CHAPTER ENTITLE

The significance of acquiring computerized technology training for pharmacists and nurses in order to ensure sustainability in the health system

Mr. Ujwal Havelikar

Assistant Professor (AP)
Department of Pharmaceutics
NIMS Institute of Pharmacy,
NIMS University Jaipur, (RJ)
India 303121.
havelikarujwal@gmail.com

Dr. Akhilesh Patel

Assistant Professor (AP)
Department of Pharmacy Practice
NIMS Institute of Pharmacy,
NIMS University Jaipur, (RJ)
India 303121.
akhileshpatel0112@gmail.com

Abstract

To comprehend the importance of the technological revolution in the professional practices of pharmacists and nurses within the framework of sustainability, this research endeavour aimed to examine the perspectives of nurses and pharmacists regarding the implementation of computerised technology. The data was subsequently assessed in order to ascertain the impact of social, professional, and personal factors on the utilisation of computer technology in the fields of pharmacy and nursing. The study was undertaken with the understanding that the active participation of pharmacists and nurses is essential for the development of sustainable breakthroughs, such as the integration of computer technology, which has the potential to enhance the quality of healthcare and promote community well-being. The most commonly cited advantages of implementing technology in the field of healthcare are the positive correlation between years of professional experience as a pharmacist or nurse, user-friendliness of the technology, relevance of the technology to job requirements, and enhanced output quality. Regarding the professionalism of pharmacists and nurses, it is understood that by embracing new behavioural responsibilities for their position, they would be able to improve community health and promote the quality of care. From the standpoint of global sustainability, strategies including multi-professional teamwork must be developed to utilize computerized technology both inside and across nations in order to enhance sustainable circumstances in the worldwide community.

Keywords: - Sustainability; nursing & pharmacists; computerized technologies; healthcare system; health management.

1. Introduction:

Human activities and the planet's natural temperature volatility contribute to extreme climate shifts. Computers are increasingly being used in the medical industry. There are several layers of connection between computer technology and medicine. This essay aims to raise computer literacy among medical professionals and emphasize the importance of various computer-assisted medical treatments. The utilization of technology has exerted a substantial influence on various facets of human existence. One such sector that has benefited greatly from computer applications is healthcare. We'll examine some of the technological difficulties the healthcare sector has encountered in this blog article, as well as how computer programs have enhanced patient care. The use of computers in healthcare is on the rise, and it has significantly improved healthcare services. Hospitals now operate more easily and effectively because of the use of computers for different administrative activities like computerized invoicing, insurance processing, and data management. Additionally, the way doctors treat their patients has been transformed by the use of electronic health records (EHRs). Doctors may access their patient's medical histories using EHRs, which allows them to make better judgments about their care. Thus, it is clear that computer applications in healthcare have significantly impacted this industry and will probably continue to do so in the future.[1]

In 2015, the Sustainable Development Goals (SDGs) were created and accepted by all Member States of the United Nations (UN) as an integral part of the 2030 Agenda for Sustainable Development. The SDGs, comprising 17 primary objectives and several detailed targets for each, emerged as a culmination of extensive global health efforts undertaken by diverse governments and the United Governments (UN), building upon the foundation laid by the Millennium Development Goals. They serve as an exemplar for enhancing global health due to their recognition of the significance of interconnections among climate change, education, inequality, and economic growth, and their understanding of the synergistic nature of these factors.[2]

SDGs encompass a diverse array of concerns, often appearing unrelated to the routine responsibilities of a pharmacist. However, upon conducting a more thorough analysis of the interplay between the SDGs and the involvement of pharmacists in patient care, it becomes evident that these relationships possess a level of complexity beyond their initial perception and indeed exert a significant influence on the individuals with whom pharmacists interact.

As an illustration, SDG 6 places emphasis on the provision of clean water and sanitation, which, at first glance, may seem unrelated to the primary role of pharmacists in delivering direct patient care.

