

Navigating Academia:

Women's Stories of
Success and Struggle.

A Call to Action!

Refilwe Nancy Phaswana-Mafuya





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Other titles by Refilwe Nancy Phaswana-Mafuya:

- *Vision Never Dies: From village girl to award-winning fighter of pandemics - Learning curves from my non-linear career journey, 2021*
- *Research Mentorship: A Developmental and Transformational Tool in Shaping and Sustaining African Women's Career Progression in Academia 2023*

Foreword

To the reader of this book

Professor Refilwe Phaswana-Mafuya, the author of *“Navigating Academia: Women’s Stories of Success and Struggle in Academia”*, possesses a remarkable quality of touching the lives of others through her knowledge and experience. As an African woman who has faced the challenging journey to the pinnacle of academia and science, the subject matter of this timeless book resonates deeply with me. Even today, the question Acker and Warren Piper posed in 1984, “Is Higher Education Fair to Women?” remains relevant.

Refilwe, who has dedicated her life to empowering women and combating gender inequities in science and academia, demonstrates in this book that women face significant obstacles in academia. These challenges arise from longstanding, entrenched inequities such as the subordination of women within structures, patriarchal systems, familiarity, complacency, and resistance to change. Through her own experiences and those of 15 other women from various disciplines, institutions, and regions, Refilwe comprehensively explores the plight of women in academia and the factors that hinder their career advancement.

Through this book, Refilwe amplifies the voices of women that are often silenced and enhances our understanding of the problems women encounter in academia. Furthermore, she challenges the status quo within academia by offering perspectives, strategies, and approaches that empower women and encourage decision-makers to initiate changes in the field. This book is a vital resource for promoting transformation and radical change in academia, addressing persistent gender inequities. Readers from all walks of life can

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glean valuable lessons from this remarkable work, allowing them to be inspired and empowered.

Dr Olive Shisana

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Doctor of Science

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CEO of Evidence Based Solutions, Cape Town

Former CEO of the Human Sciences Research Council

Introduction

“There is no greater agony than bearing an untold story inside you” - Maya Angelou

The book *“Navigating Academia: Women’s Stories of Success and Struggle”* contains powerful stories about career journeys of women in academia, for women, by women, and with women. Although a range of studies have been conducted on gender equality, critical knowledge gaps remain on gender disparities in academia requiring views, experiences, and insights of women who are affected the most, i.e. women with intersecting identities. This book provides an opportunity to obtain first person accounts of Black African women experiences in navigating academia which can serve as a rich source of knowledge towards closing critical gaps and guiding practical strategies for women’s recruitment, retention, and career advancement in academia. The women in this book share courageous career choices made amidst seemingly insurmountable situations, challenges experienced, strategies used to overcome challenges, and lessons learnt. This book is also an endeavour to pay it forward by offering advice to inspire and empower fellow women in their career advancement based on past experiences and insights, especially the next generation of academics. The book offers a platform for validating the experiences and heeding the voices of African women who are hardly given an audience in higher echelons. The rich lived experiences provided in this book have implications for attracting, advancing, and retaining women including women with intersecting identities, in academia.

The process that was followed in compiling the stories of the women in this book was iterative, consultative, and supportive to bring out key messages from the unique journey of each woman. The author approached remarkable women with whom she had a special relationship to share their stories in a personalised manner, incorporating their candid expressions and reflections to learn more about how they

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navigated academia given persistent gender disparities. The women approached were the author's colleagues, peers, and mentees. The author asked the respective women to write up the highlights of their career journeys. She subsequently reviewed and edited each piece, probed for more information, consolidated different aspects, structured the information provided to bring focus and coherence to each piece, cleared any ambiguities, and ensured alignment with the storyline of the book without altering the original meaning. There were multiple discussions before the final writeup between the author and the respective women not only to ensure that each writeup is relatable and hits closer to home but also to ensure completeness, thoroughness, comprehensiveness, and clear focus. The process of engagement ranged from three to twelve months until a complete writeup was completed with each woman. The consolidated individual write ups were shared with the respective women to review and approve the final version. Further, the author reviewed literature on the plight of women, the status quo, and persistent gaps in gender inequality in academia to contextualise the stories of women in the book. The literature included peer reviewed journals, grey literature, organizational reports, and websites. She triangulated the above mentioned with her lived experiences, observations, and insights to provide advice to young people, share key lessons learnt and make a call for action. The author also included selected quotes in the text, as and when applicable, as well as examples and tangible instances of women who faced challenges to accentuate some of the points made in the book.

The book is divided into six sections which are described below to give the reader a sense of the structure of the book.

The first section focuses on the plight of women in academia to provide the context for this book's focus on women as well as a perspective for the successes and struggles of women as detailed in subsequent chapters.

The second section details the author's experiences. In this section, the author lays the foundation for other women's

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stories by sharing her own career journey. Her story is subdivided into three chapters. The author does not detail her biography in the same manner as she did with the rest of the women in the respective chapters because her full biography has been detailed at the end of the book.

The third section, which is central to the book, focuses on the stories of success and struggle of fifteen (15) courageous women known to the author. Journeys of women are often under-studied and overlooked. The author shares the chronicles of journeys of resilience to the top by these phenomenal women of prominence, good standing, and authority from six African countries, namely Botswana, Ghana, Mozambique, Nigeria, South Africa, and Zimbabwe. These tenacious women were drawn from diverse science, technology, engineering, and mathematics (STEM) disciplines and related fields mainly across academic and related institutions to reach a wider audience including data science, environmental health, epidemiology, mathematical statistics, medical virology, medicine, physiology, public health, public health management, and behavioural/social sciences.

The women are diverse having varying age, years of experience, fields of study, cultural, ethnic, and socio-economic contexts. They assumed different career roles as mentees, leaders, managers, and upcoming scientists. Each story is unique, compelling, and inspiring, providing distinctive insights that can empower women from all walks of life. The stories of young women pursuing postgraduate studies are just as incredible, full of real-life lessons to empower the younger generation.

The journeys of women in this book reveal that they went through periods of distress that stretched their inner strength in pursuit of their careers. They survived excruciating pain that went through joints and marrow for making unpopular choices in striving to succeed in their careers. The women rose above situations that pointed to overwhelming defeat; they kept their heads high above oceans of circumstances that threatened to block their path. They remained true to

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their ideals, moral principles, and noble values, focusing on the course. Further, they let integrity, discipline, and civility be their guides in their career choices and actions. When the time of difficulty came, their personal attributes, professional principles, and standards safeguarded them against forming negative forces that sought to devour them. They walked in victory, politeness, and composure through all seasons of their career lives. Further, they maintained a positive outlook of open-mindedness, sincerity, and gratitude, even in times of uncertainty and turbulence. These women used challenges as stepping stones to their career growth. They learnt from their experiences, blind spots, and mistakes for their growth; in turn the challenges they went through became fountains of blessings. These women raise their voice, through this book, not to shout aimlessly but so that others can hear and heed their experiences which can help women in navigating through academia.

The accomplishments of women in this book speak volumes, defy expected cultural norms and practices, challenge patriarchal tendencies and stereotypical views, as well as arbitrary sets of prescribed rules that often limit women from exploiting their career potential to the fullest. They demonstrate the fact that nothing can stop a determined person from achieving their vision. These courageous women showcase courage to stick to their career aspirations against all odds. It is apparent that these women are game changers whose cumulative achievements and recognitions is an embodiment of courage over fear. Their success stories represent courage in action. These women reached the depths, lengths, breadths, and heights that they never thought they could reach through their courageous actions. The key message is that career success in any field is for those who are willing to make tough choices against all odds. Everyone writes his/her own destiny through the courageous choices they make.

In the fourth section, the author provides a synopsis of the lessons learnt from the journeys of women featured in the book. The lessons shared bring inspiration and hope to those who identify themselves with them.

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In the fifth section, the author provides advice to young women pursuing careers in academia and other spaces. This section reveals pragmatic insights that young women from all walks of life should consider when choosing and navigating academia. The discernments in this book can be used to support the development of young talented academics, and scientists.

This book goes beyond relating the struggles that women went through to succeed in their careers. In the sixth section, the author makes a call to action to increase women's participation rates in academia. While women's stories of success and struggle foster awareness and empathy, the impact of this book is further amplified by providing readers with actionable steps and strategies to utilise in achieving gender transformative change. Academic institutions are called to execute systemic changes in their environments to strengthen gender equality, diversity, and inclusivity. This approach offers not only a deeper connection between personal experiences and larger systemic issues, but also provides a more holistic understanding of both challenges and potential solutions, thereby demonstrating a shared responsibility and offering hope to the reader. The systemic actions proposed in this book will go a long way in supporting improved recruitment, retention, and advancement of women in general, Black women, and women with other intersecting identities in academia. The reviewers have commended the book for the contribution it makes in the field towards mitigating gender inequality in academia as paraphrased below.

"I've read the manuscript so many times that it became a part of me. I cried, laughed, and screamed out loud at some of the stories that are included in the book. The manuscript itself contains powerful stories about women's career journeys in academia. We don't have enough books like this that are for women, by women with women. Literature on the experiences of women in the workplace, let alone women in academia, is scant. This manuscript is the first of its kind that I have ever seen, so I believe that the idea is original. Non-fiction books

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about the experiences of women in the workplace can never be too much. We need more literature for young girls and women to access and read. Such contributions will help women learn from others instead of continuously going through the same challenges time and time again. When I was reading the manuscript, it broke my heart that women continue to face the same struggles today as they did two or three generations ago. When you consider the workplace experiences, it seems that women must suffer on their way to the top; they must bend over backwards and reach the brink of death to realise their dreams. The book outlines the struggles of women and what should be done about them. The author uses the stories of women to seek and drive impact so that future generations don't go through the same struggles as well. She makes a call to action to make academic institutions easier for women of all ages to navigate. This challenges the reader to do his or her bit, in his or her own area, to create productive places of work for women in academia and business. The author also extracts some lessons at the end of the book on how academic institutions and other workplaces can make it easier for women to enter into academia and thrive. The intended audience of the book is girls and young women looking to break into an academic career.” – **Anonymous internal reviewer feedback, paraphrased**

“*Navigating Academia: Women’s Stories of Success and Struggle*” offers an invaluable collection of narratives that humanizes the academic journey, making it relatable and deeply resonant. By presenting a spectrum of experiences and emotions, the manuscript highlights the reality of women’s lives within the academic sphere. The manuscript introduces thought-provoking concepts and demonstrates originality in its conceptualization. The collection of personal narratives provides an invaluable platform for women to share their triumphs, challenges, and the intricate paths they have taken in pursuit of their academic careers. The author presents the multifaceted challenges that women, particularly women of color, encounter when it comes to pursuing, progressing, and maintaining their careers within academia, and thus offers a compelling and personal glimpse into the diverse experiences of women

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within the academic space. What sets this manuscript apart is its innovative approach of using personal stories as a catalyst for transformation. By giving voice to the lived experiences of women within academia, the manuscript creates an emotional connection that goes beyond mere statistics or analyses. It paints a vivid picture of the intricacies and complexities that women navigate in their pursuit of success while facing various barriers. The author further outlines the various factors that contribute to these disparities, shedding light on the systemic and structural barriers that hinder the equitable participation of women in the academic sphere. The strength of this manuscript lies in its ability to humanize the complex and daunting landscape of academia. By showcasing real-life stories, one is able to connect on a deeply empathetic level with the women who have braved the academic journey. This personal touch is not only engaging but also serves to validate the experiences of those who may have encountered similar challenges. The juxtaposition of stories of success and struggle is particularly enlightening. The manuscript underscores the multifaceted nature of academic life, where moments of accomplishment and fulfilment can be intertwined with periods of frustration and doubt. This nuanced approach adds authenticity to the narratives, allowing readers to appreciate the true depth of the academic experience. Furthermore, the inclusion of a diverse range of voices across the continent is commendable. Women from different academic disciplines, cultural backgrounds, and career stages contributed their perspectives, showcasing the universality of certain challenges while also acknowledging the unique hurdles that they faced. This diversity of voices enriches the reader's understanding of the broader landscape of academia. By featuring women representing varied academic disciplines, cultural origins, and career points, the manuscript effectively illustrates the shared nature of specific challenges, while also acknowledging the distinctive barriers each individual encountered as they climbed the career ladder. This multifaceted approach significantly enhances the reader's comprehension of the wider academic landscape. The inclusion of women from different backgrounds, fields, and stages of their careers further ensures a holistic representation of the

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challenges and triumphs within academia. This diversity invites readers to appreciate the universality of the struggles while recognizing the nuances that arise from individual experiences. The true power of this manuscript lies in its call to action. The stories of struggle and resilience not only shed light on the difficulties but also spark a sense of responsibility within readers. The manuscript effectively shifts the narrative from passive observation to active engagement. It encourages readers to reflect on the systemic issues that contribute to gender disparities in academia and challenges them to consider how they can be a part of the solution. The manuscript can serve as a valuable resource for researchers studying gender dynamics in academia. Scholars can draw upon the stories and experiences shared to inform their studies, deepen their understanding, and propose recommendations for change. – **Anonymous external reviewer 1, paraphrased**

The book is divided neatly into six sections which provides the reader with a good structure of what is to come. This structure holds together what is probably a diverse and unique set of stories. The manuscript is unique in that it empirically delves into stories from the African continent over several African countries. The women are diverse in terms of age, experience, appointments, fields of study and the various cultural and socio-economic contexts. Inevitably, the chapters contain a mix of anguish and analysis with a good dose of normative writing about what should be given the wake-up call for the sector in terms on the gendered nature of Higher Education. The manuscript moves beyond a traditional oppositional-binary or categorical concept of gender to one where phenomenal women of prominence are highlighted. It is good to see the diversity of subjects which reveals various themes and periods of distress. – **Anonymous external reviewer 2, paraphrased**

1. The Plight of Women in Academia

“My utmost desire is to live in a just and fair society where man-made obstacles that hinder career entry, progression, and retention among all women, especially women with intersecting identities, are completely eradicated. I wish to live in a world where there is equity, inclusivity, and diversity in academia, science, and research; where all voices are heard, heeded, and valued; and where contributions are equally and equitably recognized, rewarded, and celebrated. I desire to see gender transformative change in academic career access and success for the realisation of much needed societal change for the better” - Author

The plight of women in academia is real. Women remain significantly under-represented in academia, especially at senior levels in the African continent and globally.¹⁻² This is so despite the wide array of interventions to advance gender diversity, and inclusivity in academia.³⁻⁴ Academic institutions have implemented initiatives to promote women access to university education and employment; improve university climate to become more gender-sensitive; support the career development and promotion of women across echelons as well as transform the curriculum to include gender issues.⁴⁻⁶ Examples of the interventions aimed at mainstreaming gender in academic institutions include the introduction of gender policies, gender centres/institutes, gender forums, affirmative programmes, as well as qualifying examinations, and bridging courses for transitioning girls from high school to academic institutions.⁴⁻¹⁰ There has also been efforts to increase public awareness of gender issues through proliferation of discourses on gender issues including gender campaigns, webinars, debates, panels, and rallies.¹⁰⁻¹⁴ However, these initiatives have not yielded the desired outcomes due to the lack of gender mainstreaming in the universities' core activities, systems,

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frameworks, structures, processes, procedures, practices, and policies in academia.⁶⁻⁸ The initiatives or interventions have had several limitations. They have not been participatory, collaborative, comprehensive, and holistic.⁵⁻⁸ Further, they overlooked intersectionality, assuming homogeneity of women regardless of their different socio-economic profiles.⁶⁻⁸ The interventions focused on changing women rather than addressing the gendered contexts and gendered dynamics which create 'new frontiers of exclusion.'⁵⁻¹⁰ They have not succeeded in building human capacities to systematically and sustainably manage gender issues. Further, the interventions did not systematically and sustainably incorporate gender into the integral academic activities such as teaching, research, and community engagement.⁷⁻⁸ There is also a growing epidemic of gender-based violence in academic institutions contributing to a more hostile workplace environment for women.⁶

Consequently, academic institutions remain gendered and gendering organisations that are male dominated despite the incontestable potential they possess to become agents of change in society. This has led to gender issues remaining peripheral, optional, and of questionable value across academic institutions.

Women, especially Black African women, are still in least proportions in leadership, management, and governance positions in academia, professorships, promotions, mentorships, academic networks, memberships, fellowships, science disciplines, scientific panels, and peer reviews.⁸⁻¹² This makes it hard for many women to see themselves in those that pursue academic careers as they do not have their identity and experiences adequately reflected in academic spaces; they end up thinking that academia is not for them.⁸ The under-representation of women in academic careers also implies that women continue to be an untapped resource which, if leveraged, could expand the capacity and competitiveness to generate scientific innovations and technologies essential for solving complex societal challenges and for optimal contribution to sustainable development.¹⁻²

1. The Plight of Women in Academia

Women are still excluded from accessing some of the resources and networks that would connect them to academia and advance their professional development.⁹⁻¹⁰ Gender disparities have also been observed in postgraduate studies. Doctoral enrolments remain far lower among women globally and in Africa.⁸⁻¹⁴ Drop-out rates from PhD studies are generally high and time to completion is relatively long among women.¹⁵⁻¹⁹ Not only does the underrepresentation of women in postgraduate studies discourage younger women with potential from pursuing or accessing postgraduate education opportunities, but it also perpetuates the shortage of women in academia.¹⁸⁻²⁰

Further, gender inequality has been observed among students in STEM education where a higher proportion of male students pursued STEM studies compared to their female counterparts, and the gender gap widened sequentially with each consecutive education level.²¹⁻²⁴ The scarcity of women academics in STEM results in fewer female science role models and science mentors. Being in the minority in STEM studies not only discourages younger women from entering or accessing postgraduate education in this field but also propagates the perception that women are not a science material.²⁵⁻²⁷

Women work in unwelcoming academic environments that affect their sense of belonging. Women in these work environments face pressures to conform to a prescribed set of arbitrary majority rules of a male-dominated culture, as well as limiting social and cultural expectations associated with the historical realities about the perceived place of women in society.²⁸⁻³² In such work environments, women are either silenced or coerced to fit into certain cultural norms irrespective of their position level, type, or duration, lest they experience retaliation or are labelled as irrational, aggressive, unstable, or as the black angry woman³²⁻³³. They also have to contend with a sense of entitlement by those who are in significant numbers with little or no regard for diversity, leaving them feeling dominated and excluded.³⁴⁻³⁵

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Further, women hardly go through their academic careers unscathed; they are subjected to malicious integrity attacks and smear campaigns from insecure rivals who resist change as they are generally viewed as the easiest and least-feared targets.²⁷⁻²⁸ Their academic abilities, intellectual authority and professional competencies are often questioned to plant seeds of doubt, distort their scholarship and sabotage their leadership identity forever.²⁹⁻³¹ At times, women are framed into a narrative that suggests that they receive preferential treatment or that they are affirmative action candidates being overworked and underpaid.^{9,31-32} The above-mentioned prevailing prejudices create a hostile work environment that is not gender sensitive and gender inclusive, with women having to repeatedly prove their legitimacy as scholars. These experiences directly or indirectly affect women's self-concept and self-confidence and prevent them not only from utilising their potential to the fullest but also from advancing their careers in academia.²⁸⁻³² Further, they affect women emotionally, physically, and cognitively, leaving them overburdened and drained.²⁸⁻³⁰ These issues are often left unattended, legitimising and perpetuating workplace gender discrimination. Consequently, these unjust workplace conditions drive women out of academia, as well as contribute to delayed or stalled research/academic careers.³⁰⁻³⁴

Additionally, studies on gender disparities in academia have tended to not differentiate or disaggregate different categories of women (e.g. by race or ethnicity) leading to the reporting on mainly the experiences of White women, who are in the majority in academia compared to women of colour. The lack of consideration of the intersectional needs of different categories of women and multiple intersecting identities such as race, ethnicity, or socioeconomic status may result in further marginalisation and social disadvantage of women of colour in academia.³³⁻³⁷ It goes without saying that the identities of Black women or women of colour are linked to historic social injustices and are thus the least represented in academia.³⁷

1. *The Plight of Women in Academia*

Furthermore, women are confronted with work-life balance challenges, having to assume multiple family roles including childrearing and work-related roles.³⁸ They have to endure workplace environments that have no childcare policies; flexible working hours; complex work schedules; long working hours; huge work-loads; as well as profile females by marital status, and the number of children.³⁹⁻⁴⁰ Women often lack adequate family support systems around them as their families may live outside the cities where they are working, without any feasible means of being in close proximity due to infrastructural and socio-economic realities they find themselves in; many black women may hardly cope in such environments.⁴¹⁻⁴² The work-life balance issues can negatively affect work performance, satisfaction, and productivity, leading to stress, burnout, fatigue as well as poor physical and mental health.⁴²⁻⁴³ The work-life balance issues worsened during COVID-19 as women had additional responsibilities of homeschooling children.⁴³⁻⁴⁵ The gendered conditions and consequences of COVID-19 at individual and institutional levels may play a role in retaining or losing women in academia. Individually and cumulatively, these systemic or structural inequities prevent women, especially women of colour and those with intersecting identities, from having interest in joining, advancing, or staying in academia than their male counterparts.

Conclusion

The foregoing discussion shows the depth of the plight of women in academia. The challenges that women experience either drive them to exit the system or take an alternative course of action which may appear more feasible and attractive. Dr Mamphela Ramphele summarised the challenges faced by women scientists in the book *Holding the Knife's Edge (2020)*⁴⁵, in which journeys of 14 award-winning Black female scientists were shared, including that of the author of this book: *“To be born in a developing country is like competing in a race with your arms tied behind your back; to be born a female is to compete with your arms tied behind your back and*

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blindfolded".⁴⁵ Thus, women must constantly fight the impulse to quit. It takes extraordinary effort for many women to stay in the academic pipeline – more than would have been the case if the odds against them were fewer. This chapter also highlighted key interventions that have been implemented, offering insights into their efficacy and shortcomings as well as the complex interplay between policy and action. A call for bold and radical action to change the status quo has been made in the last chapter of this book to offer practical strategies for further institutional reforms.⁴⁶⁻⁴⁹ In the subsequent chapters, powerful stories centred on the lives, voices, and experiences of women from different backgrounds, fields, and career stages are narrated.

2. Navigating an Epidemiology Career

Prof Refilwe Phaswana-Mafuya

MA(SW), PhD, PGD (Epi), MSc (Epi)

Biography

Refilwe Phaswana-Mafuya was born in Alexandra Township, Gauteng Province, where her parents were migrant labourers at the time. She is the second of the seven children (five girls and two boys) and the first-born girl. She was later raised in a small village called Eisleben at Ga-Ramokgopa, Botlokwa, Matoks, where her parents originally came from. Although her parents, who were both orphaned at a very young age, were not privileged to go as far as high school, they ensured that she and her six siblings obtained higher education. From humble beginnings, Refilwe became an accomplished scientist who occupied positions of management and leadership in various science/academic/research institutions in her country, South Africa. Refilwe is currently the founding director of the first ever South African Medical Research Council/University of Johannesburg (SAMRC/UJ) Extramural Unit: the Pan African Centre for Epidemics Research (PACER).⁵⁰⁻⁵² She leads epidemiological and public health studies aimed at understanding local epidemics and has been an HIV scientist for over two decades. Refilwe is also a professor of epidemiology and public health in the Faculty of Health Sciences (FHS) at the University of Johannesburg (UJ). In this role she supervises master's and doctoral students in their epidemiological and public health studies. Further, she is an epidemiology guest lecturer, and research supervisor to MSc Biology and MSc Reproductive Health students at the Pan African University of Life and Earth Sciences Institute (PAULESI), based at the University of Ibadan, Nigeria. Refilwe's epidemiological work has earned her accolades

including being an Academy of Science of South Africa (ASSAF)-merited scientist, National Research Foundation (NRF)-rated scientist, African Academy of Sciences (AAS) Fellow, and an Organization for Women in Science for the Developing World (OWSD) Fellow. She has been nominated to serve as the World Academy of Sciences (TWAS) Fellow. Refilwe served on the international expert panels including the German Research Foundation panel on infectiology; the Medical Research Foundation Impact of Climate Change Health Expert Review Panel; Africa-German Research Networks for Health Innovations in Sub-Saharan Africa Expert Review Panel; and External Reviewer University of Münster “Topical Programs” internal grant program; as well as Advisory Board Member: Ethics of HIV-related research involving underage key populations in sub-Saharan Africa, Rutgers University, New Brunswick, NJ. She also serves on the local organising committee of the World Congress of Epidemiology 2024, among others. Today, Refilwe is a celebrated epidemiologist who has made a significant contribution in the public health field against all odds.

A courageous career choice that propelled Refilwe in her career

It all started with Refilwe making a courageous choice to pursue an epidemiological career with the support of her mentors Prof Olive Shisana and Prof Karl Peltzer. The path towards completion of epidemiological training was a steep one for Refilwe. Growing up as a village girl, raised in a humble family by semi-literate parents, Refilwe never thought that she would one day become an epidemiologist, thus meeting the large unmet need for epidemiologists in her country and continent, let alone that she would be qualified from a world-class global health institution, the London School of Hygiene and Tropical Medicine (LSHTM), University of London, United Kingdom (UK). She remains greatly indebted to the Wellcome Trust, UK, and the Africa London Nagasaki (ALN) Fund (UK)⁵³ for sponsoring her epidemiology studies, which she could never have afforded on her own. She is also grateful to the

2. Navigating an Epidemiology Career

then employer, the Human Sciences Research Council (HSRC) for giving her the permission and sabbatical to pursue her studies. Refilwe was one of the five applicants to receive the prestigious ALN scholarship of approximately US\$50,000 for tuition, travel, and living expenses out of 480 excellent applicants across 26 African countries who could have equally benefited. She was further supported by the Wellcome Trust which took an unprecedented decision to ringfence flexible funding towards her collaborative epidemiological meetings, mentorships, and trainings, nationally and internationally. This culminated in the establishment of a long-standing research collaborations with remarkable international institutions and individuals including Prof Stefan Baral, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health (JHSPH) and Prof Patrick Sullivan, Department of Epidemiology, Rollins School of Public Health, Emory University. Together, they pursued groundbreaking research studies that employed novel and specialised epidemiological methods to generate robust scientific evidence for equitable and comprehensive HIV responses in the country and region.

Pursuing an epidemiology career was one of the toughest but best decisions that Refilwe ever made in her career life, one that she lives to cherish today. It challenged her and opened avenues that she could have forever longed for and that made her who she is. This became a personally gratifying and professionally fulfilling adventure.

Refilwe knew nothing about epidemiology when growing up; she had not heard of anything like it nor even seen anyone who was an epidemiologist. However, as her career evolved, she became aware of epidemiology and developed a passion for it, given her career aspirations and the large unmet need for epidemiologists in South Africa and Africa. She realised, through feedback from her mentors and reputable institutions like the Wellcome Trust, that she could greatly benefit from epidemiology to enhance her knowledge and skills in generating robust scientific evidence, using novel scientific methodologies, employing best practices, applying

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the latest scientific approaches, generating massive datasets, and applying statistical methods towards the control of a quadruple burden of disease in her country and meeting the country's public health needs.

It is not always the case that one knows in advance how their career will pan out. There are many variables in the career equation that determine how one's career will be shaped. Much as there is a lot to learn from each of those variables, there might be as many unique combinations as there are individuals who are pursuing various careers. Refilwe never thought that one of the first international universities that she visited in her first international travel after obtaining the ABE Bailey Travel Fellowship to England as an academically deserving master's student with exceptional leadership potential many years prior to this, would one day become her alma mater. She had never thought that one day she would study at the University of London (LSHTM), as she thought she would never have the resources to do so, let alone make it through their stringent and competitive admission processes into the epidemiology programme. Further, Refilwe never thought that one day she would become a rare gem with a unique combination of epidemiological and public health expertise. Her career as an epidemiologist debunks myths that confine the abilities of women to certain disciplines, categories, or pigeonholes.

