Exploring Ethical Issues in Pharmaceutical Marketing's Strategies: A Critical Marketing Perspective

Dr. Fazle Malik
Field Manager, Otsuka Pakistan Ltd
fmalik@otsuka.pk
Dr. Muhammad Junaid
&
Dr. Muhammad Asif

Abstract

This study empirically explores the ethical issues with pharmaceutical marketing, which acts as a transgressor to increase inappropriate prescriptions from physicians. Marketing is used to safeguard the interests of shareholders and indoctrinate materialism in target audiences. The inquiry aims to critically examine the marketing strategies and make some drastic changes to put them on humanistic lines to produce salutary benefits to society and the public health sector. The inquirers deploy qualitative methods to scientifically understand the behaviors of marketers and physicians. They used the stratified purposive sampling technique to get data from those who had it. The constructivist grounded theory is used as a strategy of inquiry to explore the different concepts and ideas that are interconnected to form a social phenomenon. They conducted ten in-depth interviews with the selected samples. The researchers developed categories through initial coding and established relationships among them through axial coding. The analysis and interpretation of data produce a single theme, "Deceptive Marketing Strategies," which has two main categories. Each of them has three sub-categories: (unnecessary prescriptions, drug incentivization, unethical practices) and (non-adherence to clinical practice guidelines, physicians materialistic approach, and indiscriminate use of antibiotics) respectively. The consequence of these unethical practices is the emergence of antibiotic resistance. The study found transgressions in pharmaceutical marketing and its deceitful and unscrupulous promotional strategies, which have a compounding effect on the misuse and abuse of pharmaceuticals.

Keywords: pharmaceutical marketing, ethical marketing, critical theory, critical marketing, grounded theory

Introduction

Communicating with stakeholders is essential to the viability of organizations in contemporary competitive markets. Marketing is a knowledgeable communication medium that keeps stakeholders informed of an organization's products and services. The discipline is responsible for creating, communicating, and delivering meaningful offerings to individual clients and society in general (Letunovska et al., 2021). However, this conceptualization has ended the ethical aspects of marketing (Dholakia, 2012; Tadajewski et al., 2018, p. 87). The academic and intellectual critique of marketing is imperative for bringing proportionality into practice and its long-term impact on society. Therefore, criticism of existing marketing practices appreciates marketing services to the company and has made an affirmative connection. What are the current marketing practices and what interests they served is what critical marketing all about? Therefore, constructive criticism is a way forward.

Critical marketing challenges the concepts and ideas of mainstream marketing and displays a different way of reflection (Tadajewski, 2022). The critical reflection period begins in the 1960 and 1970s on account of the suspicious role of marketing to promote the "industrial-military-complex" and materialism in society (Mitchell, 2020). This perspective is crucial for deployment in situations where the overuse of insecticides, pesticides, and pharmaceuticals (antibiotics) is frequent. The misuse and overuse of antibiotics have endangered the drug, and the bacteria become immune to these drugs, which is also known as antibiotic resistance. The burgeoning phenomenon of antimicrobial resistance and the subsequent

decline in the development of new antibiotics is taking back human civilization in the pre-antibiotic era (Livermore, 2021). These behaviors seriously affect the ecosystem and sustainable development goals that ensure access of people to safe, effective, and affordable medicines (Tian et al., 2021). Pharmaceutical marketing is inevitable in the prescription of antibiotics and the encouragement of sales over the counter.

Contemporary marketing practices are guided by neoclassical economics and neoliberalism, which have structuring effects on corporate values and societal norms and downplay ethical issues in both areas (Dholakia et al., 2021). Critical marketing questioned the managerial orientation of marketing and highlighted why the problematic facets have occupied the central and socially salutary aspects (Tadajewski, 2014). It is noteworthy that the blind pursuit of profitability and managerial perspective not only limits the scope of the discipline but also has negative effects on society (Klein et al., 2021; Schiavone & Simoni, 2019). The diverse range of power relations among firms, customers, shareholders, stockholders, and other stakeholders in the marketplace shaped the market in a manner that suited their interests and abandoned the interests of the community (Tadajewski, 2016). Nevertheless, reconstructionist sociologists desire the reorientation of marketing on humanist lines to serve society (Kotler et al., 2021). The incorporation of humanism in the field of marketing was indebted to Erich Fromm who emphasized that communal and non-instrumental human relationships are more important than possessive individualism (Fuchs, 2020). Humans are social animals that are interdependent; therefore, it is vital that we take care of one another and not exploit one another for material gain.

The humanistic approach is eclipsed by the managerial method in the context of pharmaceutical marketing, and the primary focus is on business outcomes. Critiquing existing practices provides a platform for academics to examine how certain values and perspectives of marketing are served and others are denied (Otterbring, 2021). The existing pharmaceutical industry practices eschew the interests of future generations and put the pecuniary objectives of firms at the forefront. Thus, safeguarding the interests of shareholders and companies will inflict iatrogenic diseases arising from the overuse and misuse of drugs. Antimicrobial resistance ("AMR") is a global public health issue, and consolidated efforts are required to address it appropriately. It is a matter of life and death that marketers should be pro-patients and prosociety to mitigate the chances of AMR.

Pharmaceutical marketing tactics emphasized increasing physician utilization of their relevant company's medicines. They engage customers by using various strategies to improve their brand experiences. However, antibiotic promotion is not a desirable option for the public, as various studies have shown that such indiscriminate use not only leads to iatrogenic illnesses, including antimicrobial resistance and drug dependence but also increases treatment costs for patients (Davari et al., 2018; Khojah, 2022; Yang, 2016). Additionally, the industry promotes over-the-counter medicines such as antibiotics, which are harmful to the general public's health. Marketing can be used as a key instrument to promote the prudent use of antibiotics and protect this resource for future generations.

Problem Statement

Pharmaceutical marketing has a great responsibility to keep physicians abreast of recent treatments and assess their choices for the appropriate drugs for the appropriate indication. However, pecuniary objectives are dominant, and they prefer sales volumes and profitability to ethics and morality in marketing practices. They overmarket their products and influence the prescription patterns of physicians. Consequently, overuse and misuse of drugs cause iatrogenic diseases, particularly antibiotic resistance. The abuse of antibiotics has led to the arousal of superbugs, which are difficult to treat using current medications. These unsusceptible bacteria are spreading at a high speed, and geographical boundaries do not matter to them. Owing to its emphasis on personal gain and pushing aside societal objectives, pharmaceutical marketing is a potential element that plays a substantial role in boosting antibiotic use. Therefore, more research on the contentious role of pharmaceutical marketing is required. It is worth noting that the discipline can be used not only to ensure the best possible use of medications but also to protect the rights of future generations.

Research Questions

- 1. How do physicians and the pharmaceutical industry prioritize their interests?
- 2. How has pharmaceutical marketing benefited organizations rather than society?