However, it is important for pharmacists to acknowledge that patients can face challenges in adhering to their prescription regimen due to limited access to potable water. Additionally, unsanitary environments might contribute to the spread of infectious diseases, hence necessitating collaboration between pharmacists and physicians in the treatment process. Sustainable Development Goal 8, which pertains to promoting decent work and economic growth, holds relevance in the context of patient care as individuals often struggle to afford essential medications in the absence of employment and financial stability. Consequently, this predicament might contribute to the exacerbation of unmanaged health conditions. While it is true that just one Sustainable Development Goal (SDG) explicitly focuses on health and well-being, it is important to recognise that several other SDGs also influence the manner in which our patients manifest their conditions and the measures we undertake to facilitate their treatment. The implications of sustainability for nursing and pharmacy are discussed in this chapter. The idea of sustainability has gained widespread acceptance in international society and is now included in discussions on how healthcare systems should be created in the future. The WHO contends that the ability to sustain good health would be impacted by the current climate change and it is imperative for healthcare systems to duly acknowledge and address the significance of climate change and its associated ramifications. As a result, promoting sustainable development is essential for both the healthcare industry and society at large. We contend that the idea of sustainability in pharmacy and nursing is imprecise, unexplored, and conceptualized. [3] Nowadays, practically every aspect of modern civilization uses computer technology, including government, education, healthcare, and research. Information and communication technologies (ICTs) play a key role within the health system, serving a multitude of goals such as training, research, prevention, treatment and monitoring. The principal aims of emerging technologies are to augment patient care and enhance the efficacy of medical services. The user did not provide any text to rewrite. The primary aim of computerised technology is to facilitate efficient access to diverse datasets for system carers, including nurses, ensuring precision in registration and reporting, while also empowering patients to exert greater agency over their healthcare. These technologies serve to mitigate errors in treatment, enhance patient decision-making regarding health-related matters, and facilitate the exploration of novel approaches for diagnosing and managing chronic diseases,

as well as providing training opportunities to minimise the occurrence of adverse health outcomes. It is posited that a comprehensive grasp of contemporary technology and digital information is important for nurses in order to enhance their practice. The user has provided a numerical range of [5,6]. The primary aims of this study were to assess and examine the perspectives of nurses and pharmacists on the use of computerised technology and to determine the impact of related technological advancements on the sustainability of nurses' roles. The concept of sustainability in nursing is perceived to lack comprehensive understanding and extensive investigation, despite its considerable significance. The present study aimed to investigate nurses' perceptions of the use of computerised technologies in their professional practice. Understanding the elements that influence these perceptions is crucial for the development of effective strategies to integrate computerised technology into the daily work of pharmacists and nurses. [7] The United Nations formed the World Commission on Environment and Development in 1987 with the purpose of examining the interconnections among social equity, environmental well-being, and economic progress. The report titled "Our Common Future," released by the committee under the leadership of Brundt Land, has emerged as the prevailing paradigm for sustainable development in contemporary discourse. The research posits that sustainable development, which can be understood as a strategic approach to attaining sustainability, the concept under consideration is distinguished by its capacity to address current requirements while ensuring the capacity of generations to come to fulfil their own needs. The SDGs refer to strategic initiatives aimed at fostering a more sustainable and promising future for society as a whole. [8]