Refilwe's career is being used to inspire upcoming scientists that it is possible to pursue a science career even if one grows up in a constrained environment where the prospects of pursuing a prestigious science career seems impossible.⁵⁴ From humble beginnings of walking four kilometres to the village public school that hardly had the minimum science infrastructure, Refilwe became one of the most successful Black women in science.⁵⁵ Her journey serves an inspiration to many women that they too can make it.

2. Navigating an Epidemiology Career



Pictures of Refilwe as a high school girl



Refilwe with her father while graduating her MSc Epidemiology degree at the University of London, LSHTM, UK. She took her father along for his first international trip ever.^{53,56}

Refilwe's role and contributions as an epidemiologist came to the fore throughout her two decades of work on the HIV pandemic and co-morbid conditions to ensure an equitable HIV response, as well as during the heat of the COVID-19 pandemic. She used her knowledge, skills, and insights in scientific methods, diagnostic tools, and models where she not only conducted ground-breaking studies that generated high-quality evidence but also guided policy and programming. Further, she ensured that the community was not left behind by providing science-based advice through print media, community radio stations, television, webinars, and panel discussions, which on several occasions made headline news. Refilwe continues to lead innovative and ambitious epidemiological studies that seek to improve the understanding of, and response to, local epidemics. In 2017, she obtained the TW Kambule-National Science and Technology Forum (NSTF)-South 32 Award for research and its outputs over a period of up to 15 years after obtaining

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a PhD. The award was given in recognition of outstanding contribution to science, engineering, technology, and innovation excellence at the 19th Annual NSTF-South32 Awards, on June 29th, 2017.⁵⁷ In addition to the above-mentioned award, Refilwe received five NSTF finalist awards in consecutive years. Refilwe has also been invited to serve as a founding member of the South African Epidemiology Society.



Picture of the NSTF Award that Refilwe received in 2017



Refilwe acknowledged as a titan in the battle against HIV

Refilwe is currently training others to become epidemiologists, transferring her epidemiology passion, specialist knowledge, and experience to emerging scientists through teaching, research, and mentorship in her quest to promote excellence

2. Navigating an Epidemiology Career

in science and scholarship among young scientists, especially Black women. This enables her to put her professional practice, experience, and skills into action, and propels her to read more about her subject field and remain current about it. She utilises a range of teaching methods, materials, resources, and strategies to make the assimilation of epidemiology interesting. She also uses her lived experiences as well as her hard-earned position of privilege, authority, and power in the field to create safe spaces for young scientists to flourish. This contributes to the smoothing of the paths of emerging scientists so that they not only get attracted to science careers, but they also stay in the career pipeline.

The challenges that Refilwe encountered in her career choice

Prior to enrolling for an epidemiology postgraduate diploma and later for an MSc in Epidemiology, much as she was excited to be afforded such a great opportunity that she never imagined she would have, Refilwe was caught up in a den of real fears. Although Refilwe was eager to learn new things, gain fresh perspectives, and strengthen her abilities, she was not completely ready for the challenge of pursuing an epidemiology career; it took a lot of determination, resoluteness, and tenacity. It felt scary and uneasy for Refilwe to pursue a scarce skills course of this nature even if she knew that it was the right endeavour to pursue, as she could not point to many Black African women in her circles that had pursued it. None of her closest family, friends, and acquaintances had followed it. The prevailing prejudice about the science abilities and intellectual authority of women added to Refilwe's scepticism. Refilwe feared that she might struggle as she was studying in a world-renowned international institution in global health research and postgraduate training for the first time with postgraduate students from all over the world who had been through more quality education than her. For Refilwe, this was going to be her first experience in pursuing postgraduate education in an international university as she had completed all her qualifications in local universities: the

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former University of the North (University of Limpopo) which introduced and nurtured her into research and academia; the University of Witwatersrand where she took a one-year graduate course in management and leadership as well as non-credit bearing modules in epidemiology and biostatistics; Rhodes University, and the University of Fort Hare where she took a one-year academic assessor accreditation course. Refilwe feared that other postgraduate students from elsewhere might be much more knowledgeable, exposed, and experienced than her and that they would seamlessly go through each epidemiology module without much hassle. Additionally, Refilwe dreaded that she might not cope as she was faced with the triple trouble of simultaneously rearing children, working, and studying. To put a spanner in the wheel, she recalls a renowned White male epidemiologist, who was her colleague at the time, asking her if she understood what pursuing epidemiology was like and whether she was ready for such an uphill voyage. The colleague even startled her with some little epidemiology quizzes and rhetorical questions whenever he met her. She recalls him saying that epidemiology is a very different discipline, almost implying that it was not for her. However, Refilwe forged ahead against all odds. When Refilwe pursued her previous studies, she was much younger, single, and had no children. While pursuing her epidemiology training, she realised that children can be a source of inspiration and motivation for one to pursue postgraduate studies. Her children propelled her to be more determined and work even harder, to be self-controlled, develop multitasking skills as well as self-management skills to see her course to finish. Although it took her a bit longer to finish due to multiple responsibilities, Refilwe successfully completed her epidemiology studies. Her journey proves that it is possible to pursue a dream career while raising children, even though it is not easy. It demonstrates that Black women's excellence is achievable. Although Refilwe initially felt inadequate to pursue epidemiology, she realised that she had exaggerated this. The closer she got to her fears, the more she realised that they were not insurmountable. She recognised, as Marianne Williamson puts it, that *"Our deepest fear is not that we are inadequate. Our*

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deepest fear is that we are powerful beyond measure. It is our light, not our darkness that most frightens us. We ask ourselves, 'Who am I to be brilliant, gorgeous, talented, fabulous?' Actually, who are you not to be....?"

Graduating her PG (Epi) and MSc (Epi) at the LSHTM in London, UK next to her father is proof of that. Refilwe's successful completion of epidemiology spoke volumes about the science abilities of Black women, defying patriarchal expectations, stereotypical views, expected cultural norms and practices, and arbitrary sets of prescribed rules that often limit women from utilising their career potential to the fullest. It showed that given the opportunity, women can excel in science. Refilwe arose from being a researcher with potential to an established scientist with a sustained research track record in her own field.

The strategies Refilwe used to tackle challenges to sustain her career choice

Refilwe took an audacious step to undergo formal epidemiological training while raising her children, having a young family and a full-time job. This brought out hidden reserves of courage and boldness in her. She had to:

- step out of her comfort zone, looking beyond who she was to who she could be; focusing not only on where she was but also where she could be; taking modules that were avoided by some students which she passed with flying colours (e.g. advanced statistics), anticipating that her successful completion of the epidemiology course would become a beneficial investment in the future as she would put the insights gained to good use.
- distance herself from any passive-aggressive feedback that sought to discourage her, crush her assertiveness, or plant a seed of doubt, and eventually destroy her career aspirations. She chose to overlook random opinions, manipulations, and pressures from negative people. She surrounded herself with people who injected positivity in her. She had to face the unpleasant truth that it was up

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to her to achieve her dreams, not those who looked down upon her.

- challenge and extend herself fiercely to rise above her fears; she developed a lot of courage to pursue an epidemiology career.
- treat the opportunity to study epidemiology and the scholarship support given as if it was the last one.
- make continuous and conscious adaptations to rise to the occasion seeking additional supports that would help her succeed in her course, e.g. alongside her formal epidemiological studies, she attended additional non-credit bearing block modules in epidemiology and statistics at JHSPH) epidemiology summer institute in Baltimore, USA, experiential epidemiology training modules at the World Health Organization (WHO) in Geneva, Switzerland, and block release modules at the University of Witwatersrand and Nelson Mandela University.
- tap into related ongoing professional self-improvement activities including workshops, webinars, and on-the-job trainings.
- adopt a teachable spirit, embracing new ideas, and constructive criticism not only to deepen, widen, and expand her bank of knowledge but also to become a better person.
- simultaneously manage intensive epidemiology courses, a career, and the demands and responsibilities of work and family life.

What Refilwe learnt from the experience

From this experience, Refilwe learnt to:

- maintain focus, dedication, persistence, hard work, and determination to finish her epidemiology training. Refilwe's epidemiology training was not easy, but she realised that with the above-mentioned qualities, there is nothing that is impossible to achieve. In the end, she achieved good grades for the respective modules.

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- adopt a success mindset throughout to finish the course she had started; she stuck to it. Though the going was tough, Refilwe had to keep herself accountable. She monitored milestones in her epidemiology studies' progression while she celebrated each module she passed as this gave her the necessary motivation to continue despite many gender-related distractions that sought to remove her from the path to her dream career.
- continuously reflect on herself, identify her areas of growth, and invest energy wisely towards her own development to improve her insights, stay on top of the game, and remain on track in terms of latest developments.
- work hard towards building her career as she realised that a career cannot be pursued through wishful thinking. Her aspirations to complete her epidemiology studies and put them into practice required vigorous commitment, consistency, persistence, positive thinking, and perseverance.
- follow her deep-seated passion to know more about local epidemics across people, places, and time; her passion to develop her own and others' capacity to deal with epidemics and pandemics; her passion to explore epidemiological questions and to find solutions to public health problems; as well as her passion to grow her career. This propelled her to wake in the early hours of the morning and work on public holidays. It was her passion that kept her going through thick and thin to develop competencies that made her excel in her studies. Her passion for epidemiology went a long way in sustaining her throughout.

With these kinds of personal resources and attributes, over time, Refilwe saw what she originally thought to be impossible become possible. She saw herself blossoming and her insecurities dissipating. In the end, she achieved her grand goal of becoming a qualified epidemiologist from one of the leading global health universities, and passed the modules she feared the most with the highest grades.

The advice Refilwe gives to young people pursuing their careers

- Take bold steps towards a career of your dreams. Do not let fear or lack of the familiar prevent you from discovering your true passion and pursuing it. It is possible for women to follow their dream careers and reach for the stars despite gender, background, and prevailing stereotypical views about their capabilities.
- Work hard towards your dreams. Dreams do not automatically materialise, they are only realised through determined work: *“...but dreams do not come true just because you dream them. It’s hard work that makes things happen. It’s hard work that creates change”* (Shonda Rhimes).
- Engage in ongoing learning for self and professional development. Learning involves taking stock of one’s strengths and building on them as well as acknowledging and working through shortcomings and making adaptations needed for one’s growth.
- Be optimistic and ambitious; there is power in maintaining a positive attitude. It gives energy and sustenance throughout life’s seasons.
- Strive for excellence in whatever you do. Explore various avenues; be the best that you can ever be.
- Get out of your comfort zone to reach the level of success you desire. Women’s excellence is possible.
- Define your own goals and go for them; do not measure your ability by the standard others put for you. Challenge yourself to go beyond the boundaries that society puts on women.

3. Breaking Barriers to Research Leadership, Management, and Governance

Prof Refilwe Phaswana-Mafuya

MA(SW), PhD, PGD (Epi), MSc (Epi)

Biography

Refilwe has assumed various management, leadership, and governance roles. Preceding her current academic, management and leadership positions as a professor of epidemiology and public health as well as a research director, Refilwe was the Deputy Vice-Chancellor for Research and Innovation at the North-West University (NWU) ⁵⁵– the first Black African woman to occupy this position in the institution. Further, she previously served as an acting executive director, research director, and chief research manager at the HIV/AIDS/STI/TB Research Programme of the HSRC for nearly 13 years. Refilwe also served as editor-in-chief and executive editor of an internationally accredited African journal (SAHARA J). In most cases, Refilwe was the first or only black African female who had occupied these positions. In these roles, Refilwe devoted her time, energy, and passion to successfully lead research teams, administer research projects, and collaborate with other researchers locally, regionally, and internationally despite the challenges of resistant mindsets, stereotypical attitudes, and patriarchal tendencies that she had to navigate through to fulfil her career progression and aspirations. Refilwe eventually received performance and institutional awards including the HSRC: CEO (2012), and Ubuntu (2012) awards, for her outstanding contributions. These accolades inspire many women because: *“Every time a woman excels in a high-profile position, her achievement lifts the social status of*

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women everywhere.” — Margaret Chan, Physician, Director-General, WHO for the Chinese delegation, 2006–2017



The HSRC Ubuntu Award for recognition of abilities in building team spirit and morale among colleagues to work together to achieve a common goal in the past 2 years. The team was led by Refilwe – her team was the first Black female-led team to win this award at HSRC.



The HSRC CEO Award is an extraordinary award that aims to recognize extraordinary contributions to the achievement of the goals of the HSRC. Refilwe was the first African Black female to receive this award at HSRC.

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Additionally, Refilwe serves in various governance structures. For example, she is a member of the Dira Sengwe National AIDS Conferences as well as board member of Higher Health, ASSAF, Sonke Gender Justice, NRF, among others. She also serve/d as a member of the scientific advisory committee of the African Health Research Institute, Department of Science and Innovation Transformation Task Team, Higher Education Research and Innovation Strategy Working Group, Network of African Science Academies, African Union Kwame Nkrumah Continental, and Regional Awards Rules of Procedure, and a Department of Higher Education and Training (DHET) Health Sciences sub-panel for reviewing research outputs, among others. Refilwe offers the chronicles of her journey to research leadership, management, and governance, i.e. how she navigated her own path of resilience from novice researcher to research leader.

A courageous career choice that propelled Refilwe in her career

Refilwe's path to research leadership was a steep one. She had to make courageous choices, undergo character development, and learn lessons from her journey which she believes can empower others. Refilwe was privileged to be recruited into research and academia early, while she was still young and tender, supported by her generous mentors, moving through the echelons, making choices that would enable her not only to survive but also to thrive in academic/research/science leadership. Her appointments were, in most cases, unprecedented as a Black African woman. She was the first and youngest Black female in several research management and senior management positions she occupied at the time in science councils and institutions of higher education. When she assumed her respective roles, she was excited to be afforded such great opportunities that she never imagined she would ever have. However, little did she know what it would take for her to navigate through such positions in non-diverse environments where gender disparities persisted. Refilwe was confronted with a lot of challenges, but she made a courageous

choice to remain in the research leadership and management positions for almost 20 years and she continues to serve in these positions.

The challenges that Refilwe encountered in her career choice

Refilwe experienced academic environments as male-dominated spaces that negatively affected her sense of belonging. She was one of the few women in management and leadership, if not the only one in some cases. Her voice was often muted and overlooked. Refilwe felt dominated and weighed down by those who were in the majority. Further, the under-representation of women in management and leadership positions created the impression (to Refilwe) that such positions were not for people like her. Additionally, this made the work environment uneasy, threatening not only Refilwe's academic abilities but also her self-esteem. Being in the minority in these positions was hard as Refilwe constantly had to fight subtle derisions about her abilities in executing the roles and responsibilities in her positions. From day one of commencement in her respective management positions, Refilwe felt like she had a lot of ground to cover to be viewed as an equal due to preconceived stereotypical gender norms that perpetuate certain prescribed roles and expectations for women. She felt vulnerable and silently pressurised to prove that she deserved to be in the position even though she had met the necessary requirements. There were times when Refilwe felt that she experienced the dual challenge of being both a woman and Black (double-bind minority). She at times endured sarcastic remarks that she was an employment equity or affirmative action candidate in the corridors from some of her male colleagues. She recalls being told by one of her White male counterparts that she would soon become the next chief executive officer of the institution due to affirmative action. At the time the colleague made this comment, she had just been promoted to a senior management position after a highly competitive performance-based process. She was later subjected to similar utterances in a different institution

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where she worked in a male-dominated environment as well. In all these instances, Refilwe felt subtly sized up, muted, and antagonised. At times, Refilwe felt caught up in a web of alarming circumstances characterised by silent pressures to conform as well as pigeonholed by a strong upsurge of vulnerability, anxiety, and fear. She felt singled out and unfairly treated in some of the management and governance meetings she attended where she was in the minority, i.e. the only woman or only Black woman. She observed that her White female counterparts were treated differently in some respects. When Refilwe solicited support from some of the senior male colleagues who had been assigned roles in the projects that she led according to their areas of expertise, she at times would barely receive their contributions. This made Refilwe feel frustrated and let down as she needed to deliver on the projects within budget and timeframe not only to achieve the noble objectives that had been set but also for reporting and accounting purposes to external funders. Refilwe was in most cases left to her own devices, to either sink or swim. She hardly inherited any initiatives from male colleagues even though she observed that some of her male peers inherited or were allocated existing research projects and/or initiatives. Refilwe had to work extremely hard to develop her own niche area from scratch to attract and sustain research funding to prove herself. Through successfully executing her tasks in such a daunting environment, Refilwe became a force to be reckoned with. However, for the most part, Refilwe felt vulnerable in these environments. She at times felt that there were deliberate attempts to find an opportunity to axe her out of the system, position of management or leadership. During such moments, Refilwe stood her ground, her integrity became her stronghold, and her work ethic and performance became her defence. Although Refilwe faced the overwhelming pressure to deliver exceptionally on her key performance areas, lest her abilities would be further questioned, she made every effort to keep up. In most instances, she managed to exceed expectations. This was evidenced by the performance-based awards she received each year without fail.

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However, overall, the subtleties that Refilwe went through were frequently not attended to, and this seemed to normalise and propagate an environment which would likely limit her career growth and development and eventually drive her out of her career adventure for good. Unfortunately, such is the journey of many women in academia.

The odds of success in these roles seemed very low given the factors mentioned above. Refilwe never quit in all instances. When the right time had come, she ceremoniously left for greener pastures, leaving vibrant programmes behind for others to take over. Refilwe persevered through these perplexities although there were times when she wondered: *“what if I fail to deliver on my strategic objectives and key performance areas and never succeed in developing my own niche area? Would I withstand the pressure? Am I equal to the challenge?”*

Refilwe was motivated by the statement made by Sheryl Sandberg: *“We need women at all levels, including the top, to change the dynamic, reshape the conversation, to make sure women’s voices are heard and heeded, not overlooked and ignored”*

The strategies Refilwe used to tackle challenges to sustain her career choice

Refilwe experienced many challenges that needed to be tackled for her career progression. She had to:

- face the challenges she came across head-on and dealt with them. She constantly and consistently fought the impulse to run away from the research leadership and management positions because of others. She did her best to face the challenges she came across head-on and dealt with them. Since she could not change the system, she painstakingly had to change herself in order to survive and thrive in non-diverse work environments.
- exploit her knowledge, skills, and abilities, and ensure that she gets more empowered in areas of weakness to

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safeguard herself from destructive criticisms. She never succumbed to the limiting stereotypical perceptions by others or used these as a measuring stick of her potential. She pushed past walls of resistant mindsets and patriarchal tendencies for her career progression.

- know what she wanted, develop a realistic plan to achieve it, and secure the resources to help her execute her plan. She became thorough and diligent in executing planned work, holding herself accountable and thinking miles ahead about the possible outcomes of any choice she made in case there were any comebacks or malicious attacks. This safeguarded her integrity.
- be open minded and willing to learn more about the management processes and procedures in her organisation so that she can align her operations to these to avoid queries.
- disregard any set limits about what she could achieve as a black African woman. She never allowed herself to be confined to some expected or imposed limit that could undermine her abilities. Refilwe defined her own parameters and set her own limits, guided by her vision, targets, resources at her disposal, innate gifts, knowledge, and skills. It became difficult for her contributions to be ignored or downplayed as they were evidently visible at every turn.
- avail herself to relieve others of any enormous work-related burden. She also took on additional responsibilities, acted in positions without acting allowance at times and proposed solutions to problems to show accountability. She put her best effort into the work assigned to her. She rose to the occasion, stretched her abilities to the limit, performed the tasks diligently and channelled her efforts in ways that would most benefit her and those around her. This left good impressions about her. It also reduced the subtle isolation she had initially experienced and built others' confidence in her. She eventually became a noticeable and a valued member of the team, a force to be reckoned with.

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- ensure that her work performance stood out. She consistently exceeded expectations in terms of her key performance areas and indicators as well as short, medium, and long-term objectives. When duty called, she worked longer hours (and made up for lost time later) and forfeited other privileges. Thus, she was rated as a star performer during performance reviews. She achieved sustained research productivity and attracted high amounts of external research funding. This led to the receipt of great performance reviews, rewards, recognitions, credentials, sabbaticals, and good profiling both internally and externally. Refilwe eventually rose through the ranks. She received research recognitions as well as research and service excellence awards.
- put mechanisms in place to monitor her work so that she achieved her set objectives within her directorate, and could re-evaluate her work, make necessary adaptations if need be and take corrective action.

Today Refilwe is one of the celebrated female leaders in research



HSRC acknowledged Refilwe's contribution to research on women's month

What Refilwe learnt from the experience

Refilwe went through the courage development process to survive and thrive in academia. She learnt personal, spiritual, and character development lessons through every challenge she went through. Refilwe learnt to:

- correct her mistakes when she faltered before anyone did rather than overlook them.
- weigh the pros and cons of every choice she made, own up to her decisions even if they backfired.
- never personalise any attacks made, she used them as stepping stones for her next voyage.
- surround herself with those who were willing to team up with her in the performance of duties and carefully interacted with those that seemed reluctant to do so. She constantly did her best to inspire, energise, and enthuse her team to be actively involved in the work as well as share the vision with her. Further, she ensured that each team member's performance was commensurably rewarded.
- use her abilities as a standard to guard against mediocrity. She did not compare herself with others and also refused to let her womanhood determine which positions she can assume.
- remain conscious of the fact that she was a role model to many women who identified with her. She persevered against all odds knowing that her career journey would be an inspiration to other women – especially black women.
- do her best to excel in any task given to her. This unleashed her hidden assets and reservoirs of giftedness, talent, and skill, and helped her to develop the requisite skills. She was determined to be the best she could be, and she became recognized as one of South Africa's most successful Black women in science. She eventually became a science mentor, an activist, ambassador, and role model for young people.

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- confront and overcome feelings of inadequacy imposed by the external environment that could hamper her career progression

The advice Refilwe gives to young people pursuing their careers

- Exert yourself in whatever you do to prove that given the opportunity, women can succeed.
- Never quit even if the challenge before you looks bigger than you. Face the challenges head-on and resolve them.
- Put yourself out there for leadership positions to have an opportunity to demonstrate your knowledge, skills, and competencies, and inspire other women to follow suit.
- Do not wait to have your efforts recognised by others as this may never happen. Do your part, take ownership, and responsibility for your career. No one will navigate your career for you; you must carve your own path. When you have succeeded, be the first one to appreciate yourself for a job well done.
- Be emotionally intelligent. Remain calm, positive, and focused in the face of difficulties and work hard in silence. Let your merits become the noise that protects you from any malicious endeavours.
- Proactively guard yourself in everything you do so that you can account for whatever you do any time on any day. This will protect you when the day of trouble comes.
- Surround yourself with mentors of virtue, incredible networks in your field, and inspired collaborators to obtain the support.

4. Managing Competing Work-Life Priorities

Prof Refilwe Phaswana-Mafuya

MA(SW), PhD, PGD (Epi), MSc (Epi)

Biography

The commencement of Refilwe's management role coincided with raising a young family, including bearing, and rearing her two little daughters, Tando-Lihle and Zipho-Zihle Mafuya. Both Refilwe and her husband had full-time jobs while raising the kids. Although Refilwe's husband supported her in raising the kids, she had to deal with most of the child rearing responsibilities due to the inborn nurturing role and many unassigned responsibilities of mothers by default. Thus, Refilwe had to deal with her academic workload within working conditions that were characterised by the lack of support services for working mothers. Refilwe had not received any preparation or training on work-life balance issues. Although she had the requisite knowledge and skills for her work role, she was ill-prepared for work-family life demands. There were days when Refilwe could barely achieve anything as the pressures of her family responsibilities pulled her in different directions throughout the day; meanwhile other avenues of work-related responsibilities were piling up, creating quantitative stress.

A courageous career choice that propelled Refilwe in her career

Refilwe made a choice to pursue her career amidst multiple competing priorities for continued personal and professional growth. Refilwe had to juggle multiple roles and responsibilities as a mother, nurturer, wife, daughter, employee, and community builder. She needed to keep up

with her research, leadership, management, service, and administrative responsibilities. On the other hand, she needed to fulfil her family and social life responsibilities, e.g. child-bearing and rearing, self-care, time with friends, community work, and related social connections. The plight of Refilwe dealing with competing priorities was no joke; it was real. Work-life balance was not easy. There were times when Refilwe became overwhelmed and wished to call it quits, but she did not. She felt that it would be depressing for her to abandon or substitute her career goals with raising her children as she needed both in her life. She saw these multiple roles as unique and important roles that defined who she was. Once she had made the choice to pursue her career, she had to find ways to succeed amidst multiple responsibilities.

The work-life balance issues had the potential to stall Refilwe's research progress. They could have easily discouraged her from pursuing research career opportunities and advances as well as research leadership positions. However, Refilwe was determined to pursue her career against all odds.

The challenges that Refilwe encountered in her career choice

Refilwe was faced with the challenge of having to navigate multiple roles and competing priorities. She had to constantly deal with multiple work-life issues including complex work schedules, deadlines, time-constraints, long working hours, and huge workloads. Many times, Refilwe felt her plight was under-appreciated and to a large extent ignored. The support of women was often spoken about in the workplace, but concrete support was not truly evident. There were no dedicated initiatives to support working mothers; these were matters barely engaged on when developing performance plans and evaluations. Further, there were no childcare facilities that Refilwe could take her children to in her workplace/s nor any nursery rooms or daycare facilities. Refilwe did not have sufficient support locally, as her extended family lived far away. Initially, she also experienced challenges

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in securing a helper as she had fears of leaving her baby with a nanny in a new city where she hardly knew anyone. She opted to take her daughter to a nursery school. Refilwe had to squeeze some of her motherhood responsibilities within her daily work schedule as she could only access certain childcare services during working hours. For example, she had to undertake pre-natal and postnatal care visits while simultaneously ensuring that her work was not lagging behind. It was very hard for Refilwe to keep everything afloat and ensure that none of her work-life responsibilities were compromised. She had quantitative stress due to multiple roles that had the potential to drain and weigh her down. Behind the scenes, Refilwe did her best to ensure that her family life issues did not interfere with her work-life. However, Refilwe became consumed and overwhelmed; there were times when she felt like she would not make it given her endless commitments. She contemplated resignation even though she needed to work for the sustenance of her family. Unfortunately, many working moms often find themselves in such a difficult position: *“I believe every working mom probably feels the same thing. You go through big chunks of time where you’re just thinking this is impossible—oh this is impossible. But then you just keep going and keep going, and you sort of do the impossible”* - Tina Fey. In the case of Refilwe, she was fortunate to receive a lot of empathy and support from her mentor, about her responsibilities as a young wife and a young working mother. Her support, together with the strategies that Refilwe devised, helped her to continue assuming the challenging work-life demands as described in the next section. It was not easy, however Refilwe does not regret that she continued to rigorously pursue her career while simultaneously raising her children. Had she dilly-dallied, she probably would be living with many regrets today. Nonetheless, Refilwe wishes that workplaces could be more welcoming to working mothers:

“I wish for a day when workplaces are truly more welcoming to women, especially working mothers. Such workplaces should have baby rooms for emergency situations, and nursery schools with transportation to support working mothers whose

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unique circumstances are often overlooked. Young women should not have to do unthinkable things to survive and thrive in academia.”

The strategies Refilwe used to tackle challenges to sustain her career choice

Refilwe had to devise her own strategies to overcome the challenge of simultaneously playing multiple roles as a young mother and young wife in a new management role for the first time. She needed to ensure that her work-life balance challenge did not affect her productivity, negatively impact on her mental health, or stall her career progression. Refilwe maintained high quality work amidst competing priorities. She had to:

- step up her game and allow change to begin with her by breaking barriers that sought to capture and confine her consciously or subconsciously to some preconceived or prescribed levels. She eventually saw her fears become breakthroughs and her stumbling blocks become stepping stones.
- ensure self-care by being physically active, eating healthily, getting enough sleep, taking some time off, and making time to connect socially with friends, and family to keep energised and motivated.
- strictly manage her time by adhering to schedules while allowing some flexibility as far as possible, make up for the time she spent at work, and avoid idleness. She had to cut back on unnecessary travels, social activities, and any other additional responsibilities that were not a priority for her and her family. She also ensured that she did not overcommit. She focused on priorities, urgent matters, and critical outstanding tasks.
- effectively manage her workload through prioritisation, division of tasks, saying no to tasks she would not be in a position to perform, apportioning time for tasks in advance, and managing scheduling conflicts.

