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Perceptions of Board Members on the Presence of Pharmacists as Strategic Leaders of Manufacturing Pharmaceutical Companies Operating in South Africa: A Qualitative Study

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Abstract: *Life-saving medicines are produced by manufacturing pharmaceutical companies (MPCs) with operations worldwide. The COVID-19 pandemic resulted in unequal access to vaccines, which led to advocacy around health rights and MPCs needing to prioritise saving lives over profits. This study aimed to determine the perceptions of board members of the largest listed MPCs in South Africa regarding the presence of pharmacists in the strategic leadership of MPCs, as custodians of medicines. A snowball sampling method was used to identify board members of the listed MPCs on the Johannesburg Stock Exchange (JSE). The board members were approached and requested to participate in their capacity. Data were collected through semi-structured interviews. Transcription, coding and narrative thematic analysis was applied under five (5) themes with emerging themes identified. A theoretical framework was developed to describe pharmacists at the strategic leadership of an MPC. The data collected were from five (5) respondents (80% male and 20% female), with a mean age of 57 years (SD±=2,24), from medical, business and pharmacy professional backgrounds. The respondents indicated a limited presence of pharmacists in the strategic leadership of MPCs, especially the larger ones. The reasons for the limited presence included the narrow diversity of corporate and leadership skills necessary to lead at a strategic level by pharmacists. Some of the barriers to entry into strategic leadership by pharmacists included the lack of recognition of pharmacy specialisations by the regulator of the pharmacy profession, a mismatch of skills of a graduate and what the industry needs and inadequate governance of the pharmacy profession in South Africa. The respondents agreed that having a pharmacist with ambition, business skills, and experience would benefit the MPC and users of products manufactured. The role and need for pharmacists in the strategic leadership of MPCs was established. It is clear, however, that while pharmacists have value in the leadership of MPCs, their entry should be supported by diversifying their skills in business, leadership and corporate management to extend their value beyond the technical level.*
Keywords: pharmacists, strategic leadership, professional presence, manufacturing.
JEL Classification: O15, I11.

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Introduction

The pharmaceutical industry is one of the key industries in the world, as life-saving medicines and medical devices are produced in this industry (Bhatti et al., 2021; Merkuryeva, Valberga, and Smirnov, 2019). While the industry is diverse, with multiple functions at different levels, such as drug discovery, manufacturing, distribution and patient use, pharmacists have an essential role (Reinhardt, Oliveira and Ring, 2020). During the COVID-19 pandemic, the pharmaceutical industry was met with criticism about the inequalities towards access to pharmaceuticals (Girón, 2022). Concepts such as 'vaccine apartheid' were a regular feature that aimed to describe the disparity in vaccine access due to patents. Similarly, this was the case when civil society organisations advocated for access to antiretroviral therapy medicine for the management of the Human Immunodeficiency Virus (HIV) in the past.

Paquin and Plouffe-Malette (2023) describe how the Covid-19 pandemic has caused the unequal distribution of vaccines, resulting in further marginalisation of low-income countries (Paquin and Plouffe-Malette, 2023). India and South Africa proposed a temporary waiver from specific provisions of the TRIPS Agreement at the World Trade Organization (WTO) to manufacture Covid-19 vaccines that were under patent (Usher, 2020). After the negotiations, an agreement was reached in Geneva. The basis for negotiation focused on the challenges of creating international public health goods due to powerful actors, such as big pharmaceutical companies, that have vested interests (Altindis, 2022; Le and Samson, 2021). The argument presented was insufficient to solve the vaccine access problems for low-income countries as it was restrictive (Chaudhary and Chaudhary, 2021). The agreement did not cover trade enigmas, skills, production capacity and availability of raw materials for low-income countries to manufacture these vaccines (Singh et al., 2022; Chattu et al., 2022). It was found that it is essential for MPCs to share technology and skills through voluntary production agreements to promote the production of quality vaccines in low-income countries. What transpired during the COVID-19 pandemic indicates a need for reforms in the pharmaceutical industry. Notably, decisions to prioritise lives over patents are primarily made at strategic levels and not technical (Demir and Bican, 2023).

South Africa has the most established pharmaceutical industry and is the largest exporter of medicines in sub-Saharan Africa (Horner, 2021). In South Africa, companies manufacturing medicines must obtain a licence from the Department of Health (DOH) and record with the South African Pharmacy Council (SAPC). Inspections are conducted by the South African Health Products Regulatory Authority (SAHPRA), which is the only African regulatory authority that is a member of The Pharmaceutical Inspection Co-operation Scheme (PIC/S) (Dureja and Dhiman, 2021; Moeti, Litedu and Joubert, 2023). While PIC/S is a non-binding, informal co-operative arrangement between regulatory authorities in Good Manufacturing Practice (GMP) of medicinal products, it has high standards that seek to ensure confidence in the quality of medicines manufactured in the industry (Gray, 2018).