Research Objectives

There are two objectives of this study

- 1. To explore the influence of pharmaceutical marketing ethical behaviors
- 2. To investigate different marketing strategies employed by the industry for sales generation

Research Contribution

The study conspicuously explored that pharmaceutical marketing plays a significant role in the overuse, misuse, and abuse of antibiotics and inflicts introgenic diseases on patients and communities, particularly antibiotic resistance. The study inquired about how dangerous capitalist values like growth, profitability, market share, and materialism are in the healthcare sector. Weak regulatory mechanisms, compounded by massive corruption in the healthcare system, are the leading causes of irrational drug use in developing countries.

Literature Review

Markets and marketing are powerful forces in modern social systems. Marketing has infiltrated an individual's cognitive, emotional, and behavioral aspects (Dahlquist & Lehnert, 2023). It has changed the attitude of consumers, and they are looking at everything materialistically, which is also termed hyper-commercialization. Affluent society has fallen victim to capitalist values such as consumerism and materialism. This change has been brought about by managerial micromarketing, which is a narrow conceptualization of the discipline (Venugopal, 2021). Pharmaceutical marketing behaves similarly and has strengthened not only commercialization but also the social values of the healthcare system.

The obsessive desire for material things has not only damaged the environment, but also public health, family structure, and communities (Denniss & Hamilton, 2005; Oliver, 2008; Speth, 2008). The affluence-seeking race in society is a product of marketing and advertising, which have influenced society's individual and collective social norms. The apparent scarcity of disguises obscures the yearning for abundance (Ophuls, 1977, p. 29). The accumulation of wealth and material goods is destructive to the ecological environment and morally obnoxious to individuals (Varey, 2010). Ecological exploitation, unequal distribution of wealth, and political oppression are spiritual malaises in society. Consequently, individual and organizational ethics and norms are corrupted and undermined for material gains (Varey, 2012). The pharmaceutical industry exhibits similar behaviors. They change the prescribing behaviors of physicians to encourage the consumption of drugs that are detrimental to patients, contemporary society, and future generations.

Healthcare Regulatory Bodies

Pharmaceutical marketing goals are to communicate effectively and efficiently with physicians and purchasers, satisfy them, and generate sales volumes to earn profits for the company. However, there is little consideration of the interests of patients and communities. Incentivization of drugs, personalized services to healthcare professionals, free samples and meals, continued medical education (CME), and a lack of social responsibility are some of the dominant factors that make the current practice of pharmaceutical marketing dubious and skeptical (Malik et al., 2019; 2020). However, self-regulation organizations like the International Federation of Pharmaceutical Manufacturers Association (IFPMA), Pharmaceutical Research and Manufacturers of America (PhARMA), the American Medical Association (AMA), and some specialized statutory bodies like the Federal Drug Administration (FDA) in the US, the

Medicine and Healthcare Products Regulatory Agency (EMA) in Great Britain, and the European Medicine Agency (EMA) in the European Union are working in collaboration with governments in the developed world to govern the practices of physicians and industry. In the context of Pakistan, the Drug Regulatory Authority of Pakistan (DRAP) works as a statutory body, while the Pakistan Pharmaceutical Manufacturer Association (PPMA) is a self-regulatory body. Notwithstanding, the role of both bodies is questionable, and they are overwhelmingly involved in debatable behaviors.

Marketing Strategies

The marketing strategy is a game plan for communicating the core value proposition (the value a company promises to deliver to customers) to prospective customers and stakeholders (Kotler et al., 2014). It integrates information on products, customers, and organizations and converts them into value for the company and all concerned stakeholders. Pharmaceutical marketing strategies are more pragmatic and primarily focus on quantitative objectives, regardless of outcomes. However, marketing theory and practices profoundly affect the environment and sustainability (Szabo & Webster, 2021). Deontological (duty-based ethics) ethics are more appropriate to apply to situations such as this because this will make the strategies more ethical and moral. This will eventually lead to ethical incorporation in marketing practices, which are instrumental in environmental and societal preservation.

Research Methodology

It is a contextual framework designed by researchers to systematically apply all relevant procedures, methods, and strategies to obtain valid and reliable results (Ørngreen & Levinsen, 2017). In this endeavor, the researchers adopted a qualitative approach, and the central aim was to gain insights into pharmaceutical marketing practices in the field and explore their influence on the stakeholders involved. The method is appropriate, as it explores and comprehends the meaning that the respondents ascribe and attribute to a phenomenon or idea (Creswell & Creswell, 2017, p. 4). The method also helped researchers in gaining insight into the views and opinions of individuals and groups regarding social issues and human problems. In the social science field, there is an unprecedented blossoming of qualitative research inquiry, and researchers consider this method to be the most credible among all. The qualitative research method is inductive in nature, primacy is rendered to individual and group meanings, and explicitly accesses the depth of the phenomenon in a social setting (Bush & Amechi, 2019; Tarnoki & Puentes, 2019). Subjectivism is the most distinguishing characteristic of qualitative research, and each individual and group has their own separate opinions regarding social issues or problems. In the current context, physicians, pharmacists, marketers, and the relevant statutory body have their idiosyncratic views and perceptions regarding the marketing strategies of pharmaceutical companies. The most pertinent research strategy is grounded theory in this context.

Grounded Theory

Grounded theory is the most familiar strategy of inquiry (Bratianu, 2020; Turner & Astin, 2021) and has been applied by prominent researchers in various social science fields. The method is appropriate when little is known about the area of interest or social issues and when researchers want existing concepts from a different perspective. This method deploys different techniques to generate theories or modify the current theory. The most contentious characteristic of grounded theory is the prevention of preconceived ideas or empirical assumptions regarding the phenomenon of interest (Charmaz & Thornberg, 2021). This idea is termed bracketing, in which the researchers put aside preconceived ideas and experiences and draw meanings from the participants' views (Patton et al., 2017). As the principal author is part of the pharmaceutical industry, so he must avoid the empirical assumptions regarding the malpractices of marketers, the misuse of drugs, bribing, and personal obligations provided to physicians for product patronization. The grounded theory method starts with the identification of a problem or an area of interest. The second step involved relevant data collection in the field from the selected participants. The analysis of the data gleaned through in-depth interviews generates several ideas that are further summarized to

obtain higher-level abstraction. The social constructivist grounded theory was developed by Prof. Kathy Charmaz, where social reality is co-constructed by researchers and participants through continuous interactions and constant comparison (Foley et al., 2021; Ligita et al., 2020). Therefore, symbolic interactionism is the essence of grounded theory.