4. Managing Competing Work-Life Priorities

- employ self-management strategies; she ensured that she did not falter in her work responsibilities. She tried to finish her tasks promptly without procrastinating. This meant that at times she had to start her day early and finish it late, depending on the work at hand. At times she had to wake up when the children slept, irrespective of what time it was, as this would be the moment she had to finish up some of her work-related responsibilities to meet set deadlines. Most of the time she did substantive work early in the morning before the children woke up.
- engage in forward planning; she envisioned problems before they materialised, anticipated needs, and attended to them proactively. For example, she put plans in place to ensure that her children were not negatively impacted whenever she had business travels. She worked out how the children would be looked after in her absence.
- multitask, running activities in parallel as far as she could to meet the pressures of duly submitting expected contributions without delaying the rest of the team as there were no supportive workplace mechanisms. Refilwe always had to avoid inconveniencing others by her often unforeseen motherhood pressures. For example, she had to go to strategic meetings with her breastfeeding baby and helper to ensure continuity of her leadership role in projects. She wrote up some of her research outputs while on maternity leave to avoid delaying their finalisation, which could tamper with editorial deadlines for journals. She had to learn to breastfeed with one hand, while typing with the other hand. She also made contributions to research reports while on maternity leave due to deadlines that overlapped with this period. Failure to do so would result in her losing her co-authorship role.
- develop the ability to work flexibly as she needed to adjust her time to run some of the family errands. Thankfully, she did not have a rigid work schedule. She adjusted her work schedules to support her children during exam times. Through her supportive family and mentors, she pulled through. do her best to keep the affectionate connection

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with her children alive so that they never felt neglected. As soon as her children could comprehend some of her work, she nurtured them to see the bigger picture, to understand the importance of working hard so that she could afford to take good care of them as her nestlings, to be more perceptive of the fact that she also had a career that she was passionate about which brought out the best in her not only to meet their and the household's needs, but also for the fulfilment of her purpose in life. put her children in a good daycare centre close to the home, to make pick-ups and drop-offs easier.

- hire a helper whose profile suited her needs and establish a great relationship to get the best s/he can offer and retain them. This strengthened Refilwe's capacity to handle work-life issues.
- secure au pair services through which she obtained other forms of support that curtailed Refilwe's responsibilities and afforded the opportunity to balance things off.
- make an effort to teach her children about the nature of her work and ask for their help when needed or possible.
- capitalise on her flexible work schedule to manage tasks at hand. For example, Refilwe worked from home, attended some meetings and meetings virtually to enable her to complete work-related tasks. She utilised her primetime effectively, i.e. sleep early with the kids, and wake up early while the kids were still sleeping.

What Refilwe learnt from the experience

Refilwe went through a tough learning curve. She learnt to:

- manage time effectively and not foul any moment. She avoided procrastination; acted promptly and swiftly in whatever she did. She avoided deferring activities – she tried to finish whatever she started, as she could not anticipate what the next moment would bring. This improved her efficiency and productivity. It brought out a lot of discipline in her.

4. Managing Competing Work-Life Priorities

- be strategic by developing mechanisms to envision project-related challenges before they materialised. She also developed tools to address them when they surfaced.
- be decisive by saying no rather than overcommitting herself and failing to deliver on her promises. Once she had decided that she was going to pursue a given initiative, Refilwe would put her focus on it, seeking to finish it and produce an exceptional output that she would be proud of.
- embark in advanced planning to keep competing priorities under control. For example, when she was breastfeeding she would express and freeze milk that would be enough for the few days she would be away on work-related duties, so as not to forfeit her role in planned work which may eventually impact on her career progression. Further, Refilwe engaged in planning with her children as they were growing up to ensure that they valued the time they had with one another.
- use a teamwork approach to ensure finalisation of tasks. Refilwe ensured that team members were fully on board and responsibly delegated tasks to them.
- collaborate to take off some of the workload, manage stress and to exchange different types of support. She clarified expectations, roles, and responsibilities for each task with her supervisors, mentors, line managers to avoid any misunderstanding and eventually produce high quality work.
- make peace with herself about her role as a working mother. She was determined to give her children the best she could give, in the best way she knew how. She never allowed anyone or anything to make her feel guilty about being a working mom.
- maintain a positive attitude throughout because she never wanted to view being a working mom as a curse, as it was a huge blessing in many ways. It propelled her to work much harder so that her girls could see that women are great leaders.

The advice Refilwe gives to young people pursuing their careers

- Use time wisely by adhering to schedules as far as possible to strike a work-family life balance to avoid disruption of career progression. It is not easy, but it can be done.
- Build an effective family support system (including children) to help manage competing priorities as far as possible.
- Use a teamwork approach; distribute tasks to multiply your limited strength with that of others.
- Choose carefully what to get involved in to maintain focus; avoid fleeting things that are not aligned to future goals (self-management).
- Plan activities ahead of time as far as possible to avoid failure in executing them.
- Have workload management strategies to assist in handling conflicting schedules, multiple tasks, and competing priorities.
- Finish tasks promptly without procrastination to meet set deadlines.
- Be open to doing work at odd hours as and when needed.
- Keep the affectionate connection with children alive through gently making them see the bigger picture which includes them.

5. Rising from Teenage Pregnancy to Veterinary Medicine

Prof Catarina Tivane Nhamposse

*Doctor of Veterinary Medicine,
MSc, PhD*

Biography

Catarina Tivane Nhamposse was born and raised in Maputo, South Mozambique. The fourth of seven children, she has four children. Her academic qualifications are: MDV (Doctor of Veterinary Medicine) from the University of Eduardo Mondlane (UEM) (1999), MSc in Anatomy & Physiology from the University of Pretoria (2008), and PhD (Doctor in Science) in Animal Anatomy from São Paulo University (2012). Her professional career began as a junior fisheries inspector, immediately after finishing her MDV diploma. Two years later, she returned to the academy as a lecturer in the Vet faculty of UEM. In 2013 she was appointed Head of the Pre-clinical Department and in 2017 she was elected Dean of Vet Faculty at the same institution. In 2019, she became Deputy Vice-Chancellor at Save University, one of the five public universities created by the split of Pedagogical University in Mozambique.

A courageous career choice that propelled Catarina in her career

The courageous choice that Catarina made was to return to school despite all the challenges that came her way, which later paid huge dividends.

Catarina's first challenge was falling pregnant at a tender age of 15 years: *“My first challenge was a pregnancy*

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when I was only 15 years old. That was a shock to my parents and relatives. However, my father (RIP) was a great man. Even though he was extremely disappointed and sad, he taught me and encouraged me to be strong and face that challenge. I gave birth to my first-born child at 16. Nevertheless, I went back to school, and did not have a maid or babysitter to help. Later on, my parents hired a babysitter, but just to take care of the child for half of the day, while I was at school.”

Catarina’s second challenge was the rejection by the father of the child: *“The father of my daughter rejected his paternity and he, his family, and several friends (mostly boys) rejected me.”*

Catarina’s third challenge was the lack of parenting skills: *“I spent many nights crying, trying to figure out what to do when the baby was crying. I had regrets and felt foolish for getting pregnant and having to take care of my child while my friends were out at parties and discos.”*

Catarina’s fourth challenge was being denied the opportunity to work: *“Then, another challenge came; having to find a job, with a six-month-old baby in my hands! In my first job interview, the judgement chair was clear: ‘She cannot be admitted’. He then turned to me and said: ‘You are still a recent mother. Go and take care of your baby’. I had to wait for more than six months before trying to find another job.”*

Finally, Catarina got a job as a junior inspector at the Ministry of Fisheries. This presented the fifth challenge for Catarina. She needed to breastfeed her baby during lunch breaks. Since she lived far from her workplace, the head office suggested that she should rather skip the lunch break and leave the office two hours before knock-off time so that she could breastfeed her baby.

The challenges that Catarina encountered in her career choice

Catarina had her fair share of career struggles as elucidated in the preceding section. She had multiple responsibilities that

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weighed her down, but she forged ahead as she realised that if she waited for all things to be equal, she may never achieve the career of her dreams.

“If one tries to understand how I managed my academic and professional career with my responsibilities as a daughter, wife, and mother, one can never understand. Even I do not understand at times! But I believe that God guides me in every step of my life.”

Within two years of working in the Ministry of Fisheries, Catarina was invited to return to the university, as a lecturer. However, that meant that she had to enrol for postgraduate programmes: master’s and PhD. During that time, she was a wife and a mother of two daughters.

“The decision to take the position came after a short conversation with my late father, a man with a broad vision. I will forever consider him my mentor. He felt that I had already adapted to the position of assistant inspector, and was thus losing the chance to explore the intellectual skills that he knew I had.”

This became a breakthrough in Catarina’s academic career, as well as her personal life. She had to leave her two daughters (the youngest one was only three years old) with her parents to go to a training programme in vet anatomy at the University of Zimbabwe for five months. At that time, Zimbabwe was facing serious phone network problems, and she could only communicate with her daughters once a week, on Sundays.

“The language challenge was still there, and this time more severe, as my supervisor was British. I was told from the first day we met that I would have to spend more time learning English to have a good quality dissertation, since his name was involved! I cried a lot when my colleagues spent only eighteen months finishing a degree, while I had to spend three years obtaining my Master of Science degree due to my poor

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English. I got angry and found myself thinking, 'language cannot stop science!' However, my supervisor was irreducible. In Portuguese, there is a quote which says: 'na vida tudo eh uma experiencia! O que não eh aprendido, eh licao' which means 'in life, everything is an experience: learning or lesson'. This quote fits well in what comes next in my journey."

The strategies Catarina used to tackle challenges to sustain her career choice

Catarina was faced with many challenges. She had to:

- multitask: *"I was studying with my daughter on my back, and never failed. After two years I was at university. Was it easy? Not at all."*
- leave her country and go to an unfamiliar place with an unfamiliar official language: *"Upon completion of my MSc degree in 2008, I decided to continue with my studies (2010) in a country where the official language was Portuguese. I had to deal with a new life, new habits, new language (Portuguese). I also came across xenophobic attitudes."* These difficulties stalled Catarina's progress in her studies. It took Catarina's four years to finish her MSc.
- separate with her children to pursue her studies in Zimbabwe: *"This was very hard on me and I cried many litres of tears as I was missing them. In addition, I was facing language challenges. Fortunately, I had lots of support from my family and Zimbabwean colleagues who were always pushing me to keep trying to speak English, and they would also support me in translating my Portuguese ideas into English when I needed their assistance."*
- part with her children to pursue postgraduate study in South Africa. She had to travel by road from South Africa to Mozambique and back one or two times per month to see her kids. She used public holidays to have her children visit her in South Africa: *"From Zimbabwe (2003) to South Africa (Pretoria, 2005), to a master's programme! Again, I had to leave my daughters with my parents. So, one can see*

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that my parents were always supportive, motivating, and gave me strength and unconditional love, so that I could build my academic career.”

- relocate with her young family to Brazil. They had to sell everything (furniture, clothes, etc.). There she became a translator to earn extra cash. She went to São Paulo University for her PhD degree due to the experience she had had with her MSc supervisor.
- pursue her doctoral studies while pregnant: *“I had to carry the pregnancy of my third child, and gave birth while pursuing my PhD studies. That was a really challenging experience for me! My husband went back to Mozambique, and I had the assistance and support of my other daughters, as well as my special colleagues in the laboratory who had to take care of my baby while I was running experiments in the lab. Several times, I had to prepare the lab chemical samples while having my baby on my back!”*
- work long hours: *“The PhD was completed in two years and seven months; during this time, I felt lucky on days where I could sleep more than four hours.”*

What Catarina learnt from the experience

Catarina learnt important lessons out of her experience. She learnt to:

- remain focused on her studies against all odds; she never failed and was able to finish her undergraduate degree in record time.
- value the support from family and friends. This became a great enabler.
- acknowledge that there are always good things that come from bad experiences.
- finish whatever she started against all odds.
- rise above challenges to achieve her goals.

The advice Catarina gives to young people pursuing their careers

- It is possible for every woman to achieve her dreams: *“A woman can get all that she wants. Women are stronger than circumstances. Time, rain, hot sun, divorce, marriage, discrimination... whatever comes, a woman can overcome!”*
- It is important to maintain focus so that you are not carried away by every wind that blows: *“I chose to become a lecturer, researcher, wife, mother, daughter, sister, friend, and much more, but never lost my focus through it all. I always had in mind that I had something to do and I could do it perfectly. I am sharing my experience of life to inspire the new generation of women to always have a dream. Believe in it, focus on it, and be persistent.”*
- Failure is part of success: *“To fall down is part of the process. Just stand up, dust yourself off, and keep walking, so you can succeed, and you will always be a winner.”*

6. Charting a Mechanical Engineering Career which Challenged the Stereotypical View of Women

Prof Esther Titilayo Akinlabi

B.Eng. (Hons), M.Eng., D.Tech Eng

Biography

Esther Titilayo Akinlabi was born and raised in Kabba to educated parents. Kabba is a town in the central region of Nigeria. She was raised in a polygamous home with thirteen children and there was never enough to eat. It was tough for her going through school as she had to sometimes leave school to go to the farm to make ends meet or engage in selling things. In the midst of these impoverished conditions, she was focused on her education and was always top in her class. Esther is married and has two children, one of whom has graduated with an engineering degree, following in the footsteps of his mother who is an engineer. From a modest background, Esther is a full professor of mechanical engineering, and currently serves as the Deputy Faculty Pro-Vice-Chancellor for Research and Knowledge Exchange, Faculty of Engineering and Environment, Northumbria University, Newcastle, United Kingdom. In her most recent role, she served as Director of the Pan African University for Life and Earth Sciences Institute (PAULESI), Ibadan, Nigeria. *“In this role, I recruited women in science to serve on PAULESI’s postgraduate student selection committee, provide lectures to MSc students, as well as research supervision. Prof Refilwe Phaswana-Mafuya was one of them. She lectured epidemiology and provided supervision to MSc Biology and MSc Reproductive Health students. I also increased the number of female students attending PAULESI from 29% to 42%.”* Prior to

joining PAULESI, Esther had a decade of meritorious service at the Department of Mechanical Engineering Science, UJ, South Africa. During her period of service at UJ, she served as Head of Department for Mechanical Engineering Science and also as the Vice Dean for Teaching and Learning of the Faculty of Engineering and Built Environment (FEBE).

Esther was successfully nominated as an AAS Fellow by Prof Refilwe Phaswana-Mafuya in 2021; she is also a Fellow of the Nigerian Academy of Science. Further, Esther is an OWSD member. She previously served as the chair of the selection committee of the South African Young Academy of Science (SAYAS) for three years. She also chaired the Women in Science Without Borders conference.

A courageous career choice that propelled Esther in her career

Esther graduated with her first degree in 1997 and has over 25 years of experience in this field, which remains extremely male-dominated. The most courageous career choice that Esther made a very long time ago during her undergraduate studies was choosing to refuse to accept the pity of men when she chose to pursue her studies in the engineering field. Esther had a vision, and she strove to achieve it. She believed that it was her right to take up her place according to her potential and that she would not allow gender to be a determinant of her career choice. However, Esther found herself having to deal with deep patriarchal tendencies, negativism, and scepticism in the workplace: *“Men are very quick to pity women in engineering in all aspects of the profession and always view women as weaker vessels that would be unable to cope with the rigours of the profession. Hence, I developed a personal principle to always ensure that I work very hard and diligently in whatever I find myself doing.”*

The challenges that Esther encountered in her career choice

Following an engineering profession was courageous as very few women pursue it. Esther had to rise above the pity of men: *“The courageous choice of not allowing the pity of men to weigh me down in whatever I found myself doing was the propelling force that kept me going throughout my study periods. I graduated as the best student in my undergraduate class. Post graduation, I continued to ensure that I work very hard and focus on my goals and aspirations.”*

Esther’s journey demonstrates that it is possible for women to pursue career opportunities in any field of their choosing. Esther is a role model who refused to be stigmatised and discriminated against based on her gender.

Esther supports other women in ensuring that their gender is not an obstacle to career advancement. Her career journey serves as an inspiration for other women to follow.

Her successful career journey has challenged walls of silent pressures made on women to conform to social and cultural expectations, to be submissive and subservient to their calling.

Esther’s experiences reveal the need for effective gender-sensitive policies, systems, processes, structures, and resources that can disrupt implicit biases, prejudices, and patriarchal tendencies in careers for gender-equitable career access and success.

The strategies Esther used to tackle challenges to sustain her career choice

Esther experienced a lot of challenges in her career. She had to:

- give her best academically and careerwise post graduation to redefine herself and the role of women in society, challenging the stereotypical view of women as being incapable of pursuing an engineering career. She dealt

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with stereotyping associated with women in the field of engineering, both in the industry and in academia.

- focus on her goals: *“I am result- and goal-driven and will always ensure that I go beyond the call of duty in every opportunity that I am privileged to be given.”*
- defy any attempts to mute her voice. She made her voice heard, backed up by results and outputs that were too obvious to ignore. Further, she engaged in gender-related debates that promoted the integration of women into higher education, academia, and science.
- work hard to ensure that she succeeded in her endeavours so that she showcases that women can do it.
- ignore pessimist people that could side-track her from her dreams. She was looked down upon whenever she was new in a place: *“I recall during my undergraduate days, I was referred to as a village girl and looked down upon. The narratives however changed when my peers realised my exceptional performance academically. The same experience continued to repeat throughout my master’s and doctorate studies. I also had a similar experience on assumption as a lecturer at the UJ. I always tell myself that it is a matter of time; I just ignore it and remain focused on my goals.”*
- engage in advocacy work. For example, she gave talks on gender insensitivities and injustices, promoting and advocating for the recognition of the dignity and rights of women in the workplace in various platforms to influence the broader context. One of the initiatives that she facilitated involved bringing together women in science to speak at a maiden Women in Science webinar series hosted by Her Excellency Prof Sarah Anyang Agbor, the African Union (AU) Commissioner for Human Resources, Science and Technology, in women’s month (August 2020): *“I coordinated the event on behalf of the commissioner and facilitated the invitation of Prof Refilwe Phaswana-Mafuya to the webinar as one of the presenters representing the Southern Africa region.”*

What Esther learnt from the experience

Although patriarchal tendencies hurt Esther deeply, they exposed her to qualities she never knew she had. Esther learnt to:

- be a catalyst for change, facilitating opportunities for women to become co-creators of scientific knowledge needed for innovative long-term solutions to key societal challenges.
- ignore people who look down on her capabilities because she always knew that it is only for a while.
- maintain positive thinking which helped her withstand negativism.
- be courageous, determined, confident and disciplined.
- build her self-esteem and to try to help other women in similar situations.

The advice Esther gives to young people pursuing their careers

- Stay focused on your goals to achieve your career aspirations and dreams.
- Remain positive regarding your chosen career despite stereotypical views about your abilities as a woman.
- Ignore pessimists who look down on women's capabilities; surround yourself with people that inject optimism in your career journey.
- Be diligent and hardworking to reap great results in your endeavours; this has ripple effects.
- Ensure that you get mentors, especially those who have walked similar roads for guidance: *“A lot goes into reaching for your dreams; it is always a journey.”*

7. Ascending from Humble Beginnings to Mathematics Education Followed by Academic Leadership

Prof Nosisi N Feza

*Diploma in Education,
Postgraduate Diploma in Education,
Bachelor of Education,
Master's in Education, PhD*

Biography

Nosisi Feza was born in a small town in the Eastern Cape of South Africa named Queenstown. She has two daughters and a son. She was a middle girl out of eight born in an uneducated home with no hope for educational prospects. Neither of her parents were educated; her mother only had Grade 4 education, and her father never entered school. She is the first and only graduate amongst her siblings, however her uneducated father was her role model. What made her stand out was that she always believed that anything is possible when you set your mind on it. From her childhood, she had a love for science and mathematics, and she put her mind to this and it became the defining feature of her career.

From humble beginnings with the possibilities for her to study being bleak – although her father believed differently –, Nosisi arose from a Diploma in Education, Postgraduate Diploma in Education, six-month Certificate in Mathematics Education (Leeds University), Bachelor of Education degree in Science, Mathematics and Technology, Master's in Education, to a PhD from the State University of New York, USA, Buffalo) following the receipt of a Fulbright scholarship. She was

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recognised as an emerging scholar and awarded the inaugural Leroy and Margaret H Callahan Scholarship from the same university. Later, she was recognised as a Diversity Scholar by Michigan University, based on her thesis.

Nosisi arose from being a teacher's aid for eight years in a remote farm school, to a permanent teacher with a passion for mathematics education, taking various leadership positions in academia until she became the first Deputy Vice-Chancellor for Research and Postgraduate Studies at the University of Venda (UNIVEN) in Thohoyandou, an executive leadership position which affords her opportunities for strategic leadership and decision-making. Nosisi is one of the few women in this role both in South Africa and in the African continent. Before then, she was Rector of the Buffalo City Campus at Walter Sisulu University (WSU). She has also served as the Dean of Humanities at the Central University of Technology (CUT) in the Free State prior to joining Walter Sisulu University.

The story of Nosisi is of a woman who found her niche in mathematics education and exploited it. It is also about a woman who later moved from one academic leadership position to another, working in universities and research institutions characterised by under-representation of women and gender dynamics across different levels. As Nosisi was pursuing academic leadership positions, she also pursued her interests in mathematics education.

A courageous career choice that propelled Nosisi in her career

The most courageous aspect of my career was to embrace leadership positions in non-diverse environments: *“Academia rendered me opportunities to lead naturally. While I was a senior research specialist it was natural for me to nurture others and take the lead in projects. My independence allowed me to push even if things were tough and it became clear that my research contribution was unique and noticed. This is what led to headhunting for directing the Institute of Science and Technology*

7. Ascending from Humble Beginnings

Education at the University of South Africa. The Institute was male-dominated, with prolific researchers who were strong-minded. There I was, a woman in their faces, however I enjoyed every challenge.” This position taught me the importance of knowing your role, how it is regulated, and how you position your team.

As a leader, Nosisi realised that her challenges were irrelevant and outdated legacies and historical practices that make women vulnerable. These legacies were owned by people who believed in them and could not let them go. Nosisi also observed that women leaders are barely supported; they are expected to know it all or are mentored without consent: *“Sometimes assumptions are made that as a woman you do not know how to lead without even being assessed.”* She further observed that women in leadership are often labelled: *“Being a woman is labelled emotional work in a two-pronged way. Your silence is seen as you being defeated, while your defence is seen as being emotional”.*

Nosisi’s experience made her realise that being a career woman is a sacrifice on its own in South African systems: *“There is minimal support available, specifically in my country. One of the sad realisations I had to accept is that connections – not education – provide opportunities outside academia. I also learnt that being an academic generally is a lonely life; you either make it by being friends with your research or desert it for relationships.”*

Nosisi explained that she did not choose her career, but she believes her career chose her through challenges and passion for research. She proudly said: *“This is the best career route I could have taken as it allows me to grow continuously and explore more. Any other career would have been boring. The research career allows me to learn, question, analyse, challenge, and never be satisfied with not bringing solutions.”* Furthermore, she says she continues to investigate the relevance of the solutions for their refinement or re-configuration.

The strategies Nosisi used to tackle challenges to sustain her career choice

In tackling challenges to sustain her courageous career choice, Nosisi had to:

- employ a trading approach through negotiations to deal with historical practices: *“I knew I would not get a 100% win, but each small win is a win.”*
- use her position of influence to celebrate other women’s performances, contributions, and achievements, showcasing them as they take the courage to successfully navigate through their specific career paths against all odds.
- empower other women with her insights, including young women.
- rise above gender stereotypes, biases, prejudices, and attitudes.
- perform her duties diligently: *“Performance is how women sustain themselves in leadership. I focus on performance and always have a parallel approach. I solve problems while I support performance and create a financially healthy environment. I build human capacity and develop staff esteem, which translates to performance. I am human and understand that behind each staff member there is a family that depends on him or her.”*
- think strategically, see far ahead and plan accordingly: *“Leadership is not boring, it stimulates strategic thinking.”*
- strive for excellence in whatever she does all the time and continuously. She demonstrated leadership in the early years of her career.

What Nosisi learnt from the experience

According to Nosisi, leadership is about creating a winning team and being able to direct and listen. She expressed that there were hard days when tables were banged, but at the end positive results were achieved. She learnt to:

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- appreciate herself: *“I learnt the power of being a woman, the power of reinventing yourself, the power of multitasking, and the power of pulling teams together by nurturing, supporting, and influencing.”*
- be humble: *“Leadership is a visionary mission where only creativity and problem-solving skills accompanied by humility works. The leader’s eyes look ahead and cannot be distracted by obstacles but see these obstacles as builders of the vision.”*
- be proactive: *“I have never received instruction but was always proactive, even if my ideas were not supported.”*
- focus more on strengths and progress, and overlook flaws: *“In my leadership I take what is good and use it to create; leave what is wrong, as nothing can come out of it.”*
- distance herself from personal attacks that sought to degrade her as a woman: *“I learnt that when you are attacked as a leader, you need to distance yourself as a person and know that it is the leader that is attacked, not you.”*
- be the bigger person through recognising everyone’s strengths, focusing mostly on them: *“I learnt to be a leader who does not look for faults but for successes, and enhances them.”*
- trust during challenging times and release control, which resulted in more productivity. Trust the people you work with and watch the reward.
- value her initiatives even if others treated them as if they were business as usual, irrespective of their uniqueness.
- listen attentively to the views of others as they enrich hers: *“I learnt to listen attentively and know that I am human. I also make mistakes. I learnt to apologise when I am wrong, when I realise I crossed a line.”*
- seek assistance from others as and when necessary: *“One of my best strengths is that I seek assistance easily from peers. I found other directors and worked with them, learning from them and sharing my own expertise. In addition, I requested Prof Refilwe Phaswana-Mafuya, who was a Deputy Vice-Chancellor of Research and Innovation, to mentor me.”*

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- treat people equally and with respect: *“As a leader, I have learnt that you cannot be part of gossip, you cannot have favourites, and you must have high expectations of others as that shows you respect them.”*
- be there for others: *“I learnt that everyone looks up to me. I must never be absent when they need me.”*
- deal with her emotions separately and keep her calm at work.

The advice Nosisi gives to young people pursuing their careers

- Find something you are passionate about: *“To young people out there who have better opportunities than I had, please find something you are passionate about and give it your all.”*
- Aim high: *“In life, some leaders are born, some are created; aim high and leave a legacy. All human beings are capable of creating an enabling environment. There are no guarantees given to us, but pulling yourself through your dreams with determination and courage will benefit you. By that I mean you will attain self-fulfilment, create a legacy, make contributions, and see yourself making history.”*
- Seek to make an impact: *“One of the best achievements I cherish is being able to influence other people’s lives positively. Knowing that I also participated in other people’s educational dreams as well as enhanced their economic status makes me feel alive. My life is about making positive change everywhere I go and to everyone I meet through my experiences, expertise, and personality.”*
- Provide support to others: *“Never give negative labels to others. Identify their challenges, and provide support. Leadership is about developing others’ self-esteem and worth. It is about providing support when it is needed. It is about developing one’s commitment to their own contributions. It is about developing a team that wants to serve with excellence. When I was leaving Central University of Technology, a colleague of mine said the following words: ‘You, Nosisi, have*

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a heart of flesh.’ That I carry with me all the time. He doesn’t know how powerful that was to me. I continue with my human heart in leadership. I lead with a human heart, and I capture others to buy in and own my goals as everyone who works with me knows ‘They can’. Together, we move mountains.”