To issue a licence for the manufacturing of medicines, the DOH requires the presence of a responsible pharmacist. The role of a responsible pharmacist is like that of an "Authorised Person" or "Qualified Person" in the global context (Pisani, Vella Brincat and Farrugia, 2009). In South Africa, the responsible pharmacist must be a registered pharmacist with the SAPC (SAPC, 1974). While the functioning of an MPC is anchored by a responsible pharmacist as required by regulatory organisations, including a pharmacist in the strategic leadership of MPCs in South Africa is not mandatory. The role of a responsible pharmacist is at a technical level, where pharmacists are responsible for production, quality assurance and operations. This role is limited to the actual decision-making powers of pharmaceutical companies, which are usually large organisations that make use of boards to drive the strategy of the MPCs (Okereke et al., 2021; Pisani, Vella Brincat and Farrugia, 2009; Yermagambetov, 2017). It means that the strategic direction of the MPC may be determined by other persons who may or may not be registered pharmacists or have a pharmacy education background.

A literature search was done to find studies that have explored the presence of pharmacists in the strategic leadership of MPCs in South Africa and global context. Such studies were not found. However, Haumschild and Weber (2014) explain that pharmacy leadership is concerned with integrity and guides other

professionals. Pharmacists need to be leading and managing with ethics and integrity. Pharmacists must act in the best interest of their patients and ethically conduct themselves. The World Health Organisation (WHO) recognises pharmacists as custodians of medicines. Hence, they are held responsible for ensuring access and availability of quality medicines. While MPCs are organisations that are businesses and therefore need to be profitable, their goal for existence is to produce medicines. The organisational goal is related to the professional role of a pharmacist. This study is part of a larger study that sought to determine the presence of pharmacists in the strategic leadership of MPCs and the factors affecting their presence. The research in this manuscript is the qualitative phase that aims to determine the perceptions of existing strategic leaders of MPCs on the presence of pharmacists at the strategic level of MPCs that operate in South Africa.

Methodology

A qualitative narrative design was used in the form of semi-structured interviews for the research conducted. The design was chosen as it was suitable for comprehensively understanding the respondents' opinions regarding the presence and necessity of pharmacists in the strategic leadership of MPCs. The semi-structured interviews were used to gain in-depth thoughts and perceptions from key informants who were board members of the three (3) listed pharmaceutical companies in South Africa. The Semi-structured interviews were chosen for their ability to explore the subjectivity and reflexivity of the data on leadership by pharmacists. Ethical approval was obtained from the University of Witwatersrand Human Research Ethics Committee (Non-medical). All the respondents were provided with an information leaflet and consent form before participating in the study. The reporting of the results was done considering the consolidated criteria for reporting qualitative studies (COREQ) framework as described by Tong, Sainsbury and Craig (2007).

Participant Recruitment. The intentional snowball method was used for recruiting participants for this study. The target comprised persons who have been in the strategic leadership of MPCs listed on the Johannesburg Stock Exchange (JSE), i.e., Ascendis Health, Adcock Ingram and Aspen Pharmacare. Three (3) MPCs were listed on the JSE during the data collection period. There were 28 board members in the three (3) companies, which form the sample population. The respondents were identified from company websites and annual reports from the three (3) manufacturing companies listed by the Johannesburg Stock Exchange (JSE). Furthermore, recommendations of such persons were received from the industry.

Data Collection. An interview guide, informed by literature, was used to conduct In-depth interviews with the respondents who indicated interest in participating in the study. The respondents were asked five (5) open-ended questions, each of which they could answer and elaborate on as desired. It was to allow for their opinions and views to emerge. A narrative approach was used, where the respondents could provide their views and experiences as key informants for the research questions. The interviews had minimal interviewer involvement in limiting bias. The role of the interviewer was solely to ask questions. The interviews were conducted online and face-to-face, according to the respondents' preferences. For the online interviews, one respondent preferred Zoom® while the other preferred Microsoft Teams®. Both applications were used to accommodate the respondents. The face-to-face interviews were conducted in venues suggested by the respondents. All the interviews ranged between 15 to 25 minutes in length. The interviews were conducted between February 2022 and September 2022. A Phillips® DVT8110 Meeting Recorder was used to record the interviews conducted face-to-face. The interviews conducted virtually were recorded using the computer.

Data Analysis. The data recorded were processed and analysed in phases (see Figure 1). Initially, the data were transcribed and coded using Atlas ti® version 23 software. A thematic text analysis was used for both the transcription and analysis of the data. The data analysis was done using the questions as the foundation for the themes in the narratives. A thematic analysis of the data was applied to the data collected in the interviews. An inductive approach was used to identify the actual content in each of the themes for the data. The keywords and phrases were generated for the interviews and mapped with the pre-existing themes to prevent an overlap. The codes that were generated but could not be linked to a pre-existing theme were acknowledged. Emerging themes were identified according to the codes and keywords derived during the analysis process. The themes generated, along with the codes, were reviewed to strengthen the integrity of the methodology.

Credibility of Method. Content and thematic analysis were done, where the content was fragmented into smaller parts that could be analysed descriptively. It involved repetitive listening and reading of the data to gain an understanding and ensure the transcription of the respondents' views was accurate. The other members of the research team were consulted. Areas of disagreement between the researchers were identified and resolved by reaching a consensus.

Reflexivity. One member of the researchers had significant experience in the leadership dynamics of the pharmaceutical industry. The potential bias that this could introduce was acknowledged during the transcription process and further the interpretation of the data collected.

Results

The board members of the three (3) MPCs that are listed with the JSE were identified. Five (5) respondents were successfully recruited to participate in the semi-structured interviews. Data saturation was determined in the fifth interview as the ideas presented were repetitive and was already indicated by the previous respondents. The demographic profiles of the respondents formed part of the data that were collected, presented in Table 1.

