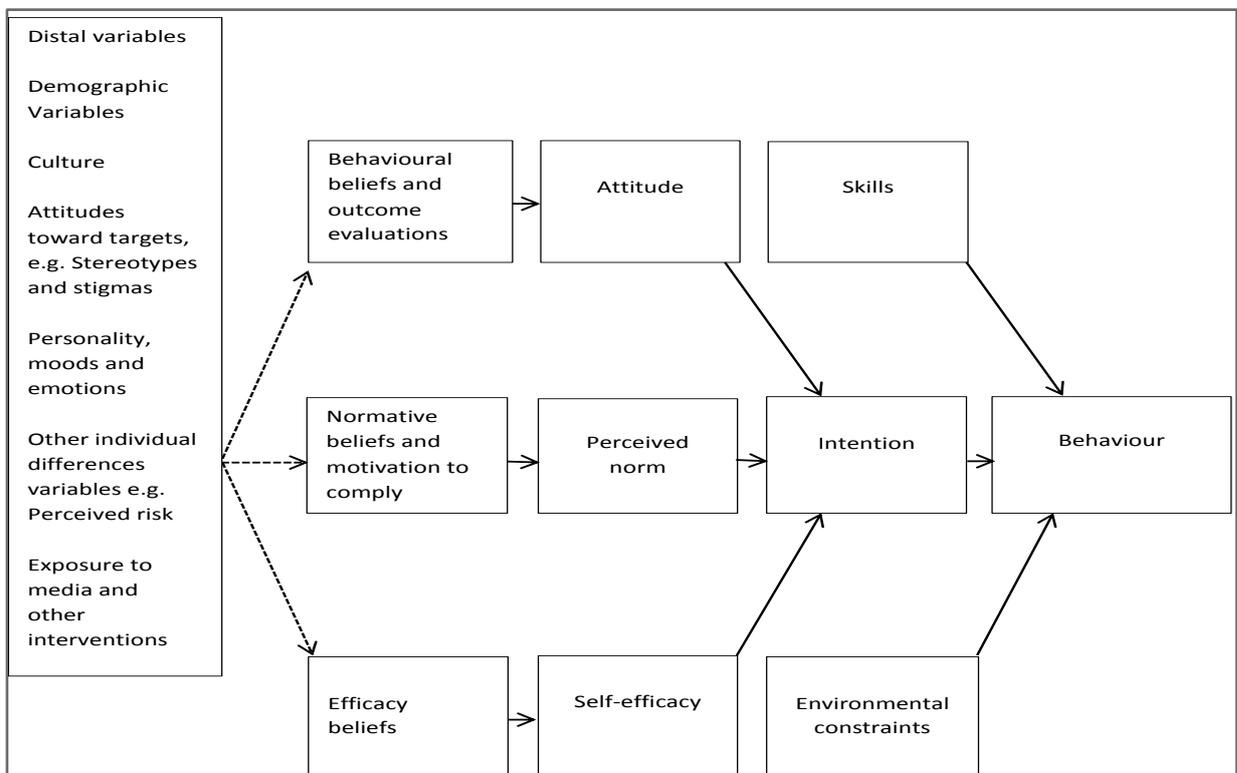
### Theoretical Framework

The study which this paper draws on (see Buldeo 2016) adopted a psychosocial framework – the Integrative Model of Behavioural Prediction (IMBP) – as a theoretical guide to explore the nexus between the socio-environment and health behaviours. The IMBP is based on several social cognitive theories including the Theory of Reasoned Action, Theory of Planned Behaviour, Social Cognitive Theory and the Health Belief Model (Fishbein & Yzer 2003; Fishbein 2008). The framework is commonly used for designing and evaluating health behaviours and behaviour change interventions.

It identifies distal, demographic and other factors that explain, predict and help understand behaviours (Yzer 2012). These factors together interpret normative beliefs, attitudes, perceived norms, self-efficacy and intention or behavioural beliefs for performing or not performing behaviours.

The discourses associated with the IMBP mapped the trajectories of constrained choice and decision-making in the critical context of South Africa’s quadruple burden of disease. It focuses on decision-making in the time of neoliberal consumerism and the barriers of health and help-seeking behaviours in Johannesburg. The model includes macro-, meso- and micro- levels of behaviours to explain how health and chronic disease perceptions are shaped in different environments. The IMBP was useful for exploring the underlying psychosocial factors that characterise CVD knowledge, individual risk perception and the meanings attached to health, choice of care, ‘The Body’, self and identity in the context of constrained choice in South Africa.