The Rationale for the Application of Constructivist Grounded Theory

Constructivist grounded theory is an inductive research method applied in situations where there is little theory and the solutions to specific problems are hazy (Eisenhardt et al., 2016; Malik, 2021). Pioneering academics from the Academy of Management Journal, like Chandler and Whyte, used the technique to become the journal's prize-winning writers. The research approach is thought to be a must for resolving complicated social problems in today's fast-paced society. Numerous ontological and epistemological pillars are being taken into account by a popular research methodology known as grounded theory. Relativism and an appreciation of the numerous realities and truths that subjectivism includes form the foundation of constructivist grounded theory (Charmaz, 2012, 2014; Charmaz & Belgrave, 2012). To undertake a constructivist inquiry, which demands the development of an attitude of mutuality between researcher and participant in the research process, one must reevaluate the traditional role of the grounded theorist as an objective observer. According to the constructivist grounded theory, knowledge is mutually constructed during the interview process through active exchanges that raise and discuss ideas. In this viewpoint, data generation is a process where the researcher and the participants jointly create the data.

Results and Discussion

The analysis of data is like spinning straw into gold and is a very tricky and painstaking process. The techniques and procedures of grounded theory are applied in such a way as to bring about rigor and trustworthiness in the research (Harley & Cornelissen, 2020). The research work passes through the peer debriefing process to incorporate validity and credibility (Shufutinsky, 2020). The researchers have cross-checked the techniques applied appropriately with former classmates who are qualitative researchers and incorporated their suggestions. They were aware of their role in inquiry and avoided infiltration of prior experiences, assumptions, and beliefs incorporating credibility into the research, which is also called reflexivity (Berger, 2015). We have positioned ourselves in the whole research process because this status affects the process as well as the outcomes. So it is important to critically evaluate ourselves at each stage of the process and explicitly execute internal dialogue, exhibit non-exploitative behaviors, and demonstrate compassion towards the subjects (Charmaz, 2020; Chun Tie et al., 2019) who are physicians, marketers, pharmacists, and employees of legislative bodies. It is vital to remember that deceptive marketing has the highest level of abstraction achieved by researchers through data analysis, category formation, and interlinking to funnel up the issue under consideration. This is a distinguishing feature of inductive techniques.

Physicians' Inducement

The promotional strategies of the pharmaceutical industry are the strategic and decisive instruments for building brand loyalty, equity, and image (He & Lai, 2014; Srivastava & Bodkhe, 2020; Xiong et al., 2021); stimulating sales; and generating profits (Parker & Pettijohn, 2005). As the existing version of pharmaceutical marketing is instrumental and possesses an inward-looking approach, the discipline is more interested in corporate profitability than societal issues. For this purpose, they exercise questionable marketing strategies that are remarkably aggressive and aimed indirectly at the most vulnerable segment of society—the patients (Tipton et al., 2009). The respondents to this study unanimously asserted that the industry indulges in unethical and illegal promotional activities.

In developed countries such as the US, the pharmaceutical industry is engaged in bribing physicians and engaging in illegal marketing, which costs both patients and the healthcare system. For example, Pfizer paid \$2.30 billion in a settlement to the US Department of Justice for its involvement in misleading

marketing (Arnold & Oakley, 2013; Evans, 2010; Tanne, 2009). It has strained the organization because, with this loss, the company went down in the financial market as well. The use of drugs, particularly antibiotics, has spiked in recent years due to an increase in infection incidences and drug incentivization.

Lucrative Incentivization

The narrow area where pharmaceutical marketing concentrates its resources is to convey the right message to targeted audiences in an appropriate space and time. The participants revealed that the industry used different techniques to persuade targeted customers, and the majority of them were contrary to ethics (Resp4, R7, R12, & R17). The pharmaceutical industry cherishes and enriches regular prescribers, bulk users, and good dispensing doctors, pharmacists, and hospital purchasing authorities with lucrative incentives in the form of high discounts, bonuses, free air tickets and meals, and foreign recreational tours (Resp2, R5, & R9).

Rational prescriptions effectively achieve therapeutic goals, ameliorate symptoms of the disease, and prove to be worthwhile for patients. The data gathered from the respondents shows that malpractice in marketing is a vilification of the scholarship of marketing. They suggested that the influence of marketing on drug consumption must be reduced to a minimum level for early intervention in antibiotic resistance. Over-prescription of antibiotics is a major factor in making bacteria immune to antibiotics (Yang, 2016) and arousing superbug bacteria that are difficult to cure with existing antibiotics (Adamson et al., 2020; van den Brink, 2021). The overuse, misuse, and abuse of antibiotics have made bacteria triumphant over this universal remedy.

Unethical Practices in Medical Profession

The informants of this study revealed that physicians' greed and lust for material gains, their unfamiliarity with clinical guidelines, and patients' attitudes toward treatments are contributing factors to unethical practices in the healthcare system (R1, R4, R5, R8, & R10). The previous studies also found multifaceted malpractices among physicians and other healthcare service providers (Vizcaíno-Rakosnik et al., 2022). In Pakistan, the loopholes in regulatory mechanisms and statutory bodies' inability to implement the existing laws have further worsened the situation (R1, R3, R7, & R9). Physicians have both poor fidelity and constancy with the world's contemporary guidelines, and they even find them incongruent with current codes. They are of the view that clinical practice guidelines developed in the local context will be more appealing and easy to bring into practice (R2, R6, & R8).

Inappropriate Prescriptions

According to WHO, rational medications are defined as "patients receiving medications appropriate to their clinical needs, in doses that meet their requirements, for an adequate period, and at the lowest cost to them and their community" (WHO, 2002). Less than 50% of medications received by patients are following guidelines, and at the same time, more than 50% of patients have poor compliance with optimum use. Such inappropriate use is a waste of precious resources and is hazardous to patients in the form of poor therapeutic outcomes, serious drug-related adverse events, and antimicrobial resistance (Atif et al., 2019). Antibiotic resistance is an increasing challenge to public health worldwide because of the misuse and overuse of antibiotics in humans, animals, agriculture, and leakage into the aquatic environment (Holmes et al., 2016). It circumvents access to effective antibiotics and hampers the achievements of the medical sciences obtained over the years of research in managing infectious diseases and successfully conducting organ transplantation. The inappropriate use of this drug accelerates the chances of resistance, morbidity, and mortality across communities (Saleem et al., 2019). The results of this study are consistent with those of previous studies, which demonstrated that inappropriate prescribing is pervasive in the clinical practices of physicians and that the availability of antibiotics over-the-counter without prescription leads to self-medication and abuse (R2, R4, R10, & R11). The respondents suggested that urgent

improvements are needed in the prescribing habits of physicians and the dispensing procedures of paramedical staff (R1, R6, R12, & R13).

Patients living with comorbidities require multiple medicines to achieve optimal therapeutic outcomes. However, the addition of two or more antibiotics has negative consequences for patients as well as an economic burden. One pharmacist replied to the question of polypharmacy and identified important concomitant hazards.