2. Sustainability and Healthcare:

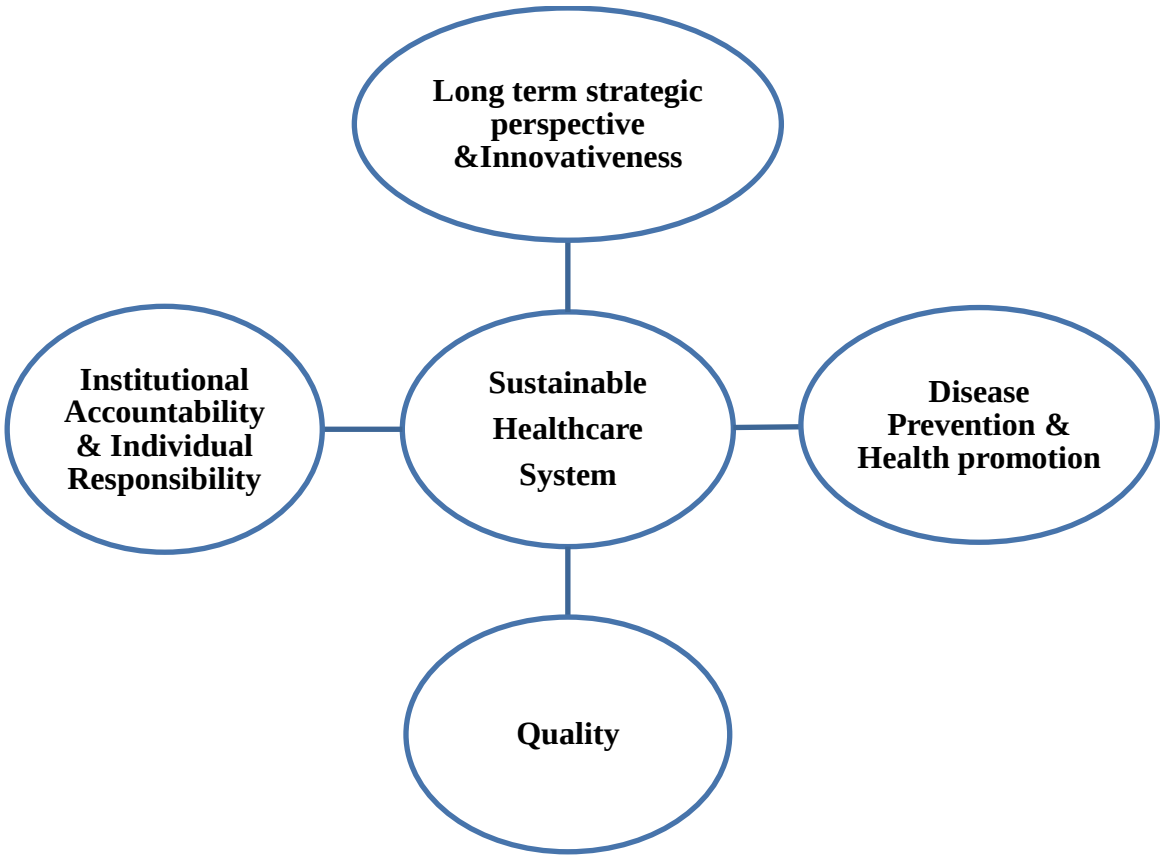
The term "sustainability," which refers to the activities that must be performed to rescue the world, has historically been used to describe a notion that emphasizes the coexistence of nature and the human environment. The need to broaden the definition of sustainability and consider strategies that would enable health sustainability has arisen as a result of the significant influence that health has on an individual's capacity to maintain personal well-being. [9] When considering the concept of social sustainability in the context of healthcare, it is imperative to recognize the potential of health systems in both hospital and community settings to enhance the overall standard of life and well-being of the populace. The prioritization of healthy living and working environments should be emphasized in the

execution of sustainable health practices, as this has the potential to yield significant societal benefits. These strategies should be expressed using three levels.

1. Building medical facilities and managing them using sustainable practices.
2. Establishing enduring health procedures.
3. Introducing sustainable practices into daily work for healthcare professionals in the varied roles they play.

Political decision-makers and the leadership of the health services are responsible for social and environmental motivation and integration of these activities. [10] Three areas dominate sustainability in the healthcare sector: In order to mitigate the adverse effects of climate change on public health, it is imperative to focus on the development and promotion of morally sound products and services within the healthcare sector and environmentally responsible, and encouraging leadership that is concerned with environmental health. [11]

Recognizing how the healthcare sector's production of greenhouse gases and solid waste contributes to climate change is a necessary first step in implementing sustainable policies and practices. Therefore, the ability of healthcare professionals to uphold patient safety while upholding a sustainable environment speaks to their role in the industry. [12]



3. Sustainability in Nursing Profession: -

The field of nursing and sustainability is currently lacking in comprehensive research, with a limited number of studies available. Furthermore, within the nursing profession, there is a lack of consensus regarding the definition and understanding of the term "sustainability." As per the International Council of Nurses, sustainable development encompasses the provision of resources that enable the establishment of infrastructures aimed at fostering health outcomes for both collectives and individuals. [13, 14] The responsibility of nurses is to increase public knowledge of health dangers and to offer viable solutions to stop the population's health from being negatively impacted by climate change and global warming. [15, 16]