**Figure 2.** Integrative Model of Behavioural Prediction



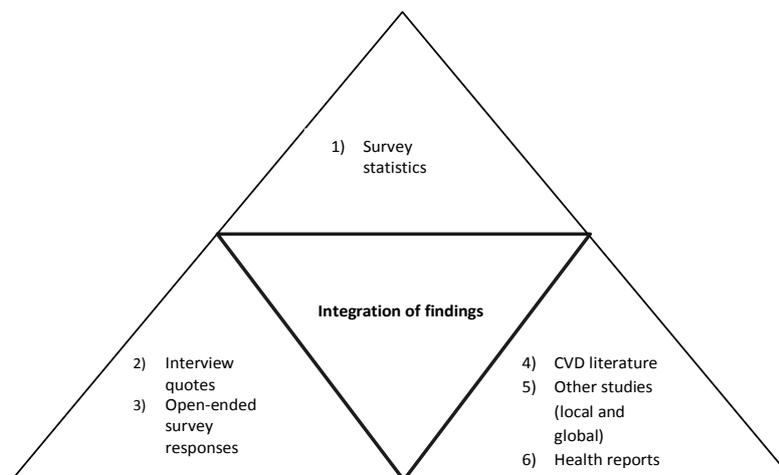
Source: Fishbein & Yzer (2003, p. 167)

The IMBP explored the psychosocial factors relating to the performance or non-performance of health-related behaviours and choice of help-seeking behaviours in the prevention of illnesses and disease and health improvement.

## Methods

Since the main research questions were to answer the *how*, *what* and *why* of CVD, health behaviours and risk perception, the study was exploratory and descriptive in nature. Data were collected by means of a survey (N=400) and (ii) in-depth follow-up interviews (N=60) to investigate broader themes relating to health, illness and chronic disease. The questionnaire and interview schedule was first piloted to test the instrument before its application. After a few minor changes to the instrument, a convenient sample of workers aged 19–75 was invited to participate.

Data were analysed using IBM SPSS 22 software to conduct descriptive statistics (frequencies and cross-tabulations) and QSR NVivo 10 software for thematic content analyses to gain a deeper understanding of the topic by identifying themes and patterned responses (Braun & Clarke 2013). The process of thematic analysis involved reading and re-reading transcripts, grouping similar ideas, noting areas of convergence and divergence and verifying that all themes and concepts were accurately captured (Terre Blanche *et al.* 2006).



**Figure 3.** Data organisation, integration and management

It was necessary to supplement narratives (verbatim interview quotes and written survey responses to the open-ended questions) with descriptive statistical findings.

### **Ethical considerations**

Ethics approval was obtained from the Human Research Ethics Committee (non-medical) at the University of the Witwatersrand (R14/49 Buldeo, ethics protocol number H13/01/21).

### **Findings**

The constraints listed below were found to influence health improvement and the ways in which lay retail pharmacy workers give meanings to their overall health, health behaviours and choice of care.

1. Financial difficulty, cultural ideologies, family responsibilities and time limitations.
2. Lack of motivation, laziness, tiredness, old age, joint pain and existing chronic conditions.
3. Long working hours, economic pressures, work-related stress and family and household duties.
4. Gendered and cultural norms in the family, community and workplace.
5. Lay retail pharmacy workers had a reasonable understanding of CVDs. The problem, however, was that knowledge about health issues and individual risk perception for CVD was low.
6. 'Good' health behaviours were associated with physical attractiveness, social acceptance and health improvement and maintenance.
7. Age seemed to be a facilitator or posed constraints to physical activity and illness management in different social contexts, especially if the individual had suffered from, or is suffering from, a chronic condition.
8. Chronic conditions posed obstacles to balancing the demands of illness and everyday life where participants expressed not being able to isolate illness trajectories and management from other aspects of their lives.

9. The lack of motivation to comply with improved health behaviours were due to the social, interpersonal, familial and individual constraints experienced in the home environment where gendered and cultural norms were reported to still exist.
10. The home and the work environments placed constraints on healthy food options which facilitated poor health behaviours and food consumption. For example, people per household and the workplace impacted decisions to healthier lifestyle choices or mindful eating behaviours.
11. Poor eating included snacking, skipping meals, eating junk food, drinking soda instead of water and indulging in fast food.
12. Some important perceived constraints to health improvement included the lack of importance placed on seeking medical assistance or having a medical examination.

