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The nature of the interaction between pharmaceutical sales representatives and general practitioners in South Africa

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A research article submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, 2018

DECLARATION

I, **Malan Roome**, declare that this research article is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.



Malan Roome

Signed at **Centurion** on the **31st** day of **May 2018**

DEDICATION

To my loving wife Monja, who’s motivation and support formed the foundation I needed to complete this amazing journey in personal development.

ACKNOWLEDGEMENTS

Foremost, I would like to express my sincere gratitude to my former leader and now friend Andrew Eve (Former CEO of Boehringer Ingelheim South Africa) whom, without any hesitation, gave me the financial support I required to go on this wonderful journey.

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SUPPLEMENTARY INFORMATION

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	Participant Statements
	Consistency Matrix

† Includes abstract and references

Abstract

Purpose – The pharmaceutical company's sales force, utilized to engage with general practitioners to promote the prescription of the company's products, continues to be the most significant sales and marketing expense to date. To justify this level of investment into a specific marketing channel, the relevance of the pharmaceutical sales representative needs to be validated. The aim of this research is to investigate the nature of the interaction between the South African general practitioner and the pharmaceutical sales representative (a current marketing channel employed by pharmaceutical companies) from the perspective of the general practitioner, thus establishing whether the utilisation of the pharmaceutical sales representative is still effective and appropriate to the needs and wants of the general practitioner.

Design/methodology/approach – A semi-structured interview instrument was utilised to understand the views of the general practitioners and identify potential themes amongst the sample selected. The interviews were conducted with general practitioners because they are considered one of the primary targets for the marketing efforts of the pharmaceutical companies.

Findings – It appears that the interaction with the pharmaceutical sales representative as part of the marketing strategy employed by the pharmaceutical companies, continues to be preferred by general practitioners in South Africa. The general practitioners, however, want the pharmaceutical sales representative to provide new and insightful information on new and existing products and focus on keeping the doctors updated with the latest information that will ensure that they are providing their patients with the best standard of care. It is suggested that the pharmaceutical companies who fail to address the needs of the general practitioner could find their pharmaceutical sales representative blocked from engaging with the general practitioner.

Practical implications – To reduce the dominant sales and marketing expense on a sales force, pharmaceutical companies might investigate more cost-effective alternative marketing channels. Due to the general practitioner's continued preference for the face-to-face engagement with a pharmaceutical sales

representative who is well prepared and focused on addressing their needs, the pharmaceutical company will have to keep this in mind when exploring alternative marketing channels as a potential substitute to the pharmaceutical sales representative.

Originality/value – The research approach was focused on investigating the validity of the pharmaceutical sale representative as an effective marketing channel, but specifically from the viewpoint of the general practitioner. By not interviewing the pharmaceutical companies themselves, any potential bias regarding their developed marketing strategies was excluded.

Limitations and future direction – The research has a few limitations. The interviews were conducted with only 10 general practitioners, thus future research could potentially include a larger sample size and other specialties. The research focused only the face-to-face interaction between the pharmaceutical sales representative and the general practitioners. This is only one perspective of potentially many others, thus further research could map other perspectives, test their relevance and develop a more comprehensive view on the all possible marketing channels the pharmaceutical companies can utilize.

Keywords: South Africa, pharmaceutical sales representative, general practitioner, face-to-face interaction, customer needs, pharmaceutical company, marketing strategy

Introduction

According to Khedkar and Sturgis (2016), the pharmaceutical industry sales and marketing spend on unsuccessful access-restricted calls has been stable around the $1 billion mark for the past couple of years in the United States. Over the past decade, pharmaceutical companies have significantly decreased the size of their sales forces, yet spending on the sales force still accounts for 88% of the sales and marketing budget. According to Pesse (2007), the industry no longer values the pharmaceutical sales representative (PSR) as a trusted and respected provider of knowledge. The Global Sales Perception Report by Mitchell, Thomas and Hughes (2008) states that salespeople are deficient in knowledge and understanding, disinclined to listen and are merely focused on achieving their bonuses instead of satisfying their customers' needs. The report concluded that customers feel increasingly that their needs and expectations are not being met by the salespeople; these salespeople are not reaching business partnership status, and the customers' perception of these salespeople is poor.

According to the Head of Primary Care, Ian Wrathall (Pharmafield, 2008), centralised brand strategies have been driving the PSR's role, resulting in the establishment of a tick-box culture which measures the representative's success by the number of main selling messages delivered to a targeted doctor, irrespective of the doctor's needs. According to Mitchel et al. (2008), the respondents confirmed that out of all the qualities in a salesperson, trust is most valued. Andy Holgate, the Business Unit Director at Ashfield In2Focus, states that the PSR's first duty must be toward ensuring that the right patient receives the right treatment that will result in the best possible outcomes for the patient. Giving the wrong advice regarding treatment options could have catastrophic effects and will irrevocably damage the trust between the representative and the doctor (Pharmafield, 2008). According to McGettigan, Golden, Fryer, Chan, and Feely (2001), an advantage posed for direct PSR selling stems from the doctor's importance rating of a personal face-to-face transfer of information. Salmasi, Ming and Khan (2016) conducted a meta-synthesis to explore the nature of the interaction taking place between doctors and PSRs.

Their study highlights that most doctors believe that their prescribing behaviour is not influenced by their interactions with PSRs. These same doctors are convinced that the PSR interaction can, however, influence the prescribing habits of their colleagues.

According to Pesse (2007), the traditional metric utilised by pharmaceutical companies to measure the exposure a doctor is getting to face-to-face product selling interactions by the PSRs, is called share-of-voice. This measure compares the exposure of one company to the total exposure delivered by all companies competing in the same specific therapeutic area. Pesse (2007) goes on to confirm that the historically positive relationship between share-of-voice and revenue generation has led to the PSRs being rewarded for having the most product-focused transactional interactions with their doctors. The more interactions, the more revenue was generated. However, the true value of the sales call is diminished by the fact that representatives are incentivised in such a way and thus, customer needs beyond the product, are often left unaddressed. From a marketing perspective, Sammut-Bonnici (2015) highlights that when the strategy of a company tends to become too focused on what the company makes (a process or product), instead of being orientated towards to what the customer wants, a deviation from the needs of the market can occur. By ignoring the needs of the customer, the company's focus could potentially be removed from the processes or products which will be demanded by the market in the future.

This research is focused on addressing the problem pharmaceutical companies might face in remaining relevant, from a marketing strategy perspective, to the preferences of the general practitioners in South Africa. Where the general practioner continues to prefer a face-to-face PSR interaction, the research will also provide justification of the substantial sales and marketing expense associated with this marketing channel. The purpose of this research is to investigate whether and under what circumstances the PSRs are still valued by the South African general practitioners, thus providing the pharmaceutical companies validation of their investment in a sales force as part of their marketing strategy.

Review of recent literature

The literature reviewed was considered recent if dated within the 21st century and thus any literature that was published earlier, was not considered.

The dynamics of the doctor-PSR interaction

Salmasi et al. (2016) found that the frequency of interactions is a good indicator of an active relationship between the pharmaceutical industry and the doctor. The nature of said relationship could either be based on the PSR providing true value to doctors and their patients, or on the PSR offering services which are potentially ethically questionable. A study by Alosaimi, et al. (2015) illustrated that 75.2% of physicians agreed that PSRs often used the word "safe" and that a mere 19.7%, 20.4% and 23.6% of PSRs clarified drug interaction, adverse drug reactions and the cost of the drugs respectively. From an ethical perspective, these interactions can potentially have a negative effect on the patient's health, if any of the various marketing methods utilised by the PSR (gifts, free lunches, sponsorships, etc.) act as an inducement to the doctors' prescribing behaviour.

Doctors typically grant PSRs access based on sponsorships, gifts, a social bond developed over time, courteousness, or the tradition of the PSR-doctor interaction. Comparatively, however, PSRs are blocked from interacting with doctors for many more reasons. Doctors have cited inappropriate timing of visits, lack of conviction and credibility about their product, previous bad experiences with the PSR, and obligations to other companies as reasons for not giving certain PSRs access to their practices. Furthermore, a lack of accuracy in the information offered, an approach considered "pushy" and argumentative, and information which is commercially biased also contributes to the decline in PSR access in the pharmaceutical industry (Salmasi, Ming, & Khan, 2016). According to ZS's AccessMonitor™ study (Khedkar & Sturgis, 2016), the decline in access of PSRs to doctors persists. The trend indicates that access is becoming increasingly restricted, starting with PSR-accessibility at 80% in 2008, accessibility has decreased by 36% over the past eight years. Khedkar and Sturgis (2016) state that the high value doctors, who are contacted the most due to their prescribing

potential, are typically receiving a pharmaceutical sales representative contact every working hour of every day throughout an entire year. This is even worse if the doctor is focused on more than one therapeutic area. The outcome of this amount of ‘noise’ is the creation of a negative customer experience in general.

According to Salmasi et al. (2016), the doctors’ perception varies considerably on the accuracy and accountability of PSRs as a legitimate source of information. Although the doctors find the information provided by the PSRs as factual, they do believe a great deal of bias exists. The perceived benefits and drawbacks, according to Salmasi et al. (2016), are presented in Table 2.