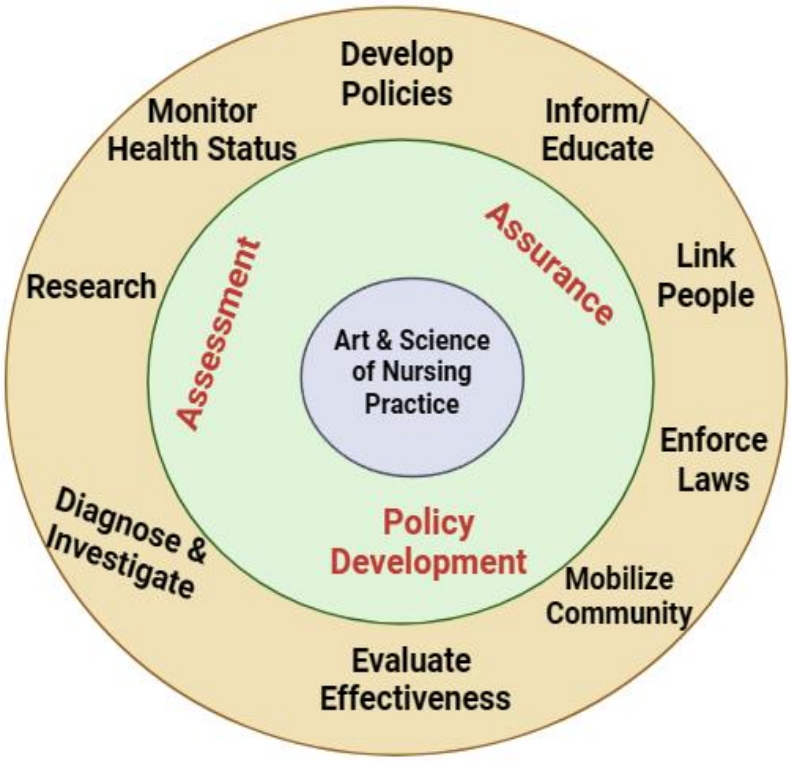
The connection between nursing and sustainability has not received much attention from these studies, despite the fact that sustainability has been studied in relation to many different domains. Environmental and sociocultural factors, financial reasonability, political commitment, and organizational competence are the five elements that make up the notion of sustainability. [17] To reduce trash and its harmful impacts on the environment, major organizations like the EPA and the WHO support waste reduction initiatives and promote the practice of product reuse and recycling. [18, 19]

The nursing profession plays a vital part in this, with registered nurses (RNs) leading the way in giving crucial knowledge and advice on how to reduce, reuse, and recycle in order to improve public health. Interprofessional environmental management teams must be established. Nurses, environmental service workers, managers, and pollution control specialists should all be a part of these groups as they work to develop policies and procedures for reducing waste, implementing reuse techniques, and stepping up recycling activities. Nurses, who make up the majority of the medical staff and are in charge of processes and strategies to lessen environmental damage, ought to be in charge of them. Nurses in particular and health services in general are committed to ensuring patient safety and the best possible health while managing the environment. General health and well-being are negatively impacted by an unhealthy environment. Licensed practical nurses are knowledgeable about these topics and possess the skills necessary to suggest and direct improvements. [20, 21] In order to evaluate and treat the population's emerging health issues, the nursing profession's long-term objectives should give careful thought to increasing public understanding of the health consequences of climate change. There is still room to extend the

body of research on nursing and sustainability, despite the fact that the ICN believes nurses to be in charge of addressing global health challenges. [22]

Governments can advance the welfare of the populace and make important decisions thanks to indicators that indicate public well-being. Based on this idea, the Israeli government has been assessing the well-being of its citizens and formulating decisions and policies to advance well-being since 2015. The term "health" refers not only to an individual's physical health but also to his or her psychological and sociological well-being. As a result, in order to ensure that its citizens have the best possible health, the government must invest heavily in health infrastructure and hire qualified staff in every field related to health. Based on administrative data provided by several current health organizations like "Kupat Holim," which offers healthcare services to all citizens, the health of Israelis is assessed.

These organisations provide opportunities to acquire knowledge pertaining to chronic illnesses, the prevalence of drug use, and an individual's functional capacity among the populace. Health policy can be decided upon at the political level as well as at the level of the numerous sectors that provide health services thanks to data gathered for "big data." The ability of the populace to keep their health is significantly influenced by nurses, who make up the largest sector of health services. [23]



A) The environmental footprint of healthcare: -

While healthcare services play a crucial role in preserving and improving human well-being, it is important to acknowledge that they also contribute to environmental impacts, hence augmenting the environmental risks associated with human health. Previous studies have quantified the worldwide carbon emissions originating from the healthcare sector. Our goal was to offer a comprehensive analysis of this industry's numerous environmental effects. The healthcare industry plays a significant role in the economic development of many nations, serving as a big contributor to their overall economic output and serving as a major source of employment. On average, the allocation of healthcare expenditures by members of the Organisation for Economic Co-operation and Development (OECD) amounts to around 9% of their gross domestic product (GDP). The user's content does not contain any information to rework in an academic manner. It is imperative to gain a comprehensive understanding of the influence of the healthcare sector's environmental footprint on human health. This urgency arises from the escalating global healthcare expenditure, which carries a substantial risk of exacerbating the adverse effects of environmental change and pollution on public health. Individuals who experience the adverse effects of healthcare on the environment often reside at a considerable distance from those who benefit from the services provided. Therefore, it is the moral and practical duty of physicians and other leaders in the health sector to assess the environmental impact of providing medical care. [25]