Table 1. Demographical Information of the Respondents

Gender (%)	
Male	Female
4 (80%)	1 (20%)
Mean age	
57 years (SD±=2,24)	
Mean number of years in the industry	
32,4 years (±=5,89)	
Professional background	
Medical	1
Business	1
Pharmacy	3

Source: Compiled by the authors

The respondents were mainly male, except for one respondent who was female. Since there were five (5) respondents, 80% were male. The mean age was 57 years (SD±=2,24). The lowest age recorded was 54 years. The highest age recorded in the population was near retirement age, which is 60 years, in South Africa. The average number of years the respondents were in the pharmaceutical industry was 32,4 years (±=5,89), the lowest observation was 28, and the highest observation was 42 years.

Respondent Codes and Professional Positions. This study sought to determine strategic leaders' perceptions of a pharmacist's presence. Hence, it was essential to consider the professional backgrounds of the respondents when analysing the data, as the professional background may serve as a basis for biased views. There was a diversity of academic qualifications among the respondents. Notably, three (3) of the five (5) respondents were qualified and registered pharmacists with the SAPC. Other background qualifications included a Bachelor of Medicine (MBChB) and academic qualifications in finance (see Table 2). Two (2) of the three (3) pharmacists had additional qualifications in commerce and management.

Table 2. Codes, Roles and Professional Backgrounds for the Respondents of the Interviews

Case	Role/position	Primary Professional background	Additional qualifications
CN1	Board member	Pharmacy	Science
CN2	Board member	Commerce	None
CN3	Board member	Pharmacy	Commerce
CN4	Board member	Medical	Science
CN5	Board member	Pharmacy	Commerce

Source: Compiled by the authors

The respondents were allocated case number codes which were used to identify their professional background in relation to their opinions (see Table 2).

Interview Themes

The responses to the interview questions were analysed by allocating codes according to the themes. The keywords and phrases were generated for each interview theme. The responses had existing interview themes. Emerging themes were identified when analysing the data according to the coding system.

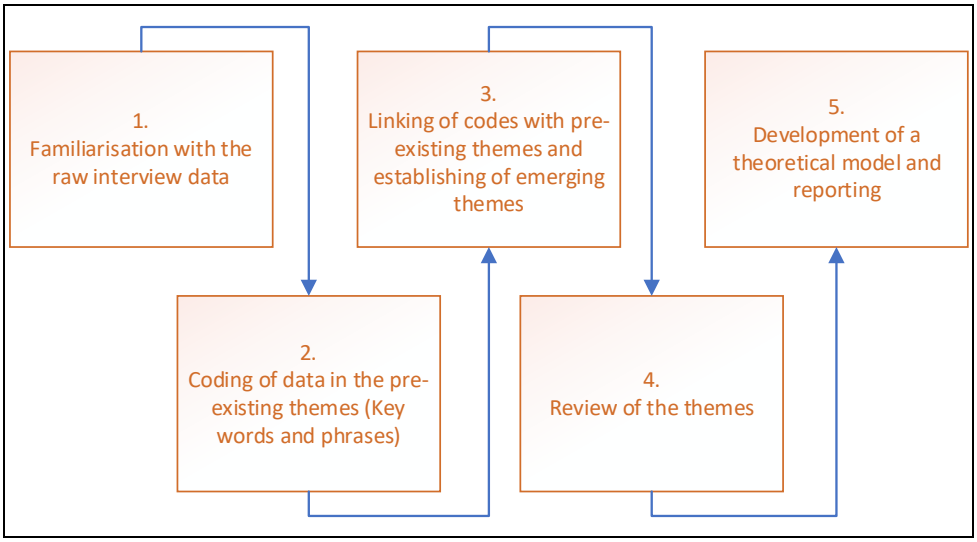

Figure 1. Process Followed for Data Analysis

Source: Compiled by the authors

Theme 1: The presence of pharmacists in the strategic leadership of MPCs in South Africa

All the respondents agreed that there was a limited presence of pharmacists at the strategic level of the MPCs in South Africa. It was a mutual feeling from all the participants that pharmacists, in their training, were experts in the technical functions of a pharmaceutical organisation and therefore need more time to be ready to take the responsibility to drive the strategic mandate of such a company. The respondents indicated that the skills required at a board and executive level are generic but directed towards financial, people and systems management. Pharmacists as medicines experts typically may not be in possession of these financial and people management skills that are required.

It was explained that the people sitting in company boards are not there because of their professional background but rather because of what they had achieved as managers, executives, directors or leaders in other companies. So, the fact that pharmacists are not present is not because they are not required, but rather the limitation in their diversity of skills. One of the respondents indicated that with the pharmacy industry being highly regulated, one would expect to see pharmacists at the strategic leadership level. They reflected on a role previously in the Pharmacy Act 53 of 1974, where each MPC needed to have a pharmacist as a managing director of that company. They indicated that they were in such a role. The role of a managing director had more influence on the strategic mandate of the company than the role which replaced it, i.e., responsible pharmacist (RP). They felt that the RP role was more technical and had limited or no influence on the strategic level of decision-making for the company.

Theme 2: The need for pharmacists to be in the leadership of MPCs

The respondents all agreed that a pharmacist could not be provided with a position at a strategic level just because they possessed a Bachelor of Pharmacy qualification. However, it was noteworthy that MPCs are operating in the pharmaceutical industry, and therefore the perspective, not necessarily the pharmacist's skills, would be valued in their boardrooms. The respondents felt that it remains essential for the MPCs to have a pharmacist or at least a medically qualified person for the boards of MPCs to operate ethically and with integrity.