Table 1: Perceived benefits and drawbacks

Perceived Benefit	Perceived Drawbacks
• Ease of access to information on products, journal articles and research papers • Free gifts ranging from practice related items (educational material etc.) to personalised items for the doctor (ranging from cheap stationary to expensive gifts) • The social aspects of the interaction, where the doctors view the PSR as a friend instead of a promoter and considers their interaction as a more casual event	• Interacting with time-wasting PSRs have a negative impact on their patients and their bank balances • PSRs pressurising doctors into prescribing their products by either assertively challenging them or utilising emotional appeals to get their drug prescribed as a personal favour to the PSR • Leveraging indirect pressure based on previous services provided to get the doctor to prescribe their products

Source: (Salmasi, Ming, & Khan, 2016)

The dynamics of the pharmaceutical company's marketing strategy

To delve into this dynamic, of which the PSR forms only a part, it is important to clearly define the concept of strategic drift and how it links to marketing. Johnson, Whittington, Scholes, Angwin, and Regner (2014, p. 162) define strategic drift as, "…the tendency for strategies to develop incrementally based on historical and cultural influences, but failing to keep pace with the changing environment". Figure 2 illustrates the four phases associated with strategic drift and how each relates to a changing market environment.

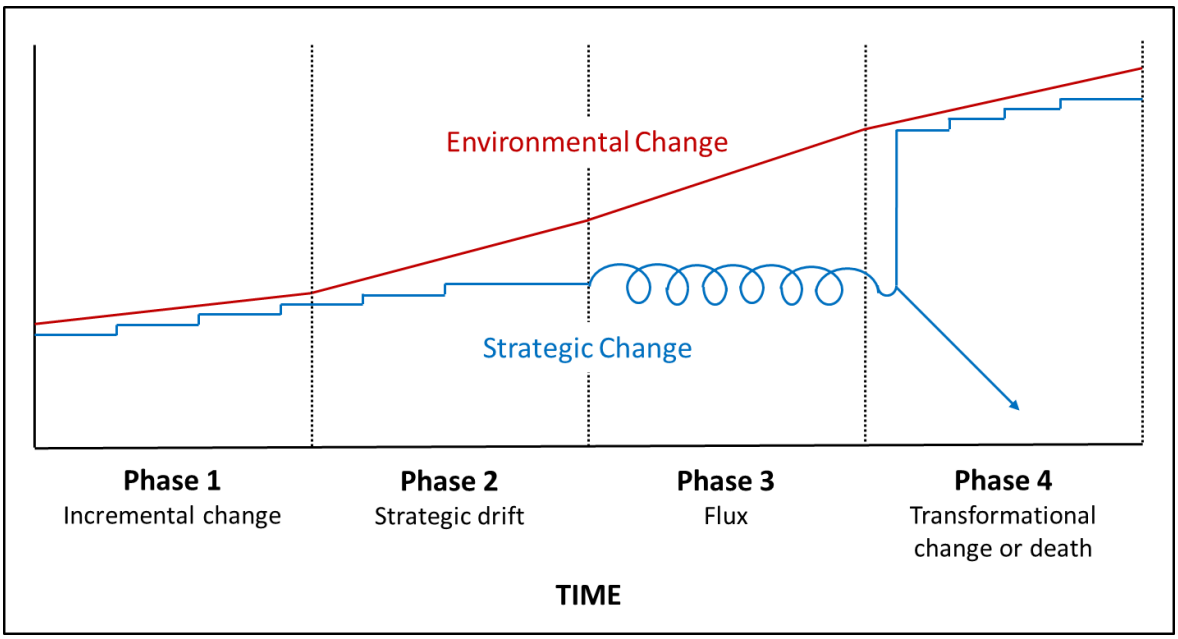


Figure 1: Strategic Drift

Source: (Johnson, Whittington, Scholes, Angwin, & Regner, 2014)

During the incremental phase of strategic drift, there are extended periods of stability within most companies where established strategies experience only incremental change, if any. This is due mostly to the market changing so gradually that the companies can remain aligned to it through minor incremental changes in strategy. Another reason is the historical successes achieved with a specific strategy and the manager's resistance to making any significant changes to it (Johnson, Whittington, Scholes, Angwin, & Regner, 2014).

Johnson et al. (2014) describes the second phase where the change in the market begins to gradually ‘drift’ away from the strategy employed by the company. As highlighted by Sammut-Bonnici (2015), an example of this is when the company’s strategy loses focus on what customer wants. Pesse (2007) confirms that such a loss of focus can take the form of a company holding on to the historically positive effects of maintaining a high share-of-voice, while the true value generated by these sales calls have diminished by PSRs not being incentivised to be focused on the customer’s needs beyond the product. The problem of strategic drift occurs when a company is not able to adjust its strategy at a same rate at which the market is changing. A reason associated with this phase is a management team with a “steady as we go” mind-set, where insights are generated from an analysis of the market, but are not acted upon due to an underestimation of the significance of said insights. A management team that prefers building on the familiar due to a lack of understanding of observed changes in the market, is another cause of strategic drift. Johnson et al. (2014) define a company’s core capabilities as those capabilities that form the basis for the company’s competitive advantage. However, when these capabilities become challenging to adjust, they become core rigidities. This means that the way the company tends to operate on a routine basis, becomes fixed and inflexible, which, in turn, will result in strategic drift becoming more evident. Consequently, most companies in this situation re-allocate the same resources in the same way year after year. Critically, if the strategic drift continues, symptoms such as a decline in company performance, market share and/or the company’s share price will become evident.

This downturn in performance will prompt a period of flux within the company, where the realisation emerges that a significant strategic change is needed. However, flux occurs when management is not aligned on the best strategy to follow to ensure the future success of the company. Confidence in the company will be low with stakeholders demanding changes to rectify the situation as the performance further deteriorates. The final phase gives a company two options, “transformational change” or “death” (Johnson et al., 2014). The transformation required here could

entail a change to senior management, the company structure and more significantly, the business model.

According to Osterwalder and Pigneur (2011, p. 14) “a business model describes the rationale of how an organization creates, delivers, and captures value”. The business model links the customer value proposition to the selected customer segment through two key building blocks of the Business Model Canvas, the key customer relationships and the identified customer channels. Figure 2 illustrates the Business Model Canvas and the various elements making ups its architecture.

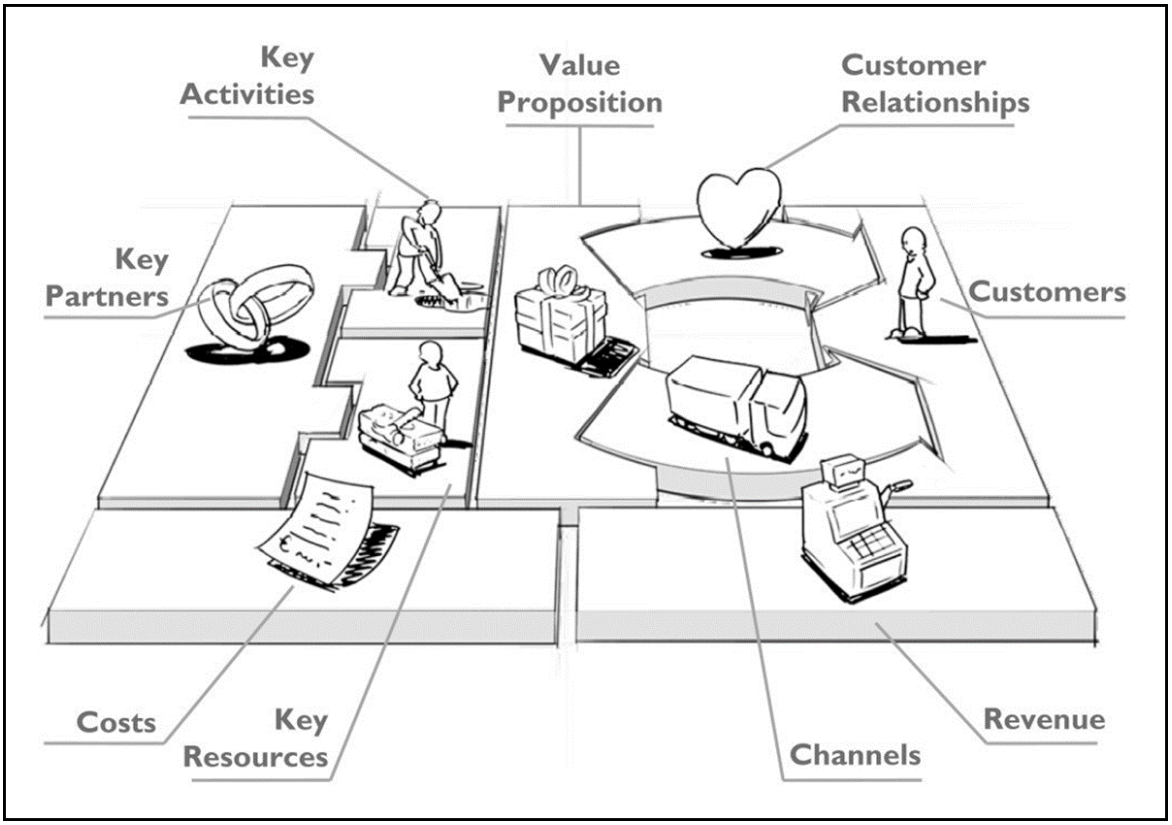


Figure 2: Business Model Canvas

Source: (Osterwalder & Pigneur, 2011)

The value proposition of a company aims to create value for a defined segmented customer via a very specific mix of facets catering for the needs of the customer, ultimately attempting to solve their problems. The value offered could be qualitative

(e.g. customer experience) or quantitative (e.g. price, efficiency of service). Value delivery is done through the channels identified as those preferred by the customer. The selected channels could be owned and direct (e.g. sales force), partnered and indirect (e.g. wholesalers), or owned and indirect (e.g. own stores). The channel preferences are also very closely linked to the type of relationship the defined customer segment is looking for. The maintenance of these relationships involve cost and form a core aspect of any business model.