Physicians' Unethical Practices

The informants of this study revealed that physicians' greed and lust for material gains, their unfamiliarity with clinical practice guidelines, and patients' attitudes towards treatments are contributing factors to unethical practices in the healthcare system (R1, R4, R5, R8, & R10). The previous studies also found multifaceted malpractices among physicians and other healthcare service providers (Stoneking et al., 2011). In Pakistan, the loopholes in regulatory mechanisms and statutory bodies' inability to implement the existing laws have further worsened the situation (R1, R3, R7, & R9). Physicians have both poor fidelity and constancy with the world's contemporary guidelines, and they even find them incongruent with current practices. They are of the view that clinical practice guidelines developed in the local context will be more appealing and easy to bring into practice (R2, R6, & R8).

It is important to establish the healthcare system through three strategies. From the bottom, the practices of quackery must be brought to an end; in the middle, guidelines, and codes of ethics are needed to streamline the behaviors of the industry; and at the top, it is necessary to develop indigenous clinical practice guidelines for physicians and proper infrastructure for implementation. One respondent working in the drug regulatory authority of Pakistan suggested that interventions in the healthcare sector are indispensable.

Mainstream marketing plays a prominent role in overconsumption and serves the interests of the corporate sector rather than the social sector (Guyader et al., 2020). Pharmaceutical marketing behaves similarly and protects against capitalist values. Therefore, marketing theory, practice, and thoughts serve the best interests of firms and shareholders, with very little consideration for the community's welfare.

Physicians' Poor Adherence to Ethics

The Hippocratic Oath serves as an ethical framework for clinical practice in the medical profession (Adhikari et al., 2016). The Nuremberg Code and the Helsinki Declaration, which have been reinterpreted in light of medical science's inexorable growth and commercialization, are the two most important and modern documents on medical ethics. The four basic medical principles are autonomy (patients should be well informed of all risks and benefits associated with a medical procedure), justice (the burdens and benefits of new treatments or pandemics should be distributed equally among members of society), non-maleficence (the primary obligation of physicians is to prevent harm to patients; they should avoid inappropriate treatments and interventions and choose those that are beneficial to patients), and beneficence (the burdens and benefits of new treatments or pandemics should be distributed equally among members of society) (Varkey, 2021). The strategies adapted to maintain and keep patients' autonomy in clinical practices are confidentiality, informed consent, and truth-telling. Nonetheless, present clinical practices are immoral and unethical, with little regard for ethical ideals, medical ethics, or religious ethics.

Adherence to codes of ethics, whether in an individual or organizational capacity, provides a firm foundation for professional behaviors and is a good portent for long-term commercial success. The following norms of conduct are critical in the healthcare sector because they have a substantial impact on public health. Codes of ethics are systematic procedures that regulate clinical practices by aggregating the best available evidence to ensure transparency in healthcare delivery systems (Alnamlah et al., 2022). The fundamental goals of such codes are to provide quality patient care and to reduce incorrect medical

practices. Existing clinical practices, however, do not adhere to worldwide principles and rules of ethics. The researchers elaborated on the categories created throughout the investigation in the following paragraphs.

Non-Adherence to Clinical Practice Guidelines

Adherence to clinical practice guidelines is unavoidable; nonetheless, clinicians are inconsistent in this regard (Bos et al., 2017). It is worth noting that clinical practice guidelines were produced following numerous studies and advocate logical and evidence-based treatment to alleviate patients' suffering (Metlay et al., 2019). Respondents stated unequivocally that healthcare professionals are money-oriented and materialistic, which leads to self-centeredness rather than patient care (R2, R5, R10, & R16). They also acknowledged that their habits harmed not just their professional careers, but also the broader health sectors.

According to one of the physicians, the self-regulatory mechanism is not operational in Pakistan, and doctors' groups are unable to establish norms that will simplify the behaviors of their peers. Because of their adaptability to the environment and local unique situations, the majority of respondents believe indigenous codes of ethics and clinical practice guidelines will be beneficial. Clinical practice recommendations created in the West are difficult to execute in Pakistan. However, effective training, as well as enhanced knowledge and abilities of medical personnel, can improve adherence to clinical standards (Liu et al., 2021).

Physicians' Materialistic Approach

Unmet psychological demands and accompanying fears are linked to materialism (Burroughs et al., 2013). Materialistic persons are more interested in money and have less interest in spirituality and societal wellbeing. This behavior is contentious in the healthcare sector and has far-reaching consequences for other stakeholders, such as patients. They overprescribed medications, mainly antibiotics, which resulted in iatrogenic disorders in patients. It is believed that 50% of antibiotic prescriptions in affluent countries, including the United States, are inappropriate (Fishman, 2006). Antibiotic overuse and abuse harm patients, the healthcare industry, and society as a whole (Young et al., 2020). These investigations corroborated the findings of this study's respondents. Physicians have grown so materialistic that they are given based on marketing efforts rather than strong proof (R3, R7, R12, & R19).

Inappropriate prescriptions not only raise healthcare costs but also increase undesirable adverse medication reactions and antimicrobial resistance in patients. The incorporation of local and international principles will benefit all stakeholders in the healthcare system. Statutory entities such as the Ministry of Health and the Drug Regulatory Authority of Pakistan can play an important role in appropriate legislation, promulgation, and stakeholder accountability.

Indiscriminate usage of Antibiotics

Antibiotic resistance is a multifaceted and complex global health challenge due to the misuse and overuse of antibiotics in humans, agriculture, and animals (El Khoury et al., 2018). Multidrug-resistant superbugs are the major concern of this phenomenon, which inflicts infections that are difficult to treat with the existing antibiotic (Lammie & Hughes, 2016). The respondents conspicuously asserted that over promotion by industry is a major factor in influencing the overuse and misuse of antibiotics (R1, R2, R3, R5, & R10). The perils of AMR and the subsequent plummeting effectiveness of antibiotics are alarming reasons to act urgently and simultaneously (R11, R14, & R20).

This research found that pharmaceutical marketing focuses on physicians and diverts all resources to persuade them to write prescriptions for specific brands. They suggested punitive regulatory mechanisms to curb the marketing influence on physicians and eradicate bias from prescription. The previous studies also asked for responsive regulation to offset the industry's illicit drug marketing and prevent misuse and

abuse (Mulinari et al., 2021). Respondents from the medical field admitted that they occasionally recommend broad-spectrum antibiotics on purpose to speed up recovery and avoid transferring patients to other colleagues. Lack of suitable education and training, as well as a lack of knowledge among healthcare workers, contribute to physicians' poor adherence to ethics. The physicians proposed that clinical practice guidelines be disseminated through proper education at the graduate and postgraduate levels.