- Give people your authentic self: “Be a woman, a mother, and a nurturer.”
- Never allow yourself to be silenced: “In leadership, it is often that as a woman your views will be ignored. That should never silence you, because you are heard – but your views will only be used when repeated by a male peer. That should not discourage you because your contribution is your contribution, regardless of it being used when someone else mimics it.”

8. Adjusting to Unprecedented Changes to Become an Associate Professor of Physiology

Prof Lebo Gafane-Matemane

BSc Hons, MSc, PhD

Biography

Lebo Gafane-Matemane was born and brought up in Limpopo, Ga-Molepo Sehlale and raised in Sengatane village. She is the mother of three boys and one girl. She holds positions as a board member for the Southern African Hypertension Society, director of the executive committee of the Childhood Hypertension Consortium of South Africa, member of the South African National Committee for the International Union of Physiological Sciences, and member of the International Society of Hypertension Mentorship and Training Committee. She became an associate professor of physiology at the North-West University in 2021. *“Prof Refilwe Phaswana-Mafuya made an extensive motivation towards my promotion into this position and for this I will remain eternally grateful.”* She is usually asked how she achieved all this and still manages to raise a young family with four children.

A courageous career choice that propelled Lebo in her career

Lebo first registered for an MSc degree in 2012 at a local university. However, she was not satisfied with her study progress. During this period, Lebo was offered a permanent teaching position in the same university which she desperately needed to take care of her needs and those of her family. Lebo

had to decide whether she should pursue a full-time master's degree to complete in record time or take a permanent teaching position: *"I was at a crossroad. Should I accept the offer and continue my master's for as long as it took, or should I decline the offer and study full-time to complete my master's degree by the end of 2013? The answer lay with where I wanted to see myself in the next 5–10 years, which was having a PhD, and I knew that with consistent hard work I would be able to achieve that goal. I therefore made a difficult choice to study full-time at another university far away from home that had a postgraduate programme that would enable me to complete my master's degree in record time and be able to move on to a PhD. I worked hard and completed the master's degree within a year as envisioned. At the end of that year, when everything was set for me to go, I was offered a permanent position as a junior lecturer in the department – a very good offer at the time. It provided me with the financial stability I needed for myself and my family."*

The challenges that Lebo encountered in her career choice

Lebo passed through many hurdles in her career journey: emotional difficulties, mental health and self-esteem issues, financial problems, language barriers, cultural differences, and workplace prejudices. Lebo chose courage over fear when she was at a crossroad: *"I experienced guilt and fear of uncertainty for leaving the salary that my family was dependent on. I also felt scared to disappoint any people at work and in my personal life. I was also fearful of starting afresh in a university far away from home where I had never been before without a guarantee that things would work out for the best. But I chose courage over fear. I declined the offer given by my local institution in 2012. In January 2013, I packed my bags to a far-away university to start a master's degree afresh, a full-time one. A year later it was in the bag – with a distinction (83%). I was then offered a junior lectureship position at that university. Afterwards, with sufficient academic support from my supervisors to excel and financial support from the NRF, I went on to graduate with a PhD in Physiology in 2017. I later became an associate professor of physiology."*

8. Adjusting to Unprecedented Changes

After leaving her alma mater, Lebo experienced language challenges: *“When I got to the new environment, I struggled to fit in as the only full-time postgraduate student of colour present at the unit, with limited understanding of Afrikaans, which was the main medium of communication. This was completely different from the experience at my previous university, where I completed my undergraduate and honours degrees in English. I recall having to do a Spoken English course to improve my ‘African accent’ as a lecturer in physiology.”*

The strategies Lebo used to tackle challenges to sustain her career choice

Lebo made it through her postgraduate studies and her early career years through tackling challenges that came her way. Lebo had to:

- make courageous and sometimes risky decisions to move from one level to the next, aligned with her career goals. Leaving a permanent job to study a master’s degree full-time was just the beginning of many bold steps that Lebo needed to take to be successful in her career at a younger age. *“I was satisfied to have made a decision that aligned with my career goals.”*
- maintain determination, commitment, resilience, and focus. Lebo always knew that nothing came easily in the path she had chosen and had to push boundaries to get ahead and thrive in new and challenging environments.
- tap on opportunities for growth. She had to do additional modules to keep up: *“As part of the prerequisites for the MSc in Cardiovascular Physiology, I had to do three honours modules together with my master’s as I did not have sufficient background in cardiovascular physiology and research methodology, which in the end helped me greatly in understanding my research. At some point during the adjustment, I started doubting my prior education and capabilities – something that bothered me through the early years as a researcher and black physiology lecturer. I then planned to leave the institution as soon as I finished my PhD*

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for a place where I would be more comfortable and fit in because I believed that I could excel in such an environment. But that was not my path and I had to be reminded of why I left my comfort zone at the local university in the first place to come study at a far-away university. This time, instead of leaving for greener pastures, I decided to stay and carve my own path with the resources available, no matter what obstacles lay before me.”

- adjust to the new environment when she experienced work-life challenges. From 2015, the second year of her PhD, she was employed full-time as a lecturer and had two children. Being far away from her family, which was in Limpopo, meant she did not have enough support to care for the children when work demanded more: *“As a young mother, I had to adjust. At one point (in 2016), we were staying at Randfontein, where I had to spend three hours on the road daily, driving to and from work. I would drop off the children at a daycare centre at 6am and pick them up again at 6pm. With time, we got to settle and be stable in my area of work and I got more family support when needed. With this, I was able to get some form of balance needed to do well in my career and personal life.”*
- lead a principled life. She had life principles that kept her going throughout her challenges: *“The most important principles I kept with me throughout my career challenges were knowing myself, letting my God-given purpose in life guide me in the work that I did, being consistent with working hard, maintaining focus, and persevering.”*

What Lebo learnt from the experience

Lebo learnt to:

- continuously work towards something better.
- never run away from a difficult situation or a task that seems almost impossible.
- accept failure as part of learning. She accepted that they were part of the journey just like winning and losing:

8. Adjusting to Unprecedented Changes

“Challenges make us grow in strength, knowledge, and the ability to push boundaries.” She never felt defeated by all the challenges that were mounting up against her. Lebo mentioned that as a young academic, she used to think that losing or failing was not acceptable, and this was partially driven by her love for and connection to the work she did. It took her a while and lots of encouragement from great women who came before her to understand that failure is part of life and rejection is a stepping stone to the next level: *“Prof Refilwe Phaswana-Mafuya has been one of my role models in this regard.”*

The advice Lebo gives to young people pursuing their careers

- Have a plan: *“If you want to get anywhere in life, you need to have a plan and make courageous decisions to put that plan into action and sustain it. Young people should decide as early as possible where they want to go in life and set achievable goals to be reached for the bigger dream to be realised.”*
- Have a vision: *“One needs a vision and a commitment to that vision to be successful in life. When you meet uncertainty and challenges along the way, your vision keeps you focused and helps you to find strength and solutions to keep moving forward. There are many obstacles and discouragements along the way when one embarks on a meaningful career path. Your vision is like the fire burning inside you: if it is aligned with your passion and what you believe is your purpose in life, it will get you to the mountaintop.”*
- Use challenges as a stepping stone: *“When everything seems to be working against you, you can choose to leave for a safer place or greener pastures. You also have a choice to develop something better for yourself, starting where you are now, on your own terms and according to your own definition of what is better and greener. For me, I had to make both decisions at different stages in my career, and they worked because of what I was going through at each stage. Whether planned for or not, change always comes and with it the task of making*

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choices about moving forward. Sometimes it feels great, like success, and it can also come in the form of failure. Either way, we must face it and use it to advance the achievement of our career goals and dreams.”

9. Opening a Solo Medical Practice without Financial Backup

Dr Refiloe Nkadimeng-Simelane

MBChB

Biography

Refiloe Nkadimeng-Simelane was born in Mankweng Township, Limpopo together with her twin sister, Kagiso, both of whom are Prof Refilwe Phaswana-Mafuya's best friends since high school days. Refiloe has four other siblings. She is married and has two kids. Her parents were both professionals: her father, Don Nkadimeng, was an attorney, and her mom, Damaris Nkadimeng, was a high school biology teacher. Refiloe attended high school at Makgoka, where she met her lifetime friend, Refilwe Phaswana-Mafuya. Following her matric, she was accepted to study medicine at the University of Durban Westville which later became the University of Kwa-Zulu Natal. She completed her Bachelor of Medicine and Bachelor of Surgery (MBChB) degree in record time in 1996, being inspired by her local general practitioner, who was her mentor. She then worked in one of the Limpopo hospitals, but later decided to relocate to Gauteng. Upon arrival in Gauteng, she worked in Soweto clinics and several Gauteng hospitals. An opportunity came for a private medical practice, and she started her own practice in central Johannesburg, which has been operating for more than two decades: *"My practice is very interesting as holistic medicine is offered, from preventative medicine to hospital referrals. This gives me an opportunity to work with real disadvantaged people and gives me pleasure to contribute to community service."* Refiloe's story has a touch of the gambler, an attribute that many highly successful and competitive people possess. She pursued multiple avenues that did not only

benefit her and her family but others through quality health care, employment opportunities, and food security.

A courageous career choice that propelled Refiloe in her career

The courageous career choice that Refiloe made more than two decades ago was to open a solo medical practice without financial backup, leaving her hospital job to go solo without any salary and guarantees:

“I started my private practice out of nothing. My patient profile includes working-class Africans, mostly working in town, staying in Soweto and in flats around town as well as elderly people from Soweto. Although having my surgery downtown was initially a coincidence (as I preferred to work in a township setup), when the opportunity to work in town came first, I chose to do my best with it. This in turn exposed me to greater opportunities of working with patients from all walks of life, especially those from disadvantaged backgrounds who have real practical issues and not upmarket society with what I consider ‘fake’ problems at times. I have helped deliver babies on the street to the homeless. Although I work in a risky area, the people around the area know me and protect me as I am their doctor. I have become known as the people’s doctor.”

Refiloe consistently made interesting and bold career choices that many would have deemed uncalculated, yet they produced the best in her, including joining the farming community without any farming experience as well as establishing an accommodation business without any hospitality experience: *“I consider myself a hustler doctor. I believe in a portfolio career, where I don’t only follow one career, but multiple ones. I believe the world is there to explore and enjoy. I am also a farmer; I decided to buy a farm as I was interested in the food security of our country. I do crop and animal farming. This has enabled me to employ six permanent employees and ten seasonal workers. I run a bed and breakfast (B&B) accommodation establishment in Gauteng. This was not an easy move but I found pleasure in exploring the hospitality business. My B&B grew*

9. Opening a Solo Medical Practice

from humble beginnings to become a four-star accommodation establishment, employing six people.” Refiloe is exploring the possibility of incorporating clinical research into her private practice so that she can use her patients’ medical records, after proper approvals and with the consent of her patients, to generate empirical evidence to guide clinical practice. She intends to collaborate with universities for this work. She believes that there is a huge gap in the non-optimization of data from available clinical records to answer health questions that are critical to improving patients’ health outcomes.

The challenges that Refiloe encountered in her career choice

Refiloe’s decision to open a medical practice was courageous. She decided to venture into unfamiliar territory: *“I decided to leave the hospital job with a guaranteed salary, and start a medical practice without taking any business loan to cushion myself.”* Refiloe experienced several challenges in her career as a general practitioner (GP): *“Being a GP is not easy and requires passion as one needs to sacrifice time, almost working 24/7. I was fortunate to have an understanding family and the support to be able to perform this duty. I went through a range of challenges.”*

The challenges Refiloe highlighted included:

- finance – starting a practice with no financial backup.
- time constraints – it is a full-time commitment.
- Bookkeeping – which extends outside the medical profession.
- human resources – recruitment of employees that are suitable for the job. Refiloe subsequently explored other avenues, namely: farming and hospitality: *“Farming and hospitality are not what I studied for, but due to curiosity and hunger to explore, I ventured into these businesses, and it paid off.”* Regarding the farm, Refiloe cited capital finance for growing her farm, as she experienced lack of financial support from the Departments of Agriculture, Labour and Finance.

During the hit of COVID-19, all of Refiloe's businesses took a hard knock. She relied mainly on income from her general practice. This reminded her of the importance of having a profession. It took a lot of effort and resources to have the farming and B&B businesses up and running again.

The strategies Refiloe used to tackle challenges to sustain her career choice

Refiloe had to:

- tap on the skills of the farm manager and dedicated employees to sustain and learn more about the farming business while enjoying the outdoor work that comes with it.
- use the informal market to sell her crops as she did not have any formal market. Her medical clientele helped her in accessing the community and informal market to sell and advertise her farm produce.
- use marketing tools like booking.com (which gave her extensive exposure) as well as word-of-mouth to attract guests.
- use the support from her family to sustain her practice: *"I have a supportive husband who also has a busy schedule. However, on Saturdays he does sports with the kids. When I'm not available, he drops off the kids at school."*
- make a lot of personal sacrifices, including less time with family and friends: *"I still regret this but it's the nature of the business."*
- join peer groups to share experiences with people who are in the same profession: *"This helped a lot. It's a rewarding job to run a successful medical practice."*
- use her colleagues and patients as her support system: *"I also built good relationships with patients over the generations; they became part of my family and support system."*

What Refiloe learnt from the experience

Refiloe learnt to:

- be patient: *“Being a GP needs patience and love for the people.”*
- keep time, start early, and be there all the time: *“Patients don’t want to be seen by different doctors; it’s a very private personal space. It is important to be accessible 24/7 even through phones.”*
- give love and care: *“Being a GP is part of primary health care. We are the gatekeepers of the health system. We end up being mothers, sisters, and social workers to our patients. People just want to feel that you are part of them and, most importantly, that you care about them.”*
- treat people with respect the way you also want to be treated: *“When an elderly mother comes to consult, I treat her like she’s my mother. I say to myself, ‘if it was my mother, what medication would I have given her?’ Then I give them the same treatment. You can’t survive without human relations.”*
- show dedication and commitment: *“I pay my staff decent salaries so they feel like they are part of the practice. We also do ‘after-sales service’, checking how patients are responding after their visits, and sending Christmas messages. I have a strong referral system to qualified specialists. My practice is sustained by word-of-mouth marketing.”*
- keep the balance: *“When I’m not at work, I dedicate my time to family, to be a good wife and do what wives are supposed to do, wearing my mother ‘hat’ and removing my ‘GP’ hat. I make sure my family knows my cooking and try to create good family memories for my kids. I take my kids to school every day; this gives me time to connect with them and engage with them on their school activities I help my kids with their homework every day; this helps me to keep myself informed.”*
- value her profession more in a real-life setting: *“My work created opportunities for direct involvement in saving lives, being accessible to diverse populations and giving them my all, as well as job creation for others. The practice generated*

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income to support my kids and my family. I got a lot of fulfilment from seeing my receptionist acquire a degree. Being self-employed affords me the opportunity to work until I'm too old to work, giving my kids a better life and education. I have also mentored some Wits medical students."

- not undermine any work including farming which is critical for food security. She realised that all types of work are important.
- appreciate hard work: *"Hard work always pays off."*
- acknowledge the hospitality sector as an important industry for our economy, and that having supportive staff members is very important in improving performance and productivity. Further, she learnt how to manage client feedback, time management, and bookkeeping.

The advice Refiloe gives to young people pursuing their careers

- Live your dream: *"I am living my dream of being involved in community work in my own way."*
- Identify a mentor: Young people should receive career guidance early in their lives, as well as receive mentorship to advance in their careers
- Consider specializing in a particular field: *"Specifically young medical students need to further their studies after a primary degree to broaden their scope of practice. If you specialise, you don't have to be a slave. You can work flexible hours and still do other things."*
- Follow your passion: *"I will advise young doctors to stay in the profession as they are a much-needed resource. However, they should also follow other passions to relieve the pressure – take up sports, do community work, balance their life, or one day they'll retire and find that they don't have any other friends other than their patients.", "Doctors should socialise to balance the pressures, and most importantly plan for their retirement as soon as they start working."*

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- Do your research before venturing into any career:
“One has to do their homework, work hard, take courses or training, work with experienced people, have a good business plan, network, have financial backup and have a hunger to succeed. The hospitality market needs good business and good marketing. Explore and research the sector and lastly enjoy the journey.”

10. Turning Vulnerabilities into Stepping Stones towards a Public Health Career

Dr Edith Phalane

BSc, BSc Hons, MSc, PhD

Biography

Edith Phalane was born and raised in Thlabine, Leolo village in Limpopo Province. She is the second-born of three siblings, and a humble mother of two children. Edith and her sisters were raised by a strong and remarkable woman, who instilled in them the importance of education and of pursuing their dreams against all odds. She sadly passed away in 2008, just after Edith finished her matric, leaving Edith and her siblings without parents. However, her legacy lives on through her three children, with Edith being a PhD graduate, her older sister being an attorney, and her younger sister being a medical doctor. Edith holds a BSc degree, BSc honours, MSc, and PhD. She completed one degree after the other from 2010 to 2021, without a break, and gave birth to her two children during that period. Her research career started with being a field worker in research studies led by the HSRC and SAMRC in 2015. She subsequently worked with Prof Refilwe Phaswana-Mafuya: *“From there I met my destiny helper. After requesting her to give me a chance as I could see myself in her, Prof Refilwe appointed me as a research assistant in 2019 in her office, the Office of Deputy Vice-Chancellor, at the North-West University. This was followed by a postdoctoral research fellowship after the completion of my PhD in 2021 under her at the University of Johannesburg. The following year, she appointed me as a research manager/specialist researcher in the SAMRC/UJ PACER EMU, of which I became the co-founder through working with her as the founding director. Further, I co-supervise the MPH and PhD*

students together with her, acquiring supervision skills to become a great supervisor soon.”

Edith’s story is of a young woman who learnt from her young adulthood’s shortsightedness. She exceptionally utilised her mistakes as stepping stones to her career success, rather than allowing them to serve as stumbling blocks. Today, Edith is a young woman with great potential who is being groomed for research leadership.

A courageous career choice that propelled Edith in her career

The courageous choice that Edith made was to pursue her honours degree in 2013 despite her falling pregnant in her BSc final year: *“In my own shattered corner, I knew the most sensible step was to look for a job to care for my child and forget any thought of continuing with postgraduate studies. This was a bitter pill to swallow, even worse when I had to narrate this to my sisters, uncle and granny (as my parents were no more), who had better hopes and dreams for me than to be coming home with a child while they sent me away to pursue my studies. However, even in their disappointment and heartbreak, my family supported me to go back to university and enrol for my honours degree.”*

Just as Edith was catching a break, one year later, she became pregnant with her second baby: *“This time I was a full-time MSc student, with no job, and dependent on my family for financial support. With baby number two on board, I was two years into an MSc programme, without much progress due to matters beyond my control. Falling pregnant twice within a space of two years as a single person did not give my family confidence in me. The street gossip was also not easy to bear – there was talk that I should have known better, that falling pregnant at 23 years while studying – without parents for that matter – was a disgrace. I felt that they were right, that I should have known better and done things differently. I missed my mother so much in this period; I wished she was still alive.”*

The challenges that Edith encountered in her career choice

After two major life-changing events, Edith did not give up. She soldiered on: *“I did my postgraduate degrees (Hons-PhD) as a single mother, on a full-time basis and while being far away from my children. This was not easy at all as I had to miss the precious moments that I cannot go back and relive. I missed most of their childhood development so that in the long term I could give them a better future. However, it was these unfortunate experiences that kept me motivated to achieve my career goals.”*

Further, Edith mentioned what she had to go through as a brand-new mother and student: *“I remember with my first-born, it was so painful when I had to leave him just three days old in the care of Mamokwena (a helper whom I refer to as his grandmother as she was part of the family). Sophy Mokwena, fondly called Mamokwena, was a distant family relative. The day I left my son in her care was the first time meeting her in person and being at her house, which has since become a second home to me and my children. I had to go back to the university to write a test which I missed on the day I gave birth to my son. Within these three days of giving birth, I had to also study for the test. On the fourth day I took an oral test, and I achieved 73%. I remember sitting in front of my lecturer, trying to focus on the questions, with my breast full of milk and so painful, almost ready to burst. I couldn't wait to finish and rush to the bathroom to express the milk. I give full gratitude and thanksgiving to Mamokwena as I call her, for taking care of my children, being a caring and loving mother to my children before I took them to stay with me. Just as I was dealing with the reality of mothering one child whilst studying, one year later I gave birth to my second child, my daughter. I was in my first year of MSc and pregnant with a second child, outside wedlock, with no job, and a full-time student who was dependent on her family for support. I could not bring myself to tell my family and the grandmother who was looking after my son. It was a very difficult time in my life; I went into depression and could not even go home until my elder sister noticed I was pregnant, questioned me, and only then was I able to admit it to the family. I had concluded that, with my second pregnancy, I needed to get a job,*

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care for my kids, and abandon the MSc until further notice – yet again, through my family’s unconditional love and support, I was afforded another opportunity to continue with my MSc on a full-time basis. In my lonely corner, I would ask myself whether I was being a responsible mom to my kids by choosing to study full-time, whether I was being selfish to myself and to them, whether I was being naive about our needs.”

The story of Edith is an embodiment of a quote by Maya Angelou: “You may not control all the events that happen to you, but you can decide not to be reduced by them.”

During this time, Edith’s older sister, being self-employed, was already responsible for four households, her younger sister in medical school, Edith and three kids (two of which were Edith’s). Thus, it became a struggle for her to pay off all of Edith’s tuition fees: “I told myself that if I could not get a PhD scholarship, I would not continue with my studies, but rather look for a job. But in the midst of this great uncertainty, God came through for me. I was awarded an NRF scholarship, and I registered for my PhD. During this period, I met Prof Refilwe, my mentor whom I never let go. She created opportunities for me while doing my PhD, including doing an oral presentation for the first time at the second largest medical meeting ever, the 2019 SA AIDS Conference, which she chaired. I received the Discovery Award and chaired a satellite session there successfully. She further supported my ASSAF nomination for an international Nobel Laureate meeting that brought a lot of exposure in my career. I therefore completed my PhD in 2021, which earned me a space in the top 15% of best performing students in the Faculty of Health Sciences at NWU by the Golden Key International Honours Society.”

During the last two years of her PhD, Edith stayed with her children, and needed time to assist them with their schoolwork and provide for them, among other responsibilities. Given that her PhD study was demanding, she had to find a way to make it work. For instance, during the day she focused on her children and when they were sleeping at night, she focused on her PhD work. Some days

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it worked better and on other days it took its toll on her, but the support of her family and mentor kept her going.

At the height of the COVID-19 pandemic, Edith's responsibilities of managing her studies and taking care of her children was taken to another level: *"During this time I was not just assisting with schoolwork, but I was also a full-time teacher to my Grade R and Grade 1 kids since they had a few months of not going to school and I had to ensure that they were not left behind with their schoolwork. I must say that after this task, I found myself tired and without much strength in me to do much work on my studies. Also, Wi-Fi access to do my PhD work was a struggle since I did not have access to the university. This sometimes delayed my work progress and keeping up with online meetings."*

Clearly, as a university student, Edith had to balance social and academic life. She had to choose between being a social giant and a bookworm. She chose not to dwell on her past mistakes; she focused on her studies more than friendships. She forfeited lots of university entertainment to afford herself more opportunity to successfully complete her studies.

When Edith finished her PhD, she knew she had to follow her mentor. So, she approached her. Long story short, she was appointed as a postdoctoral research fellow (PDRF) under her: *"I got a game-changing opportunity to be a PDRF under my mentor. Almost simultaneously, I was offered another PDRF position at the SAMRC Extramural Unit in Cape Town with a higher stipend. This was a very easy decision to make. I chose to pursue my PDRF opportunity under my mentor so that I can receive holistic support for my personal and professional development."*

A few months later, Edith was at a crossroad. *"Following the submission of a compelling application letter and the referral letter by my mentor prior to becoming a PDRF at UJ under her, I was offered a six-year new generation of academics programme (nGAP) position in one of the largest institutions in Africa, UNISA. At the time the offer was made, I was a two-month-old PDRF on a one-year contract, subject to renewal."*

Edith wrestled with herself and God about the nGAP opportunity, given the financial security the position gave to

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enable her to meet her needs versus receipt of a PDRF stipend. *“I took a courageous career choice not to accept the nGAP offer, even if I was going to be paid triple what I was earning on a PDRF stipend, gaining the financial security and independence I had long desired as a graduate student. I was now living in Johannesburg, and I had to survive on a PDRF stipend. The pressure to take the position was there, considering the fact that I had always been the last-born of the house in terms of financial security and stability, among my siblings. But prayerfully, I chose to focus on my PDRF position as by God’s grace I could see the end from the beginning in working with my destiny helper. Working side by side and very hard with my mentor, Prof Refilwe Phaswana-Mafuya, I was thrown into a deep learning curve. Eventually, all the hard work, sacrifices, and sleepless nights paid off – as the saying goes: ‘hard work pays off’. Within a short space of time, we secured multiyear, multimillion rand projects. I was offered a permanent lectureship position at UJ with structured responsibilities and roles, benefits, and a better package than even the nGap position. It was irresistible and my mentor was supportive of me in taking the position. However, prayerfully, I declined it as it would not afford me the unlimited research opportunities I needed to immerse myself into to become an independent researcher. Instead, I chose to take the position of Research Manager/Specialist Researcher in PACER to continue with the great work we had started. This time my salary was doubled as I had moved from a PDRF position to being a Research Manager and Specialist Scientist. I am now on an accelerated and intensive path of growth under the tutelage of my mentor. I am co-supervising 18 MPH and 9 PhD in Public Health students with her, so that I can become an independent supervisor. I am also co-authoring high-level papers with her so that I will first-author some in the near future. Further, I am managing exciting and innovative research projects so that I am equipped to become a principal investigator in the near future.”*

The strategies Edith used to tackle challenges to sustain her career choice

There are several barriers that Edith had to break to ensure that the choices she made to advance her career adventure were sustained. She had to:

- leave her three-day-old son in the care of Mamokwena, whom she met for the very first time in person when she left her son in her care, to go back to university and write her exams, and one year later she had to leave her three-week-old daughter to go back to university. She had to travel almost every Friday to go home to see the kids over the weekends and Monday morning she had to be back at the university.
- deregister from the MSc in her local university and start another MSc in a different university far away from her home: *“This was not easy at all, after two years of hard work and dedication, but no tangible fruits to show for it. With tears rolling down my cheeks and uncertainty going into a new environment, far away from my home, children, and family, I took four taxis to get to the new university. I had no bursary, no registration money, and no place to stay. All I had was a small red bag with my clothes. I started the journey to redeem my chance of getting an MSc with a conviction that I will do it and finish it against all odds. During this time, I had my faith stretched to the limit. Studying without a scholarship, I had to manage the little I had, sometimes living on one square meal a day, managing the number of meals through compulsory fasting and prayer. Little did I know this was growing my spiritual life and relationship with God, which has become part of my lifestyle. Indeed, by the grace of God, with hard work, determination, and eagerness to make up for lost time, I completed my MSc in one year with distinction and got the Golden Key International Honours Society membership, which was purely based on academic merit.”*
- move to a new university, which was away from home, kids, and family. She therefore saw the kids about thrice a year, unless there was a pressing emergency. She missed

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quite a lot of their childhood development, birthdays, and milestones but she has no regrets as she can now better look after them.