The marketing needs to fit within the overall strategy of the company and the changing market environment requires that companies have a detailed understanding of market dynamics and in doing so, aim to be aligned to it. Without this alignment, the company's marketing will lack focus and strategic drift, from a marketing perspective, will be inevitable (Gilligan & Wilson, 2003). According to Leask (2015), replicating the organisation's previous marketing investment in a constantly changing environment can result in a reduction in sales productivity and wastage of the organisation's marketing efforts. By keeping the proportion of marketing investment allocation unchanged year after year, the organisation will be allowed to drift away from customers, losing its position in the market, resulting in potential market failure and loss of productivity. The continued investment in ineffective marketing campaigns, will counter the efforts of the organisation's most effective activities. Consistent customer retention, which could be defined as continued product use and support, is further affected when the company fails to ensure the right customers remain the priority and the most effective marketing and sales activities are allocated to them. The "right" customer being the most relevant, highest potential and most influential in terms of product use. (Leask, 2015).

According to Gilligan and Wilson (2003), the aim of the marketer is to anticipate the nature of potential market changes and in doing so, attempt to proactively manage strategic alignment and avoid drift. However, most take a reactive stance. The reactivity is generally either quick or slow, depending on the potential opportunities or threats uncovered by the market change, the timeframe and the ability of the company to respond to the change.

Figure 3 illustrates the typical process a marketer undergoes when strategic drift starts to happen in the company. Initially, the marketer is shocked by the mismatch between their strategy and the needs of the market. This is then accompanied by a certain level of denial in terms of the significance of the market change occurring. Once they start to recognise and accept the significance of the market change, a psychological recoil appears and the marketer typically responds in a manner where the new reality has been absorbed and incorporated (Gilligan & Wilson, 2003).

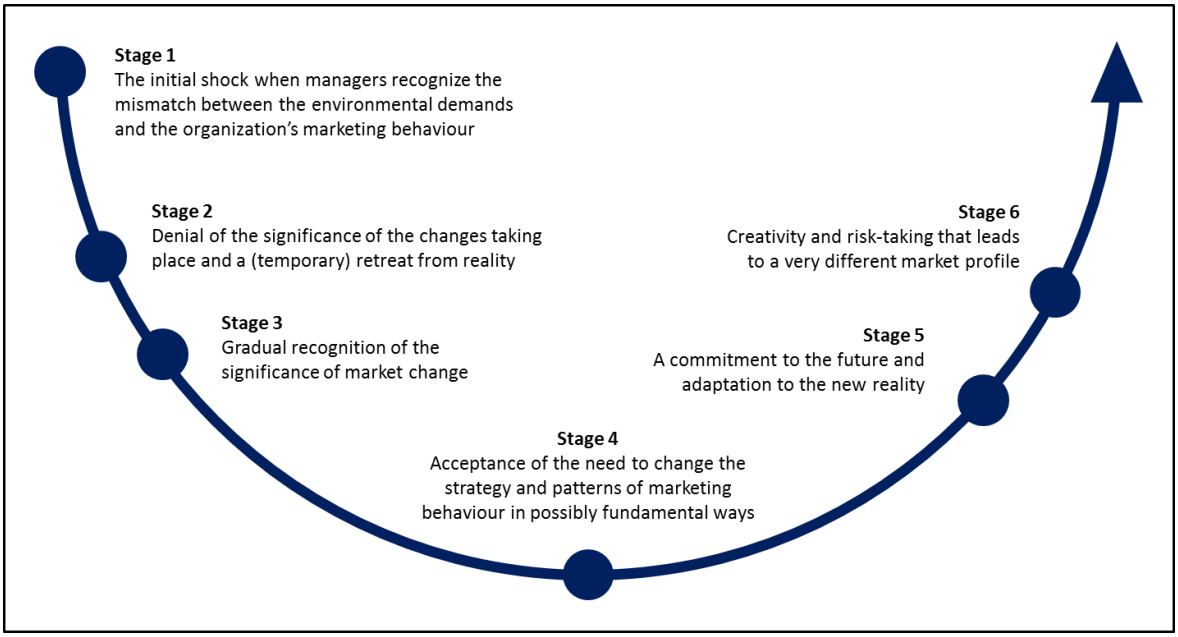


Figure 3: Moving towards the future

Source: (Gilligan & Wilson, 2003)

Maintaining a higher share-of-voice than competitors, is part of a marketing strategy that has been used in the pharmaceutical industry for years. According to Pesse (2007), the sheer number of PSRs in the market and the lack of comprehensive knowledge about the intricacies of the doctor's needs, has resulted in the time spent with each PSR being severely limited, if not completely stopped. The access problem faced by the PSRs is directly related to the historical surge in the size of sales forces because of management's focus on the share-of-voice metric.

The fading correlation between revenue generation and share-of-voice is evidence of the shift on perception about the utilisation of the PSR. Situations where share-of-voice has been increased, only to further stagnate the revenue, are more and more prevalent. These diminished returns are forcing pharmaceutical organisations to rethink the “high share-of-voice” approach and seriously consider steps to streamline sales forces (Pesse, 2007). Iafolla and Greco (2005) state that under the operating assumption that sales representatives truly did influence doctors, the share-of-voice model was very successful. However, nowadays, representative levels have saturated the industry beyond the tipping point and the number of influences affecting the doctors has increased dramatically. This has resulted in customers becoming overwhelmed, and with the large number of influences surrounding doctors, the effectiveness of the high share-of-voice model has diminished. Companies must now consider the mass of potential influences in the market when developing their sales and marketing plans. These influences include, but are not limited to managed healthcare, government regulations, peers, advocacy groups and digital channels. Based on all these influences, it makes more sense for sales and marketing efforts to be based on influence, instead of on share-of-voice. By understanding the influences and their dynamics, sales and marketing activities must be designed to optimally affect these dynamics and ultimately, the doctor’s prescribing habits (Iafolla & Greco, 2005).

Tailoring marketing efforts according to the alternate channel preferences of each doctor, and personalising the approach to a customer level, is imperative. Instead of just making as much ‘noise’ as possible, each doctor must be reached via the right channel at the right time, ensuring an optimal customer experience. To develop an optimal customer experience, marketing efforts must be tailored according to a thorough understanding of the customer’s preferences (Khedkar & Sturgis, 2016).

The use of non-personal channels of promotion have started to increase as the representative accessibility continues to decline. The non-personal channels represent a relatively inexpensive way for pharmaceutical companies to extend their reach into the market. These include channels such as mobile alerts, emails

and websites (Khedkar & Sturgis, 2016). An understanding of influence shifts the focus towards quality and away from quantity. It also calls for the sales representatives to deal with each doctor holistically, thus assisting each doctor to successfully navigate the intricacies of the myriad market influences contained in a very complex environment. By having this approach, the companies can create real value for each doctor. To achieve all of this, the companies must be very much in-tune with changing conditions in the pharmaceutical market and agile enough to avoid strategic drift (Iafolla & Greco, 2005).

Methodology

It must be noted that the focus of the research on the face-to-face interaction between the PSRs and the general practitioners, is only one perspective of potentially many others for investigating the topic.

When the objective of research is to explore and better understand the views of groups or individuals related to a specific problem, qualitative research is a preferred approach. The process involves the development of questions, collection of data in the setting of the interviewee, building of general themes inductively from details, and the interpretation of the data by the researcher (Creswell, 2014).

According to Zorn (2010), the semi-structured interview is often used for conducting qualitative research. The semi-structured interview offers specific questions with the aim of gaining the respondents' views on the topic of interest. Each interviewee gets the same key questions asked, but there is flexibility in how they are asked. The flexibility also pertains to what relevant follow-up or probing questions are used (Van Teijlingen, 2014). Follow-up questions are posed to gain further in-depth information on the topic. Ultimately, the interviewer must avoid steering the interview and ensure a relaxed and comfortable conversation (Zorn, 2010).

According to Van Teijlingen (2014), an advantage associated with this approach is that it is ideally suited for investigating views, values, beliefs, attitudes and motives. It also allows for the evaluation of truthfulness (validity) and urgency through non-

verbal indicators. It ensures all the questions are answered and that the respondent is working on their own. There is potential for this method to increase the response rate. Cohen and Crabtree (2006) state that the use of the semi-structured interview is beneficial as it allows the interviewer to appear competent and well prepared, and gives the interviewee the freedom to communicate their views. However, van Teijlingen (2014) states that there are also some disadvantages associated with the semi-structured interview approach. There may be difficulties linked to the equivalence of meaning from the various respondents, which is why it is important to clarify definitions. Respondents may also revert to responses which are socially preferred. There may also be some groups not represented. The approach can be considered by some as an invasion of privacy. The interviewee's unique characteristics and the researcher's perception, prejudices and appearances may alter the responses.

Sampling of the general practitioners is based on scripting data from ImpactRx (www.impactrx.co.za), a data and consulting company focused on the healthcare industry in South Africa. Hypertension is the most prevalent chronic disease in South Africa and was used to identify ten of the top potential general practitioners to be interviewed. The interview guide contained a list of questions and topics to be covered during the interview. According to Cohen and Crabtree (2006), the interview guide is exactly that when it comes to semi-structured interviews, a guide. It allows the interview to cover pre-specified topics, but if the conversation strays from the guide, the interviewer will allow it as it could add value to the interview. The interview guide (see Supplementary File 1) was paper-based and all interviews were recorded and transcribed for analysis. According to Creswell (2014), the analysis of qualitative data is generally focused on examining the dense text data generated and aggregating it into themes. The data analysis process used to analyse the interview data, is explained in detail in the data analysis section.

According to Gibbs (2007), qualitative validity refers to the accuracy of the research findings, while qualitative reliability indicates a consistent approach by the researcher. Checking for validity was done by employing certain procedures.