Table 1: Theme, Categories, Sub-categories, and Respondents' Quotations

| Central Theme | Categories | Sub-categories | Respondents Quotations Respondents Quotations |
|-------------------------------------|-----------------------|--------------------------------------|---|
| Deceptive Marketing Practices | Physicians inducement | Lucrative Incentivization | Most physicians practice unscrupulously and their behaviors are not aligned with professional ethics (R3 L#35). Marketers frequently offer healthcare professionals material things in the form of incentives and discounts on bulk purchases which promote overuse and misuse (R10, line#114). The profit-oriented intentions of industry and doctors are superior to the services to society and ailing humanity (R9, L#139). Antimicrobial resistance is inflicted in patients due to irrational prescriptions from physicians (R7, L# 258) The drug act 1976 is the base of all regulatory frameworks in the drug regulatory authority which is not implemented itself in true spirit |
| | | Inappropriate Prescription | Over-promotion and increased asking from physicians pressurized them to prescribe inappropriately R4 (l. 141) Antibiotics worked against bacteria and have no effect on viruses, however, some of our physicians prescribed this wonderful drug for viral infections which is misused the drug R3, (l. 117). Antibiotics prescribed in inappropriate infections cause serious problems to the body and make the micro-organisms immune to the drugs R8, (l. 46). Physicians usually prescribe medications based on the proper diagnosis and prognosis of the disease, establish the goals of the therapeutic regimen, and then select the most appropriate drugs from thousands of available alternatives. However, only a few physicians have followed this standard protocol. Legislative reforms, awareness, and a good understanding of antibiotics can prevent erroneous prescriptions (R6, L#126). It clearly shows that physicians are under the influence of pharmaceutical marketing and there lack of appropriate regulations to govern such behaviors (R11, Line#38). |
| | | Physicians Unethical Practices | Physicians considered themselves as the sole authority in prescribing for patients and advised medication based on personal gains (R3, L#35). Physicians' undue favor to marketers is malefic to patients. The marketers provide services in the form of free meals, and sponsorships (R1, line#63). The commercial objectives of healthcare professionals are superior to their services to humanity. The objectives of doctors change with time and their only motivation is earning money (R7, L#90). |

Antimicrobial resistance is developed due to physicians' unethical practices [R7 (1.258)

The Drug Act 1976 is weak in terms of reinforcement and penalty, so the manufacturing and marketing of pharmaceuticals are hampered.

Weak drug regulatory mechanism in Pakistan has greatly undermined the delivery of safe and effective drugs to common patients

Physicians are not aware of contemporary clinical practice in different specialties. (R2, L#53)

The healthcare professionals are unable to develop their indigenous guidelines to ensure their applicability in Pakistan (R6, L# 27, R9, L#75)

Adherence to clinical practice guidelines increases the likelihood of better treatment outcomes (R5, L#32)

An obsolete healthcare system is the principal hurdle to compliance with clinical practice guidelines (R1, L#63).

In Pakistan, the prescriptions are overly filled due to overpromotion and financial incentives for drug dispensing. Therefore, they overlook the clinical data and findings of different studies (R3, line#4).

There are limited restrictions on the marketing and promotional activities of the pharmaceutical industry, so they significantly affect physicians prescribing behaviors (R7, L#90)

The financial incentives offered to physicians and their acceptance have led to materialism resulting in inappropriate prescriptions (R3, L#117)

Pharmaceutical marketing influences physicians' prescription habits by offering lucrative activities that induce drug use (R11, L#39).

The materialistic approaches of both physicians and the pharmaceutical industry are so dominant that human virtues are useless in front of them (R12, L#298)

The key stakeholders of the healthcare system in Pakistan focus on their commercial gains and put behind the values that promote the well-being of humanity

Physicians prescribe antibiotics empirically, without considering specific diagnostic tests and appropriate drug selection.

Pharmaceutical spending on marketing efforts and the personal preferences of physicians influence the use of drugs and the efficiency of the healthcare system.

It is common practice for physicians to advise two or three antibiotics for the management of an infection. There is logic for using two antibiotics: one is for gram-negative bacteria and the second is for gram-positive. However, there is no rationale for a third antibiotic treatment (R10 L#38).

Antibiotic patronization is common in non-indicated diseases like viral infections [R8 (1.45), R11 (1.38), R12 (1.146).

Imprudent prescription is due to over-marketing of industry and physicians prescribed a broad spectrum of antibiotics in

Poor Awareness of clinical practice guidelines

Lack of Adherence to Ethics

> Physicians' Materialistic Approaches

Indiscriminate use of Drugs

infections where the requirements are narrow spectrum (R5, L#110).

Informal healthcare providers or quacks prescribed antibiotics indiscriminately, particularly in an injectable form, for rapid action and patient satisfaction. I received many patients from the OPD and private clinics who had used antibiotics extensively. I was surprised that these crooks practiced ruthlessly and played with public health without fear (R4, Line#70).

Bonus schemes and high discounts on bulk purchases increase the consumption of drugs and misuse and abuse of antibiotics. The reforms in the healthcare system of Pakistan are a complex trend that needs to be reformed from the base, middle, and top. From the bottom, we need to abolish quacks; in the middle, we should work vigorously to formulate guidelines, and from the top, we shall correct the behaviors of doctors (R3, L#34).

The influence of pharmaceutical marketing strategies on physicians prescribing behaviors is evident from the literature and myriad inquiries (Agarwal & Kaur, 2017; Altawalbeh et al., 2020; Hailu et al., 2021; Unger et al., 2020). The data revealed that some pharmaceutical companies, particularly multinationals, are doing fair, transparent, and sustainable business; however, the majority of companies, specifically local firms, are involved in unethical and unscrupulous marketing activities. The diagram shows that the deceptive marketing strategies of the firms are interpreted as physicians' inducements and their poor adherence to ethics. They have changed the prescribing behaviors of physicians who write medicines based on marketing, not on robust scientific evidence (Davari et al., 2018; Ortiz-Martínez & Moreno-Babilonia, 2017; Tangcharoensathien et al., 2018). In this context, the critical marketing perspective simultaneously critiques contemporary marketing practices and envisions new possibilities to make them more ethical and legal. In the corporate world, patients are disenfranchised from their rights in the healthcare sector. Critical marketing challenges the power structures in society and all the issues that arise from the unethical behaviors of these structures. The discipline is normative and focuses on what ought to be, not what is. Criticizing society's issues by general values or norms or comparing them with their own espoused values

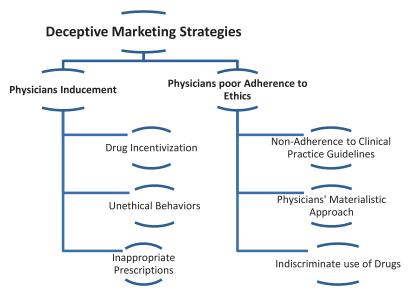


Figure: 1 Flow diagram for Deceptive Marketing Strategies

The flow diagram illustrates how deceptive marketing practices have an impact on doctors' ethical actions, which in turn have an impact on patient's quality of life, treatment outcomes, and the healthcare delivery system.