B) Importance of nursing in sustainability

The concept of "sustainability" is employed across diverse contexts, such as healthcare systems, exemplified by the concept of Sustainable Healthcare Systems. The concept of sustainability is multifaceted and intricate. The concept of sustainability has become a pivotal topic in various discussions and political discourse. In addition to ecological considerations, the matter of allocating progressively scarce resources also warrants attention. The dearth of resources is readily apparent in contemporary nursing scenarios. Furthermore, within the realm of nursing and healthcare, it is imperative to ensure the sustainable preservation of the system's financial resources, its human capital, and the natural environment. The significance of the sustainability notion in professional practice is readily apparent since it influences decision-making and guides activities. The user provided a numerical reference without any accompanying text.

a) The Significance of Sustainability in Ethical Deliberations and Ethically-Informed Decision-Making.
b) The Ethical and Moral Dimensions of Sustainability. [27]

4. Sustainability in the Pharmacy profession:

Pharmacy sustainability involves eliminating or significantly decreasing hazardous substance use and improving environmental, safety and health impact through the pharmaceutical life cycle. The pharmaceutical industry is responsible for generating waste and contamination through inadequate disposal of drugs, wastage of medications, and operational waste. In order to advance the cause of sustainability, it is imperative to actively support and contribute to the importance of pharmaceutical services that guarantee fairness in their accessibility, encourage their provision, and foster their sustainability and suitable integration within the funding of healthcare systems. According to the rules and regulations of WHO, the pharmaceutical profession was a very prominent healthcare system. Biotechnology and Pharmaceutical companies are facing increasing pressure to reduce their carbon emissions and make environmental sustainability a core part of their particular profession. [28] The pharmacy profession must actively adopt the digital transformation that has been rapidly reshaping the healthcare landscape. Ensuring the long-term viability of pharmacy practice and promoting equal access to healthcare for all individuals are of utmost importance. The global study on digital health in pharmacy education was undertaken by the International Pharmaceutical Federation (FIP) in order to evaluate the readiness, adaptability, and openness of pharmacy education programs in equipping the current and future pharmaceutical workforce in this field. Additionally, the study sought to identify any deficiencies in knowledge and skills pertaining to digital health among the current pharmaceutical workforce. In order to obtain input from individuals within the academic community, including pharmacy schools, pharmacists, and pharmacy students, an online survey was disseminated. The findings indicate that a significant number of pharmacy schools lack educational content on digital health, highlighting a deficiency in competencies and understanding related to the use of digital health technology for addressing contemporary clinical challenges and improving healthcare. The intersection of pharmaceutical sciences and digital technologies has promising prospects for future advancements. A technologically proficient and flexible workforce within the pharmaceutical sector can effectively leverage the benefits of digital health to further the overarching objective of promoting universal access to quality health and well-being while ensuring inclusivity for all individuals. It is imperative for pharmacy and

pharmaceutical sciences education to promptly implement necessary measures. The user's text does not contain any information to rewrite in an academic manner. FIP Development Goal 21, titled "Sustainability in Pharmacy," emphasises the imperative for the pharmacy profession to establish rules, laws, and strategies that effectively harness the pharmaceutical workforce to enhance pharmacies and services, hence ensuring the long-term viability of pharmacy practice.