Triangulation, the converging of several perspectives of the various interviewees, was used to build a clear justification for the emerging themes, thus validity was added to the study (Creswell, 2014). The discussion of information that contradicts the major themes identified also added to the validity of the study by making it more realistic (Creswell, 2014). Confirmation bias, according to Heshmat (2015), occurs when one desires a certain concept to be true. It prevents objectivity on a specific topic. According to Robertson (2015), confirmation bias is overcome by considering the opposing view as a possible outcome. Self-awareness on possible biases enables an open mind and an objective view on the research.

Creswell (2014) also mentions key strategies to ensure the study is deemed reliable and consistent. Firstly, all transcripts must be carefully reviewed for any glaring mistakes that might have occurred during the transcription process thus potentially affecting the reliability. Then, by following a stringent coding process and avoiding any drift from the definitions assigned to the various codes, reliability can be maintained.

Data analysis

An interview guideline was formulated based on a consistency matrix (see Supplementary File 3) and in line with the objective of the research. The 10 interviews were scheduled with practitioners and took place over a period of two days. During the interview process, a total of 115 minutes of audio was recorded and additional notes were taken; and observations were made. The audio recordings were transcribed verbatim into 59 typed pages. The rich data collected was analysed using thematic content analysis, as described in the Methodology section. The key themes that emerged during the analysis are discussed in the results section of this research report. As much as possible, the actual words used by the participants are used, despite some of the excerpts being grammatically incorrect.

Qualitative data analysis was applied to the transcribed interviews. The analysis involved grouping of collected information to identify differences, common themes,

perceptions and trends (Zikmund, Babin, Carr, & Griffin, 2013). The transcribed responses were systematically analysed using a replicable, credible method (Marying, 2000). Each audio recording was listened to at least once to understand the data collected during the interviewing process to identify any common themes and insights; however, most of the analysis was done post the interview process. The purpose of initially conducting the content analysis was to test any emerging themes and to enrich the interview process. Thematic content analysis was employed by grouping the data on a question-by-question basis (Braun & Clarke, 2006; Zikmund et al., 2013; Saunders & Lewis, 2012). Braun and Clarke (2006) assert that thematic analysis identifies and analyses themes or groupings in data that has been gathered through qualitative methods. Braun and Clarke (2006) suggested the following steps in the thematic analysis of data (See table 3 below).

Table 2: Phases of thematic analysis

Phase	Description of Process
Phase 1	Study the data collected and become accustomed to it, paying specific attention to patterns and themes that emerge
Phase 2	Find the initial codes and document the obvious patterns
Phase 3	Combine the codes into major themes that precisely describe the data
Phase 4	Relate the created themes to the data
Phase 5	Describe the theme and give details of the significance of each theme
Phase 6	Determine the key themes that are important for the discussion of the results

Source: (Braun & Clarke, 2006)

It took approximately four hours to analyse each transcribed interview in full, using a systematic process as defined by Braun and Clarke (2006); this then translated to 40 hours in total to complete the analysis. This process entailed listening to the

audio recordings from the interviews, the review of transcripts and a review of the observation notes that were taken during the interview process. The codes were comparably generated and assigned to the features of the data collected (Braun & Clarke, 2006; Zikmund et al., 2013). The themes were established through identification of important constructs, opinions or thoughts, which were associated to the research questions (Saunders & Lewis, 2012; Braun & Clarke, 2006). The research adopted an iterative method, ensuring that the codes and identification of themes were generated twice before continuing with the review of the identified themes (Braun & Clarke, 2006). Analysis was then performed for each question, which was followed by a frequency analysis. Each notion, view, or idea from the data was recorded and the number of times it recurred was captured. These captured concepts were then ranked according to the number of times they were mentioned. Finally, insights from each interview were interrelated and analysed in the context of the research questions (Saunders & Lewis, 2012; Braun & Clarke, 2006).

Results

Although the frequency of mention is not necessarily an indication of importance, it does however reflect the views which are top-of-mind for the interviewees. The results are ranked according to the themes which came up most frequently and for the context of this research, the more frequent the mention, the more important it was considered to the sample interviewed.

Description of the sample

A list and description of the participants chosen for this research study is presented in Table 4 below. As highlighted in the methodology section, the appropriate general practitioners to interview were selected from various types of medical practices. Each participant's previous and current position and experience was also considered. The 10 general practitioners were all working in the private sector, with more than eight years of experience.

Table 3: Sample description

Type of Medical Practice	Position	Number (Gender)
Solo Practice	General Practitioner	2 (Male)
Small Group Practice	General Practitioner	3 (Male) and 2 (Female)
Large Group Practice	General Practitioner	2 (Male) and 1 (Female)

Understanding the general practitioner's perception of PSRs

The three interview questions that pertain to this research question were set up to understand whether doctors allowed PSRs access to their practices and the reasons behind this. Furthermore, the question sought to understand the effectiveness of PSRs in achieving their objectives and questioning whether the role of PSRs has evolved over time in South Africa.

The first interview question dealt with whether doctors allowed PSRs into their practices, as it was important to first establish this to understand the reasons behind it. All the doctors who were interviewed confirmed that they allowed PSRs into their practices. Table 5 below illustrates the five common reasons for doctors allowing PSRs in their practices. The highest ranked reasons for doctors allowing PSRs in their practices are: new and future insights, intelligence and information on new pharmaceutical products. Pharmaceutical products are considered new when they are about to be or have recently (six months to a year) been launched into the market. Existing products are those which have been in the market for more than one year.

Table 4: Understanding the purpose of allowing PSRs in doctor's practice

Rank	Themes	Frequency
1	New and future insights, intelligence and information on new pharmaceutical products	13
2	New and future insights, intelligence and information on existing pharmaceutical products	10

3	Updates on changes in the pharmaceutical industry	7
4	Clarification of pharmaceutical products in the market	3
5	Face-to-face interaction as an effective tool of communication for information	3

In analysing the top three themes, most of the participants agreed that they allowed PSRs in their practices because they provided them with new information and future insights, intelligence and information on new products. Many of the participants agreed this was important for the doctors as it kept them informed on new pharmaceutical products, with one of the participants stating that "*It's one of the ways of keeping in touch with what is happening with new medicines in particular*" *(Respondent 1)*. Furthermore, another participant highlighted the importance of getting new information from PSRs to make accurate choices on prescriptions, stating that "*It is the responsibility of the representatives to give us information on drugs so that we make good choices when we need to prescribe drugs*" *(Respondent 6)*. Participants considered PSRs as their main source of information on new investments and practices in the pharmaceutical industry.

As with the new products, many of the participants agreed that new insights were also appreciated on existing products. The participants emphasised the importance of conducting proper research and summarising these in the form of studies to be presented to the doctors, with one of the participants raising the notion that, "*It gives you a bit of a refresh of the old medication that has been around and they often bring studies that are happening*" *(Respondent 1)*. Another doctor emphasised the fact that it was important for PSRs to regularly update them on existing pharmaceutical products stating that, "*It keeps me informed on developments, even if its repetitive news, we all forget*" *(Respondent 5)*.

Another significant construct raised, based on frequency count, was the importance of getting updates on changes in the pharmaceutical industry. The doctors insisted that personal interaction with the PSRs gave them important information on

changes in the industry with one of the participants expressing that, "*Yes my purpose for seeing them, is of course keeping in touch with the industry, especially pharmaceutical, I see the rep very important in my practice*" *(Respondent 5)*.

The second interview question required participants to assess and describe the effectiveness of PSRs in achieving their objectives. The participants were prompted to reference their professional experiences to describe whether the PSRs were achieving their objectives in a manner that was effective. Table 6 below presents nine factors that described the effectiveness of PSRs in achieving their objectives. Interestingly, the top ranked perspective was that PSRs were only effective when they focused on new information, rather than advertising the products.

Table 5: Understanding the effectiveness of PSRs in achieving their objectives

Rank	Themes	Frequency
1	Ineffective if focus is on advertising rather than informative	5
2	Effective if PSR has effective and excellent people skills	4
3	Effective if PSR provides new insights and information on pharmaceutical products	4
4	Effective if PSR is offering pharmaceutical products with efficacy	3
5	Effective if PSR has effective and excellent communication skills	3
6	Effective when there is a focus on one or two products	2
7	Ineffective as sale of pharmaceutical products is dependent on pharmacies not doctors	2
8	Ineffective if information on pharmaceutical products is outdated	2
9	Effective if PSR is offering pharmaceutical products that are cost effective for patient	1

The participants had different views on the effectiveness of PSRs in reaching their objectives. The participants emphasised the point that PSRs were effective when they communicated on the efficacy of the products rather than focusing on sales. Focusing on advertising was identified as the main hindrance in the success of PSRs in reaching their objectives, with one of the participants stressing that, "*Sometimes they can be a little bit difficult you know they come with arguments like clones and things like that and price wise and things, its actually they want to push their product*" *(Respondent 9).* The participants found that focusing on the sale of products rather than the efficacy of the products resulted in doctors disengaging from the interaction, with one of the participants explicitly expressing that, "*Definitely, you get certain companies that will tell their reps to push or emphasise that their product is good and hammer it in a way that might actually be annoying" (Respondent 5)*. The participants expressed empathy to the fact that the approach is linked to the compensation of the PSRs, but they were of the notion that this approach was ineffective.

Some of the participants believed PSRs were more effective in their objectives when they tried to ensure effective personal interaction and demonstrated excellent people's skills. The concept of significant provision of new insights and information on pharmaceutical products emerged once again in this interview question. The provision of new insights and information was considered by the participants as value-add by the PSR. One of the participants went as far as mentioning that he avoided PSRs that did not have sufficient information on new pharmaceutical products, declaring that "*I think in terms of the new drugs they are effective, because we need to know about it, we need to know about the new studies, but the ones who come with the drugs that we all know and to say the same thing is just a social thing, is not actually doing much here*" *(Respondent 8)*.