It will be recognized through critical engagement with the discipline of marketing that social actions, particularly relationships with stakeholders, may be altered and good implications for the social world can be established. The critical confrontation underpins both the positive and negative aspects of marketing, as well as the causes of weaknesses, impediments, and errors. How can ethics and moral behavior be incorporated to remove all impediments to compliance? Regardless, the critical marketing viewpoint is the best marketing dimension for criticizing present discourses and offering relevant remedies and hopeful proposals to policymakers.

Conclusion

The study's informants made it abundantly evident that the pharmaceutical sector engages in unethical and immoral practices that have negative effects on patients, society, and the healthcare system. It has extended an olive branch to those who frequently dispense medication, buy in bulk, and have purchasing power in hospitals. As a result, the public lost faith in the marketing field, which led to its demonization. Similarly, doctors engaged in a variety of unethical behaviors and professional dishonesty that led to the prescribing of unsuitable medications and the development of iatrogenic disorders such as drug addiction and antibiotic resistance. Bacteria have triumphed over this all-purpose treatment due to the overuse of medications, notably antibiotics, under the doctors' orders.

Dishonest marketing strategies encourage doctors to behave unethically by offering gifts, samples, and other customized services in exchange for endorsing their companies' brands. This is achieved by the incentivization of products, which transforms these specialists into ravenous, materialistic people who lose sight of their responsibility to serve humanity. However, they provide drugs ineffectively out of personal self-interest and contempt for the broader interests of society and patients. These unnecessary and careless prescriptions lead to antimicrobial resistance, where germs are resistant to the available antibiotics, and medical professionals struggle to manage the diseases caused by these superbugs. AMR is a global problem that has worsened due to the COVID-19 epidemic. Antibiotics inadvertently harm the microbiota or cause collateral damage. This results in the depletion and imbalance of this crucial resource. The microbiome is the initial defense against infection. It is essential to change present pharmaceutical marketing strategies and bring them within the bounds of morality and ethics. It is remarkable that if used together, laws and moral principles can act as cornerstones.

Limitations and Future Research

Current research provides a variety of justifications for future research, followed by some restrictions. The first drawback is that software was not employed to handle and analyses data to prevent bias. It can be utilized in subsequent research, though, to present the data more graphically. Second, data were gathered using a cross-sessional strategy; a longitudinal approach would provide a more thorough understanding of the impact of socioeconomic dimensions of antibiotic resistance. Thirdly, there were 20 respondents in total, which means that results cannot be extrapolated to other nations because the analysis provides a thorough understanding of the phenomenon under research in the given environment. Future scholars might carry out a study in other nations to comprehend the universal phenomena. The researchers recommended that industrialized nations should investigate the socioeconomic damage caused by AMR to create effective intervention measures.

References

- Adamson, P. C., et al. (2020). Point-of-Care Testing for Sexually Transmitted Infections: A Review of Recent Developments. *Arch Pathol Lab Med*, 144(11), 1344-1351. doi:10.5858/arpa.2020-0118-RA
- Adhikari, S., et al. (2016). Knowledge, attitude and practice of healthcare ethics among resident doctors and ward nurses from a resource poor setting, Nepal. *BMC Med Ethics*, 17(1), 68. doi:10.1186/s12910-016-0154-9
- Agarwal, P., & Kaur, S. (2017). Pharmaceutical Promotion and Its Influence on Prescription Behavior: Ethical Issues and Legal Framework in India. *Asian Bioethics Review*, 9(1), 73-85. doi:10.1007/s41649-017-0011-2
- Alnamlah, M. S., et al. (2022). Common medical ethics dilemmas: few reflections from a Saudi perspective. *Journal of Forensic and Legal Medicine*, 90, 102394.
- Altawalbeh, S. M., et al. (2020). Influence of pharmaceutical promotion on prescribers in Jordan. *International Journal of Clinical Pharmacy*, 42(2), 744-755. doi:10.1007/s11096-020-01006-3
- Arnold, D. G., & Oakley, J. L. (2013). The Politics and Strategy of Industry Self-Regulation: The Pharmaceutical Industry's Principles for Ethical Direct-to-Consumer Advertising as a Deceptive Blocking Strategy. *Journal of Health Politics, Policy and Law, 38*(3), 505-544. doi:10.1215/03616878-2079496
- Atif, M., et al. (2019). What drives inappropriate use of antibiotics? A mixed methods study from Bahawalpur, Pakistan. *Infection and drug resistance*, 687-699.
- Berger, R. (2015). Now I see it, now I don't: researcher's position and reflexivity in qualitative research. *Qualitative Research*, *15*(2), 219-234. doi:10.1177/1468794112468475
- Bos, J. M., et al. (2017). A multifaceted intervention to reduce guideline non-adherence among prescribing physicians in Dutch hospitals. *International Journal of Clinical Pharmacy*, 39(6), 1211-1219. doi:10.1007/s11096-017-0553-0
- Bratianu, C. (2020). Toward understanding the complexity of the COVID-19 crisis: a grounded theory approach. *Management & Marketing. Challenges for the Knowledge Society*, 15(s1), 410-423.
- Burroughs, J. E., et al. (2013). Using Motivation Theory to Develop a Transformative Consumer Research Agenda for Reducing Materialism in Society. *Journal of Public Policy & Marketing*, 32(1), 18-31. doi:10.1509/jppm.10.046
- Bush, A. A., & Amechi, M. H. (2019). Conducting and presenting qualitative research in pharmacy education. *Currents in Pharmacy Teaching and Learning*, 11(6), 638-650.
- Charmaz, K. (2012). The power and potential of grounded theory. *Medical Sociology Online*, 6(3), 2-15. Charmaz, K. (2014). *Constructing grounded theory*: Sage.
- Charmaz, K. (2020). "With constructivist grounded theory you can't hide": Social justice research and critical inquiry in the public sphere. *Qualitative Inquiry*, 26(2), 165-176.
- Charmaz, K., & Belgrave, L. (2012). Qualitative interviewing and grounded theory analysis. *The SAGE handbook of interview research: The complexity of the craft*, 2, 347-365.
- Charmaz, K., & Thornberg, R. (2021). The pursuit of quality in grounded theory. *Qualitative research in psychology*, 18(3), 305-327.
- Chun Tie, Y., et al. (2019). Grounded theory research: A design framework for novice researchers. *SAGE open medicine*, 7, 2050312118822927.
- Creswell, & Creswell. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches:* Sage publications.
- Dahlquist, S., & Lehnert, K. (2023). Strategic Orientation: Market Changer or Market Defender? *Journal of Macromarketing*, 43(1), 5-16.
- Davari, M., et al. (2018). Factors Influencing Prescribing Decisions of Physicians: A Review. *Ethiopian journal of health sciences*, 28(6), 795-804. doi:10.4314/ejhs.v28i6.15
- Denniss, R., & Hamilton, C. (2005). Affluenza: When too much is never enough. In: Crows Nest: Allen & Unwin.