The pharmacy profession must actively adopt the ongoing digital transformation that has been significantly reshaping the healthcare landscape. This is crucial to safeguard the long-term viability of pharmacy practice and to effectively deliver equitable healthcare for all individuals. More than ever, hospitals, neighbourhood pharmacies, and other locations where pharmaceutical care is provided use digital healthcare as standard practice. It is also a crucial component of pharmaceutical research and development. The commitment made under FIP expansion involves the establishment of global facilitators of digital transformation in the pharmacy industry and the implementation of efficient processes to foster the development of a digitally literate pharmaceutical workforce. Goal 20, often known as Digital Health, is a target that aims to improve healthcare services through the use of digital technologies. [30]

The International Pharmaceutical Federation (FIP) has conducted a comprehensive worldwide investigation on the subject of digital health within the realm of pharmacy education. This study aims to provide valuable insights and guidance for the effective execution of FIP Development Goal 20. The aim of this study is to examine and clarify the extent to which pharmacy education programs demonstrate preparedness, adaptability, and responsiveness in preparing the current and future pharmaceutical profession with training in digital health. Additionally, the study aims to identify any deficiencies in knowledge and skills within this workforce. This chapter provides a comprehensive overview of the key findings and presents a policy-oriented analysis of the curricula of pharmacy schools and the preparedness of students for a sustainable career in pharmacy. [31] The capacity and desire of pharmacists to use these tools will have a big impact on implementation. It can be difficult to keep up with the innovations that should be accepted and modified to improve health. To ensure that they maximize the advantages of digital health, the education and training of students and practitioners is a constant process. This keeps them current and in line with changes in health technologies. By teaching the next generation of pharmacists, pharmacy schools may significantly contribute to speeding up the adoption of digital health. Pharmacy

schools should instruct future pharmacists on how to use these technologies in pharmaceutical treatment in addition to their technical elements. [32]

A) The role of the pharmacist and pharmacy practice

This paper provides an overview of the present state of pharmacist and pharmacy practice, encompassing a comprehensive examination of professional obligations and accountabilities, the diverse patient populations served, the intricate nature of patient services provided, and additional characteristics associated with the evolving landscape of pharmacy practice. The focus of this study mostly revolves around the patient care services provided by pharmacists, with the exclusion of other potential tasks such as administration and general management. The current analysis demonstrates a descriptive characteristic. The purpose of this document is to provide a foundation for comprehending the connection and congruity between the various obligatory and voluntary qualifications within the profession, as well as the range of professional activities, without expressing a stance on potential future alterations. The primary prerequisites for the education and accreditation of pharmacists and pharmacy technicians are delineated and referenced. The user did not provide any text to rewrite.

The Council on Credentialing in Pharmacy (CCP) has developed a reference book that provides a comprehensive overview of contemporary pharmacy practice, encompassing its diverse range of services and the role played by pharmacy technicians. The delineation of the current extent of pharmacy practice encompasses the various duties, obligations, and tasks undertaken by pharmacists and pharmacy technicians. These delineations have been formulated in collaboration with the Academy of Managed Care Pharmacy (AMCP), an esteemed member of the CCP. [34]

1. Medication therapy management encourages the proper administration of pharmaceuticals by working in collaboration with the patient or caregiver, the pharmacist, and other medical experts.

2. Patient care, systems management, and public health are the three main competency areas on which pharmacist education is centred.

3. These three primary skill categories line up with the Institute of Medicine's five core competencies:

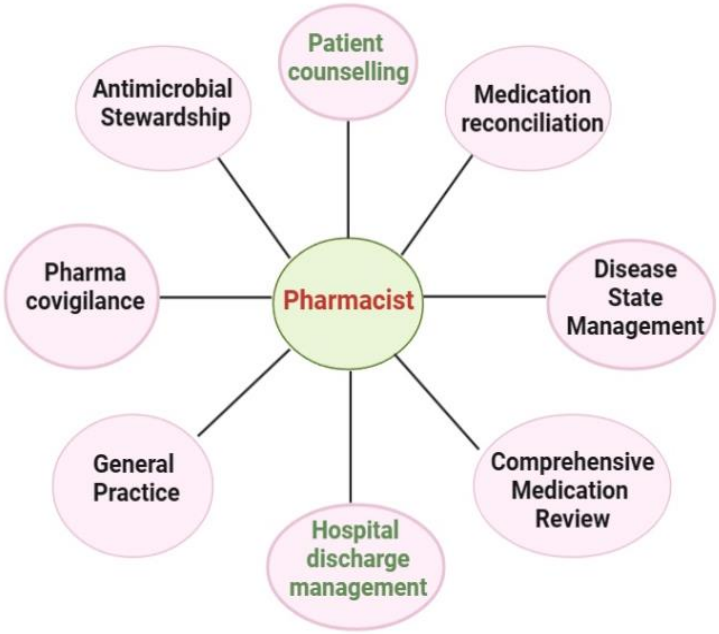
(a) Providing patient-centred care.

(b) Participating in Interprofessional teams.