Many participants also raised the importance of marketing products that were characterised by efficacy and quality. The doctors expressed concern that generally prescriptions were based on medications proven to be effective based on experience and scientific research, hence switching to new products was a

challenge, with one the participants pointing out that, "*as a doctor you have often set prescribing processes that they are trying to change and the only reason to change is either significant cost advantage or product advantage or a new product that demonstrates better efficacy over an older product on a market*" *(Respondent 4)*. The participant qualified this notion by stating that changes on prescriptions were only made based on cost effectiveness and efficacy. The doctors further added the view that over and above people's skills, it was of utmost importance that PSRs possess effective communication skills when providing information about the products. The participants believed PSRs needed to have effective communication skills that ensured engagement and interest on the subject.

The third interview question prompted interviewees to reflect on how the role of PSRs has evolved in the past few years. The question was specifically phrased in a manner that allowed the participants to first determine whether indeed the role of PSRs had changed and to elaborate on the reasons. Table 7 below presents the main changes that have occurred on the role of PSRs in the past few years.

Table 6: Understanding how the role of PSRs have changed over the years

Rank	Themes	Frequency
1	PSRs now must be well informed, knowledgeable and well educated which is a value add	7
2	The role of PSR is now based on new information on pharmaceutical products	5
3	The role of PSR is now pressurised because of high competition in the industry	5
4	Previously PSRs would buy loyalty through social events, promotions and gifts for the doctor	5
5	The role of the PSR now focuses on advertising pharmaceutical products	3

6	The role of PSR now focuses on other avenues of marketing such as getting on medical aid and pharmacies' listings	2
7	The role of the PSR has not changed	2
8	The role of the PSR is now enhanced by technology	1

In response to this interview question, nine of the ten participants agreed that the role of PSRs had changed in the past few years. Only one individual expressed the view that the role of PSRs remained the same, qualifying this view that in his experience the PSRs tend to provide the same information. As presented in Table 7 above, the highest-ranking aspect based on frequency count was that: PSRs are now required to be well-informed, knowledgeable and well educated which was not the case previously; this factor appeared to be the most common change in the past few years. One of the participants specifically gave a narrative on how this has changed, recalling that, "*I think it has changed, in the old days when pharmaceutical companies could buy a doctor's loyalty, the rep could have just been a pretty face, and invite a doctor to some form of reward*" *(Respondent 5)*. Another participant supported this view point stressing how the role of PSR has evolved, "*their responsibility now is to give us the information on the drugs" (Respondent 6).*

The participants were of the impression that the new role of PSRs added more value because it focuses on new intelligence and information that can be applied in practice. The participants appreciated the fact that the role of PSRs is no longer about bringing samples but rather providing new value add information based on updates informed by research. Some of the participants were of the perception that the role of the PSR was now pressurised based on numerous factors which include; the introduction of generics in the market which are generally more cost effective, changes in legal frameworks in the pharmaceutical industry and the influx of multinational companies. According to the participants, these factors were considered to have contributed to the high competition in the pharmaceutical industry and essentially affecting the role of the PSR. One of the participants

communicated that due to the high competitiveness in this industry, PSRs are now required to work harder than before.

For the rest of the participant statements, see Supplementary File 2.

Understanding the general practitioner's perception of the marketing strategies of pharmaceutical companies

The three interview questions pertaining to responding to this research question sought to understand the effectiveness of marketing strategies adopted by pharmaceutical companies, the evolution of the marketing strategy in pharmaceutical companies and the relevance of PSR in the marketing strategy of pharmaceutical companies, from the view of the South African general practitioner. The fourth interview question encouraged participants to assess the effectiveness of marketing strategies adopted by pharmaceutical companies. Each participant was requested to draw on their past experiences to determine whether pharmaceutical companies were adopting appropriate strategies in the marketing of pharmaceutical products. The questions were designed in a manner that firstly determines whether the current strategies were considered effective, then further probing elicited elaborations on the reasons behind their notion. Many of the participants believed the marketing strategies of pharmaceutical companies were effective, with three of the ten participants unreservedly disagreeing with this view. The results of interview question 4 are summarised in Table 8 below. The highest-ranking concept based on frequency count was related to the perception that marketing strategies within pharmaceutical companies were only effective if PSRs provide new information and insights on the products.

Table 7: The effectiveness of marketing strategies adopted by pharmaceutical companies

Rank	Themes	Frequency
1	Effective when the PSR provides new information and insights on pharmaceutical products	6

2	Effective when pharmaceutical companies provide articles and organise workshops on the latest development on products and treatment	5
3	Effective when the PSR interacts face-to-face and is well informed and prepared	4
4	Effective when marketing is strategic through visual and tangible advertising	3
5	Effective when marketing is based on quality and cost-effective pharmaceutical products	3
6	Ineffective when marketing is based solely on gifts	3
7	Ineffective when their target for advertisements are doctors instead of pharmacies and medical aids	2
8	Ineffective when there is information overload in one appointment with the PSR	2
9	Effective when marketing is customised based on doctors' needs and requirements	1

Because the participants' exposure to the companies' marketing strategies were mainly limited to their interaction with the PSRs, their responses related mostly to their experiences with PSRs and not necessarily to the entire marketing strategies of pharmaceutical companies. The participants expressed the fact that they generally had busy schedules which involves providing medical services to patients, therefore they had limited time to read articles and research studies on new information related to pharmaceutical products, hence the participants recommended that pharmaceutical companies should invest time in ensuring that their PSRs provide doctors with new insights and information on products. As expressed by one of the participants that, "*I think you are right, I think the generic companies and it is partly to do with the reps themselves, but a good rep, a good rep will take a product, they are mostly female, will take a product and talk as if it's a new product, and that is always good, because she is then expressing what she has learned about the product*" *(Respondent 1).*

Many of the participants found that organising small group events and workshops with doctors to ensure sufficient interactions was extremely helpful. The participants were of the viewpoint that such interactions through events and workshops was one of the most effective strategies. In highlighting the importance of interactions, the participants were of the notion that the interactions had to be made up of PSRs who were sufficiently prepared and well informed.

It is interesting that some of the participants were of the view that marketing through visible and tangible products was effective as it spurred memory of the name of the products, whilst other doctors were of the notion that pharmaceutical companies should refrain from giving away goods as in most cases, these served little to no value, especially if it was stationery such as pens and writing pads, with one of the participants emphasising that they serve no value, "*You know I actually think all the little things that they give us to market their stuff, is a waste of time, space and paper, so I mean you don't really need any more pens, you don't really need any more things*" *(Respondent 8).* It is important to qualify that the participants who supported this type of marketing strategy, specifically mentioned that the goods had to be something that could be used by the doctor daily. Some participants made an interesting point that pharmaceutical companies were targeting the wrong market, emphasising that more focus should be placed on getting into the medical aid lists, because essentially the medical aids have the last word in terms of payment for prescribed products, with one of the participants stating that, "*Medical aids deciding what they pay for*" *(Respondent 3).*

The fifth interview question sought to determine whether the marketing strategies of pharmaceutical companies changed over time, further probing on how these strategies have evolved. Nine of the ten participants agreed that the marketing strategy of pharmaceutical companies had changed over time; on the contrary, one participant was of the view that this was not the case. Table 9 below gives an overview of how the marketing strategies of pharmaceutical companies have evolved over time. Based on the frequency count, the two highest ranking aspects that were highlighted were that marketing strategies still involved personal

interaction, however, with a mix of other digital platforms and that the change in regulations in the pharmaceutical industry was the cause in the shift of the marketing strategy of these companies.

Table 8: Changes in the marketing strategy of pharmaceutical companies over time

Rank	Themes	Frequency
1	Marketing still includes personal interaction, however, with consideration of other channels such as digital platforms	6
2	Change in regulations have influenced change in marketing strategy	6
3	Historically marketing strategy was considered too aggressive	5
4	Marketing strategy is now more competitive	4
5	Marketing strategy is now customised to the needs of doctors	4
6	Marketing strategy is now focusing on generics to ensure competitiveness on pricing	2

With the world moving into a digital society, the pharmaceutical companies have also changed the marketing strategy through the combination of personal interaction which are still required, and other digital platforms such as e-mail and short messaging, with one of the participants questioning the role of PSRs in the digital society enquiring that, "*I am also questioning the role of a rep in the modern day and age, in other words should it not be replaced by a mail drop you know, other channels rather than, and I think is, the problem is they got, you got to choose the correct human interaction*" *(Respondent 4)*, the participant did however acknowledge the fact that most doctors still preferred personal interaction, highlighting that, "*I think doctors still want human interaction*" *(Respondent 4)*. Another participant affirmed by expressing the view that the only factor that had

changed in the marketing strategy of pharmaceutical companies, was the use of technology.

Most of the participants associated the change in the marketing strategy of pharmaceutical companies to the change in regulation in the pharmaceutical industry. A considerable amount of deliberation occurred when considering the interplay of regulations in the pharmaceutical industry with one doctor stating that, *"they must have, especially after the new law that has been around now for a few several years, definitely, it is much more difficult for companies to do marketing than in the past" (Respondent 5).*

Many of the participants were of the belief that the introduction of generics in the pharmaceutical industry contributed to increased competition in the industry, consequently forcing pharmaceutical companies to change their marketing strategy entirely. In some cases, participants were of the perception that previously, the marketing strategy of pharmaceutical companies was too aggressive, and it has toned down over the years, which is considered a positive change**.** The participants found that in the past the marketing strategy was too aggressive in some cases with PSRs going as far as attempting to dictate to doctors on how to prescribe. It comes as no surprise that some of the doctors appreciated the fact that the marketing strategies were now being more personalised or customised. The doctors were of the view that the marketing strategy should be strategic with the use of proper analytics to alter their marketing strategy in a manner that offers customised services.