- Dholakia, N. (2012). Being Critical in Marketing Studies: The Imperative of Macro Perspectives. *Journal of Macromarketing*, 32(2), 220-225. doi:10.1177/0276146711435844
- Dholakia, N., et al. (2021). The unwitting corruption of broadening of marketing into neoliberalism: a beast unleashed? *European journal of marketing*, 55(3), 868-893.
- Eisenhardt, K. M., et al. (2016). Grand Challenges and Inductive Methods: Rigor without Rigor Mortis. *Academy of Management Journal*, 59(4), 1113-1123. doi:10.5465/amj.2016.4004
- El Khoury, G., et al. (2018). Misconceptions and Malpractices Toward Antibiotic Use in Childhood Upper Respiratory Tract Infections Among a Cohort of Lebanese Parents. *Evaluation & the Health Professions*, 41(4), 493-511. doi:10.1177/0163278716686809
- Evans, R. G. (2010). Tough on Crime? Pfizer and the CIHR. *Healthcare policy = Politiques de sante*, 5(4), 16-25.
- Fishman, N. (2006). Antimicrobial stewardship. *American Journal of Infection Control*, 34(5, Supplement), S55-S63. doi:https://doi.org/10.1016/j.ajic.2006.05.237
- Foley, G., et al. (2021). Interviewing as a vehicle for theoretical sampling in grounded theory. *International Journal of Qualitative Methods*, 20, 1609406920980957.
- Guyader, H., et al. (2020). *Marketing and sustainability: Why and how sustainability is changing current marketing practices*: Studentlitteratur AB.
- Hailu, A. D., et al. (2021). Influence of pharmaceutical marketing mix strategies on physicians' prescribing behaviors in public and private hospitals, Dessie, Ethiopia: a mixed study design. *BMC Public health*, 21(1), 65. doi:10.1186/s12889-020-10063-2
- Harley, B., & Cornelissen, J. (2020). Rigor With or Without Templates? The Pursuit of Methodological Rigor in Qualitative Research. *Organizational Research Methods*, *0*(0), 1094428120937786. doi:10.1177/1094428120937786
- He, Y., & Lai, K. K. (2014). The effect of corporate social responsibility on brand loyalty: the mediating role of brand image. *Total Quality Management & Business Excellence*, 25(3-4), 249-263. doi:10.1080/14783363.2012.661138
- Holmes, A. H., Moore, L. S., Sundsfjord, A., Steinbakk, M., Regmi, S., Karkey, A., ... & Piddock, L. J. (2016). Understanding the mechanisms and drivers of antimicrobial resistance. *The Lancet*, 387(10014), 176-187.
- Khojah, H. M. (2022). Over-the-counter sale of antibiotics during COVID-19 outbreak by community pharmacies in Saudi Arabia: a simulated client study. *BMC health services research*, 22(1), 123.
- Klein, S. P., et al. (2021). Facilitating business model innovation: The influence of sustainability and the mediating role of strategic orientations. *Journal of Product Innovation Management*, 38(2), 271-288.
- Kotler, P. (2009). Marketing management. Pearson Education India.
- Kotler, P., Pfoertsch, W., & Sponholz, U. (2021). *H2H marketing: The genesis of human-to-human marketing*. M. Haas (Ed.). Cham: Springer.
- Lammie, S. L., & Hughes, J. M. (2016). Antimicrobial Resistance, Food Safety, and One Health: The Need for Convergence. *Annual Review of Food Science and Technology*, 7(1), 287-312. doi:10.1146/annurev-food-041715-033251
- Letunovska, N. Y., Liulov, O. V., Pimonenko, T. V., & Aleksandrov, V. T. (2021). *Environmental management and social marketing*: A bibliometric analysis (Doctoral dissertation).
- Ligita, T., et al. (2020). A practical example of using theoretical sampling throughout a grounded theory study: A methodological paper. *Qualitative research journal*, 20(1), 116-126.
- Liu, B., Huang, F., Wu, X., Xie, Y., Xu, R., Huang, J., ... & Zhou, Z. (2021). Poor guideline adherence in type 1 diabetes education in real-world clinical practice: Evidence from a multicentre, national survey. *Patient education and counseling*, 104(11), 2740-2747.
- Livermore, D. M. (2021). Antibiotic resistance during and beyond COVID-19. *JAC-Antimicrobial Resistance*, 3(Supplement_1), i5-i16. doi:10.1093/jacamr/dlab052
- Malik, F. (2021). Exploring Ethics in Contemporary Pharmaceutical Marketing Practices: A Stakeholder Marketing Perspective. *Available at SSRN* 3954593.