(c) Using evidence-based medical practices.

(d) Concentrating on raising standards.

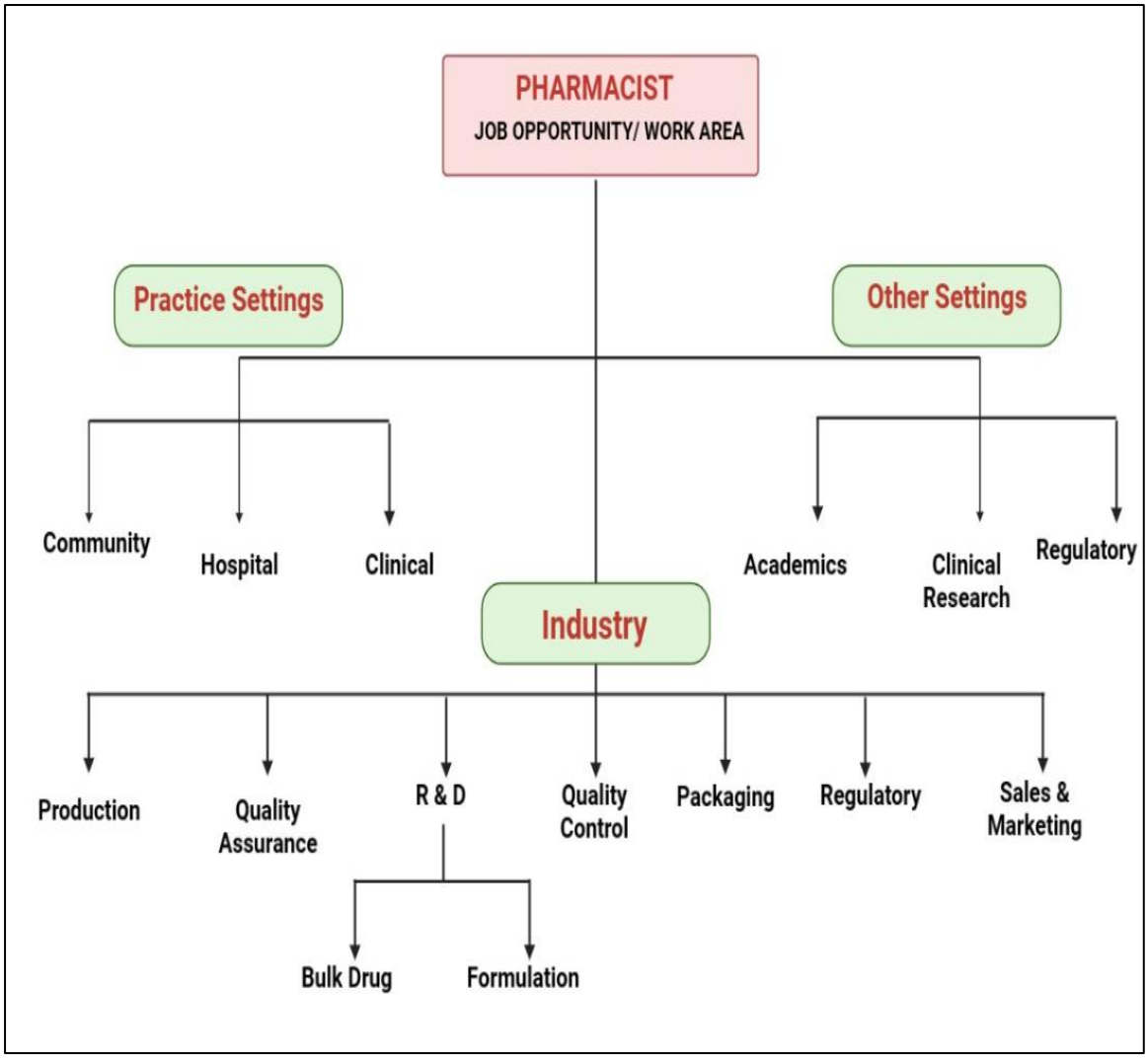
(e) Making use of computer technology in the pharmacy profession.