- manage her scholarship to pay for her tuition, accommodation, and groceries, as well as help care for her children. Studying full-time with two kids was not easy, especially financially and timewise. She had to work around the clock at times to keep up.
- initially survive on a PDRF stipend with two children while living in Johannesburg, which is relatively expensive in terms of accommodation, transportation, and lifestyle, but she pulled through. This is a big city around which she had difficulty navigating by herself but through persistence, she succeeded.
- learn to multitask and manage her time effectively. *“Work-life balance is one of the toughest challenges I have had to endure as a working mother, research manager, and specialist scientist. Thankfully, my mentor, line manager, and role model, Prof Refilwe Phaswana-Mafuya, supports me to ensure that my motherhood responsibilities do not stand in the way of my career dreams.”*

What Edith learnt from the experience

From her experience, Edith learnt life-changing lessons that have been instrumental in her successful career journey to date. Edith learnt to:

- rise above occasional failures; she utilised her failures as a mechanism to succeed.
- break the barrier of discouragement, doubt, low self-esteem, cultural and social norms, and pull-down syndrome, among others. Single parenthood, difficult as it was, Edith realised that it was not the end of the world. She did not allow it to ruin her career prospects. Instead, this became the driving force behind her determination to succeed. This seemingly “negative experience” became a

10. Turning Vulnerabilities into Stepping Stones

huge motivator for her career success. Edith is currently raising her two children with great pride.

- take responsibility for her choices by dealing with the consequences thereof. Since she had decided to study full-time, she turned down job opportunities. Tap on available support. She realised that it was difficult to make it in a career journey without the support of family, mentors, and friends, emotionally, financially, academically, and socially. Focus on her destiny. Once she had made her choices, she focused on them and never looked back to realise her destiny. Appreciate the fact that challenges are part of life and they take one closer to their dreams: *“For one to succeed, one has to overcome a challenge. For me, leaning on God and knowing that He is always by my side kept me going and gave me strength to go on.”*

The advice Edith gives to young people pursuing their careers

- It is important to have a career plan. This is your compass to guide your steps as you navigate your path. In the absence of a vision, you run the risk of floating around like a lost object amid the ocean – you default to being directionless.
- Have a mentor that you look up to, with a shared vision and your best interest at heart, to guide you in navigating your way towards fulfilling your career adventure. A mentor will link you to opportunities, resources and networks to become a better scientist.
- Have a teachable spirit while under the tutelage of your mentor. Mentorship requires one to be open to learning, development and growth.
- Work hard; hard work never kills but brings success: *“If you set your mind on your goals, you will achieve the results”*
- Never allow circumstances to stand in the way of following your career.

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- There are always other options – you should look beyond the ordinary.
- Women are enough: *“They can do and be anything they imagine or think! The ability to think warrants them the power to be it!”*

11. Transitioning from an Average Pass in Matric to Doctoral Degree in Medical Virology

Dr Hazel Tumelo Mufhandu

BSc, MSc, PhD

Biography

Hazel Tumelo Mufhandu is a medical virologist who was born and raised in the township of Mamelodi, in Pretoria. She attended school in Pretoria and passed her matric there. Hazel is married with two children, a girl and a boy. She is the first-born child among four siblings. One brother passed on while studying towards his BCom degree. The other brother is a graduate working at Sasol as an IT software developer. Meanwhile her sister is in her final year of Bachelor of Laws (LLB), working as manager of facilitators at Optimum. Hazel's academic qualifications are BSc (University of Limpopo), BSc Honours in Medical Virology (Sefako Makgatho University), MSc in Medicine (University of the Witwatersrand) and PhD in Medical Virology (University of the Witwatersrand). At the time of writing this book she is a senior lecturer and the deputy subject group leader in the Department of Microbiology at the North-West University, where she met Prof Refilwe Phaswana-Mafuya while she was Deputy Vice-Chancellor of Research and Innovation; Refilwe encouraged her to apply for South Africa's Future Professors Programme Phase I, as well as to tap into various career development opportunities. Since then, she has sought advice from her on various COVID-19-related studies. Hazel is a mentor and an academic supervisor to several postgraduate students. Hazel's mother is a retired teacher; she took early retirement at 55

due to severe rheumatoid arthritis. Hazel matriculated at the school where her mother was employed, thus she was bound to work hard to avoid embarrassing her. Her father was self-employed, selling liquor from home, a business previously known as bootlegging as Blacks were denied liquor licences in the Apartheid era. Hazel's father registered for LLB at a very old age; unfortunately, he passed on during the final year of his degree at the age of 61 years: *"I must say that my father's 'illegal' business was very profitable and afforded us a privileged life as a family. Thus, I did not have any childhood difficulties to deal with. When I saw my father working hard to make a living for us, I felt the need to work hard to ensure that his efforts were not in vain."* Hazel's journey is about a girl who, after not making the grades to pursue medicine due to political unrest that disrupted matric classes, courageously forged ahead until she obtained a PhD in Medical Virology and the opportunity to become part of the greatest HIV prevention initiatives in her country.

A courageous career choice that propelled Hazel in her career

The courageous career choice that Hazel took was to do medical virology. Her career took off when she joined the HIV Immunology Research Team as a research assistant, while pursuing her MSc studies at the National Institute for Virology (NIV), now the National Institute for Communicable Diseases (NICD). She became part of exciting initiatives in the country, including: the South African AIDS Vaccine Initiative (SAAVI), the DNA-prime/MVA (Modified Vaccinia Ankara) booster vaccine candidates, and the HIV Vaccine Trials Network (HVTN). The highlights of her career journey were being introduced to NICD and being accepted as an MSc student registered at the University of the Witwatersrand. This propelled her to join the Centre for Scientific and Industrial Research (CSIR), and to follow biosciences for her PhD studies at the University of the Witwatersrand. Hazel's love for education was initially inspired by her parents: *"I was inspired by my parents' support of my education. What I admired most*

11. Transitioning from an Average Pass in Matric

about my father was that he supported his children's education (as well as my mother and extended family members). His personal educational efforts inspired me more and helped me to propel forward with my PhD studies."

The challenges that Hazel encountered in her career choice

As a young girl in high school, Hazel was encouraged by everyone around her to study medicine and she aspired to study at the then Medical University of South Africa (MEDUNSA), now Sefako Makgatho Health Sciences University. However, her matric year was affected by political unrest resulting in only a few months of schooling, which led to her obtaining average pass results, forfeiting her chances of enrolling for a degree in medicine. Little did Hazel know at the time that the alternative route she would take would become her career destiny. Hazel did her BSc at the University of Limpopo, after which she did her honours at MEDUNSA:

"After completing my BSc degree, I felt I was equipped enough to go for my dream university, and I went to MEDUNSA to register for BSc Honours in Microbiology. When I got there, I was told that the department was full for registrations, and that they had just introduced a new Honours degree in Virology. I had a choice to go to other universities and look for Honours registration in microbiology. However, being on the grounds of the university I longed to be part of, I decided to register for Honours in Virology. At that time, the field of virology was very unfamiliar in biological sciences and very intimidating; the department that I joined had only produced one PhD student at that time. However, the idea of being part of a new field of research excited me and I was courageous enough to join the honours group of only three students."

Later, Hazel pursued her MSc in Medical Virology at NIV. She was the first African female to register for and obtain an MSc in Medical Virology at the prestigious University of the Witwatersrand, which she thought was for White, Indian, and

privileged African students only. She continued to follow the scarce skill area of medical virology through to PhD.

The strategies Hazel used to tackle challenges to sustain her career choice

Hazel faced a number of challenges that she had to overcome to sustain her career choice. Hazel had to:

- forge ahead with her PhD studies amidst marital problems until she completed them: *“The first challenge I faced was the decision to start my PhD studies two months after my wedding, while expecting our first child. I was convinced that my personal life must continue parallel with my career pursuits. However, I experienced serious challenges in my marriage while trying to be a wife, a mother, and a student all at once. Nevertheless, I was determined to raise a family and God blessed me with another child while still busy with the PhD studies. With two young children, the load became almost unbearable, but I made it through with the help of my mother. If it was not for her help I would not be where I am today.”*
- withstand a period of unemployment after completing her PhD: *“after completing my PhD studies, I became a postdoctoral research fellow. I was later appointed to a senior scientist position. However, there were new systems and strategic changes introduced at my organisation that led to a retrenchment exodus. The only aptamer research laboratory in Africa was dismantled due to retrenchments, and I was part of that team. This was the worst challenge I had to confront in my career. I was unemployed for four months but later joined academia as a part-time lecturer. I never foresaw the retrenchment and unemployment as a PhD with a scarce skill.”*

What Hazel learnt from the experience

- Hazel learnt to: persevere through it all: *“I persevered through marriage and family growth challenges. Indeed perseverance is the mother of success.”*
- stay positive: *“I never looked at failure as an option.”*

11. Transitioning from an Average Pass in Matric

- finish whatever she started: *“My life’s motto of ‘finish what you start’ pushed me to the victorious end of my PhD degree.”* collaborate: *“Being unemployed taught me the need to collaborate and have courage to knock on closed doors and sell my concepts to anyone who gave me a chance.”* venture into the unknown and leave the old behind: *“I also learnt to venture into the unknown and leave the old behind. That is, my organisation decided to retain me after their retrenchment decision, but I opted to leave, believing that it was time to venture into a new chapter in my career, even though it meant facing unemployment. Then the academia opportunity presented itself and I decided to join and give back to the nation through teaching and learning.”*

The advice Hazel gives to young people pursuing their careers

- Follow your passion: *“Be sure of the career path you want to pursue to avoid wasting time – time waits for no man or woman!”*
- Learn from the wisdom of the elderly: *“Get mentors to guide you through your career path. Seek help when in need, whether from your mentors, seniors, authorities, systems, or even family and friends, whether for advice, financial help, or just a shoulder to cry on or someone to vent to.”*
- Persevere through it all: *“When you have a dream, you’ve got to grab it and never let go. Persevere against all odds to ensure that you reach the pinnacle of your career or dream; nothing comes without trials.”*
- Help other people: *“Always remember that life is give and take; when you get help during your tribulations of life, be ready to help another person in return.”*

12. Going Back to Matric after Falling Pregnant, Followed by Discovery of Passion for a Public Health Career

Dr Nkhensani Olga Masekoa

BSc (Medical Science), MPH, PhD

Biography

Nkhensani Olga Masekoa hails from Limpopo Province, South Africa in a village called Matanda in a district called Makhado. She is married with three beautiful daughters. She is the first-born daughter of the late Frans and Grace Magada, with four siblings. She started her education at Matanda Primary School, obtained her matric at Dimbanyika Secondary School, and furthered her studies at the University of the North (BSc Medical Science degree), University of Pretoria (Honours degree in Human Physiology), University of Limpopo (Master of Public Health), and University of South Africa (PhD in Public Health).

Her professional career began in 1998 as a natural scientist at the University of Pretoria for five years. She then became a lecturer at MEDUNSA and moved to the public sector, where she occupied several senior and executive positions at the Department of Mineral Resources (DMR) as a senior manager in policy development (eight years), and as Executive Chief Research Operations Officer (five years). In June 2022 she was appointed as Chief Director in Policy Development in Mining, Minerals and Petroleum in the Department of Mineral Resources and Energy, a portfolio that seeks to promote sustainable mining whilst contributing to the GDP, alleviating poverty, and creating employment

through policies that attract investment in South Africa. Apart from being a professional, she has a passion for farming and is involved in crop and animal production, which she believes contributes to hunger alleviation whilst creating job opportunities in the community that she serves. Nkhensani fell pregnant when she was in matric in 1991. She stayed home for a year, went back the following year, worked hard and passed matric with exemption. She was the only girl amongst six boys in her school that made it. Nkhensani enrolled for a BSc in basic sciences. However, she ended up pursuing a public health career. Nkhensani's inspiring career journey is that of a young girl who thrived after teenage pregnancy, passed her matric, pursued a junior degree (BSc) in basic sciences and later pursued an MPH and PhD in Public Health degrees, the passion of her heart.

A courageous career choice that propelled Nkhensani in her career

Nkhensani made a courageous choice to go back to do her matric after falling pregnant: *“At the age of 18, I fell pregnant whilst doing my matric due to lack of parental guidance as I was raised by my grandmother who had to play the roles of both father and mother, whilst also selling fruits and vegetables in the streets. In those days, you could not attend school whilst pregnant, and therefore I had to stay home for a year. I then had to be courageous and went back to school to pursue my matric despite missing school for a year. My pregnancy was such a taboo because I was an ‘A student’ and my mother and father had so much hope for my future. When my father got the news of my pregnancy, he was devastated and stopped talking to me for nine months. My life after having a baby was never the same. I instantly became a mother and a high school girl. After the baby was born, I had to bear the brunt of going to school, washing nappies, doing homework, and still fetching wood and cooking when it was my turn, as I took turns with my sisters. It was hard to concentrate at school as some girls made me a laughingstock, but I forged ahead despite the chores after school and sometimes having to spend sleepless nights looking after my baby. My grandmother stood by my side as*

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sometimes I had to miss school to take the baby for immunisation intervals. Whenever the baby was sick, it meant I could not attend school, which meant having to check what was done at school when I was absent and make double efforts to catch up. My self-esteem was drastically affected as I could not do what other girls of my age would normally do, like playing in the street after school or attending extracurricular activities. I was always in a rush to go home to my afternoon shift of caring for my baby whilst juggling schoolwork. The hardships were more than one could ever imagine, from a young girl full of aspirations to a teenage mother. This was a time in my life I will never forget! My pregnancy became a great eye-opener, such that I worked harder and passed matric with exemption. I was admitted to the University of the North. After passing matric, I had to wean my baby from breastfeeding to go study at the local university, far away from my village. My dad later got me a nanny as he believed in education, and he could also see the potential that I had. I am in awe of my late grandmother's love, my late father's passion, and my late mother's caring nature. Without their encouragement, my life could have turned out for the worst."

The challenges that Nkhensani encountered in her career choice

The circumstances outlined in the preceding section made the pursuit of matric and later university studies quite courageous. Little did Nkhensani know that she was going to meet another obstacle to her dream career.

"I registered to study for a degree in optometry and passed my first year. During my second year, I realised that the degree had many courses, and I was in a hurry to finish university so that I could go and work to be able to take care of my baby. This was a decision I took abruptly, without really seeking advice. I got so confused during this time and ended up having registered for a BSc Medical Science degree, not knowing what it entailed. But I forged ahead and obtained the degree with the hope that it was my ticket to get a job. My dad was also struggling financially as my mom was a housewife and my siblings were still at school.

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I felt the need to exit university to earn an income to help my family. Thank goodness for the advent of the Tertiary Education Fund of South Africa where all disadvantaged students who were progressing well could be funded for their studies.”

Nkhesani's first degree opened doors for her first job opportunity whilst pursuing her postgraduate degree. This marked the beginning of a bright career for Nkhesani.

“Not knowing and understanding what would happen after graduating as I just wanted a job, I landed a job in the Department of Physiology, at the University of Pretoria. This was the first time I came to Johannesburg. I can now relate to the story of ‘Jim comes to Joburg’! Whilst it felt good to be in a big city, it was a nightmare to move around, not knowing how to differentiate between towns and malls and taxi signs used in the townships and navigating big highways. I felt overwhelmed. Yes, indeed I earned an income and was able to assist my siblings with school and most importantly I could buy them Christmas clothes, a big issue in the rural areas.”

Nkhesani experienced challenges:

“My first job was the toughest, as I was the only black person amongst 31 employees. I had a huge language barrier, in a culture that was unfamiliar. I felt so lost in the language during teatime as my colleagues were Afrikaans-speaking. I spent most of my time in the laboratory. My job became monotonous, doing the same thing every day; I started feeling lonely. As a young graduate, my first job felt like a baptism of fire. I just felt a sense of being lost and days would pass by without my having a sense of fulfilment from what I was doing. As I struggled to converse and blend in with a culture that I was not used to, I decided to do Honours in Human Physiology, thinking I would start to fit in. It was done in Afrikaans, and I had to translate the notes into English. I worked very hard and completed the honours degree.”

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After five years, Nkhensani moved MEDUNSA as a senior scientist. It was during this time that her parents passed away at the same time tragically. Nkhensani was devastated, having her own young family. On the one hand, she had to become an instant parent to her siblings. On the other hand, she had to support her own kids who needed financial support for their education from her income. Despite all the challenges, Nkhensani courageously jumped at the opportunity to pursue a new degree that she had heard about – the MPH degree which became the turning point of her career:

“At MEDUNSA, when an opportunity came that the university was going to give employees bursaries, I jumped at it. I had heard that there was a new degree in public health. I went ahead without notifying anyone in the department until I was accepted. The degree was mostly online and I only had four weeks of face-to-face block sessions each year, in January and July. Choosing to do an MPH was the wisest choice which propelled my career. It made the world bigger and full of new opportunities. Just after graduating, I was appointed as a lecturer in the School of Public Health at MEDUNSA. When I broke the news to my superiors, it was unbelievable. The department had plans to groom a physiologist, whilst I thought the experiments with frogs and rats were a nightmare. I moved into offices in the building next door and my life was changed dramatically. The MPH degree opened many opportunities and whilst being employed in different organisations, I pursued my PHD in Public Health.”

Nkhensani’s career grew from strength to strength and her expertise, skills, and knowledge increased dramatically and became prominent in the mining industry. However, she continued to brave challenges:

“Whilst at the Mine Health and Safety Council (MHSC), I had the huge responsibility of running a research programme with a huge budget and tight timeframes. I had to simultaneously assume the roles of being a mother and a wife, while at the same time pursuing my PhD. I had to suspend studying due to

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high work demands, which almost caused me not to pursue my dream. I had no work-life balance and, being an executive for the first time, the anxiety to deliver and impress was high. I was servicing a very important sector, with high demands of new technologies, new knowledge, and a regulatory regime that would address the occupational health and safety of miners. What a journey and experience!”

“Whilst at MHSC, I crossed paths with Prof Refilwe Phaswana-Mafuya, who also once in her earlier career had met and bonded with my mother at a professional meeting. She reminisced about the fond memories with my mother, especially upon hearing of her passing. During my tenure at MHSC, Refilwe was one of the researchers appointed as an expert panellist/ advisor on HIV-related studies. We also invited her to speak at our big conferences. After that, we kept in touch professionally. When I was at the lowest point in my career – unemployed after my five-year FTC ended – she was one of my pillars of strength. She would check in on me, share her experiences, and encourage me to have hope that things will one day be alright. She reminded me to always have a vision and believe in myself, and that God has never promised us to have a smooth life but to always remember that challenges make us strong. I am because she is! She is indeed a visionary!”

It was during her unemployment that Nkhensani continued with her PhD:

“After my contract ended, I then started winding up my thesis and I do not regret ever taking that decision. I spent sleepless nights studying and time was running out. I was at the risk of being struck off the roll of students, since I took too long to finish. I had to learn the hard way that if you take a decision, you must never procrastinate on it, as it will catch up with you sooner or later. Here I am today: I managed to finish my doctoral degree despite all the breaks I took and somehow came back to my senses that nothing on earth will surpass my education. It was my responsibility to see it through.”

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“Whilst trying to figure out my life in marriage and having to take care of my children, my parents died in a shooting incident at the same time. This was a big blow as I had to assume responsibility for taking care of my siblings. I broke down and completely lost my mind. Life was never the same. As my career was exponentially growing, I had to embrace their passing while finding permanent solutions for my siblings. I am in awe of God’s mercy as even when I write this paragraph, I am filled with deep emotions and a deep sense of loss. I miss my parents dearly. God says he will never give us something that we cannot bear; indeed he has been faithful. My siblings are a testimony to what perseverance and courage means. They are successful and have careers of their own. My husband often said ‘let’s find permanent solutions to the problems we have, and education remains the biggest weapon’. May their soul rest in peace”

Nkhensani lost both her parents tragically and simultaneously. Despite this terrible ordeal, Nkhensani never lacked courage or action. Nkhensani and her siblings are a testimony to what perseverance and courage mean.

The strategies Nkhensani used to tackle challenges to sustain her career choice

Nkhensani had to:

- Change career without knowing the outcome: *“Changing careers to studying public health whilst employed at the physiology department was a huge risk for me to take as it meant I would not get promoted to any position in the department where I was working at the time, and I also did not know how people would react when I broke the news. However, I continued despite the odds. I was so focused on the goal, without neglecting my then ongoing duties for which I was getting paid. I kept my integrity and was honest with them as I revealed that I was working on changing my career. I did not know what was going to happen upon completion of my master’s degree, but I went ahead full force and made sure I got good grades. There was no room for failing as I would disappoint myself and my inner voice, which kept on feeding*

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me with positive energy and fixing my eyes on what was ahead of me. Even worse, I had no work experience related to this new degree that I was pursuing. However, I believed in my instincts so much that I was not shaken by the choice I had made at that point.”

- *Juggle multiple responsibilities: “I was a wife, a mother of an infant, an employee, and a student. This was the most difficult experience I had ever had in my entire life. In addition to the very challenging course I was studying, I had to cut out so many activities as time became a scarce commodity. The subjects were mostly new to me, which meant I had to spend more time trying to figure out the contents of the subject matter. I was coupled with students who could easily apply concepts from their working environment, which was different for me and disadvantageous. I did not have applicable references for most of my assignments as I had never worked in a public health setting. However, this did not negatively affect me in any way as I held on to reach my goal against all odds. I graduated in record time and obtained the degree. Even when I did my PhD, the road was never easy, but I forged on to the goal. I needed a lot of courage whilst being a wife, a mother, a daughter-in-law, an employee at executive level, and a community member with church responsibilities. The sleepless nights were just unbearable.”*
- *Apply and get appointed to a job within a completely new field: “A few months after graduating, a lecturing opportunity presented itself and I applied with no experience in the field but told myself that I would explain myself at the interview and that I was a graduate of the university. In my own opinion, who wouldn’t be glad to hire their own graduate? I took a chance, and it worked, as I was appointed. This was like a dream come true and I had never felt so much inner peace in my life. I realised that when you want something so badly, and if you really put all your energy into it, it does become a reality. The attainment of a public health-focused degree changed my professional life drastically, from being a scientist to teaching master’s students in Africa and strengthening my research skills.”*

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- Embrace the passing of her parents in an instantaneous painful way while raising her young family and having to find permanent solutions for her siblings.
- Follow her passion and instinct, she had to move from physiology to public health, forfeiting opportunities for promotion: *“Changing careers to studying public health whilst employed at the physiology department was a huge risk for me to take as it meant I would not get promoted to any position in the department where I was working at the time, and I also did not know how people would react when I broke the news.”*

What Nkhensani learnt from the experience

“As a rural girl born in the villages with no running water, no basic sanitation services in my neighbourhood, and being a teenage mother, when I look at my life now, I realise the important lessons I have learnt.”

Nkhensani learnt to:

- trust her instinct in her decision-making.
- put all her energy in the goals she envisaged would change her life for the better.
- take advantage of any opportunity presented at any point in her life that may positively impact her life and others close to her.
- be prepared to take calculated risks.
- Never procrastinate in decision-making.
- be bold enough to have the resilience to face people or things that may be barriers to her choice.
- make sure that she sees what she has started through to the end. She learnt not to leave whatever she was doing in the middle. She never allowed distractions to sway her towards reaching her goal.
- believe in herself and have the confidence to think big within reasonable boundaries.

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- adjust her lifestyle to create an enabling environment to reach her goal.
- live a balanced life to ensure that her career and her personal life are moving at the pace she desired.
- be sure to make the right choices in life and seek advice where needed from those who have already walked the path: “Experience is the best teacher!”
- work hard as there is no free lunch in this world.

The advice Nkhensani gives to young people pursuing their careers

- Never allow your past to hinder your future prospects at any point in your life.
- Use your past experiences as a guide and encouragement to move forward.
- Seek career guidance early in your life and at every stage of your career. There will always be someone who has gone through the path they are taking, as there is nothing new under the sun.
- Age gracefully and look back at your life with a huge smile about the contribution you have made in all your interactions.
- Stay encouraged, young rural girls who may be wondering what on earth you are doing and where are you going.
- Never limit your potential. You can become a game changer and impact other people’s lives.

13. Traversing Difficult Seasons of Life to Pursue Mathematical Statistics

Dr Claris Siyamayambo

BSc, PGDip (Education), MSc (Statistics), PhD

Biography

Claris Siyamayambo was born and raised in Marondera, in eastern Zimbabwe. She is married, a mother of three kids (two girls and one boy), and the third-born of six. Her academic qualifications are: PhD in Mathematical Statistics from the North-West University (2021), Master's in Statistics from the University of Botswana (2012), Postgraduate Diploma in Education from the University of Zimbabwe (2004) and Bachelor of Science Degree in Mathematics and Statistics from University of Zimbabwe (2001). Her professional career began as a mathematics teacher immediately after graduating with her bachelor's degree in August 2001. Three years later, in January 2004, she pursued a diploma in education, and she continued teaching mathematics in high schools in Zimbabwe (2005 to 2007). Two years later, she was promoted to mathematics and statistics lecturer at a polytechnic college in Zimbabwe (June 2007). In July 2008, she was offered a place to lecture mathematics and statistics at a private university in Gaborone, Botswana (2008 to 2017). From 2017 to June 2022, she was a research and statistical consultant in Botswana. In July 2022, she was appointed as a postdoctoral research fellow at SAMRC/UJ PACER.

A courageous career choice that propelled Claris in her career

The courageous choice that Claris made was to go to university for her bachelor's degree after falling pregnant at the age of 19 years, soon after her advanced level examination in 1997: *“In February 1998 I got pregnant while waiting for my results. According to our culture, the moment you fall pregnant you go and stay with the responsible man. I had no choice but to leave my mother's house and go and start a new life altogether, which I was not ready for. The worst thing was joining a new family with a first pregnancy, and I had a lot of fears of the unknown. I could not face my mom, but I was courageous enough to approach the scariest person in my life then, my uncle, and break the news. He was hurt because he knew my potential. He immediately said, ‘you are going to your husband, but I will support you all the way if you pass and want to go to university.’”*

A month later, the results came. Claris had passed and was offered a place at the University of Zimbabwe to study for her bachelor's degree. Claris was at a crossroads: *“I had to make a decision whether to go to school and risk my marriage, or to give up on my career dreams and become a full-time housewife at the age of 19. I gave birth to my daughter in October that year and I decided to pursue my first degree. Later I pursued my master's degree, then my PhD against all odds.”*

The challenges that Claris encountered in her career choice

Claris started her studies whilst breastfeeding and leaving a three-month-old baby at home 100km away. She would leave home at 5 am every day heading to the city and be back after 6 pm to be a mother, wife, student, aunt, and daughter-in-law:

“I worked so hard, though I failed two courses, I never repeated a semester. I repeated some courses whilst progressing with my studies until I graduated after three years. This was a courageous career choice for me as I was a young mom who needed to grow up but I was already carrying a lot of

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responsibilities including taking care of my baby, husband, the extended family, and doing my schoolwork without excuses because I was determined. God being there and being my helper, I pulled through despite all the challenges of staying with a new family, being a first time mum and still do my schoolwork to meet deadlines.”

Claris further indicated: *“This was a very difficult time in my life as everything seemed to be working against me and the dream I strongly felt I needed to fulfil. From being known as the mathematics wizard and the smart girl in class, I found myself in another life, and many of my friends left me. Others would visit to make sure that what they heard was true, and they would pity me. The most common comment was, ‘So do you think this time you will make it with all these things around you? Why not be at home and take full care of your child? She is young and needs you more.’ These statements would make me blame myself for being immature. I was so hard on myself that I felt ashamed to walk freely as I was concerned about who would see me. Eventually, we relocated to a city where I had an opportunity for a brand new start.”*

Finally, Claris graduated and immediately got her first job back at home, from the high school where she had done her A levels. This became a success story! After three years, she went back to the University of Zimbabwe to get a teaching qualification, following encouragement from her teachers. Following this, she was transferred to another high school where she would walk for about 15 km to get transport to get to town, as it was deep in the bushes. Two years later, she was promoted to lecturer and life became better.

However, the economic situation in Zimbabwe got worse and Claris was forced to relocate to Botswana, leaving two children (including a 12-month-old baby) with their father. She got a lecturing job at a private university in Botswana and immediately enrolled for a master’s degree: *“I worked so hard that I completed my studies within the stipulated time, but life was hard because I was in a foreign land and I was self-sponsored*

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whilst at the same time sponsoring my children's education and taking care of the family, which was now with me in Botswana."