- Malik, Juaid, M., & Sharif, I. (2019). Exploring the Role of Pharmaceutical Marketing on Physician Ethical Behaviors: A Grounded Theory Study. *CITY UNIVERSITY RESEARCH JOURNAL*, *9*(2), 245-263.
- Malik, Junaid, M., Asif, M., & Sharif, I. (2020). The Counterproductive Effect of Pharmaceutical Marketing in Pakistan: A Qualitative Study. *Journal of Business and Tourism*, 6(2), 11-29.
- Metlay, J. P., et al. (2019). Diagnosis and treatment of adults with community-acquired pneumonia. An official clinical practice guideline of the American Thoracic Society and Infectious Diseases Society of America. *American journal of respiratory and critical care medicine*, 200(7), e45-e67.
- Mitchell, T. A. (2020). Critical Race Theory (CRT) and colourism: a manifestation of whitewashing in marketing communications? *Journal of Marketing Management*, *36*(13-14), 1366-1389.
- Mulinari, S., et al. (2021). Failure of Responsive Regulation? Pharmaceutical Marketing, Corporate Impression Management and Off-Label Promotion of Enzalutamide in Europe. *Journal of White Collar and Corporate Crime*, 2(2), 69-80. doi:10.1177/2631309x20970477
- Oliver, J. (2008). The selfish capitalist. In: New York, NY: Vermilion.
- Ophuls, W. (1977). Ecology and the Politics of Scarcity: WH Freeman.
- Ørngreen, R., & Levinsen, K. (2017). Workshops as a Research Methodology. *Electronic Journal of Elearning*, 15(1), 70-81.
- Ortiz-Martínez, Y., & Moreno-Babilonia, C. (2017). Antibiotic prescribing and resistance: knowledge among Latin American medical students during Antibiotic Awareness Week 2016. *Journal of Hospital Infection*, 96(3), 301.
- Otterbring, T. (2021). Evolutionary psychology in marketing: Deep, debated, but fancier with fieldwork. In (Vol. 38, pp. 229-238): Wiley Online Library.
- Parker, R. S., & Pettijohn, C. E. (2005). Pharmaceutical Drug Marketing Strategies and Tactics. *Health Marketing Quarterly*, 22(4), 27-43. doi:10.1300/J026v22n04_03
- Patton, D. U., Hong, J. S., Patel, S., & Kral, M. J. (2017). A Systematic Review of Research Strategies Used in Qualitative Studies on School Bullying and Victimization. *Trauma, Violence, & Abuse, 18*(1), 3-16. doi:10.1177/1524838015588502.
- Saleem, Z., Saeed, H., Hassali, M. A., Godman, B., Asif, U., Yousaf, M., . . . Raza, S. A. (2019). Pattern of inappropriate antibiotic use among hospitalized patients in Pakistan: a longitudinal surveillance and implications. *Antimicrobial Resistance & Infection Control*, 8(1), 188. doi:10.1186/s13756-019-0649-5.
- Schiavone, F., & Simoni, M. (2019). Strategic marketing approaches for the diffusion of innovation in highly regulated industrial markets: the value of market access. *Journal of Business & Industrial Marketing*, 34(7), 1606-1618.
- Shufutinsky, A. (2020). Employing use of self for transparency, rigor, trustworthiness, and credibility in qualitative organizational research methods. *Organization Development Review*, 52(1), 50-58.
- Speth, J. G. (2008). The Bridge at the Edge of the World: Yale University Press.
- Srivastava, R. K., & Bodkhe, J. (2020). Does brand equity play a role on doctors prescribing behavior in emerging markets? *International Journal of Healthcare Management*, 13(sup1), 1-11. doi:10.1080/20479700.2017.1409954
- Stoneking, L., Denninghoff, K., DeLuca, L., Keim, S. M., & Munger, B. (2011). Sepsis Bundles and Compliance With Clinical Guidelines. *Journal of Intensive Care Medicine*, 26(3), 172-182. doi:10.1177/0885066610387988.
- Szabo, S., & Webster, J. (2021). Perceived greenwashing: the effects of green marketing on environmental and product perceptions. *Journal of Business Ethics*, *171*, 719-739.
- Tadajewski, M. (2014). What Is Critical Marketing Studies? Reading Macro, Social, and Critical Marketing Studies. In R. Varey & M. Pirson (Eds.), *Humanistic Marketing* (pp. 39-52). London: Palgrave Macmillan UK.

- Tadajewski, M. (2016). Relevance, responsibility, critical performativity, testimony and positive marketing: contributing to marketing theory, thought and practice. *Journal of Marketing Management*, 32(17-18), 1513-1536. doi:10.1080/0267257X.2016.1244974
- Tadajewski, M. (2022). Marketing, synthesis and interdisciplinarity: reading with MJB. *Journal of Marketing Management*, 1-16.
- Tadajewski, M., et al. (2018). The routledge companion to critical marketing: Routledge.
- Tangcharoensathien, V., et al. (2018). Complex determinants of inappropriate use of antibiotics. *Bulletin of the World Health Organization*, 96(2), 141-144. doi:10.2471/BLT.17.199687
- Tanne, J. H. (2009). Pfizer pays record fine for off-label promotion of four drugs. *BMJ* (*Clinical research ed.*), 339, b3657. doi:10.1136/bmj.b3657
- Tarnoki, C., & Puentes, K. (2019). Something for everyone: A review of qualitative inquiry and research design: Choosing among five approaches. *The Qualitative Report*, 24(12), 3122-3124.
- Tian, M., He, X., Feng, Y., Wang, W., Chen, H., Gong, M., . . . van Eerde, A. (2021). Pollution by Antibiotics and Antimicrobial Resistance in LiveStock and Poultry Manure in China, and Countermeasures. *Antibiotics*, 10(5), 539. Retrieved from https://www.mdpi.com/2079-6382/10/5/539
- Tipton, M. M., Bharadwaj, S. G., & Robertson, D. C. (2009). Regulatory Exposure of Deceptive Marketing and Its Impact on Firm Value. *Journal of Marketing*, 73(6), 227-243. doi:10.1509/jmkg.73.6.227.
- Turner, C., & Astin, F. (2021). Grounded theory: what makes a grounded theory study? *European Journal of Cardiovascular Nursing*, 20(3), 285-289.
- Unger, J.-P., Morales, I., De Paepe, P., & Roland, M. (2020). The physician and professionalism today: challenges to and strategies for ethical professional medical practice. *BMC health services research*, 20(2), 1069. doi:10.1186/s12913-020-05884-1.
- van den Brink, R. (2021). A Bottomless Well and Other Solutions. In *The End of an Antibiotic Era:* Bacteria's Triumph over a Universal Remedy (pp. 261-322). Cham: Springer International Publishing.
- Varey, R. J. (2010). Marketing Means and Ends for a Sustainable Society: A Welfare Agenda for Transformative Change. *Journal of Macromarketing*, 30(2), 112-126. doi:10.1177/0276146710361931
- Varey, R. J. (2012). The Marketing Future beyond the Limits of Growth. *Journal of Macromarketing*, 32(4), 424-433. doi:10.1177/0276146712454883
- Varkey, B. (2021). Principles of Clinical Ethics and Their Application to Practice. *Medical Principles and Practice*, 30(1), 17-28. doi:10.1159/000509119
- Venugopal, P. (2021). Marketing and society: Marketing contribution gaps model. *Academy of Marketing Studies Journal*, 25(3), 1-15.
- Vizcaíno-Rakosnik, M., Martin-Fumadó, C., Arimany-Manso, J., & Gómez-Durán, E. L. (2022). The impact of malpractice claims on physicians' well-being and practice. *Journal of Patient Safety*, 18(1), 46-51.
- WHO. (2002). Promoting rational use of medicines: core components. Retrieved from
- Xiong, L., Cho, V., Law, K. M. Y., & Lam, L. (2021). A study of KOL effectiveness on brand image of skincare products. *Enterprise Information Systems*, 1-18. doi:10.1080/17517575.2021.1924864.
- Yang, W. (2016). How does the pharmaceutical industry influence prescription? A qualitative study of provider payment incentives and drug remunerations in hospitals in Shanghai. *Health Economics*, *Policy and Law*, 11(4), 379-395. doi:10.1017/S1744133116000086
- Young, E. H., Panchal, R. M., Yap, A. G., & Reveles, K. R. (2020). National trends in oral antibiotic prescribing in United States physician offices from 2009 to 2016. Pharmacotherapy: *The Journal of Human Pharmacology and Drug Therapy*, 40(10), 1012-1021.