"I think it is essential to have scientifically and medically qualified people that operate ethically and with integrity. I don't believe that it is absolutely critical that that person is a pharmacist, and I'm talking outside of the law". (CN 5)

It is believed that a pharmacist or medically-trained person on the board would contribute towards neutralising the ideas and biases of financially inclined people who only count the costs and not the human

element of the MPC and the manufactured products' end-user. However, the medically-trained person does not need to be a pharmacist.

"We have confident medical doctors in this company that fill roles that one might want for us to have pharmacists fill. They potentially fulfil these roles better because their academic training is just much broader. I can consult them on issues that I couldn't necessarily consult the pharmacist. The medical doctors would have weaknesses in other areas such as regulatory affairs". (CN 5)

The respondents felt that the role of the responsible pharmacist was sufficient for a pharmacist, and there was no need to have an additional position at the strategic level for the pharmacist. A respondent suggested that there is a need for the presence of a pharmacist at the board level and also executive level. It is because he is medically-trained and feels the company is vulnerable if it is led in the absence of a pharmacist while operating in the pharmaceutical industry.

One of the respondents indicated that his board does not have a pharmacist and believed that their board is not missing a pharmacist in any of the company-related matters they discuss during board meetings. They felt that their board comprised competent members with sufficient knowledge and understanding about the company, its functions and its duty to the stakeholders. They indicated that the board is about strategy and the big picture of corporate governance, which has nothing to do with the skills that pharmacists can offer. Another respondent indicated the dire need for a pharmacist in boards of MPCs. It is suggested that pharmacists have a role of guiding the board on decisions around the molecules to invest in for their research and development and the regulatory environment of the countries of operation.

The respondents alluded that a manufacturing company is a diverse institution with various operations. While manufacturing of pharmaceuticals may be the key operation, it is not the only operation. The company undertakes distribution, production, sales and marketing, quality control, quality assurance, laboratories, human resources and other operations. Hence, any leader in such an organisation must be capable of leading diverse operations, not just pharmacy operations.

"If it's a big company, you need to find someone who will not only manage the pharmacist, but can manage all these other different functions within a pharmaceutical company. It is any individual, not necessarily a pharmacist, who has the experience of leading large organisations". (CN1)

Theme 3: Leadership competencies of pharmacists for leading a MPC

When asked if pharmacists have the leadership competencies for leading an MPC, the respondents agreed that the basic pharmacy qualification does not translate into leadership competency. The respondents indicated that pharmacists are not provided with sufficient training that allows them to lead large organisations. A clear observation was made that pharmacists display an educational gap in finance and management skills when they finish their degrees.

"The one part is that a pharmacy degree does not provide for financial solid competencies. The other aspect is that pharmacists are very technical in terms of their knowledge that was gained in the four years. It is really focused on drugs and very specific to pharmaceuticals and pharmacology. Even then, pharmacists are taught how to run a retail pharmacy rather than how to run a manufacturing facility". (CN 3)

The respondents with a pharmacy background indicated that the pharmacy school training does not allow for training on managing large corporates, financial management and other necessary competencies. They all explained that the training in universities seemed biased towards preparing the students for retail and hospital pharmacy and not future corporate leaders of an MPC. Pharmacy schools should create an optional 2-year post-graduate degree for people who want to work in pharmaceutical manufacturing and manufacturing leadership. People should be allowed to go into streams, which will show employers their level of commitment and passion for working and leading in that stream. The was an indication from the respondents that currently, pharmacy schools are not training a graduate that is attractive to the manufacturing industry. There is a mismatch in the skills that the industry wants and what the schools of pharmacy are training.

"The resources may not be there to have these additional streams of learning however, it gives pharmacy schools the opportunity to create curricula that are relevant to the industry". (CN 1)

The respondents agreed that university training was not sufficient for leading at a strategic level. However, the respondents reflected on the benefits of experience. They indicated that leadership competency could be acquired through experience by anyone, including pharmacists.

Theme 4: The need for additional business-related qualifications in order to lead in a MPC

Four (4) respondents indicated that an additional business-related qualification was unnecessary for pharmacists to be business leaders. However, it would help the pharmacist advance in their career. The respondents indicated that they appreciate the knowledge gained from business-related qualifications. However, experience is paramount. The typical pharmacist that steps out of pharmacy school does so without being prepared to lead people. Pharmacy schools teach pharmacists how to comply with existing legislation. In the respondents' experience, that is what the pharmacist does to get people to comply with legislation. They feel that their BPharm qualification means people will buy into their idea. However, the respondents indicated that leadership is about convincing people to buy into your ideas and proving that the ideas work. Pharmacists need to work on gaining that experience.

"I look at the young Responsible Pharmacists (RP) that we employ. You can see that there are wilfully unprepared to lead people. They come in with what we get taught in pharmacy schools. In my view, there is no place for that attitude in leadership. Pharmacists come with this attitude: "I am and expert in the pharmacy. I know about medicines; therefore, everyone must listen to me, I am backed by regulations." unfortunately, the world doesn't work like that." (CN 3)

It was said that pharmacists need to be able to persuade and make people understand the context in which pharmacists are applying the rules to appreciate what is in the regulations and be influenced by the pharmacist to comply. It was indicated that pharmacists could lead at strategic levels of an MPC without additional qualifications. They felt that pharmacists don't need additional qualifications, just as other professionals such as accountants also do not need these additional qualifications.