These findings identified different levels in which choices and constraints operate (individual, social, societal, work, community). Constraints shape health and decision-making pertaining to choices which were either hindered or spurred by psychological (internal) and social (external) factors (Vassilev et al. 2011). Moreover, constraints were found to be socially and economically patterned in ways that contributed to unhealthy behaviours and lifestyle choices. Inherent in this contribution is the relationship between 'The Body' and ascribed meanings (individual, social, societal). These often govern ideas about health within different time and spatial parameters which drive (un)healthy behaviours in different geographical contexts (Van der Hoeven *et al.* 2012).

Multiplicities of views illustrated how individuals and population groups attach meaning to their (dys)embodied experiences and (dys)functioning of everyday life. The psychosocial understandings of CVDs occur in multiple ways, linking individual and societal beliefs, feelings, ideas, perceptions, social relations and environmental contexts to the self and social structures. Table 1 is an illustration of the findings of which this paper draws on as related to the IMBP (see Buldeo 2016).

**Table 1.** The levels at which contextual and psychosocial factors interact in the South African context of constrained choice

Levels	Contextual factors	Psychosocial factors
<i>Societal</i>	Background and structural aspects such as: Public health promotion policy CVD programs and initiatives NCD prevention campaigns Healthcare institutional laws and policies Organisational culture TV, print and social media	Cultural identity and norms CVD health promotion Lifestyle behavioural beliefs Experiential attitude Judgement Shame Blame } Stigma
<i>Social</i>	Physical and social environment: Access to PA resources and facilities Access to health knowledge and education Physical and built environment constraints	Shared community values Community efficacy Social cohesion and solidarity Childhood upbringing
<i>Interpersonal</i>	Personal responsibility for individual health: Living space (family, neighbours) Workplace environment Food preparation Gendered division of labour Material and financial wealth	Injunctive norms Descriptive norms Body weight shaming Personal weight goals and body image desires Outcome evaluation } Attitudes
<i>Individual</i>	Socio-demographic characteristics Self-reported CVD knowledge and risk Other's health knowledge and education Parenthood Marriage Agency Autonomy	Perceived self-efficacy Perceived knowledge Perceived constraints to better health behaviours Control beliefs Behavioural intentions Perceived values
<i>Habitual</i>	Constraints/facilitators to improve CVD-related health behaviours Recommended help-seeking behaviour Tradition/culture Positive lifestyle habits Workplace ethics	Positive and negative habits Aim to maintain health Motivated to change negative health habits Perceived body image expectation of significant other Salience of health and help-seeking behaviours

Source: Buldeo (2016, p. 224)

Although the findings are not generalisable outside the retail pharmacy workplace setting, it does contribute to the under-researched area of CVD risk perception and employed adults.

**Discussion and conclusion**

The study's significance extends beyond the biomedical paradigm. The pertinent issues raised in this paper therefore pave the way for future studies on perceived and actual CVD risks. The psychosocial framework bridges the psychological with the social, emphasising the individual and the collective milieus to better contextualise constrained choices as related to the NCD situation in South Africa. In this way, the

centralities of socio-economic structures highlighted individual living conditions and experiences of health and illness through a psychosocial and cultural lens to show how meanings attached to health; illness and disease vary across time and space.

'Bad' health behaviours are modifiable yet individuals seemed to lack the personal agency to change their health habits or expressed facing constraints in making heart-healthy decisions. Constrained choice is therefore vital for understanding the NCD situation as it examines the interaction between social structures and individual health. Yet, there is a scarcity of research that looks specifically at CVD among the working age population in South Africa and the opportunities and constraints they experience in adopting improved health behaviours. Undeniably, meanings about health, illness and chronic disease are socially produced. Becoming sick and unhealthy is beyond the result of biological processes and individual adversity, but is a consequence of the social, environmental and cultural organisation of society.

In the absence of interventions that encourage communities to make healthier food choices, South Africa might be headed towards unparalleled rising healthcare costs and NCD-related deaths (Bradshaw *et al.* 2010). The pertinent issues raised in this paper create pathways for future studies on CVD risk perception. There needs to be a greater focus on culture, belief systems, community values, and the environment when researching NCDs in South Africa as it is central to decision-making, health behaviour and examining how population groups perceive and respond to risks.