Later, in 2014, Claris enrolled for a PhD in South Africa. She would drive alone or with a friend from Botswana to meet the supervisor. At times, she would travel to Zimbabwe to meet the co-supervisor who was at the University of Zimbabwe. She had to travel many times for consultations, new insights, and presentations. A new set of challenges appeared in Claris' final year. First, she was unexpectedly retrenched from her job of more than nine years. Whilst she was trying to figure out what her next step would be, she discovered that she was pregnant with her third-born: *"This was a big blow, falling pregnant after 12 years, having a 20-year-old girl and a 12-year-old girl in the house who were asking what was going on. At the same time, I was over 40 and everyone in my circles was talking. 'What is she doing? We thought she was civilised!' I just dropped down and told myself to relax and nurse the pregnancy and the baby. It was very difficult as I was now self-employed doing consultancy work and trying to take care of the family and completing my PhD. My scholarship lapsed and I was now expected to pay for myself. As I was breastfeeding my child, again another blow: I was diagnosed with breast cancer, and I had to immediately stop breastfeeding. This was a very difficult season in my life. I would cry and cry, asking why all these things were happening to me. Unfortunately, I was alone as friends had abandoned me since the retrenchment, and even the church people I used to rely on were no longer available for me. I still needed to submit my PhD thesis, but there was no money. My husband's contract was not renewed, and we were all home, and all these challenges were just piling up. To make matters even worse, COVID-19 came, and the situation was just hopeless and getting worse."*

"I achieved my PhD while fighting breast cancer. It was really amazing that I could obtain a PhD under these circumstances. One day I just woke up and sent a very long email to my supervisors. I asked them if there was anything they could do to help me in such a situation, given that I had completed everything except submission (which was delayed for three

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years because of financial constraints). Through the advice of my main supervisor, I got a faculty bursary that covered all my outstanding dues, and I finally submitted my thesis. In a period of four months, I got my results, and it was exciting news. In the same week, the doctor said my condition was getting worse and I needed emergency surgery. The surgery cost a lot of money, which I did not have. However, I had a payment for which I had been waiting for more than five years, and three days before the appointment for the surgery, the payment came through. A week after my surgery, I hired a car since I was invited for the first physical graduation during COVID-19 and I could not miss that special day in my life. Four months after graduation, I was introduced to a vibrant dreamer and visionary who happens to be my mentor today, Prof Refilwe Phaswana-Mafuya. I confidentially shared my health condition with her. She ensured that my appointment as a postdoctoral fellow was approved despite my health condition. What a welcome and an encouragement to pursue my dream! I am now a postdoctoral research fellow in UJ/SAMRC PACER under Prof Refilwe, my mentor. She is an energetic and sharp visionary who does not waste opportunities. My skills and knowledge are being sharpened and enhanced every day. All I can say is, 'Thank you, Lord'. It is now like I am dreaming as we work very hard and enjoy moments very hard. I am very grateful to Prof Refilwe for her unconditional welcome and for agreeing to mentor me in my journey of becoming a professional researcher and statistician, without any hard feelings. I have again left the family – and this time a four-year-old boy – and I am pursuing my career.”

The strategies Claris used to tackle challenges to sustain her career choice

Claris had to:

- withstand ridicules from family and those in the neighbourhood about her pregnancy.
- join a new family without any preparation after falling pregnant. She simultaneously underwent changes of

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being pregnant, becoming a young mother, wife, in-law, and student.

- leave her three-month-old baby to go to university for her bachelor's degree. She had to breastfeed and at the same time she was travelling 100 km to and from the school for a year.
- leave a 12-month-old baby with the father to go to Botswana to look for employment and pursue a master's degree.
- following an unexpected retrenchment from her employer, put her mind together and nurse her third-born baby while studying her PhD and so that she could focus on her thesis.
- study her PhD while in the midst of a breast cancer diagnosis, and being required to make some drastic decisions about her health and her future.

What Claris learnt from the experience

Claris learnt to:

- stay focused always and not be diverted by life's temporary events. Amid challenges, her life went on as she believed that one should never stop pursuing his/her dreams or career because of a manifesting hardship that is passing.
- be optimistic – she believed that her challenges do not last forever and that they are stepping stones to push harder, and that rewards always come at the end of the day.
- be driven by hope and faith about tomorrow rather than circumstances: *“Health conditions are enemies of progress, thus one has to be driven by hope and faith about tomorrow.”*
- stay brave: *“Success is for champions who never quit, no matter the challenges or failures.”*
- be decisive and determined to follow her dream career despite challenging circumstances.
- trust in God and the power of His might which is above all situations.

The advice Claris gives to young people pursuing their careers

- Take life one step at a time with a focus married with determination, hard work, and resilience.
- Life is a journey, it can be brutal at times, but positivity, hope, determination, faith, and resilience can help you to keep going and achieve your lifelong dreams.
- You are privileged because God has awarded you an opportunity to give birth to people and to opportunities in life; take advantage and equip yourself.
- Being a successful career woman helps to shape the entire community because women carry the family, which shapes churches, which in turn shapes communities and the world at large: *“At some point, I met a lady who was a maid without any qualification, and I taught her maths and science. She went and wrote O Levels and passed. She pursued a teaching qualification in Zimbabwe, and graduated in August 2022.”*The woman is now pursuing a bachelor’s degree in education at one of the best universities in Zimbabwe.
- Do not stop at shallow levels, soldier on against all odds and attain higher levels of career mastery.
- Be a source of influence for a better world and better communities.
- The world is safe if it is full of educated career women who raise children who will grow up to follow in their mothers’ footsteps.
- Your beginning does not determine your ending.

14. Sacrificing Material Gains to Pursue a Career in the Helping Profession

Kagisho Phaswana

*Bachelor of Social Sciences,
Bachelor of Social Sciences Hons, and
Master of Social Work*

Biography

Kagisho Phaswana was born and brought up in Botlokwa, Eisleben, Limpopo Province. She is the sixth of the seven children of Moraba Emma and Ngwako Simon Phaswana. Kagisho is the younger sister to Prof Refilwe Phaswana-Mafuya (second-born), whose biography was provided earlier in this book. She attended primary schooling in three rural schools of Limpopo Province and later went to a boarding school to complete her high school studies. Kagisho Phaswana is a trained social scientist with three degrees, namely: Bachelor of Social Science; Honours Degree; and Master's in Social Work. From humble beginnings, Kagisho is currently pursuing her doctoral studies in Social Work, following in the footsteps of her two sisters who already have PhDs. Kagisho worked for 13 years in the social welfare field across several organisations including Christelike Maatskaaplike Raad, Yenzani Children's Home, Johannesburg Child Welfare, National Institute for Crime Prevention and Reintegration of Offenders, Tshwane Child Welfare, and National Youth Development Outreach. She is a registered psycho-social therapist, running her own private business. Additionally, Kagisho has worked in academia. She served as a Social Work Internship Supervisor at the University of South Africa. Before this, she was part-time Social Work Fieldwork/Internship Supervisor at UJ.

A courageous career choice that propelled Kagisho in her career

Kagisho's journey has been characterised by huge sacrifices towards fulfilling her calling in the helping profession where she dedicated most of her career life. Kagisho made the courageous choice to remain in her profession even though it was not as well-paying as it is not easy to be in a helping profession, which is often considered charity work. She made a tough decision to follow her passion of helping people against all odds. She had to take on multiple part-time opportunities in her field to make ends meet. She kept her primary job and worked part-time at universities and children's homes. Kagisho had to diversify herself. She started her own psycho-social private practice to take her career to the next level and make ends meet. Despite limiting circumstances, Kagisho is pursuing her PhD to strengthen her authority and influence in her field. She has been inspired by her two older sisters, Prof Refilwe Phaswana-Mafuya and Dr Motlatso Phaswana-Mlambo, her role models and mentors, to get her PhD like them. She saw how hard they worked to achieve their dream careers and decided to follow suit, to become the best version of herself and to exploit the potential she knew she had.

“Although the salary remains low despite acquiring a master’s degree and it does not match all the hard work I put in, I am proceeding to do my PhD to excel in my career. While money is important to meet survival needs, nothing can surpass the pursuit of noble goals.”

The challenges that Kagisho encountered in her career choice

The decision to remain in the helping profession was not easy for Kagisho as her work did not generate sufficient income. It took a lot of courage for Kagisho to sustain the choice she had made. Many times, she felt like her efforts were going unnoticed as she was not commensurably rewarded. It was also not easy for Kagisho to start and run her own private practice

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without any financial support; this took a giant leap of faith on her part. With her years of experience in the field, she has been able to open her own private practice and has been able to have her private practice registered, and developed a client base. For example, her practice is affiliated to two companies, namely: an employee wellness and a trauma debriefing company. Kagisho's private practice is flourishing, giving her additional income. Throughout her career, Kagisho endured racial and gender issues. She believes that she forfeited opportunities for promotion because of her skin colour and her gender. Whenever she applied for promotions, she never succeeded. Either an external or internal person with a different race would be taken: *"At times internal colleagues who had similar expertise were promoted rather than me due to their favourable skin colour. I felt discriminated against, prejudiced, undermined and marginalised."*

"Following my career path has not been easy. Despite pursuing multiple jobs, I am also studying towards my PhD. Working six days a week and sometimes six-and-a-half days has resulted in my having limited social life so that I can finish what I have set out to achieve."

On a personal level, Kagisho experienced relationship challenges: *"I was engaged to the man I thought I would spend the rest of my life with. However, this did not work out."*

The strategies Kagisho used to tackle challenges to sustain her career choice

Kagisho had to:

- refocus and re-strategize: *"Following the separation with my fiancé whom I depended on for augmentation of my salary, I realised that self-empowerment was most important. I refocused and restrategised."*
- multitask: *"Juggling multiple roles is challenging; this required focus and self-discipline."*

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- put a lot of enticements on hold to pursue her career using personal resources.
- sacrifice personal finances to carry out some of her work-related responsibilities.
- grab opportunities to grow and develop herself personally and professionally throughout her career life.
- choose companions that gave her positive energy to sustain her career choice.
- celebrate her smaller successes to keep her motivation going; each time appreciating and rewarding herself.
- find creative ways to earn extra income to meet her basic needs to sustain herself, as her salary was very low.

What Kagisho learnt from the experience

Kagisho learnt to:

- make courageous choices that would take her career forward. She ensured that her hard won career does not crumble.
- be content, optimistic, and grateful for every opportunity given to remain productive throughout her career: *“I have never allowed my challenges to distract me.”*
- prioritise multiple responsibilities, manage time wisely and effectively, as well as execute tasks within a restricted time frame because every moment counts.
- appreciate every challenge she had to pass through and use hurdles as opportunities for deeper self-discovery rather than a source of discouragement. Although some of the gender-related situations still hurt her, it was through them that Kagisho became aware of her hidden qualities of resilience and perseverance. Kagisho learnt that there is a lesson to be learnt in every situation: *“It is no coincidence that my career journey evolved in this manner. Certain things must happen the way they do to learn valuable lessons in life. I am now working towards a better and sustainable future for*

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myself and my significant others. In the end, my sacrifices will be rewarded.”

- develop academic resilience to persevere through it all until she could see light at the end of the tunnel, i.e. finish her master’s degree. She never quit.
- toughen up and do her best in her work to achieve excellent results.
- depend on God in her unpredictable career journey: *“I give glory to God the Almighty who knows the end from the beginning and can discern the future. I have no doubt that He will continue to perfect and prosper my choices.”*

The advice Kagisho gives to young people pursuing their careers

- Do not run away from challenges; they are necessary for personal, spiritual, and character development
- Exploit your potential: *“Courage is all about bravery, bouncing back, and strength. We are all born with these abilities; we just need to exercise them. It is up to us as individuals”*
- Stay optimistic; each day is a bounce. What put you down yesterday, can put you up tomorrow: *“Young people, wake up and bounce!”*
- Follow your passion and never look back: *“Passion is critical in sustaining your career.”*
- Learn from challenges rather than harbour bitterness that can make you miserable and stifle your growth.
- Be patient. When one door closes, another door opens.

15. Surviving Unstable Jobs in Pursuit of a Public Health Career

Enireta Makanza

*BSc. Hons Geography (Environmental Management),
Master of Public Health*

Biography

Enireta Makanza served as a public health PhD student and research assistant at SAMRC/UJ PACER. Prior to this, she was a part-time lecturer for diploma students in the Department of Environment Health, UJ, a part-time laboratory assistant in the Occupational Health and Safety Laboratory, Department of Environment Health, and a senior environmental officer at De Beers Namibia Diamond Corporation. Eni holds a BSc in Environmental Health from Solusi University, Zimbabwe, a BSc honours in Geography (Environmental Management) from the University of the Witwatersrand, and a MPH from UJ. Eni was born in Lomagundi, a small town in north-central Zimbabwe, but grew up in the capital city of Harare. She is the first-born child of Kilburn and Lucky Hofisi, and she has four siblings (two brothers and two sisters). Her father worked for the government as a driver, whilst her mother worked as a nurse. This brought enough family income to live comfortably during her childhood. Eni is married and is a mother of three girls. Eni's career journey is about a woman who redefined her course of action after struggling to find a permanent job as a foreigner, moving from one part-time job to another, following up and following through every endeavour, until she was accepted as a full-time PhD Public Health student, an opportunity which she never thought she would have. Through this opportunity, Eni was exposed to a

range of career-building opportunities towards strengthening her career journey.

A courageous career choice that propelled Enireta in her career

Eni was unemployed, moving from one part-time job to another, when a generous opportunity to do a PhD was presented to her by her mentor, Prof Refilwe Phaswana-Mafuya. She had struggled to get a permanent job due to difficulty in obtaining a work permit in South Africa:

“Job hunting was a dilemma for a foreigner like me because of the work permit requirements. To apply for a job, a work permit was required upfront, and on the other hand, to apply for a work permit, a job offer was required.”

Although Eni was not sure that she had what it took, she made the most audacious career choice to pursue her PhD. She made this choice while dealing with several obligations and competing priorities at the mature age of 44. Shortly after taking a decision to pursue her PhD, a teaching assistant position was offered. However, she declined it as she wanted to prioritise her doctoral studies.

The challenges that Enirieta encountered in her career choice

Eni made the choice to pursue her PhD studies despite pressing financial obligations. She had previously deferred the opportunity to pursue her PhD studies for fear of losing a life partner. Thus, she chose to get married first and have children. However, she later realised that the pursuit of her postgraduate studies was important to achieve her dream career. She then made the decision to pursue her PhD studies and she has never regretted it. This decision meant that she had to forfeit some of the comforts and luxuries.

“At the time I was doing my MPH, we had to sell one car because we were experiencing some financial difficulties. This

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meant walking for a considerable and steep distance to catch public transport. Therefore, I would put on some sneakers because the rubber sole made walking easier and comfortable. It also meant having to carry an extra pair of good shoes in the bag, which made my bag look bulky. A friend would ask what was in my bag since it looked bulky most of the time. I had to carry the extra pair of shoes so that I would be presentable in the company of colleagues and the students as well. Other times there would be a jersey, an umbrella, printed publications, and students' scripts for marking. I used to be embarrassed about always carrying a heavy bag, until I got comfortable with my status quo. I reminded myself that my situation would one day change. All I needed was to focus on my studies. I passed my MPH. I am still carrying my heavy bag as I continue to pursue my career."

The strategies Enirieta used to tackle challenges to sustain her career choice

Eni had to:

- *make huge sacrifices: "I made huge sacrifices to pursue my postgraduate studies. As I was still celebrating the exciting opportunity to do my PhD studies, an offer was made for the position of assistant lecturer in the Department of Environmental Health that my mentor, Prof Refilwe Phaswana-Mafuya had motivated for. I became very excited about the prospects of finally having job security. However, after several considerations – including the advice given by my mentor – I turned down the position and decided to pursue my PhD studies to realise my dream to become a public health scientist."*
- *juggle the responsibilities of family life and motherhood: she pursued her master's degree while raising her children and working as a laboratory assistant in the Department of Environmental Health: "I had to move my daily errands to the weekend and share some of the errands with my husband as well as my older child."*

- arrange external support: *“I had to look for a full-time caregiver to take care of most of the home and the children’s school activities, and some of my domestic duties.”*

What Enireta learnt from the experience

Eni learnt to:

- make a bold decision to study for a PhD on a full-time basis: *“This requires new levels of career growth, new levels of thinking and determination.”*
- have a teachable spirit: *“As much as one needs to work independently, one should also be prepared to be led, guided, humble, change drastically and a new you.”*
- be self-disciplined: *“Studying a PhD requires new ways of spending one’s time; demands focus, humility, and a new you. I have improved in terms of organisational skills, determination, and time management skills.”*
- be positive: *“A delicate balance of accepting that one cannot know the future while believing things will be better tomorrow plays an essential role in a career.”*
- believe in herself: *“I had to believe in myself, and not in my peers. I did an analysis of myself, exploited my strengths and worked on my weaknesses.”*
- trust her supervisors: *“I had uncertainties regarding funding, and I had to trust my supervisors, Prof Refilwe-Phaswana Mafuya and Dr Edith Phalane, that I would get the funding. Since enrolling in my PhD programme, I have been awarded three PhD scholarships through the recommendation of my mentor, who is also my PhD supervisor, working together with Dr Edith Phalane, my co-supervisor. This includes the UJ Supervisor-Linked Bursary, and the Global Excellence Stature 4.0 Scholarship, which I relinquished when I obtained the SAMRC Doctoral Internship Scholarship. I have realised that there are many opportunities to support doctoral studies that could be tapped into by many young people. I am grateful for the strategic decision I made to pursue my studies.”*

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- move out of her comfort zone: *“It was not easy but it was worth it.”*
- put her hope in God: *“I had to trust that God is with me, will give me strength and wisdom to carry on to the very end.”*

The advice Enireta gives to young people pursuing their careers

- There are huge sacrifices to be made for one to achieve their dream career. It is important to be clear about what you want and why you want it. This decision is a critical career milestone.
- Follow a career that interests and energises you: *“Forget about how you will do it; you will know how to do it or how you will get it as you go.”*
- Welcome challenges, take some calculated risks, and do not be afraid to lead. Every opportunity carries a certain amount of risk: *“Pain is temporary; pride is forever. If you enjoy challenges, earning a PhD is something that you should consider.”*
- Put great effort into every task you do. Explore your field through reading, working hard, working smart, and showing exceptional productivity.
- Incubate your hope and trust in your mentors. They have walked the path before you, they can provide you the guidance you need as you navigate through your career, you do not have to do it on your own.
- There are many opportunities that can be exploited towards pursuit of PhD studies that young people can tap into through the help of their supervisors and mentors.

16. Crossing Territorial Boundaries to Pursue Environmental Health Career Aspirations

Martha Chadyiwa

*BSc in Environmental Health,
MBA in Environmental Management*

Biography

Martha Chadyiwa is a lecturer and coordinator of the MPH Programme, FHS, Department of Environmental Health, UJ. She is also in her final year of studying for a PhD in Public Health. She obtained her MBA in Environmental Management from the University of Twente, Netherlands, a BSc in Environmental Health from Solusi University, and a certificate in Early Level Leadership Development from UJ. She is the second-born in a family of six girls and one boy. She was born in the small town of Wedza in Zimbabwe. Martha is married and has two children. Her parents had a lot of influence as her dad was a headmaster, and her mother was a teacher; they led a comfortable life. Growing up, Martha had low self-esteem issues. She was in the same primary school where her parents taught, and she was not considered a star performer. At one point, she was so embarrassed by her low marks that she tore her report apart and she later received counselling. After that incident, her grades started to improve as she was afraid of being put on the list of at-risk students. She went to the same high school as her older sister, who was a superstar and all rounder in academics and extracurricular activities, and this made her feel inferior at times. Martha also felt awkward being a thin, tall, and very dark-skinned girl compared to her sisters; in her culture, being curvy and light-skinned

was considered beautiful. She had to rise above her low self-esteem issues through determination, hard work, and pursuit of her passion. Martha's story is about a young woman who moved from place to place at a tender age in pursuit of her career aspirations. She crossed territorial boundaries to pursue environmental health. Martha had to learn to adjust to different religious, cultural, and geographical contexts initially within Zimbabwe, then in the Netherlands and South Africa. Martha is now pursuing her PhD while working as a lecturer and raising a young family. Her passion for environmental health has sustained her throughout: *"I knew that what we give to the environment is what we get – that health and the environment are related."*

A courageous career choice that propelled Martha in her career

The most courageous choice that Martha made had to do with her traversing unfamiliar territories in pursuit of her career aspirations. Initially, Martha moved from an urban area to a private, Christian, rural university about 90 km from her hometown in Zimbabwe – that had a completely different belief system to hers – to study her Bachelor of Science in Environmental Health.

After studying at a private university, Martha wished to settle in an urban area and start her career there. However, this was not possible as she had to work in Mwenze District, a deep rural area of Zimbabwe made up of communal areas, intensive conservation areas for wildlife, large- and small-scale commercial farms, and old resettlement areas. The weather was very hot with heavy rains in summer:

"This place had hunting concessions – not what a 22-year-old with raging hormones would be looking for. It was either this wilderness or the urban area, with lights, the nightlife of dining and clubbing – what every young lady would desire. This was also at a time when I had a boyfriend who was working in the capital city of Harare with an option of moving in with him and enjoying the life of any normal lady at my age. But

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I was an ambitious young lady, so that was an easy choice to make. I took the environmental health management job! This was a new province for me, away from all my friends, family, and relatives. Only strangers awaited me, with a new language and culture. This was another difficult choice that exposed me to challenges head-on, but this moulded me into the person I am today. At such a young age I had to start managing human resources crises and make critical decisions that can cost or save a life. The responsibility was too much at first, but at the end of the first month, I learnt that what doesn't kill you makes you stronger.”

Coming straight from university – with no hands-on experience of what happens in the communities, but only theory – Martha struggled to understand some of the cultures and habits of environmental health technicians who were reporting to her. Martha was only 23 at that time, not married and with no children. She made a courageous choice of taking the challenge of running the department of environmental health in a rural district.

The challenges that Martha encountered in her career choice

When Martha took up the position of running an environmental health department, she suffered prejudice. She was not viewed as not being equal to the challenge: *“According to them, I did not know anything. But I was very confident of what I had learnt at university. I had a lot of energy and lessons to share with my professional counterparts to make an impact on the community. Even with such enthusiasm, neither my work colleagues nor the community accepted me, based on my age and lack of experience. They doubted that I would be able to make viable decisions for the community at that point, so there was a constant reference to my subordinates (who were more senior in terms of age and work experience, some were even approaching retirement at the time). However, I was eager to change the status quo and prove that a woman can make a difference. Quickly, I had to stamp my authority and make sure that I regained my power,*

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which was being undermined in my face. I made sure that I was the only person who approved and signed things off, for example housing plans, store plans, butcher plans, inspections, and risk assessments. But this was not easily accepted. Although the community members had to understand that I was the only one with the mandate to issue such approvals, they still questioned my capabilities. After the first successful approvals, this made them see that I was well equipped to assess and make sound decisions when it came to academic issues. I also decided to humble myself and made sure to consult when I had doubts or required practical experience. It was my prerogative to consult those who were deemed to have the experience.”

At the end of the year, Martha’s district was rated as one of the best-performing districts. Subsequently she gained a lot of respect and trust from the councillors, engineers, doctors, and headmasters under her district jurisdiction.

After this, Martha made a bold choice to move into academia as she wanted something that would challenge her. Initially, she joined Masvingo Poly-Technical College in Zimbabwe as one of the youngest lecturers in the country. “I say ‘in the country’ because at the time there were three colleges that were training Environmental Health – in Harare, Gweru, and Masvingo. Everyone who was lecturing at these institutions was known and no one transferred or moved posts; they were more like lifetime appointments.”

Later, Martha left her home country, and everything she knew, to move to a foreign land, the Netherlands, to enlarge her territory. Her decision was met with a lot of resistance from her family as she had just finished a university degree and she had a good job with lots of benefits that supported her family. At this point, Martha needed to equip herself with more knowledge. Moving to new territories to pursue postgraduate studies and look for greener pastures was a great test. It was anticipated that she would be getting married and settling down like her friends. However, she made a courageous choice to stop working and go to the Netherlands as a full-time student to pursue a master’s degree, at the risk of losing

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her fiancé. Being in a foreign land as the only Zimbabwean in the programme was not easy. The Netherlands is a Dutch-speaking country, and she was coming from an English-speaking country. This became the number one challenge.

“It was a tough time, from buying food I could not eat after looking at the picture on the package, to buying and returning very expensive clothes as I could not understand the Dutch language.”

Martha also had to adjust to the wet weather in the Netherlands, which was very different from her home, Zimbabwe. Despite all these challenges, Martha soldiered on; and completed her master’s degree. On completion of the master’s degree, Martha could have stayed in the Netherlands or moved to any other European country, but she decided to move back to Zimbabwe and pursue her academic career at the Bindura University of Science and the University of Zimbabwe. At the time, her options were either to stay comfortably in Europe or to go back to Africa and have a humble new beginning with the failing Zimbabwean economy. Shortly, Martha relocated to South Africa.

Martha pursued her postgraduate studies despite the difficulty in having children for eight years after marriage. However, Martha never stopped pursuing her dream career in environmental health, despite the childbearing responsibility she had. She later conceived both her two children while pursuing her doctoral studies.

“I made another bold decision and went back to Africa. I knew I had better growth opportunities in Africa compared to Europe. This was my best choice ever, as the exposure and experience I got upon my return to Zimbabwe led me to relocate to greener pastures – by African standards – in South Africa.”

On arrival in South Africa, Martha did not lose momentum. Despite her being a foreign national, she courageously applied for a job and got appointed as a lecturer at UJ. Two years into her new lecturing role at UJ, she was appointed as

HOD, an assigned function. It was a challenging post. When Martha became the HOD of Environmental Health and MPH Coordinator, there were a lot of teething problems. Martha also experienced scepticism as a young HOD and needed to prove herself before she could be trusted:

“The post of HOD at UJ was hot at the time, with a lot of uncertainties as all lecturers at the time were new and had limited experience. I chose to accept the post, knowing the challenges I would have to deal with. Being a black, foreign lady, I felt like I had an opportunity to showcase my capabilities. During my term, I experienced scepticism as a female HOD. I had to prove that I was competent. I was so focused and I ensured the successful introduction of the MPH programme – the first 100% online programme at UJ. After five years as HOD and MPH Coordinator, both the department and programme were functional. We became trendsetters of 100% online programmes at UJ, which became handy during the COVID-19 period.”

The strategies Martha used to tackle challenges to sustain her career choice

Martha had to:

- take up challenges to perform tasks she had never done before and solicited help as and when she needed it.
- make the bold decision of moving out of her comfort zone, moving from one place to another in the African continent.
- stamp her authority and made sure that she regained her power, which was being undermined.
- prove that she was competent to deliver on the introduction of the MPH programme.
- adjust to different contexts. She adjusted to different religious, cultural, and geographical contexts in the unfamiliar territories she had to go through: *“When you are in Rome, do what the Romans do.”*
- adapt to new lifestyle, new place, new language, new culture, and new people – away from all her friends,

family, and relatives: *“I have learnt that being in a different place should not hinder your progress. Find a way to work through your difficulties and still come out winning. I have learnt to keep my eyes on the ball and not lose focus.”*

What Martha learnt from the experience

Martha learnt to:

- overcome low self-esteem issues by accepting things she could not change. Though easier said than done, she always looked at the bright side.
- concentrate on her strength and feed that aspect with positivity.
- persevere and complain less about any situation, always pushing and never giving up.
- soldier on with the limited resources to achieve her career aspirations; never to fear failure due to circumstances.
- work hard to cope with her university and academic work as an average academic performer.
- stop focusing on being afraid of what could go wrong, and start being excited about what could go right: *“My experiences taught me that your worst fears teach you that what doesn’t kill you makes you stronger.”*
- adopt a teamwork and consultative approach: *“Through teamwork and shared vision, the teething problems in the department were resolved.”*

The advice Martha gives to young people pursuing their careers

- Find a way to work through your difficulties and still come out winning.
- You don’t have to be afraid of new things; there is always the first time: *“When I took responsibility for the introduction of the 100% MPH online programme, I had no clue about what I had to do. I had to learn everything to implement this*

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task. This was a humbling experience which taught me that no matter how many mistakes you make or how slowly you progress, you are still ahead of everyone who is not trying.”