"Anybody with a university degree and has worked in business management, managed to rise up the ladder, would be capable to sit on a board. I wouldn't say all the chartered accountants qualify to be in a board, no they don't. It also depends on the experience they have". (CN 2)

The respondents particularly felt that pharmacists, with their qualifications, will be eminently capable of being excellent board members. It will be the case if they have the proper exposure, training, coaching, mentoring and urge to lead. This principle applies to everyone on a board, irrespective of their professional background.

Theme 5: The key attributes that may contribute to having pharmacists enter into leadership positions

When asked for the key attributes that may lead to a pharmacist entering into a position of strategic leadership, the respondents were requested to give their answers about pharmacy qualifications, additional business-related qualifications, availability of opportunities, personal desire (ambition), pharmaceutical environment, gender and race. There was an agreement from the respondents that a pharmacy degree does not necessarily guarantee entry into positions of leadership for MPC. However, as a basic degree, it helps. There was a consensus from the respondents that additional business-related qualifications are not necessary. Nevertheless, these allow the pharmacist to understand companies' operations and help them advance quicker into leadership positions. The respondents indicated that the opportunities to lead in the manufacturing industry are available as board members can only remain in office for a few years. Nonetheless, pharmacists must possess the right skills and experience to exploit the opportunities. Ambition is a key attribute mentioned directly or indirectly by all respondents. They agreed that the personal desire of the pharmacist to be in the strategic leadership positions of MPCs would contribute to their entry.

The respondents indicated that the pharmaceutical environment was enabling the pharmacist to thrive. Nevertheless, all the other attributes determine whether the pharmacist enters these positions. The respondents all indicated that men seemingly have an unfair advantage concerning entry into strategic leadership positions in the manufacturing pharmaceutical industry, like all industries. One of the respondents noted that many boards are recruiting a 'gentlemen's club' rather than people to form inclusive teams, as women are not present in these boards. The respondents felt that gender was a significant contributor as women, whether a pharmacist or not, are not typically present in the strategic leadership of MPCs. All the respondents indicated that the historical inequalities concerning access to education and opportunities based on race contributed to the entry of Africans into leadership positions for the South

African perspective. The leadership of MPCs has been white-dominated. They ascribed race to being a contributor for a pharmacist to enter into leadership positions, especially in the South African context.

Emerging Themes

Specialisations and Career Pathing for Pharmacists. Three (3) of the respondents indicated that the skills of the pharmacists in the industry are not appreciated, as some pharmacists are highly skilled but not recognised as specialists in their field by the professional regulator, the SAPC. The respondents indicated that they valued the skills of medical doctors more, as they could map their specialisations and refer to them as experts in a particular field. The same principle could not be applied to pharmacists.

"Industrial pharmacy is a potential subspecialty for pharmacists. The unavailability of specialties is a detriment to the profession and, in my view, form part of the reason why pharmacists are not featured in strategic leadership. Pharmacists who qualify as such have reached a ceiling and there is no career progression. These pharmacists who acquire more knowledge and skills are needed, however, are not recognised and acknowledged". (CN 4)

Advocacy Role of a Pharmacist in Boards. It emerged in the interviews that the role of a pharmacist includes knowledge and understanding of legislation around medicines. This role often puts the pharmacist in a conflicting position as they need to stand their ground when decisions are being made considering profitability, reputation and dividends.

"A pharmacist must be able to speak truth to power. Management may try to lead the company astray, for lack of a better word, a pharmacist, must be able to say 'no' in such instances. A pharmacist who is going to be honest and as well as ask questions that will guide the board". (CN 4)

Gap Between the Training of the Pharmacy Graduate and Pharmacist Needed by the Industry. The respondents highlighted a mismatch in the industry needs as opposed to the graduate that the pharmacy schools are producing at the present moment. It was mentioned that the pharmacy schools must ask the industry about the current 'on-the-job' training that is being done with the graduates once they arrive in their facilities. The content of the training should be considered for inclusion in the pharmacy curriculum. The respondents indicated that this is important as the current graduates they are receiving are not necessarily ready in terms of both hard and soft skills. One respondent, notably, indicated they often find it extremely difficult to successfully recruit competent and experienced pharmacists into the manufacturing sector of the industry as most pharmacists only have hospital and retail experience.

"But I get a sense that the profession is still considered very much, a retail profession. We struggle to find good people, so we tend to have to pay above the asking rate. Because we are competing everybody else for that hand-full of skills available". (CN 5)

Inadequate Governance of the Pharmacy Profession. The respondents expressed concerns over the governance of the pharmacy profession. They indicated that the statutory council that regulates the pharmacy profession, i.e., SAPC, was rather reactive than proactive in advancing the pharmacy profession. They cited this as one of the key reasons pharmacists are not present in the leadership of the MPCs. The respondents registered with the SAPC and other Councils alluded to seeing the SAPC as an organisation that did not optimally regulate the profession.