This research informs and feed into current debates on social transformation, chronic diseases and the future of healthcare provision and access in South Africa in a context where cultural ideologies about risk, health and illness continue to exist. Constrained choice is considered a platform for CVD prevention and is therefore relevant for policymakers and healthcare practitioners as it has potential to develop contextual health promotion interventions and chronic disease prevention programs.

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## References

- Airhihenbuwa, C.O., Ford, C.L. & Iwelunmor, J.I. (2014). Why culture matters in health interventions: Lessons from HIV/AIDS stigma and NCDs. *Health Education & Behavior*, 41: 78–84.
- Bradshaw, D., Pillay-van Wyk, V., Laubscher, R., Nojilana, B., Groenewald, P., Nannan, N. & Metcalf, C. (2010). Cause of death statistics for South Africa: Challenges and possibilities for improvement. MRC South Africa, Burden of Disease Research Unit.
- BeLue, R., Okoror, T.A., Iwelunmor, J., Taylor, K.D., Degboe, A.N., Agyemang, C. & Ogedegbe, G. (2009). An overview of cardiovascular risk factor burden in sub-Saharan African countries: A sociocultural perspective. *Globalization and Health*, 5(10): 1–12.
- Bird, C.E. and Rieker, P.P. (2008). *Gender and Health: The Effects of Constrained Choices and Social Policies*, New York: Cambridge University Press.
- Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. London: SAGE Publications.
- Buldeo, P. (2016). *A psychosocial study of cardiovascular diseases, health behaviours and risk perception among retail pharmacy workers in Johannesburg, South Africa*. PhD thesis. University of the Witwatersrand, Johannesburg.
- Fishbein, M. (2008). A reasoned approach to health promotion. *Medical Decision-Making*. 28(6): 834–844.
- Fishbein, M. & Yzer, M. (2003). Using theory to design effective health behaviour interventions. *Communication Theory*, 13(2): 164–183.
- Maredza, M., Hofman, K.J. & Tollman, S.M. (2011). A hidden menace: Cardiovascular disease in South Africa and the costs of an inadequate policy response. *Health Policy and Cardiovascular disease. SA Heart*, 8(1): 48–57.
- Mayosi, B.M., Lawn, J.E., Van Niekerk, A., Bradshaw, D., Abdool Karim, S.S. & Coovadia, H.M. (2012). Health in South Africa: Changes and challenges since 2009. *The Lancet*, 380: 2029–2043.
- Micklesfield, L.K., Lambert, E.V., Hume, D.J., Chantler, S., Pienaar, P.R.; Dickie, K., Puoane, T. & Goedecke, J.H. (2013). Sociocultural, environmental and behavioural determinants of obesity in Black South African women. *Cardiovascular Journal of Africa*, Review article 24(9): 369–375.
- Spires, M., Delobelle, P., Sanders, D., Puoane, T., Hoelzel, P. & Swart, R. (2016). Diet-related non-communicable diseases in South Africa: Determinants and policy responses. In: Padarath, A., King, J., Mackie, E. & Casciola, J. (eds). *South African Health Review*. Durban: Health Systems Trust, 35–42.
- <http://www.hst.org.za/publications/south-african-health-review-2016>

- Stuckler, D., Basu, S. & McKee, M. (2011). Global Health Philanthropy and Institutional Relationships: How Should Conflicts of Interest Be Addressed? *PLoS Medicine*, 8(4), e1001020.
- Terre Blanche, M., Durrheim, K. & Kelly, K. (2006). First steps in qualitative data analysis. In M. Terre Blanche, K. Durrheim, & D. Painter (Eds.), *Research in practice: Applied Methods for the Social Sciences* (2nd edn.). Cape Town: University of Cape Town Press. pp. 320–344.
- Van der Hoeven, M., Kruger, A. & Greeff, M. (2012). Differences in healthcare seeking behaviour between rural and urban communities in South Africa. *International Journal for Equity in Health*, 11(3): 1–9.
- Vassilev, I., Rogers, A., Sanders, C., Kennedy, A., Blickem, C., Protheroe, J., Bower, P., Kirk, S., Chew-Graham, C. & Morris, R. (2011). Social networks, social capital and chronic illness self-management: A realist review. *Chronic Illness*, Research Paper, 7: 60–86.
- Yzer, M.C. (2012). The integrative model of behavioural prediction as a tool for designing health messages. In: Cho, H. (ed.). *Health communication message design: Theory and practice*. Thousand Oaks, CA: SAGE Publications. Chapter 2, pp. 21–40.