- Go after your goals because no one is coming to do it for you. Once you have fulfilled your goals, you will have a sense of fulfilment and achievement which will propel you to go forward.
- Serve with humility, loyalty, and integrity in whatever you do, then you will reap the greatest results.
- Find a mentor who will encourage you along the way as a career journey can be daunting without support: “*Prof Refilwe Phaswana-Mafuya is one such person.*”

17. Leaving a Comfort Zone to Pursue Doctoral Studies Against All Odds

Betty Sebati

*BSc Life Sciences,
BSc Physiology Hons,
MSc Physiology*

Biography

Betty Sebati is currently a PhD student and research assistant at the SAMRC/UJ PACER. She holds a BSc in Life Sciences, a BSc honours in Physiology, and an MSc in Physiology from the University of Limpopo (UL). She obtained an award as the third-best MSc research presenter in the School of Molecular and Life Sciences, UL Faculty of Science and Agriculture Research Day. She previously served as a research fieldworker and junior lecturer. Betty was born and brought up in a village called ga-Lekgothoane, ga-Molepo in Limpopo Province. She is a mother to a young daughter and is the last-born of four siblings, two brothers (one late) and one sister. Her father was an administrative worker at a metal ore mining company (currently retired), while her mother worked in retail.

Betty's childhood was relatively comfortable as she had all that she needed. During her primary education, she was an average-performing learner and felt reserved as villagers put pressure on her academic performance, given the fact that her parents were well known and respected. When she finally went to high school, which was a few villages away and where she was unknown, she felt like she could be herself. She was more confident and excited to start anew in a new environment. Her academic performance improved; she became one of the top three learners until Grade 12. When she was in Grade 10,

there was an educational programme run by Wits University called the Targeting Talent Programme (TTP), for which eight top learners from Grades 10 to 12 were chosen, and she was one of these. The learners were taken to Wits during school holidays to take extra lessons in mathematics and science, as well as computer studies. This prepared her for varsity life and its challenges.

A courageous career choice that propelled Betty in her career

Thus far, the most courageous career choice Betty made was to turn down a great job offer which she needed to provide for herself and her family. She had been in temporary junior roles and had been searching for a stable job. However, when she got offered a job simultaneously with an opportunity to pursue her PhD, she chose the latter. She made a hard but courageous decision because she knew that it was for the best. Prior to this, she had taken two unintentional gap years from studying, wishing to do a PhD, but the odds were against her. So, when she finally got the chance, she did not want anything to disrupt it.

“When I was at the crossroad of whether to pursue a full-time PhD or to take the job offer, I went through moments of doubt and guilt that my plans for my personal life and family wouldn’t fall into place immediately, as they would have if I had taken the job offer. I felt sad and helpless that I would not be able to get my daughter the best education. However, a few months down the line, I felt content that I had made the right choice as my decision would impact positively on my daughter’s life in the long run. Moreover, her seeing that I followed my passion and vision will inspire her to believe in hers later and to know that she can achieve anything she puts her mind to.”

Betty was fascinated by the world of research and how knowledge can really make the world a better place. *“It was during my honours degree that I knew the path I was meant to take, because I could relate easily to the activities and contents I*

17. Leaving a Comfort Zone

was dealing with research-wise.” Not struggling to relate to research, as new as it was, gave her the confidence and pushed her to be the dedicated young woman that she is, who is driven by progress: “For everything that I did, I could see the amazing results, including awards and publications that confirmed I was doing something right, which was encouraging.”

“I am now working hard in pursuit of my PhD under the supervision of Prof Refilwe Phaswana-Mafuya and Dr Edith Phalane, while at the same time being exposed to novel and ambitious research studies within the SAMRC/UJ PACER EMU.”

The challenges that Betty encountered in her career choice

Betty took a courageous decision to decline a stable and financially generous job to pursue her doctoral studies even though she knew that she desperately needed the job to support her family. Although the job could have put her in a better position to financially assist her father (who is a pensioner) and her siblings who have unstable jobs, she opted to pursue her studies as she knew that it would eventually contribute to a better life for her and her loved ones, including her daughter’s education. Taking this decision required her to move out of her comfort zone; she had to relocate for the first time from Limpopo to Johannesburg, where she had to start afresh away from the support and company of her loved ones. She had to learn to adjust to a new environment. *“Being a proud villager, I found it big and intimidating as I had to adapt and find my way through it, having to find an affordable place to stay, find the university location all alone for the first time, and make it through that daily horrendous traffic that initially made my heart skip a beat as I feared bumping into other motorists’ cars. I had to adjust to higher living expenses at a time when I was only earning a stipend. I left my comfort zone and endure all the above to pursue my PhD studies. Nothing can stand in my way.”*

“Since I started pursuing my PhD, I have had tremendous growth and advancement in my skills due to the support of

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my mentor Prof Refilwe Phaswana-Mafuya working with Dr Edith Phalane. I obtained departmental research committee, higher degrees committee and research ethics approvals for my PhD proposal. I wrote a systematic review paper for the first time in my life. This first paper for my PhD paper has been accepted for publication in an internationally accredited journal. I have presented my research project at national conferences, co-authored highly impactful manuscripts, and obtained a scholarship from the SAMRC. I have been appointed as one of the 600 young scientists to attend the Lindau Nobel Laureate meeting. This has brought a lot of publicity. Further, I have received the Department of Science and Innovation (DSI): Ndoni Mcunu Doctoral Fellowship at the South African Women in Science Award (SAWISA) Ceremony. It is an exciting journey and I am looking forward to more that is definitely coming.”

The strategies Betty used to tackle challenges to sustain her career choice

Betty had to:

- forfeit a job offer that she needed to better her education which would enable her to realise her dream to venture into academia.
- move out her comfort zone; she had to relocate for the first time from Limpopo to Johannesburg, where she had to start afresh away from the support and company of her loved ones.
- leave her child with the grandparents to focus on her PhD studies full time: *“I am grateful for my supportive and encouraging parents, siblings, and partner. My parents continuously remind me that education is the key to everything and that I should reach where they could not.”*

What Betty learnt from the experience

Betty learnt to:

- adjust to a new environment; she moved from a rural life to big city life.
- consider personal circumstances and vision when making life- and career-changing decisions.
- work hard and not limit herself or convince herself that she cannot do or learn something.
- think about the impact of her decisions: *“My decision may motivate my peers or young people in my village to realise that they can pursue any journey they envision in their lives, even if they don’t have footsteps to follow. They can carve their own path.”*
- do her best with what she has: *“I am not looking back. I encouraged myself that the path I chose to pursue would bring far better opportunities in the near future, and I am very appreciative of the path I have taken and the recognitions I have received as a young scientist. I have evolved to become a better early career scientist, hence there are no regrets.”*
- rise above challenges: *“Through it all, I reminded myself that it wasn’t the end of the world.”*

The advice Betty gives to young people pursuing their careers

- Have a plan for your career: *“From the moment you enrol at school, know the next step and the possibilities of what the path you have chosen will bring you. Do not wait to figure it out when you are doing your final year”.*
- Give your all to every opportunity you are given, regardless of how big or small it might be, because that is how we develop and realise our strengths.
- Do not compare yourself with other people; strive to become the best version of yourself.
- Follow your passion; do not live with regrets: *“We simply all have different journeys with varying paces, curves, and turns”.*

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- Believe in yourself and your vision, even when other people do not. You are the driver of your own journey and if you can see the path you want to take then that is enough.
- Do not let temporary setback affect your vision: *“As with anything in life, sometimes things do not go as one has planned and envisioned due to uncontrollable factors and unforeseen circumstances. Such moments may bring discouragement. However, one should not let such momentary hiccups blur their vision; with experience comes lessons and growth.”*

18. Transforming from Barrenness to Fruitfulness while Achieving a Data Science Career

Cynthia Adobe Asante

*Bachelor of Arts Information Studies and Statistics,
MSc Industrial Mathematics,
MPH Epidemiology and Advanced Statistics*

Biography

Born in Accra, the capital City of Ghana, Cynthia Adobe Asante currently works as the data manager of the Ghana AIDS Commission (GAC), now taking a new role as the officer responsible for strategic information at The Joint United Nations Programme on HIV/AIDS UNAIDS Ghana Office. She is the first daughter and second-born child of her parents. Cynthia holds an MPH from the University of Ghana, a MSc in Industrial Mathematics, and a Bachelor of Arts in Information Studies with Statistics from the Kwame Nkrumah University of Science and Technology (KNUST). She is a monitoring and evaluation (M&E) specialist with over ten years' experience in health management information systems (HMIS), M&E, and research. In her previous role as the data manager of the GAC, she plays an oversight role of coordination, management, M&E of HIV and AIDS data in Ghana. Cynthia has extensive experience in data science, designing and implementing M&E and health information systems. Since 2014, Cynthia has been the country rapporteur and coordinator of the Global AIDS Monitoring (GAM) Report submitted to UNAIDS on the progress of the HIV epidemic in Ghana.

She is an experienced trainer in HMIS, M&E, and data quality assurance systems. She has championed several research projects in Ghana, including the Integrated Bio-Behavioural Surveillance Survey for Female Sex Workers, the Integrated Bio-Behavioural Surveillance Survey for Men Who Have Sex with Men, Key Population Implementation Science, Ghana Modes of Transmission, development of the Key Population Standard Operating Procedure, the National HIV Data Management Manuals, and evaluation of the Key Populations programme implementation in Ghana.

A courageous career choice that propelled Cynthia in her career

Cynthia migrated to the UK in 2004 to seek greener pastures after completing her undergraduate studies. To the disappointment of her dream, instead of greener pastures, she was plunged into considerable hardship in her quest to secure a job with the temporary visa she possessed at the time. With a firm determination to realise her ambition at all costs, she reached deeper still to overcome in this adventure of the survival of the fittest. She worked as a factory worker running 12-hour shifts, holding two jobs at one point, taking a two-hour bus drive to do a 30-minute cleaning job as an immigrant. This made her feel she had lived the “greener pastures” dream well enough and, in response to parental advice, she decided to return to her home country after two and a half years. This decision was reached after her parents had implored her to return to Ghana to pursue a professional career because of the unbearable conditions in the UK at the time and the fact that job opportunities were springing up rapidly in her home country. After purchasing her return ticket, she had only £500 as a returnee (or, as they say in Ghana, a “bogger”). Her consolation was that she was going back home to do her national service and get a stable job. She also envisaged that her partner at the time, who was pursuing a postgraduate programme in the UK, would join her in Ghana to finally tie the knot and start a family. That was only a mirage.

The challenges that Cynthia encountered in her career choice

Cynthia had a fair share of life's struggles in her journey, but this later turned into breakthroughs from barrenness to fruitfulness to a fulfilling career in data science. God remembered her!

On this path, her parents had already enrolled her to commence her national service as a requirement for every undergraduate, post-graduation. She was assigned to a reputable organisation but was informed that they had too many personnel and did not need additional recruits. After several unsuccessful attempts to find her an organisation in which she could do her national service, a former work colleague of her dad recommended her to a new government audit firm. This was an opportunity that she did not undervalue, and which opened the door to her professional career. She was given a permanent appointment after national service to work as the first employee of the M&E Division in the GAC. Through her initiative, the organisational M&E Plan was developed with support of a state organisation responsible for providing support to institutions. That was her first professional achievement.

Intrigued by the success stories of people who had travelled abroad, Cynthia's novice childhood mind had devised a blueprint for her success in life: either travel abroad so she can be successful, educate herself to PhD level and work hard, or eventually marry. Well, she ended up accomplishing all three wishes: travelling abroad, educating herself (PhD in the offing) and getting married. But her marriage dream was not to be until her return to Ghana. She started her career with a lot of hope and optimism. However, after some years in the corporate world, the reality dawned on her that she needed to invest time and resources to upgrade herself academically in addition to her training on the job to make her more competitive in her profession. She started a part time master's programme in industrial mathematics, a male-dominated area. In her class, there were only three females, and she was the youngest of

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them. Not an easy experience when starting a professional career and taking a master's programme (albeit part-time), but she had a supportive boss who encouraged her to live her dream and reach the furthest academic feat possible. In 2011, she joined the GAC, as an M&E officer. She worked for two and a half years and applied for the position of data manager when it was vacant. She later withdrew the application due to the perceived fear of not being able to excel. This fear was manifested because of the demands of the job and feedback she received from some key people she consulted. But the director general at the time, being an empowered woman, encouraged her that it was a golden opportunity to challenge herself and directed her to engage one director who was a firm believer in supporting others to progress in life to assist her prepare for the interview. Even though the director was no longer with GAC and out of the country, they had scheduled preparatory sessions and thankfully, she passed the interview.

Cynthia married a year after joining the GAC, and assumed a new role as data manager at the head office, which was a fast-paced environment and not an easy ride to take off. Responsible for coordinating HIV and AIDS data, part of the job involved working on a global fund core team in GAC as the focal person for data, ensuring data quality, completing dashboards, and monitoring programmes, training M&E professionals, and supporting the National Estimates Team (NET) to generate HIV national and sub-national estimates for planning and decision-making, among others. Her greatest achievement was leading Ghana to develop the unique identification system (GKPUIS) which is a public health surveillance system for key populations and has now expanded to capture data for the general population.

While she was making strides in her profession, her marriage was "deficient". After eight years of marriage, she had not been blessed with the fruit of the womb and although she was happy and enjoying life with her partner, they were sometimes reminded by well-meaning friends, colleagues, and family that they were delaying childbirth. Some made derogatory remarks about her seemingly suggesting that

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she might have had several abortions committed in her early years which caught up with her when she needed to conceive. Cynthia once empathised with a pregnant woman when she saw her in so much pain looking at her facial expression, and the woman's reaction was "*Mind your own business.*" For most women, their in-laws would have been their biggest headache on this subject, but for Cynthia, it was the opposite. She got married to the only child of her mother-in-law whose own attempts to have additional children were not successful. Therefore, she was already familiar with the terrain and understood her plight.

Cynthia and her partner got their breakthrough during the heat of COVID-19. Although she was involved in a car accident while seven months pregnant, her twin pregnancy was sustained. God turned her misery into history.

"It still beats my imagination that after several failed in vitro fertilisations, intrauterine insemination, and herbal concoctions, God remembered me and gave me and my partner a gracious gift. This prompted me to name one of my children Zachary and the other one Zane. God's timing is just phenomenal."

The strategies Cynthia used to tackle challenges to sustain her career choice

Cynthia had to:

- leave her "greener pastures" dream in Europe to take that bold step of faith, entrusting an unknown future to an all-knowing God.
- invest time and resources towards her professional development.
- work and study simultaneously.
- pursue her master's programme in a male-dominated area: industrial mathematics.
- rise above the derogatory remarks made regarding her difficulty to conceive a baby.

What Cynthia learnt from the experience

Cynthia learnt to:

- persevere through unsuccessful attempts to do her practicals.
- be consistent in taking steps in the right direction: *“I have learnt not to cease in my efforts but rather strive to work every single day in fulfilling my passion.”*
- never give up or get affected by the anticipated failures along the journey: *“I have never given up on something I really wanted.”*
- wait patiently for the right time: *“Although sometimes it was difficult to wait, it was more fulfilling to wait than to rush and regret.”*
- be self-disciplined: *“The key to success is self-discipline and working hard.”*
- be goal-directed: *“Always work towards a dream, a vision, and a goal to achieve.”*
- acknowledge the power of networks, both professional and personal.
- appreciate her worth as a woman: *“I have learnt over time that a woman is whole, phenomenal with or without children, marriage and all the societal prejudices.”*
- appreciate challenges as they can become breakthroughs: *“Out of barrenness came fruitfulness.”*
- rise above her fears.
- never under-value any opportunity given.
- accept there is no blueprint for success.

The advice Cynthia gives to young people pursuing their careers

- Dream big, do not limit yourself. There is so much you can achieve beyond your wildest imagination.
- Work hard at it, you will see the results. This will motivate you to do more and achieve great things.

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- Challenge yourself to become a better person; do tasks that you never perform so that you learn and develop skills that will become handy in your career progression.
- Never doubt the power of believing in a supreme God. He always provides when you least expect.
- Always know that you are more than capable: *“I recall that my former director general said I should not rescind my decision to apply for the vacant position of a manager because of the discouraging feedback I had received from other people. She said, ‘They are not God. They are mere mortals. Prepare for the interview and disregard their comments.’ I did so, and I obtained the position. Always know that you are more than capable of navigating the challenges that come your way if only you believe in yourself.”*
- Have the courage to look in the face of adversity and still be able to convince yourself that you will be able to pass through the hurdles of life.
- Be committed to personal and professional growth so that you can become the best version of yourself.
- Never succumb to negative or pessimistic people, remain positive in all your endeavours.
- Tap on available opportunities and make the most of these because one opportunity can change your career forever.
- Listen to the voice of reason, the mentors. Their expertise and insights can help guide you in the path as they have already done so.

19. Defying the Odds, Either Push or Pull

Rita Afriyie

*BA Secretaryship,
PG Certificate in Business Administration,
MA Development Management*

Biography

Rita Afriyie was born and raised in Abeka, a suburb in greater Accra, Ghana. She is the second child of her parents, and serves as a kind of foster mother to her siblings. Rita is a dynamic professional with over ten years of working experience in development management and health issues, particularly in government, civil society, and the private sector.

She holds a Master's degree in Development Management (MDM) from the University of Westminster (UK), a Postgraduate Certificate in Business Administration from the Ghana Institute of Management and Public Administration, and a Bachelor's degree in Management Studies from the University of Cape Coast. She has demonstrated expertise in programme development, health communication, and community outreach. Her area of specialty is designing and implementing health education programmes that improve the health of underserved populations. The MDM gave her a solid foundation and strands from different disciplines such as management, social work, public policy, and development studies to tackle the multifaceted problems she encounters in the social sector.

A courageous career choice that propelled Rita in her career

Rita's professional career began as a personal assistant after completing her university education, and gradually

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manoeuvred through to become a regional technical coordinator in the greater Accra region for the Ghana AIDS Commission. *“Failure to pursue any activity for fear that you may fail, is a manifestation of your failure for doing nothing.”* Inspired by this maxim, Rita forged ahead even though she had had a lot of lost years of studying due to lack of support from her father which resulted in self-doubt. Rita felt that her past has been a perfect foundation to teach her everything about her career and life. She weighed the risks against the benefits of becoming a public health specialist and decided to develop contingency plans. During that period, she did not have the requisite skills to enable that courageous decision but decided to align her goals and personal philosophy away from her comfort zone and advance her career.

Rita went to the UK to pursue her postgraduate studies. When Rita arrived in the UK, she challenged herself to not allow her dream to be derailed by the difficulties that beset her. Having no external support for school fees and personal upkeep, Rita had to take up menial part-time jobs to raise money for the advancement of her career. Rita always had the energy, motivation, and passion to pursue a career as a public health consultant, though her initial academic background focused on business-related matters. She used her position at the Ghana AIDS Commission as a vehicle to channel all of her energies by providing her with viable opportunities for diversified skill development through which she became a management and public health specialist. Rita’s current role as a technical coordinator provided her with the technical and analytical expertise to assist in: *“the planning and supervision of sub-projects relating to HIV and AIDS, and the undertaking of activities related to the provision of technical services to people infected and affected by HIV and AIDS, coordination of regional activities in the promotion of behaviour change, and dissemination of information via information education communication materials.”*

“Most women in Africa who are not married are sometimes discriminated against. Although I am not married, I have been

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able to rise against all the odds to achieve my professional dream to my full potential. I have never been apathetic in what I do and strive to achieve more.”

The challenges that Rita encountered in her career choice

Rita experienced her fair share of challenges: *“The foregoing narrative might paint a misleading picture that my life has been blessed with unstinting progression from one rung of the ladder to another, but that has not been the case. It has been full of setbacks.”* In her early twenties, Rita struggled to find footing in her career due to lack of support from her father. She was not advancing as fast as she perceived other women to be. She was plagued with self-doubt and had a role to support her three siblings to further their education. *“Despite this struggle, I had to take a bold decision to work part-time in the evenings with a marketing company to promote Unilever Ghana products and save funds to support my education and my heart’s desire to attain a master’s degree. Though I was not financially sound, I gained admission to Westminster University in London, and I decided to pursue the programme despite not fulfilling the payment of the admission fees.”*

The strategies Rita used to tackle challenges to sustain her career choice

Rita had to:

- challenge herself to not allow her dream to be derailed by the difficulties that beset her. Having no external support for school fees and personal upkeep, Rita took menial part-time jobs to raise money for the advancement of her career.
- develop new skills and use the skills to effect change through mentorship of young professional women and provide an environment of collegiality and professionalism for institutional growth.

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- align her goals and personal philosophy away from her comfort zone and advance her career.
- weigh the risks she had to take against the benefits of becoming a public health specialist and decided to develop contingency plans.
- use her position at the Ghana AIDS Commission as a vehicle to channel all of her energies; this provided her with viable opportunities for diversified skill development through which she became a management and public health specialist.

What Rita learnt from the experience

Rita learnt to:

- go beyond just having a vision. She had to believe in it; be passionate about it and, more importantly, persevere through the odds until it materialises.
- develop contingency plans to realise her dream career.
- appreciate her past as it laid a firm foundation for her career journey.
- rise against all the odds to achieve her professional dream.
- never become apathetic in what she does and strive to achieve more.

The advice Rita gives to young people pursuing their careers

- Follow your passion in pursuit of your dreams if you want to excel.
- You should view setbacks as learning curves that help you gain valuable knowledge in times of adversity rather than bad experiences.
- Ask for clarity from those who walked the path before you and pose thoughtful questions for guidance in setting personal goals.

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- Never let fear or self-doubt prevent you from pursuing your dream.
- It is never too late to pursue your dream career; seize opportunities that come your way at any given stage in your career.
- Weigh benefits against risks in whatever you do so that you can make the most calculated decisions.

20. Key Lessons Learnt From Journeys of the Women Featured in the Book

The extraordinary women in this book demonstrate that their successful career journeys were not once-off, overnight events that simply showed up mysteriously and miraculously the next day by default. The success of their careers emanated from a series of conscious, tough choices that were made consistently and persistently amidst difficult circumstances. However, these women audaciously pursued their careers through it all to arrive at the destiny they longed for. They chose courage over fear, which became a defining characteristic of their careers.

Although the journeys of the women in this book are unique in terms of type, scope, and value-add, as they each took their own course in a different way, the challenges they went through are comparable. Throughout their career journeys, many of these women faced thick and heavy walls of gender-insensitive environments, gender stereotypes, implicit biases, gender discrimination, harmful gender norms, stalled career progression, prejudice about academic abilities and intellectual authority, demeaning attitudes, exclusion from career development opportunities in some cases, work-life balance challenges without much support, and marginalisation with very little regard, if any, for their intersectional realities. They had to constantly deal with limiting social norms and beliefs about the role that women can play, as well as unwelcoming, unfriendly, male-dominated environments characterised by patriarchal tendencies as indicated in literature.^{7-10, 21,22}

The capabilities of the women in this book are undeniable and incontestable. Many of them went through the double trouble of simultaneously working and studying to make ends meet. Some of the women declined attractive

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job offers that could provide a decent salary to support their families so they could finish their studies promptly. They went ahead with their studies despite challenges in the academic promotion or progression of women. Initially, when they went to university, many of them had no intentions to pursue postgraduate studies. They wanted to have a junior degree, secure a job, help their parents, as well as escape poverty and appalling rural conditions. However, when they got the opportunity to study, they made it despite the high postgraduate student drop-out rates and relatively long time to complete postgraduate studies, especially PhDs.^{13,14} They have become a scarce resource as the number of women who have postgraduate qualifications – let alone PhDs – remains low on the African continent.¹²

Although the odds of success in their roles seemed very small and impossible, the women stuck to the course. They withstood the temptation to take a different route. These women persevered through disappointments and welcomed support to make a difference. It took extraordinary effort for them to make it through their careers. They fought the impulse to give up.

Initially, some of the women found themselves in a dark room of negatives that made them feel very sceptical that they could succeed in their careers. They felt like they had a lot to do to be perceived as competent. They sometimes felt overwhelmed and trapped by intimidating circumstances as well as enveloped by a tidal wave of vulnerability, fear of the unknown, and anxiety. They asked themselves: “*Who am I to succeed in an academic career?*” This threatened not only their academic abilities and intellectual authority, but also their self-esteem, which had the potential not only to confine and distract their career advancement, but also to drive them away from such career adventures for good. However, these courageous women braved it. They moved through the echelons in non-diverse environments, making choices that would enable them not only to survive in all spheres but also to thrive. They survived and thrived in their careers against all odds and, over time, they went through the courage

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development process. They rose through the ranks, grew in knowledge, and made it in difficult situations that had the potential to limit their career aspirations. They broke social, economic, and cultural barriers at different levels, confronted their fears, went the extra mile, leapt eagerly to opportunities for continuous self-improvement, and made efforts to balance work-life demands.

There are lessons to learn from these extraordinary women. They:

- defied deep patriarchal tendencies, stereotypical views, expected cultural norms and practices, and arbitrary rules through their accomplishments. They grew exponentially and expanded their intellectual territory beyond culturally and socially expected limits.
- positioned themselves to perform beyond expectation. They never allowed themselves to be confined to some expected or imposed limit due to gender, race, class, or creed; their socio-demographic characteristics do not limit their potential.
- defined their own parameters and set limits based on their innate abilities, vision, targets, and resources. Their work contributed to national development, impacted lives positively, and advanced strategic objectives of the organisations they worked in. They never lost focus of their dreams and desires.
- immersed themselves in a world of new possibilities that others had not seen, stretched their abilities to the limit, took maximum advantage of their strengths, unleashed their hidden assets and reservoirs of giftedness, talent, skill, grit, emotional intelligence, femininity, and strong relationships.
- ventured into new areas, embraced the unknown, welcomed innovative ideas and new perspectives, pursued new roles, and took on unfamiliar tasks, bigger assignments, and additional responsibilities for their own good.

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- approached each opportunity as if it was the only or last one.
- utilised resources and opportunities at their disposal, leaving no room for idleness – an idle mind is the seat of the devil.
- did their best in little things which gave them the confidence to do greater things and consistently exceeded expectations.
- ventured into new roles, unacquainted areas, unfamiliar tasks, unacquainted territories, bigger assignments, and additional responsibilities. They embraced the unknown, for their good. This stretched their abilities to the limit.
- exercised self-discipline in the face of trying circumstances so as to not to foul any single moment they had. They used their ability to focus, dedication, persistence, hard work, and determination as an antidote against any ill-intended pushing or pulling forces. This helped them to consistently exceed expectations beyond their wildest imaginations.
- broke barriers that sought to capture and confine them, consciously or subconsciously, to preconceived or prescribed levels. They spoke openly to those who held positions of power and responsibility against demeaning attitudes that had the potential to stifle their career prospects and efforts. They stood firmly for what they believed was fair and just, even though they were in the minority and risked being unpopular. They overcame their fears.
- practised active citizenry, e.g. giving inspirational talks on women's issues, targeting events such as National Science Week, International Day of Women and Girls in Science, Women's Month, and related gatherings. This developed a "can-do" attitude in everything they ventured into in life, regardless of the evidence that pointed them in the other direction. They saw impossibilities become possibilities. They also discovered their strength and ability to thrive, self-regulate, and remain calm and focused in the face of difficulties.