"I always get a sense that the South African Pharmacy Council doesn't really have much cloud. As long as pharmacists pay their annual subscriptions, and the odd pharmacist gets disciplined for what he or she shouldn't be doing". (CN 5)

"When you look at some of the other professions, in South Africa, for example, manage their profession well". (CN 5)

Lack of Unity Amongst Pharmacists in the Various Sectors. The respondents who were in the pharmacy profession and another respondent indicated their concern over the lack of unity in the voice of pharmacists across the various sectors of the industry. They noted that pharmacists lacked unity among themselves within the profession. It results in the profession being vulnerable as decisions are made to the detriment of the profession. It, they argued, caused the limited presence of pharmacists as observed.

"I tend to feel that pharmacists don't get the recognition they deserve as a profession because of their own shortcomings and selfishness. For example, the pharmacists in retail, only care about retail. Even if it is at

the expense of the pharmacists in the manufacturing sector and this probably applies vice versa. Pharmacists are trying to make a buck. I do feel they are their own worst enemies". (CN 5)

Discussion

Findings and thematic analysis of this study phase have been used to develop the theoretical model illustrated in Figure 2. The study sample comprised males as a majority of the respondents who were interviewed. Willows and van der Linde (2016) conducted a study to determine the presence of women on the boards of companies in South Africa. The study revealed that the presence of female board members was limited in large companies. Female board members only made up 18.78% of the board members of the boards of the top 40 companies listed on the JSE (Willows and van der Linde, 2016). Similar studies presented similar findings worldwide (Fernandez-Feijoo et al., 2014; Ndi nda, and Okeke-Uzodike, 2012; Smith and Parrotta, 2018).

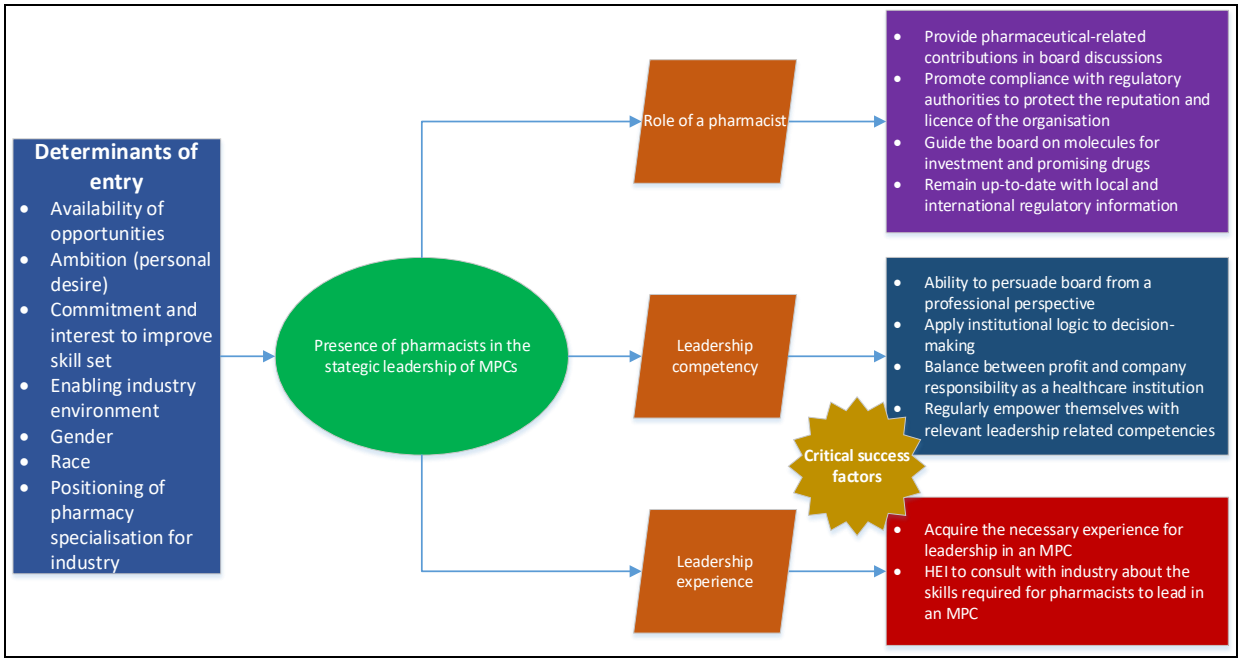

Figure 2. Theoretical Model Based on the Findings of the Research

Source: Compiled by the authors

The sample had persons with a variety of qualifications. The profession that was most represented in the sample was pharmacist. The invitation to be a respondent was extended to as many board members as possible. However, some of the people approached indicated that they do not feel that they have the right knowledge or skills to be respondents. That is potentially the reason why more pharmacists were willing to be respondents. Notably, the pharmacists in the sample have other qualifications enabling them to identify as pharmacists and the finance fraternity. The ages reported by the respondents are reflective of the requirement for experience. South Africa needs a framework to guide board members' competencies. However, Hlobo, Moloi, and Marx (2022) found that an undergraduate degree and industry experience should be non-negotiable when short-listing for appointing board members for state-owned enterprises. They do not indicate which undergraduate degree but that board members should understand financial statements (Hlobo, Moloi and Marx, 2022). This finding is similar to the research findings as the respondents suggest that additional-business-related qualifications are unnecessary for pharmacists to enter strategic leadership positions.