The sixth interview question sought to understand whether participants thought the role of PSRs was still relevant as part of the marketing strategies of pharmaceutical companies, further assessing how they see the role of PSRs currently. Many of the participants were of the view that PSRs are still relevant, however, this is dependent on some factors. The factors highlighted by the participants are presented in Table 10 below. Based on the themes that emanated from the interviews, many of the

participants thought that PSRs were relevant today only on the basis that they provided new insights and information that was based on scientific research.

Table 10. Relevance of PSRs in the marketing strategies of pharmaceutical companies

Rank	Themes	Frequency
1	Relevant on the basis that PSR provide new insights and information based on scientific research	9
2	The importance of face-to-face/personal interactions	4
3	PSR should develop sustainable relationships with doctors	4
4	On the basis that PSR should be professional and book appointments	2
5	Relevant on the basis that marketing strategy is based on visual and tangible advertising	1

Evidently, most of the participants agreed that PSRs were still relevant, however this was dependant on the fact that PSRs add value through the provision of new information, something that the doctors will otherwise not have known, as previously stated that doctors do not have time to read articles and studies on new developments and changes in the industry. Many of the participants emphasised this point with one of the participants declaring that, *"Yes, I think so, a 100% I think a good rep can make a change decision on valid scientific basis" (Respondent 4).* The doctors' main concern is to prescribe products that will benefit the patient as expressed by another participant that, "*If they are going to bring out new information with that new product that is a benefit to a patient, yes there is still going to be a role, if they are just going to be a TV ad, then I can just ask for what I want" (Respondent 7).* Another participant highlighted that they were not interested in being informed about old information, stating that, "*if a pharmaceutical company have new information, even if it is on an old drug, they have new information, new*

studies, if they are talking to you about new drug, I think they should focus on that" *(Respondent 8).*

Some of the participants believed that PSRs are relevant especially because of the personal interactions, with other participants going as far as underlining the importance of forming sustainable relationships between the doctor and PSR. The participants believed personal interaction was crucial, especially invitations to workshops further expressing that the invitations to the workshop should be done through personal interaction and not e-mail. Similarly, other participants believed that it was important for PSRs to form sustainable relationship with the doctors, as this was considered an effective marketing strategy. One of the participants advised that PSRs should not see their interaction with doctors as a marketing opportunity, but rather as an opportunity to develop sustainable relationships. Some participants emphasised the importance of booking appointments instead of waiting at reception with the hope of seeing the doctor, the participants warned against PSRs pitching to the practice without an appointment with a hope of squeezing in a discussion.

For the rest of the participant statements, see Supplementary File 2.

Understand the general practitioner's preferences on engaging with the PSR

The six interview questions that relate to this research question were set up to understand the needs of the general practitioner in South Africa, in relation to the services provided by the pharmaceutical industry. The questions further sought to understand if the general practitioners were open to the use of alternative marketing channels by the pharmaceutical sales representatives and their companies.

The seventh interview question sought to establish from the general practitioner's perspective how they would ideally like to interact with PSRs. The views of the participants were mixed, with some highlighting the importance of short and precise interactions as they have time constraints due to the nature of their jobs. Table 11 below highlights the several themes that emerged during the analysis of data pertaining to interview question 7.

Table 11: Preferred interaction with PSR by health practitioners

Rank	Themes	Frequency
1	The PSR should provide relevant clinical information	7
2	A short interaction with the PSR is ideal	6
3	The PSR should ideally provide a precise message	4
4	New and future insights, intelligence and information on new pharmaceutical product	3
5	The provision of visual aids by the PSR is preferred	2
5	PSR should not question / dictate to practitioner	2
6	Should ideally be an informed and knowledgeable PSR	1
6	Honesty about pharmaceutical products	1
6	A personal relationship with the PSR	1
6	PSR should promote own product, not criticise competitor	1

In analysing the top five ranking views expressed by participants, a theme that emerged strongly was the view by participants that it was important for the PSRs to provide relevant clinical information about the products they were promoting to practitioners instead of providing too much information that proved unnecessary. As one practitioner put it "*they must come in and just give you one or two little things, you one or two key messages and that is it, not try to run through the whole thing the whole time they come here" (Respondent 10).* The participants also indicated that it was important for the PSRs to provide a platform where they could provide feedback on certain products as well as get the views of other doctors on their experiences on the use of other products. Emphasis was placed by the participants on the amount of time spent during an interaction with PSRs.

The participants indicated that the interaction ideally had to be short and precise as they ran busy practices and could only spare a limited amount of time in their day

for the sales representatives. The importance of the message from a PSR being precise was highlighted as being important for the participants. "*But it must be short, and they must have an idea of what their message is going to be, and it must be relevant*" *(Respondent 1)* and "*they must be on the point" (Respondent 2)*, were some of the views expressed by the participants on the importance of receiving precise information.

The type of information provided by the pharmaceutical sales representatives appeared as a key factor of the practitioners' preferred engagement with the PSR's. It emerged that practitioners are interested in finding out the new and future insights on new products as well as existing products. Participants are also particularly interested in new products that will be alternatives and provide benefit for their patients. In support of the views of other practitioners, other participants expressed their views as "*I think when a brand is being launched, I think for a year, if they see you even five times in that year, I don't mind, because you want to know, and you want to hear the feedback as to what the other doctors are saying, you want to give your feedback*" *(Respondent 8).*

Another factor that emerged as an important element of the preferred engagement of practitioners with pharmaceutical sales representatives was the method of delivery of the message by the PSRs. Participants highlighted the importance of visual aids for them in the form of graphs and articles specific to the products they were promoting. An equally important theme that emerged during the analysis of data was that practitioners viewed the role of the pharmaceutical sales representative as that of providing information on clinical product information rather than dictating to them how to use the products. The views of some practitioners were that some representatives questioned practitioners on the use of their products with some even attempting to dictate to the practitioners how to prescribe drugs. Practitioners do not take kindly to this type of behaviour by PSRs and some expressed their views by stating "*They should not tell me what to do" (Respondent 7).*

As indicated in Table 11 above, there are other preferred methods of interaction by practitioners, however only the top five themes have been discussed for purposes of analysing the interview question.

The eighth interview question sought to understand if the general practitioner was open to the use of alternative marketing channels by pharmaceutical companies and their sales representatives. The views of the participants were mixed, with some openly expressing their lack of interest and some indicating that they realised the importance of alternate channels, however also highlighting that they did not have time to explore the alternatives due to the nature of their busy schedules.

Table 12 below provides a summary of the views and insights provided by the general practitioners when asked about their preference to use alternative marketing channels by pharmaceutical companies and their representatives.

Table 92: General Practitioners' views on alternative marketing channels

Rank	Themes	Frequency
1	No, some practitioners have no time and interest	7
2	Practitioners are somewhat open to the idea of alternative channels	2
2	Yes, some practitioners are open to the idea of alternative channels	2
2	No, some practitioners prefer physical interaction	2

Most participants expressed that that they were not interested in the use of alternative marketing channels by pharmaceutical companies. With a frequency of seven, the key theme that emerged was that practitioners had no time or the interest to explore these alternative means. As one participant put it, "*I can see the need for it in this environment currently, but personally I am not interested" and "Well I think the problem with that if you are looking at electronic media in terms of emails and*

those kind of things, you know if it is a busy day, you are just going to delete them and not look at them" (Respondent 10).

Furthermore, there were some participants who somewhat believed that there was some value to be realised from the use of alternative marketing channels such as the use of online platforms to a certain extent, as well as continuous medical education using video or audio files. What was interesting from the findings is that only two participants were clear in their view of the benefits of alternative marketing platforms. They specifically pointed out symposia or group meetings to improve medical education. Two of the participants also emphasised that while they appreciated alternative marketing channels, they still believed in the value of physical interaction. One participant expressed their views as follows, *"you know if you see somebody outside and you go and see them, that is a much more effective way. So, I think there is a role for electronic marketing, but I don't think it should replace that physical interaction because that is too easy to just delete and to just run over it" (Respondent 10).*

A follow-on question sought to understand which alternative channels were most preferred by the general practitioners. Table 13 below, provides a view of the alternative channels highlighted by participants during the interview process.

Table 103: Alternative marketing channels preferred by general practitioners

Rank	Themes	Frequency
1	Digital (Online) platforms	4
2	Symposia (Group Meetings)	3

In analysing the responses, the emergent themes were the two platforms highlighted in Table 13 above. Although online platforms were not the choice of most practitioners due to time constraints and spam related issues, there were practitioners who pointed out the value of digital platforms, such as video and audio training, as well as the benefits of social media for getting a group of practitioners

together for collective feedback and continuous learning benefits. One participant said, "*I mean I have mentioned the email, the SMS, you know social media is such a massive medium, you know if you can have a few doctors belong to for an example Burenams diabetes workshop unit and then they form a group, a WhatsApp group or a certain IPA forms a WhatsApp group and will communicate through that group to the doctors" (Respondent 5).* Symposia and group meetings also emerged quite strongly with those practitioners who highlighted them as an alternative means, pointing out their potential value-add to continuous medical education. These are some of the views of the practitioners in this regard, "*say okay we have got eight doctors with like a nice small meeting, we going to put it together with a speaker, put them in the same room, that's hundreds" (Respondent 4).*

Where relevant, an additional question was aimed at understanding the reasons behind why general practitioners were not particularly interested in using alternative marketing channels provided by pharmaceutical companies and their representatives. The key themes that emerged from the analysis were that the general practitioners generally had no time to explore these alternatives and that some believed there was generally a poor response to alternative channels, such as emails, as illustrated in Table 14 below:

Table 14: Reasons general practitioners do not prefer the use of alternative marketing channels

Rank	Themes	Frequency
1	Practitioners have time constraints	3
2	Practitioners believe there is poor response to alternative channels	1

In expressing their views, one of the participants said, "*I have tried that (online interaction), you know it is so difficult, you never know what time you going to get home, when you get home, you want to organise yourself supper" (Respondent 1),* while the other said "*maybe some practice doctors will appreciate that more, I just*

don't think, you know if you are going to send the email out to ten practices and say listen we are going to have a dinner at Monte Casino, respond on email and you will most probably get two doctors I think, but if you personally invite them, you will get eight doctors" (Respondent 5).