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- stopped pity parties. They never allowed themselves to be pitied nor pigeonholed into mindsets or subtleties because of their gender, race, class, or creed. They let go of their inner feelings of inadequacy and freed their spirits to be the best they could be, despite the environment that seemed to suggest the opposite.
- identified and dealt with any internalised negative attitudes towards themselves created by themselves or others due to the constraining external environment that could impede their career progression.
- stepped up their game and allowed change to begin with them.
- used focus, dedication, persistence, hard work, determination, and trustworthiness as an antidote to any form of direct or indirect side-lining, exclusion, isolation, marginalisation, or any ill-intended pushing or pulling force.
- solicited support from more experienced and resourceful individuals, their mentors, who became sounding boards to get ideas that could help them thrive in their work.
- tapped into capacity development opportunities to develop their competencies and intellectual capacities, which became evident in their career advancements and scholarly identities.

However, women cannot be left to deal with the macro systemic challenge of gender inequality on their own. Radical action is needed to change the status quo together with the involvement of a range of stakeholders.

21. Synopsis of Advice to Young Women Pursuing Careers in Academia

Follow your passion. The pursuit of your passion will enhance your mental health, contentment, self-discovery, and self-awareness. It will sustain and keep you interested in what you are doing: *“I think passion is the secret ingredient that drives hard work and excellence.”* – Kelly Ayotte

Focus on set goals. Look beyond who you are; focus on who you can be. Put your mind not only on where you are but also where you can be. Stay committed to the course and remain faithful in the pursuit of your career goals despite challenges: *“There is something so special about a woman who dominates in a man’s world. It takes a certain grace, strength, intelligence, fearlessness, and the nerve to never take no for an answer.”* – Robyn Rihanna Fenty

Dream big. Do not limit yourself: *“Every great dream begins with a dreamer. Always remember, you have within you the strength, the patience, and the passion to reach for the stars to change the world.”* – Harriet Tubman

Exert yourself to complete what you have started. Make yourself responsible and accountable for every action no matter the consequences: *“The question isn’t who’s going to let me; it’s who is going to stop me.”* – Ayn Rand

Exploit opportunities. Make use of available options and opportunities to become a better version of yourself and to make this world a better place: *“Never doubt that you are valuable and powerful, and deserving of every chance and opportunity in the world to pursue and achieve your own dreams.”* – Hillary Clinton

Work hard. Develop the determination, resilience, tenacity, perseverance, and patience to make things work in the face of difficulties. Nothing comes easily in life: *“Dreams are lovely, but*

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they are dreams. Fleeting, ephemeral, pretty. But dreams do not come true just because you dream them. It's hard work that makes things happen. It's hard work that creates change." – Shonda Rhimes

Never give up easily. Work repeatedly on whatever you start. Put in extra effort, keep trying, repeating, until you have achieved the ideal you desire. In the end, consistency of purpose and resilience will sustain you in all your endeavours: *"Winners never quit, and quitters never win."* – Vince Lombardi

Never allow challenges to distract you from your vision. Challenges are necessary for success. Some of the challenges can become a wake-up call and reality check: *"Occupy, fill, and cement your space unapologetically."* – Minnira Katongole

Stand for what you believe in. Never allow circumstances to dictate terms: *"Each time a woman stands up for herself, without knowing it possibly, without claiming it, she stands up for all women."* – Maya Angelou

Recognize your uniqueness. Every woman has something to offer: *"Women have a unique power of being able to look at the world's problems and discover solutions that transform lives and make the world a better place."* – Dr. Ayanna Howard

Align yourself to sources of support. Surround yourself with people who believe in you; who give you courage in your endeavours; who inspire great ideas; who see you achieving great things: *"Choose people who will say your name in a room full of opportunities."* – unknown author.

Do not allow yourself to be muted. A woman's power is in sharing her views and opinions: *"Women raise up their voice not so that they can shout, but so that those without a voice can be heard; we cannot all succeed when half of us are held back."* – Malala Yousafzai, paraphrased

Learn from your mistakes: Be sincere about your faults. Take a step back, consider the situation, take responsibility, and acknowledge areas that need development and work on them to become a better person: *"The biggest room in the world is the room for improvement."* – Hemut Schmit

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Be courageous. Courage is the foundation of success: *“Courage is the most important of all the virtues because without courage, you can’t practise any other virtue consistently. You can practise any virtue erratically, but nothing consistently without courage.”*
– Maya Angelou

Be optimistic. Do not harbour negative feelings; have a positive view of yourself: *“Nothing has ever been achieved by the person who says it can’t be done.”* – Eleanor Roosevelt

Be flexible. Learn to adjust to new situations: *“Rarely are opportunities presented to you in a perfect way in a nice little box with a yellow bow on top. Here, open it, it is perfect. You will love it. Opportunities – the good ones – are messy, confusing, and hard to recognize. They are risky, they challenge you.”* – Susan Wojcicki

Appreciate your worth. There are unique innate abilities that women have that make them phenomenal: *“As women, we have to start appreciating our worth and each other’s worth. Seek out strong women to befriend, to align yourself with, to learn from, to collaborate with, to be inspired by, to support and to be enlightened by.”* – Madonna

Believe in yourself. Have a can-do attitude: *“Women need to believe that they can do whatever they set themselves to do, despite the society’s pressure and people telling them otherwise. You can only have the power to be a changemaker if you believe in yourself.”* – Meaza Ashenafi

Strive for excellence. Guard against mediocrity; never settle for less. Endeavour to excel in whatever you do: *“My mission in life is not merely to survive, but to thrive; and to do so with some passion, some compassion, some humour and some style.”* – Maya Angelou

Leave your comfort zone. It is important to step out of your comfort zone to create who you would like to become: *“I always did something I was a little not ready to do. I think that’s how you grow. When there’s that moment of wow I am not really sure I can do this and you push through those moments, that’s when you have a breakthrough.”* – Marissa Mayer

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Leave your past behind. Your background does not determine your destiny: *“If you don’t get out of the box you’ve been raised in, you won’t understand how much bigger the world is.”*
- Angeline Jolie

22. A Call to Action to Change the Status Quo – The Time is Now

The journeys of women in this book, supported by up-to-date literature, show that gender parity in academia persists. Progress towards gender equality has been slow paced despite a range of policy interventions to mitigate it.¹⁻³ The course of action needs to be changed to reverse the situation and combat the prevailing gender disparity in academia. Women cannot be expected to survive in untenable situations on their own without any meaningful support.⁴⁷ They cannot be required to devise their own strategies to push past walls of resistant mindsets, stereotypical attitudes, and patriarchal tendencies to fulfil their career progression and aspirations.⁴⁸

The time for academia to deal decisively with the challenges that affect women participation is now; gender equality should be topmost on the academic agenda, not only theoretically but also practically. Strategic leadership and decision making is pivotal in the provision of practical support mechanisms that seek to deepen gender responsive strategies for improved women's participation rates.

This section focuses on actionable evidence-based strategies and practices that institutions should develop, adopt, or adapt to address gender gaps in academia. In this regard, the author presents and describes several areas of intervention or thematic areas emanating from the contextual factors elucidated in the women's stories of success and struggle that have been narrated in the book. In this regard, the section provides practical suggestions or interventions for institutions, policy makers, and individuals to achieve gender transformative change. The proposed interventions are not mutually exclusive. In fact, the interventions are fundamentally interconnected to mitigate complex systemic factors that have consistently served as barriers to women's participation in academia.

Gender transformative change interventions to minimize the progressive loss of talent

There are various gendered structural factors that discourage female academics from entering or accessing academic career opportunities as well as push women who are already in the system to leave or leak from the pipeline as evidenced in the preceding women's stories of success and struggle.⁵⁷⁻⁶¹ The underlying driver of limited women's participation rates is the lack of gender transformative change which manifests in some form of power dynamics, social norms, and rigid structures.⁴⁷⁻⁴⁹ Gender transformative change is needed to minimize the progressive loss of talent in various career stages and to improve women's participation rates in academia.⁵⁹⁻⁶⁰ Traditional gender mainstreaming initiatives that focused on changing women have not worked.⁴⁷⁻⁴⁸

There are radical systemic interventions that academic institutions can implement to change the dynamic and shape the narrative; ultimately ensuring that women not only pursue careers in academia, science, or research but also remain in them.⁴⁸⁻⁴⁹ Such interventions can close the gap between in-depth understanding of gender inequality in academia, its consequences, implications, and meaningful change.

The interventions should focus on changing the system to become more inclusive, and equitable rather than seeking to change women to adapt to unfair and unjust systems.⁴⁶⁻⁴⁸ A tailored institution-wide agenda that reinforces stable gender governance and legislative frameworks with clear and concrete institutional milestones, measurable performance indicators, and specific timelines can take academic institutions forward in ensuring gender-transformative change.⁴⁷⁻⁴⁹ Gender-transformative change requires transparent, committed, and accountable leadership that will ensure that academic institutions not only set up the for the change process but also act on it. It also requires the availability of dedicated financial and human resources to incentivise and compensate individuals who are involved in driving gender equality in academic institutions.^{44-48,59-60} Additionally, government

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ministries can work collaboratively in recognising and incentivising academic institutions that are successfully driving gender equality. The discourses on gender equality in academia with a piecemeal agenda have not yielded the desired impact. Academia must eliminate systems, informal practices, and implicit policies that harbour gender discrimination, gender biases, and gender stereotypes which systematically disadvantage women. Such systems should be humane reflecting the commitment and cooperation to achieve a higher moral purpose, social justice, and nation building. It is the system that regulates the nature of the academic work environment and the behaviours of those in it. It is a system-wide appreciation of diversity and inclusivity that can lead to the transformation of academia.⁶²⁻⁶⁹

Creation of a gender-inclusive academic environment to strengthen women's career engagement, retention, and advancement in academia

Although the stories narrated in the book showcase women's excellence, resilience, and impact, they also demonstrate that women continue to go through dehumanising and demoralising experiences in academic environments that may affect their interest in engaging, persisting, and advancing careers in academia, science, and research. Academic institutions are still non-diverse work environments characterised by gendered dynamics such as entrenched implicit biases or harmful stereotypes, discriminatory gender norms, and patriarchal tendencies. Similar experiences have been recorded in previous studies that explored the experiences of women in academia, research, or science in Africa. Consequently, women continue to work exceptionally hard under extremely difficult circumstances to achieve their career aspirations and dreams, e.g. pursue their postgraduate studies, get nominations, prizes, awards, appointments, promotions, invitations, as well as assume management and leadership roles in academia. A radical culture change to enhance a gender-friendly academic environment is needed;

academic institutions need to move from being gender-negative, blind, or aware to becoming gender responsive and transformative.¹⁸⁻²⁴ Such interventions should address the qualitative gendered contexts and gendered cultures in academia.⁴⁹ They should challenge patriarchal systems that treat men as superior, and the harmful social norms that perpetuate the subordination of women within structures and resist change.²²⁻²³ Further, they should oppose a sense of entitlement and ownership which is often used as a weapon of power and exclusion by those in significant numbers in academia.²⁴⁻²⁷ It is critical that leaders of academic institutions drive the institutionalization of gender-friendly environments ensuring the development of effective gender equality policies, gender-equitable systems and practices to mitigate any potential disruptors.⁴²⁻⁴⁹ Ultimately, it is institutional leadership that determines the social and political environments in which academics work and regulates the power dynamics that manifests in various forms and shapes.⁴⁷⁻⁴⁸ Leaders should ensure that efforts towards improving the workplace climate to become more inclusive and diverse are prioritized, incentivised, recognised, rewarded, and resourced. Further, they should ensure that qualitative and quantitative research is undertaken to generate evidence that will guide institutional policies and practices in being responsive in addressing their unique contexts.²²⁻²⁶ Leaders should also ensure that there are efforts to strengthen the performance of women in academia to enhance a sense of belonging.²²⁻²⁴ If the leadership is not committed to the change process, there is no amount of personal empowerment that can lead to sustained gender equitable change.⁴⁷⁻⁴⁹

Adoption of the intersectional approach to address the unique needs of diverse underrepresented groups

The stories of success and struggle as shared by women in this book bear testimony to the dynamics of the far-reaching implications of the intersection between race and gender in academic work environments beyond the male-female

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binary.³⁶ While all women face numerous barriers in pursuing academic careers, Black women who are often much fewer, being either the only one or the first one in most senior positions or in rare skills positions within academia experience additional barriers as also found in literature such as isolation, lower self-concept, lack of sense of belonging, their voices not heard, being looked down upon and may ultimately suffer more psychological exhaustion.³²⁻³⁸ Therefore, they are uniquely challenged; and this may prompt many of them to exit the academic system. Women from higher socio-economic background may feel relatively more welcomed in academic environments and seize available opportunities than their female counterparts in lower socio-economic contexts.³³⁻³⁴ This may inadvertently perpetuate selective empowerment. Thus, blanket approaches in addressing gender issues in academia have not worked effectively in reaching women that experience multiple forms of bias and discrimination. They have created new avenues of exclusion of Black women or women of colour. Interventions should explicitly address intersecting barriers that limit the possibilities of many Black women or women of colour in accessing, remaining and participating in academia.³⁵⁻³⁶ Academic institutions should utilise the intersectional approach in the legislative frameworks, strategic management, and leadership to ensure that the different identities, profiles, vulnerabilities, needs, and experiences of diverse groups in terms of socio-demographic and socio-cultural gender differences, are addressed to enhance inclusivity and diversity for all.³⁴⁻³⁷ The intersectional approach will mitigate the challenge of women in higher socio-economic backgrounds having greater chances of benefitting from gender initiatives compared to their counterparts.³⁷⁻³⁸ It will contribute towards narrowing the gap in participation rates for women from poor socio-economic backgrounds as they will have equitable opportunities. Further, it will create more career supportive environments that foster enabling, and equitable spaces where sex- and gender-related differences are valued; implicit gender biases are acknowledged and addressed, and harmful gender norms and resistant mindsets are challenged.³⁷⁻³⁸

Support work–life balance for women’s career progress and retention in academia

It is clear from the foregoing stories of women in this book that they had to navigate a complex network of work–life, daughterhood, motherhood, and parenthood. These intersecting traditional roles can affect women’s career progress, and aspirations in academia.^{37–38} Pregnancy, maternity, gender, and gendered family responsibilities may intersect with academic and professional stability as they may not be compatible with young women’s identity as academics, researchers, or scientists.^{40–42} Women, just like men, are faced with the requirement to continually publish their work while they have much more family responsibilities.^{38–39} The lack of paid parental leave, short–term contracts, childcare facilities, maternity policies, as well as pregnancy/maternity–friendly environments, put many females at an academic disadvantage, resulting in a ‘leaky pipeline’ or in women of a reproductive age re-evaluating their career aspirations or progression in academia to become more realistic.^{38–40, 62} Academic institutions should have initiatives to promote, value and support work–life balance, impact work culture and support women’s career–advancement.⁶² They should strive to create equitable opportunities and support to empower women to overcome work–life stressors and barriers they face in male–dominated environments.^{38,42} The strategies may include: recognition and appreciation of the disproportionate burden that women carry in terms of child rearing responsibilities, domestic chores, and management of the household; recognition and accommodation of the external societal responsibilities they carry (especially Black women), including working as front liners during social functions and events, among others; promotion of good practices such as not having meetings too early or too late in the day to accommodate the family–life responsibilities of women; and being intentional about holding meetings in venues that are easily accessible for women. Workplaces may also have guidelines for supporting parent care, flexible work times, career mobility options, and family–friendly programmes to broaden access to academia

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as well as harness and maximise the retention of women in academia including conducting workshops focusing on family-friendly benefits that can help them in the performance of their academic duties.⁶²⁻⁶⁹ Academic institutions need to develop clear policies for early-career academics that address how to integrate motherhood, parenthood, and professional development to ensure that women with the potential to become best researchers, academics or scientists are retained in the pipeline.⁷⁰⁻⁷⁶

Institutionalization of mentorship programmes with bias on gender-specific concerns to demonstrate commitment and enhance long-term sustainability

The journeys of women in this book point to the need for robust support of women in their career journeys so that they remain in the pipeline. Women, especially Black women have least mentorships given their underrepresentation in academia.⁷⁷⁻⁷⁹ It is critical that academic institutions have mentorship programmes and learning spaces for women to thrive in their careers. *“A lack of mentors, occasionally overt discrimination and the academy’s poor work-life balance are well-documented reasons for women’s lack of career progression.”*⁸⁰⁻⁸¹ Mentorship enhances retention in science, academia, and leadership: job satisfaction, promotions, nominations, professional and board memberships as well as acceptance by peers, sense of belonging, better salaries, performance awards, and a better work environment.⁸¹⁻⁸² Academic institutions should strengthen the culture of mentorship through integrating mentorship into their academic programmes to strengthen emerging career women’s research and leadership capacities.⁷⁴⁻⁷⁷ Women academics should be trained to act as academic mentors and advisors, offering sustained equitable professional support for career advancements; serving as role models that demonstrate that women, including Black women can succeed in academia and in STEM fields; connecting young women academics to networks; as well as ensuring equitable workloads and recognitions.⁷⁷⁻⁷⁸ Mentorship will go a long

way in smoothening young women's career paths so that they progress and stay in their career pipelines.⁷³⁻⁷⁸ Through mentorship, women can also be empowered to stand firm against demeaning attitudes and insensitivities that create a chilly climate in work environments.⁷⁷⁻⁷⁹ These may include creating platforms for advocacy and continued gender equality conversations including: webinars, workshops, discussions, lectures, panels, webinars, and debates. These discourses can go a long way in informing contextually relevant corrective measures. These activities can also be used to create a sense of community which will contribute to sustained change.⁷⁷⁻⁷⁸

Integration of gender into research, teaching, and community engagement for data driven approaches

There has been a lack of integration of gender into core academic activities. Academic institutions can promote utilisation of gender transformative research methodologies, research questions, frameworks, curricula, systems, processes, and analysis to understand different profiles of underrepresented groups to inform targeted interventions.⁴⁶⁻⁴⁷ The integration of gender in research and education will enhance a contextually embedded systemic approach that is data driven.⁴⁸⁻⁴⁹ Eventually, this will guide the allocation of gender-equitable investments, human and financial resources, opportunities, internships, fellowships, scholarships, funding, and networks leading to greater access, impact, and equity. It will responsively and efficiently address the curtailed educational experiences of many women and strengthen their career progression towards management and leadership spaces.⁴⁶⁻⁴⁸ The incorporation of gender in core academic activities may include having gender in the research agenda, indicators disaggregated by gender, conducting gender analysis, building capacity in conducting gendered research and the production of gendered data.⁴⁶ The inclusion of gender and sex analysis in research can enhance a deeper understanding of the context that can inform tailored approaches. It will also help understand gendered differences

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in recruitment, retention, and promotions; gendered data gaps; and gendered differences in affiliations to structures and programmes.⁴⁶⁻⁴⁸ These data can provide valuable insights in understanding gender diversity to guide gender transformative change. There is inadequate qualified academic staff to teach gender related courses or manage gender centres resulting in lack of gender activism; ignorance and arrogance on gender issues across students, academic and support staff.⁴⁶ There is a need to leverage the academic project for curriculum transformation. This may include leveraging support through learning opportunities, knowledge transfer, sharing best practices, obtaining political support, and solidarity.⁴⁶⁻⁴⁸

Conclusion

This book has created a platform to share women's views in navigating academia there continues to contribute towards closing critical knowledge gaps in improving the recruitment, retention, and advancement of women's careers in academia. Women's views and career journeys are often overlooked, understudied and invisible, yet they constitute a very rich source of knowledge upon which evidence-based solutions to address gender-equality can be derived. The information generated through the exploration of African women's experiences, voices, and lives not only builds on what is known about the recruitment, retention, and advancement of in academia but also has implications for decision-making and policy development towards gender transformative change. This book has not only framed academia as a dynamic environment where women's personal and professional development can be hindered due to a lack of gender transformative change but also suggests solutions for addressing this shortcoming. Clearly, dynamic, comprehensive, and holistic interventions are needed to realise gender-transformative change in academia. Such interventions will need to be monitored and evaluated throughout to ensure the achievement of the intended results, namely: the institutionalization of effective systems, policies, strategies, and practices. The interventions described in

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this chapter will likely go a long way in strengthening the recruitment, retention, career progression and participation rates of women in academia, especially Black women or women of colour. ⁶⁷⁻⁷¹ This call to action contributes towards bringing debates on gender equality in academia to the centre stage until gender transformative change is realised. This can go beyond increasing access, participation, women's voices, visibility, inspiring and empowering other women, but also promote excellence in scholarship.

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Biography of the Author

Professor Refilwe Nancy Phaswana-Mafuya (PhD, PGD (Epi), MSc (Epi)) is a qualified epidemiologist and public health scientist. She is the director of the SAMRC/UJ PACER EMU and a professor of epidemiology and public health in the FHS at UJ. She is also a part-time epidemiology lecturer on the MSc Biology and MSc Reproductive Health Programme at PAULESI based at the University of Ibadan, Nigeria as well as research supervisor to postgraduate students there. Further, she was appointed as a mentor in the Future Professors' Programme Phase II which is part of the DHET University Capacity Building Programme. Before assuming the above-mentioned roles, Refilwe served as the Deputy Vice-Chancellor for Research and Innovation (NWU)⁵⁸ – the first Black African woman to occupy this position in the institution. Additionally, she served as the acting executive director, research director, and chief research manager at the HIV/AIDS/STI/TB Research Programme (HSRC) for nearly 13 years. During her tenure at the HSRC, she simultaneously served as the editor-in-chief and executive editor of an internationally accredited African journal (SAHARA J). Refilwe has made a significant contribution in the epidemiology and public health field with >200 peer-reviewed articles (open-access, Scopus accredited and DHET listed) in nationally and internationally indexed journals, scholarly books, book chapters, inspirational books, clients/technical reports, and conference papers. Her outstanding academic and science journey has been featured in *Public Sector Magazine* (2013)⁸³, *FairLady Magazine* (March/April 2022)⁸⁴ and *Dialogue Magazine*, (August 2022)⁸⁵ and in the book “*Holding the Knife’s Edge: Journeys of Black Female Scientists*”.⁴⁵ Refilwe has been actively involved in advocacy work on gender equality in science and academia.⁶¹ She has given talks on the challenges faced by women in various platforms and events nationally and internationally including during the National Science Week, the International Day of Women and Girls in Science, Women’s month, and related gatherings as reflected by the

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pictures below. Refilwe obtained a national science award in 2017 in recognition of outstanding contribution to science.⁵⁷

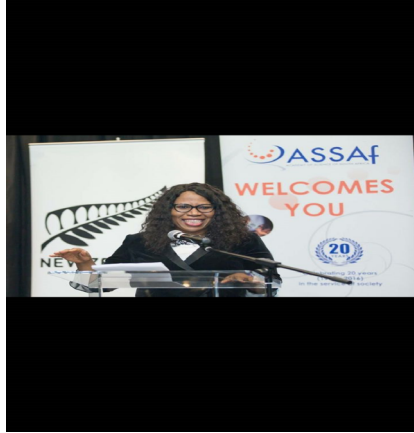
Refilwe was coronated as Queen Mother for Research and Development in August 2022 by His Royal Majesty, Daasebre Kwebu Ewusi VII, of the Abeamde State, Ghana, for having contributed to science which impacted communities.⁸⁷⁻⁸⁸

Refilwe obtained NRF rating as senior researcher from 2012 to date, ASSAF merited membership since 2008⁵⁶ and AAS fellowship since 2018, among others for her consistent contributions to science. She recently published a research mentorship book⁸² and an inspirational book on her career journey.⁷⁸

Refilwe is a socially engaged scientist; she has conducted webinars, road shows, talk shows as well as radio interviews to promote science⁸⁹⁻¹⁰³ as depicted in some of the pictures below.



Biography of the Author



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Tributes by the Women Featured in the Book

Once the writing project was completed, there was huge excitement and appreciation by the women featured in this book about the opportunity given for their voices to be heard, as expressed below:

“You are the Queen of Science; a star that is shining and polished all the time. May your glitter continue to bring light to our continent and the world.” - **Prof Nosisi Nellie Feza, Deputy Vice-Chancellor: Research and Postgraduate Studies, University of Venda**

“Good, well done in putting together this initiative. You are doing a great job.” - **Prof Esther Akinlabi, Professor of Mechanical Engineering and Deputy Faculty Pro Vice-Chancellor of Research and Knowledge Exchange, Engineering & Environment, Northumbria University, Newcastle upon Tyne**

“Thank you greatly for the opportunity and guidance throughout the compilation of the highlights of my career journey.” - **Prof Lebo Gafane-Matemane, Associate Professor of Physiology, Hypertension in Africa Research Team, NWU**

“Thank you for having a vision that never dies. This initiative gave me the courage to share my journey unreservedly for others’ edification. Thank you, my Prof and my mentor, for the opportunity.” - **Dr Edith Phalane, research manager and specialist scientist, SAMRC/UJ PACER Extramural Unit (EMU)**

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“My professor, a pathfinder, leader, and mentor. The future is bright; we are going far. Mentorship is your calling. Keep up the energy, Prof. Proud to be your mentee.” – **Dr Claris Siyamayambo, postdoctoral research fellow, SAMRC/UJ PACER EMU**

“Thanks a lot for packaging my story so well. It reads much better and brings out the key message.” – **Dr Hazel Mufhandu, senior lecturer, Department of Microbiology, School of Biological Sciences, Faculty of Natural and Agricultural Sciences, NWU**

“Thank you very much for letting me express my journey through this book. It unlocked areas that I never gave myself time to think deeply about. I now see all the possibilities.” – **Martha Chadwiya, lecturer, Department of Environmental Health, Faculty of Health Sciences, UJ**

“Thank you for the chance to be part of the priceless opportunity to contribute to the body of knowledge. Your guidance and input in shaping my story to be as clear as possible is greatly appreciated.” – **Betty Sebati, PhD student and research assistant, SAMRC/UJ PACER EMU**

“I am honoured to be part of this grand initiative that made me revisit my career from inception to date. What a journey!” – **Kagisho Phaswana, former Social Work Internship Supervisor, UJ and UNISA, managerial specialist, Independent Counseling and Advisory Services, and counsellor, Psychosocial Services, private practice**

“Cheers up, congratulations for the new vision and great ideas. I feel honoured to be part of this remarkable initiative.” – **Prof Catarina Tivane Nhampose, Academic Vice-Chancellor, SAVE University, Republic of Mozambique**

Tributes by the Women Featured in the Book

“I am in awe of your leadership; you are indeed a sister’s keeper. Your initiative reminded me of the good, the bad, and the ugly in my career journey... wow!” – **Dr Nkhensani Olga Masekoa, former senior lecturer, Public Health, School of Health Studies, University of South Africa (UNISA) and Chief Director: Mining, Minerals & Petroleum Policy Development, Department of Mineral Resources and Energy**

“This is tremendous. Great mind, great ideas, great supervisor, and great mentor. Thank you for the way you pulled my story together; I was not going to consolidate it the way you did.” – **Enireta Makanza, former PhD student and research assistant, SAMRC/UJ PACER EMU**

“Beautiful opportunity to share and give back to our society what it deserves through our own career journeys.” – **Dr Refiloe Nkadimeng-Simelane, general practitioner, private practice**

“I am glad to be on board. Thank you for the opportunity to share my story. You are so inspiring and full of energy.” – **Cynthia Asante, PhD student, SAMRC/UJ PACER EMU and Strategic Information Advisor, Department of Strategic Information, Joint United Nations Programme on HIV/AIDS (UNAIDS), Ghana**

“Thank you for giving me the opportunity to share my humble journey with the women of Africa and the world.” – **Rita Afriyie, PhD student, SAMRC/UJ PACER EMU and technical coordinator, Technical Support Unit, Greater Accra Region, Ghana AIDS Commission, Ghana**

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