A study conducted by Kor and Misangyi (2008) found that management teams comprising individuals who have worked for multiple firms within an industry are more likely to establish connections with potential alliance partners than teams whose members have only worked for a few firms in the same industry. Executives with a history of employment in various companies are more likely to encounter opportunities for forming alliances, either directly with their previous employers or indirectly through their past business relationships with suppliers and customers. Moreover, these executives may possess a more extensive network of relationships that they can rely on when assessing the reliability and commitment of potential partners. Their extensive experience also contributes to their recognition within the industry, enabling them

to provide valuable leads and connections for their current company (Kor and Misangyi, 2008). Similarly, the respondents indicated that in-industry knowledge and connections are some of the benefits of having a pharmacist as a member of the strategic team of a pharmaceutical company.

The findings from the study show that the respondents feel there is a limited presence of pharmacists in the strategic leadership of listed MPCs in South Africa. These findings further reveal that the respondents, who happen to be serving in strategic leadership positions, value the presence of pharmacists. However, entry into the strategic leadership positions of MPCs requires specific skills and experience in addition to what a Bachelor of Pharmacy (BPharm) degree can offer. Formulating a Board of directors is necessary for large companies listed and trading publicly (Nti, Adekoya and Weyori, 2020). The role of boards of companies varies across industries. However, they include and are not limited to determining the strategy for the organisation (Brauer and Schmidt, 2008). The findings show that the industry offers pharmacists opportunities to enter strategic leadership positions. According to the respondents, equal opportunity is offered to all candidates. However, a pharmacist with the necessary experience and skills would even be more attractive to become a board member or be considered for a position in strategic leadership.

Conducting this research had its challenges. When reflecting, firstly, it was challenging for the researcher to acquaint themselves with the Altas ti® software. However, extensive training was provided by the developer and also by experienced colleagues. Secondly, Collecting the data using semi-structured interviews that formed the foundation for the themes in the study resulted in the respondents providing overlapping answers. Hence, although the data were collected across the pre-existing themes, duplications were found while coding. The researchers had to repeat the review process to eliminate data duplication as far as possible. The identification of common keywords and phrases also assisted with overcoming this challenge. The data collected was extensive in volume and, therefore, overwhelming. It required the researchers' resilience to analyse the data effectively and efficiently.

Limitations

The topic that was studied of the professional presence of pharmacists in the leadership of MPCs is particularly novel and therefore has limited available literature that could be used as a basis for the study design. The semi-structured interviews were conducted with only 5 participants, representing a small fraction (28; 17,85%) of the persons in the leadership of the listed MPCs in South Africa. The successful recruitment of participants was particularly challenging, as these are businesspeople who mainly indicated unavailability to commit to an interview. Furthermore, respondents indicated confidentiality concerns as they are public figures. Three (3) respondents had a pharmacy professional background, although two (2) were also business professionals. Therefore, participant views may not be representative of the opinions of the leaders in the pharmaceutical industry. A study with more respondents and an international perspective is necessary.

Conclusion

The results obtained from the semi-structured interviews indicate a limited presence of pharmacists in the strategic leadership of pharmacists in the MPCs listed on the JSE. Furthermore, pharmacists' presence in an MPC's strategic leadership would benefit the board and the company. However, pharmacists must equip themselves to be present in the MPC at technical levels rather than strategic. While pharmacists gain entry into MPCs at technical levels, which are for regulatory compliance, diversifying their skills and experiences may result in their advancement to strategic leadership positions that will allow them to provide a pharmacist perspective in decision-making for the MPC.