The ninth interview question sought to understand the needs of the general practitioner in South Africa as they relate to the pharmaceutical services companies and their representatives. Table 15 below presents the key needs as highlighted by the participants.

Table 115: The needs of general practitioners from the pharmaceutical industry

Rank	Themes	Frequency
1	The provision of accurate clinical information	4
1	New information as well as updates on changes in the pharmaceutical industry	4
2	A regulated, fair and responsible health environment	3
3	The provision of safety information on drugs	2
4	A platform for doctors to interact	1
4	The provision of a support system to doctors	1

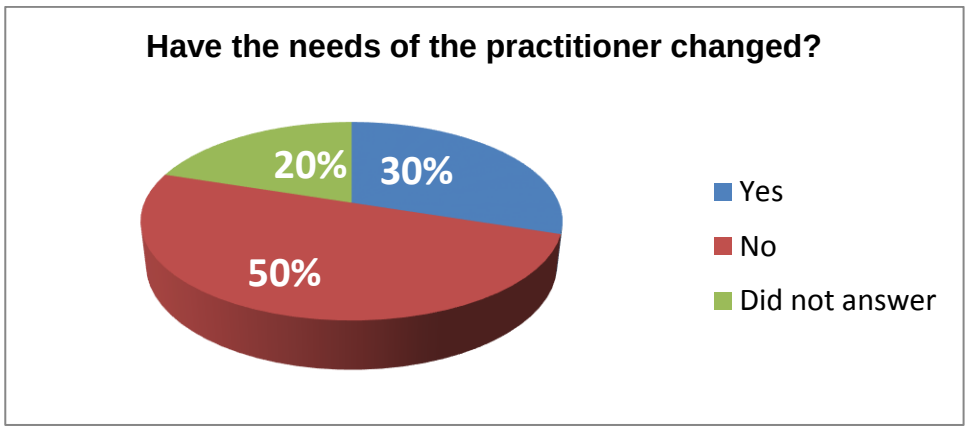
In analysing the top three themes, it emerged that the key theme was the provision of accurate information by the pharmaceutical companies and their representatives. Most participants indicated that they, specifically, were interested in the provision of accurate clinical information that would be beneficial to their patients. In answering the question, participants highlighted the importance of this information in enabling effective decision making. As one participant put it, "*It's basically what I say, they must give me information to help me make good decisions about products. They must not try to tell me and force me to use certain products, we have already got that with the medical aids" (Respondent 6).*

The second element that came out equally strongly was the importance of the provision of new developments or updates on changes in the pharmaceutical industry. In answering this question one participant said" "*To be updated with new stuff and new information and stuff, you know sometimes there is an old product and you don't have to know more about it, sometimes there is new information that you get from their part, relevant stuff, then it is worthwhile listening" (Respondent 9).*

Access to a regulated, fair and responsible health environment ranked the second strongest construct with practitioners expressing their frustrations with the health regulatory bodies as well as with medical aids. One participant who felt very strongly about the topic, pointed out their view by expressing that it was important for them as practitioners to act in a responsible manner, but that the environment in which they operated had to equally be governed responsibly. Further expressing his needs, the participant highlighted the legal risks and pressures that are faced by practitioners on a day-to-day basis. He pointed out again, the importance of the changes required to ensure a fair and safe operating environment for both doctors and their patients.

The tenth interview question sought to investigate whether the needs of the general practitioner have changed over time. Figure 4 below highlights the views of the ten participants interviewed.

Figure 4: Analysing whether the needs of the practitioner have changed over time



Half of the participants interviewed indicated that their needs had not changed, while approximately a third of the participants highlighted that their needs had changed. Two of the participants were not clear in their response and it was not possible to ascertain from their responses whether their needs have changed over time.

A follow-on question was aimed at understanding how the needs of the practitioner have changed over time. The insights provided by the participants highlight the factors that directly or indirectly influence how the needs of the general practitioners have changed over time. In analysing the question, only two themes emerged as being factors that have influenced those changes of practitioners over time. Table 16 below presents the factors that have influenced the changes over practitioners over time.

Table 126: Factors that have influenced the needs of general practitioners over time

Rank	Themes	Frequency
1	Medical aid restrictions	2
2	Sales rep / doctor changes in relationship dynamic	1

Participants expressed the view that changes in medical aid guidelines over the years have influenced how they can effectively provide care to their patients. When practitioners wish to invite their patients for follow-up sessions because perhaps they want to do further investigation on case specific matters, or wish to refer their patients to specialists, they are restricted in that the patients are not able to fund those visits, or the medical aids do not authorise those visits. One participant expressed their view as follows, "*Definitely changed, there was a time if, when you had a patient with a problem you could say to them this is the problem, you need more information, can you get them to come back to see me or send them to a specialist, people are not so happy to do that anymore" (Respondent 1)* and *"The medical aids won't pay for them to have unlimited visits to the doctor or to the GP or to the specialist, specialist don't spend time with them either so" (Respondent 1).*

Another participant shared the same sentiments, pointing out that the standard of care to patients was compromised because medical aids had taken a decision to no longer pay for preferred medicines that practitioners deemed best to treat the conditions of the patients.

The eleventh interview question sought to investigate if the general practitioners believed that pharmaceutical companies were aligned to their needs. The observations of participants were diverse with the top construct in the analysis indicating contrasting opinions from the participants. Table 17 below presents all the views expressed by general practitioners in respect of their views on the pharmaceutical companies' alignment to their needs.

Table 17: Pharmaceutical companies' alignment to the needs of general practitioners

Rank	Themes	Frequency
1	As general practitioners, we all have different views	4
2	Pharmaceutical companies are aligned and catering for the needs of practitioners	3
3	Pharmaceutical companies are somewhat aligned to the needs of practitioners	2
4	Pharmaceutical companies are misaligned to the needs of practitioners	1
4	Sales representatives are inadequately trained	1

In analysing the data for interview question 11, it became apparent that most practitioners were not entirely convinced of the alignment of pharmaceutical companies to their needs. However, the majority also felt that they could not dispute this fact with enough conviction. One participant articulated their views as follows, "*I think some of them are much more effective in terms of all that. And then other are just like, they are missing the point totally. So, there is two or three companies*

that obviously got that right and doing the right thing, but lot of them don't" (Respondent 10).

Some participants did however express the view that they believed pharmaceutical companies were aligned to their needs and trying to cater to the needs of practitioners. One practitioner pointed out that they believed pharmaceutical companies were interested in hearing them out and that they responded to their needs. Furthermore, two participants pointed out that they believed that pharmaceutical companies were somewhat aligned to their needs and only one participant was absolute in their view that pharmaceutical companies are misaligned to the needs of practitioners and that their sales representatives were not adequately trained. The participant stated "*No – Misaligned" and "most because their reps are not trained for that, their reps are trained as a road presenter and you just switch off, I certainly do, I mean somebody shows me a piece of paper and start telling me things, no sorry. Tell me what is good about your product. Ask me would I like something more if there is something I need to clarify. Don't give me a piece of paper" (Respondent 4).*

The final interview question was intended to understand how the general practitioners would like to be viewed by the pharmaceutical companies they interact with. Table 18 below presents a list of the views expressed by practitioners on how they would like to be seen and perceived by the pharmaceutical companies.

Table 18: How practitioners would like to be viewed by pharmaceutical companies

Rank	Themes	Frequency
1	Practitioners are working in collaboration with them	3
2	As a knowledgeable practitioner with sound decision making capabilities	2
3	Practitioners are open to new ideas presented by pharmaceutical companies	1

3	As an individual	1
3	As an ethical practitioner	1

In analysing the top two themes, it can be determined that the general practitioner holds in high esteem their relationship with the pharmaceutical companies. The top construct indicates that general practitioners would like to be perceived as cooperative and working in collaboration with the pharmaceutical companies. In expressing their views, one participant stated, that they would like to be viewed as, "*A partner in good health for South Africa, nothing else" (Respondent 6)* while another stated, "*Well they must see me as a professional that prescribes the product to the benefit of the patient and they shouldn't try to change my prescription base because of their generic product that is in competition with a lot of generic products, it's all generic product, it's all price based, so the only benefit that they want me to tell the patient is that we are costing R10 and product B is a R100.00" (Respondent 7).* Other opinions articulated by the participants were that they would like to be viewed as individuals; and ethical practitioners who are open to the ideas presented by the pharmaceutical industry.

For the rest of the participant statements, see Supplementary File 2.

Discussion

The top themes that materialised from the interviewing process and through analysis of data are discussed per research question in relation to existing literature.

The general practitioner's perception of PSRs

It was determined that all the doctors interviewed still do allow access to PSRs to some degree. As displayed in Table 5, the most common reasons why the doctors want to see PSRs are to gain:

- New and future insights, intelligence and information on new and existing pharmaceutical products
- Any updates on changes in the pharmaceutical industry

Although Salmasi et al. (2016) found great variability in the doctors' perception of the PSRs as a legitimate source of information, the results highlighted above indicate that most doctors interviewed do rely on the PSRs for information. However, this appears to only be true when the information was of a new and insightful nature and related to important changes in the pharmaceutical industry.