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References

1. Altindis, E. (2022). Inequitable COVID-19 vaccine distribution and the intellectual property rights prolong the pandemic. *Expert review of vaccines*, *21*(4), 427-430. [Google Scholar] [CrossRef]
2. Bhatti, S.H., Vorobyev, D., Zakariya, R., & Christofi, M. (2021). Social capital, knowledge sharing, work meaningfulness and creativity: evidence from the Pakistani pharmaceutical industry. *Journal of Intellectual Capital*, *22*(2), 243-259. [Google Scholar] [CrossRef]
3. Brauer, M., & Schmidt, S.L. (2008). Defining the strategic role of boards and measuring boards' effectiveness in strategy implementation. *Corporate Governance: The international journal of business in society*, *8*(5), 649-660. [Google Scholar] [CrossRef]
4. Chattu, V.K., Singh, B., Kaur, J., & Jakovljevic, M. (2021). COVID-19 vaccine, TRIPS, and global health diplomacy: India's role at the WTO platform. *BioMed Research International*, *2021*. [Google Scholar] [CrossRef]
5. Chaudhary, T., & Chaudhary, A. (2021). TRIPS waiver of COVID-19 vaccines: Impact on pharmaceutical industry and what it means to developing countries. *The Journal of World Intellectual Property*, *24*(5-6), 447-454. [Google Scholar] [CrossRef]
6. Demir, E., & Bican, P.M. (2023). Patents and Sustainable Medical Treatment in Developing Countries: Lessons from COVID-19 Vaccines. *Sustainability*, *15*(4), 3121. [Google Scholar] [CrossRef]
7. Dureja, H., & Dhiman, S. (2021). SAHPRA-Relevance of the New South African Health Products Regulatory Authority and Opportunities Ahead. *Journal of Regulatory Science*, *9*(2), 1-14. [Google Scholar] [CrossRef]
8. Fernandez-Feijoo, B., Romero, S., & Ruiz-Blanco, S. (2014). Women on boards: do they affect sustainability reporting? *Corporate Social Responsibility and Environmental Management*, *21*(6), 351-364. [Google Scholar] [CrossRef]
9. Girón, A. (2022). Geopolitics and Financial Profitability, the Big Pharmaceutical Corporations. *Journal of Economic Issues*, *56*(2), 562-569. [Google Scholar] [CrossRef]
10. Gray, A. (2018). Medicines Control Council–half a century of regulatory progress. *SA Pharmaceutical Journal*, *85*(1), 87-87. [Google Scholar]
11. Haumschild, R.J., & Weber, R.J. (2014). Life in a Fishbowl: Accountability and Integrity in Pharmacy Leadership. *Hospital Pharmacy*, *49*(7), 671-676. [Google Scholar] [CrossRef]
12. Hlobo, M., Moloi, T., & Marx, B. (2022). Framework for Screening and Evaluating the Competencies and Qualities of the Board of Directors in South Africa's State-Owned Companies. *Journal of Risk and Financial Management*, *15*(11), 492. [Google Scholar] [CrossRef]
13. Horner, R. (2021). Global value chains, import orientation, and the state: South Africa's pharmaceutical industry. *Journal of International Business Policy*, 1-20. [Google Scholar] [CrossRef]
14. Khan, M.M.A., Sohail, I., & Alam, I. (2020). Historical Evolution of Drug Laws in Pakistan: Regulating the Regulators and Healthcare Industry. *Journal of the Punjab University Historical Society*, *33*(02). [Google Scholar]
15. Kor, Y.Y., & Misangyi, V.F. (2008). Outside directors' industry-specific experience and firms' liability of newness. *Strategic Management Journal*, *29*(12), 1345-1355. [Google Scholar] [CrossRef]
16. Le, V.A., & Samson, L. (2021). Are IPRs and patents the real barriers to COVID-19 vaccine supplies? *Manchester Journal of International Economic Law*, *18*(2). [Google Scholar]
17. Malerba, F., & Orsenigo, L. (2015). The evolution of the pharmaceutical industry. *Business history*, *57*(5), 664-687. [Google Scholar] [CrossRef]
18. Merkuryeva, G., Valberga, A., & Smirnov, A. (2019). Demand forecasting in pharmaceutical supply chains: A case study. *Procedia Computer Science*, *149*, 3-10. [Google Scholar] [CrossRef]

19. Moeti, L., Litedu, M., & Joubert, J. (2023). The Implementation of a Risk-Based Assessment Approach by the South African Health Products Regulatory Authority (SAHPRA). *Pharmaceutical Medicine*, 1-21. [Google Scholar] [CrossRef]
20. Ndinda, C., & Okeke-Uzodike, U. (2012). Present but absent: Women in business leadership in South Africa. *Journal of international women's studies*, *13*(1), 127-145. [Google Scholar]
21. Nti, I.K., Adekoya, A.F., & Weyori, B.A. (2020). A comprehensive evaluation of ensemble learning for stock-market prediction. *Journal of Big Data*, *7*(1), 1-40. [Google Scholar] [CrossRef]
22. Okereke, M., Anukwu, I., Solarin, S., & Ohuabunwa, M.S. (2021). Combatting substandard and counterfeit medicines in the Nigerian drug market: how industrial pharmacists can rise up to the challenge. *INNOVATIONS in pharmacy*, *12*(3). [Google Scholar] [CrossRef]
23. Paquin, S., & Plouffe-Malette, K. (2023). The WTO and the Covid-19 "vaccine apartheid": Big pharma and the minefield of patents. *Politics and Governance*, *11*(1), 261-271. [Google Scholar] [CrossRef]
24. Pisani, R.C., Vella Brincat, G., & Farrugia, C. (2009). The roles and responsibilities of the Qualified Person in the pharmaceutical industry. [Google Scholar]
25. Reinhardt, I.C., Oliveira, J.C., & Ring, D.T. (2020). Current perspectives on the development of Industry 4.0 in the pharmaceutical sector. *Journal of Industrial Information Integration*, *18*, 1-11. [Google Scholar] [CrossRef]
26. Singh, B., Chattu, V.K., Kaur, J., Mol, R., Gauttam, P., & Singh, B. (2022). COVID-19 and Global Distributive Justice:'Health Diplomacy'of India and South Africa for the TRIPS waiver. *Journal of Asian and African Studies*, *1*, 19. [Google Scholar] [CrossRef]
27. Smith, N., & Parrotta, P. (2018). Why so few women on boards of directors? Empirical evidence from Danish companies in 1998-2010. *Journal of Business Ethics*, *147*, 445-467. [Google Scholar] [CrossRef]
28. South African Pharmacy Council (SAPC) (2002). The Pharmacy Act 53 of 1974 (as amended). updated to Government Gazette 23480. Available at: [Link]
29. Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International journal for quality in health care*, *19*(6), 349-357. [Google Scholar] [CrossRef]
30. Usher, A.D. (2020). South Africa and India push for COVID-19 patents ban. *The Lancet*, *396*(10265), 1790-1791. [Google Scholar] [CrossRef]
31. Willows, G., & van der Linde, M. (2016). Women representation on boards: A South African perspective. *Meditari Accountancy Research*, *24*(2), 211-225. [Google Scholar] [CrossRef]
32. Yermagambetov, D.M., Shilmanbetov, S.A., Zhakipbekov, K.S., & Khimenko, S.V. (2013). The role of staff in introducing GMP requirements for the pharmaceutical industry. Available at: [Link]