As displayed in Table 6, the PSRs were rated most effective by the doctors when:

- The PSR avoids focusing on advertising but rather on the provision of new insights and information on pharmaceutical products which are effective
- They have well-developed people and communication skills

The reasons stated by Salmasi et al. (2016) that contribute to a decline in PSR access are further confirmed by the interviewed general practitioners. Reasons such as lack of conviction and credibility about their product, a lack of accuracy in the information offered and an approach considered "pushy" and argumentative were mentioned by the interviewees.

As displayed in Table 7, the role of the PSRs has evolved in the following ways:

- The PSRs now must be well-informed, knowledgeable and well-educated (especially on new product information), as they can no longer "buy" loyalty from the doctors through social events and gifts
- The PSRs are under more pressure due to the intensification of competition in the pharmaceutical industry in South Africa.

The above-mentioned increase in the level of competitiveness with which the PSRs are now faced, confirms the statement by Khedkar and Sturgis (2016) that the high-value doctors are typically receiving a PSR contact every working hour of every day throughout an entire year. The PSRs now must navigate a large amount of PSR activity and in a more tightly regulated environment, the creation of a positive customer experience will be dependent on how the PSR can address the needs of the doctors.

The general practitioner's perception of the marketing strategies of pharmaceutical companies

As displayed in Table 8, the marketing strategies employed by the pharmaceutical companies are only considered effective when:

- The content delivered by the PSR is focused on new information and insights on relevant pharmaceutical products
- The companies provide relevant articles and organise workshops on the latest developments and product treatments
- Well-informed and prepared face-to-face interactions with PSRs form part of the marketing strategy

The statement by Pesse (2007) that the PSR is no longer valued by the pharmaceutical industry is contradicted, based on the preference found in the results mentioned above. The caveat to this that the PSRs must, as part of the marketing strategy, be utilised to add value to and address the needs of the doctors. As mentioned in the Global Sales Perception Report by Mitchell, Thomas and Hughes (2008) and Head of Primary Care, Ian Wrathall (Pharmafield, 2008), the marketing strategies (utilising PSRs) must be focused on satisfying the customers' needs and cannot merely be a tick-box measure of the number of messages delivered.

As displayed in Table 9, the marketing strategies employed by the pharmaceutical companies have only changed in some respects:

- The PSR still plays a critical role, although additional channels are being considered, such as digital platforms
- Changes in regulations in South Africa have, however, greatly influenced the marketing strategies employed
- Marketing strategies are now considered less aggressive

The confirmation of the preference for a face-to-face PSR interaction mentioned above, further affirms the doctors' importance rating of such a personal transfer of

information, as stated by McGettigan, Golden, Fryer, Chan, and Feely (2001). The tighter regulations have had a significant impact on the reasons the doctors typically granted access to the PSRs, as stated by Salmasi et al. (2016). These reasons included such incentives as gifts and sponsorships and are now regulated in such a way that the marketing strategies must be a lot more focused on adding clinical value to the doctor and consequently, to their patients. In this regard, the marketing efforts are also becoming less aggressive or "pushy".

As displayed in Table 10, the relevance of the PSR in the marketing strategies employed by the pharmaceutical companies are supported:

- If there is a provision of new insights and information based on scientific research
- By the preference for face-to-face/personal interactions with the PSR
- If the PSR has focused on the development of a sustainable relationship with the doctor

These factors reiterate a recurring theme identified, which is the provision of new and insightful information that will clinically add value to the doctor's practice and the competency levels of the PSRs with whom they engage. There appears to be a significant role for the PSR to play in the marketing strategy of the pharmaceutical companies, if they take the approach identified in the above-mentioned factors.

The general practitioner's preferences on engaging with the PSR

As displayed in Table 11, there are numerous factors that are essential to creating the ideal PSR-doctor interaction, but the top four can be grouped into the following two:

- The information provided must be new, insightful and relevant to the doctor, their practice and the patients they typically treat
- Due to the limited time doctors have available, the interaction must be short and to the point

The research by Iafolla and Greco (2005) confirms the importance of knowing the factors that influence a respective doctor and the dynamics they must deal with daily. By doing this, all marketing efforts can be tailored according to its relevance to the doctor, to have the optimal effect on their prescribing habits. This approach will force the pharmaceutical companies to rethink / abandon the “high share-of-voice” approach as mentioned by Pesse (2007) and seriously consider a more customer focused, yet streamlined, sales force. It is no longer about how many times the doctor interacts with the PSR, but how much value the PSR adds, when interaction occurs.

Although some of the doctors mentioned that they are open to idea of which alternative channels were preferred, they were limited to digital (online) platforms and face-to-face symposia (Table 13). Where alternative channels were not preferred, the most common reason indicated was time constraints (Table 14).

Although there are potentially many other marketing channels available, it is clear for the sample interviewed what their preferences are. This could potentially be because of a lack of exposure to effective and convenient alternative channels, but this would require further investigation. The importance of these alternative channels is highlighted by Khedkar and Sturgis (2016) by the fact that they are a relatively inexpensive way for pharmaceutical companies to extend their reach in the market. However, from a customer experience perspective, Khedkar and Sturgis (2016) affirm the development of an optimal customer experience is about taking their preferences to heart and developing marketing efforts accordingly.

As displayed in Table 15, the overwhelming need of the general practitioners in South African pharmaceutical industry is reaffirmed as:

- The provision of new and accurate clinical information and any updates on the changes in the pharmaceutical industry

This aspect was highlighted in nearly every research question and confirms its importance. This is a clear shift away from the quantity approach of the

pharmaceutical companies towards a quality approach, as stated by Iafolla and Greco (2005). With the doctors looking to operate in a responsibly regulated health environment, pharmaceutical companies can support this by being in-tune with changing conditions in the pharmaceutical industry and the impact of such changes on the doctors and their patients.

As displayed in Figure 4, most of the general practitioners serviced by the South African pharmaceutical industry, who were interviewed, indicated that their needs have remained relatively unchanged. Where some doctors indicated their needs have changed, the reasons were mostly centred around the restrictions which the medical aids are now increasingly imposing on the practice of the doctor. This affirms the sentiment by Iafolla and Greco (2005) that there are a growing number of potential influences in the market to consider when developing marketing plans and one of these key influences is managed healthcare. The doctors are increasingly looking for support from the pharmaceutical companies to ensure the medical aids are providing sufficient funding to the patient when prescribing the products deemed best for said patient.

As displayed in Table 17, most general practitioners were not entirely convinced that the pharmaceutical companies were aligned to their needs. This, to an extent, indicates a strategic drift occurring, from a marketing perspective in the South African pharmaceutical market, as described by Gilligan and Wilson (2003). It appears that doctors still want to see the PSRs face-to-face, but that “strategic drift” appears to have occurred in the approach some of the companies still take in their marketing efforts. The doctors interviewed highlighted that there are companies who are becoming more and more misaligned to their needs and these are the PSRs they would prefer to avoid, as they are not adding any value. This drift can be rectified when, as mentioned by Osterwalder and Pigneur (2011), the company refocused on its value proposition to ensure value is created for the customer by catering for their needs and ultimately attempting to solve their problems.

As displayed in Table 18, the general practitioners want to be perceived as partners working in collaboration with the pharmaceutical companies to provide better care for the patients. They also want to be respected for their knowledge and sound decision-making capabilities. There is a symbiotic relationship that exists with the pharmaceutical industry. The pharmaceutical companies need doctors to prescribe their products to generate revenue, and the doctors quite clearly need the pharmaceutical companies to keep them updated with the latest clinical and industry related information to ensure they are providing their patients with the best possible care. The misalignment identified is potentially driven by the fact that the pharmaceutical companies fail to recognise this. As a pharmaceutical company, you must ensure that product you are wishing the doctor to prescribe is effective in addressing the needs of the doctor based on their typical patient base. If not, it is unlikely to be prescribed by the doctor, no matter what marketing channels are used.

Conclusion

The pharmaceutical company's challenge of the substantial sales and marketing expenses associated with utilizing a sales force as part of its marketing strategy, is further confounded due to the continued relevance of the PSR from the perspective of the general practitioner. Although having a sales force appears to still be justified, the pharmaceutical companies operating in South Africa should investigate the nature of their PSR's interactions to avoid any wasteful expenditure on interactions which do not address the needs of the general practitioners. Although strategic drift, from a PSR marketing channel perspective does not appear to have manifested, it is evident that it has in terms of the nature of the PSR interaction itself. The old high share-of-voice model focused purely on driving the number of promotional messages delivered to drive product prescriptions, appears to be no longer relevant in the South African pharmaceutical market. The general practitioners interviewed want the PSRs they interact with to know the dynamics of their respective practices and steer their interactions towards adding value and addressing their needs. Thus, the preference the doctors have towards a face-to-face interaction comes with a

caveat, which is founded in the marketing strategies applied when sending a PSR to a targeted doctor. PSRs who do not know their doctors well and the challenges they face daily, and who don't tailor their interactions to solve said problems, will be denied access to the doctors.

Although other marketing channels are on the rise, the sample's potential lack of exposure to effective and convenient alternative marketing channels have deterred them from stepping out of their current paradigm of the nature of their interaction with the pharmaceutical companies. This could be a reason why the PSR remains their preferred channel. Due to the significant cost associated with employing a sales force, pharmaceutical companies will continue to investigate alternative marketing channels which could potentially replace the PSR at a fraction of the cost. When these companies develop such a marketing channel which resonates with the general practitioner more than interacting with the PSR, and they have driven the adoption thereof throughout the industry, then there will be a shift in the market dynamics which could see the PSR interaction as we know it, become obsolete.

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