B) Sustainable Pharmacy: A Regimen for the Future

This chapter introduces a few of the challenges that the pharmacy sector faces in terms of sustainable behaviours, as well as solutions. By using ineffective methods, the pharmacy sector produces waste and contamination. Disposal of drugs, trash from medications, and operational waste. Therefore, it is crucial that the sector focus on minimizing waste and pollution to promote sustainability, which will benefit both patients and the environment. The world as a whole.1, 2 A more sustainable pharmacy industry is emerging, yet juggling the needs of patients, legal constraints, financial factors, and the security and effectiveness of medicine provide a challenging task. There will need to be policy adjustments made at the state and federal levels to satisfy many of these demands, but these can take years to implement. The direct interaction between community pharmacists and patients at the counter now enables the former to exert a tangible impact on effecting substantive modifications. By first implementing changes at the community level, patients can be better informed about the value of responsible drug use, their options for returning unwanted medications, and paperless methods of communication. It is possible to reduce drug waste and dispose of it

correctly. It is possible to reduce the paper and plastic waste that is a natural by-product of pharmaceutical business operations. It is possible to use electronic information transmission techniques like computerized documentation and electronic prescribing. Medication stock bottles made of plastic can be recycled and used for other things. Although there are numerous obstacles to enacting such changes, pharmacists can address these concerns right away while law changes take place. [35]



5. Computerized Technologies in the Healthcare system

In order to optimize the availability of medical, pharmacy, and nursing information, health system teams employ computerized technologies including electronic and internet-based resources. These systems fall under a number of areas, including telehealth, telemedicine, and mobile health (mHealth). The fundamental objective of IT in the healthcare system is to increase care's effectiveness and quality while preserving its safety and lowering costs. [36, 37]

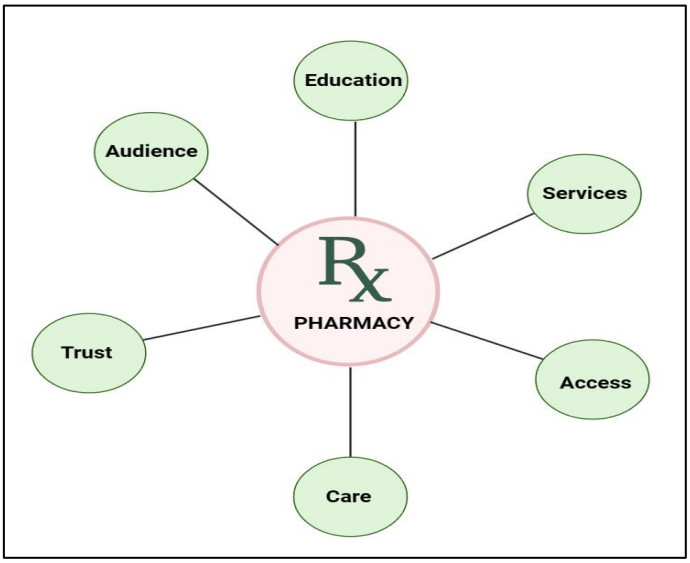
Through quick and limitless access to current universal information sources, population data, and health indicators of individuals within the population, healthcare information technology (HIT) facilitates the enhancement of care quality. Electronic health records (EHR), computerized information systems that provide increased access to healthcare services, are the core element of HIT.

Electronic medical system (EMS) records are a part of electronic health records. EMS records the health information of patients in an electronic format, facilitating accurate registration and reporting to enhance the quality and safety of healthcare. The user's content does not contain any information to rework in an academic manner. The research conducted by Flatow et al. shown that the regular utilization of emergency medical services (EMS) within intensive care units (ICU) was correlated with a decrease in the incidence of surgical infections and mortality rates. The primary emphasis of this study was directed towards the computerized registration and reporting system, due to its importance within the realm of nursing practice. The utilization of this system is of utmost importance in facilitating nurses to deliver treatment of exceptional quality and minimize the incidence of medical errors. In summary, it can be inferred that the advantages of maintaining integrity and enhancing the quality of the

treatment are evident only when the EMS is employed on a frequent and consistent basis by the recipients. The acceptance and appropriate use of EMS records by nurses in patient care is of utmost importance since they serve as the primary end-users within the healthcare system. [39]

A) Computerized technologies in pharmacy

The responsibility for drug development, manufacture, and distribution falls on the pharmaceutical sector. The pharmaceutical sector has expanded dramatically over the past 20 years, and in 2020, worldwide pharm revenues reached 1.27 trillion dollars. Computerized Technology in pharmacy has been significantly advancing the entire sector, in addition to patient-related technologies like apps and activity monitoring, and extra patient care. Keeping track of prescriptions, automating prescription refills to reduce paperwork, and developing new types of record-keeping were the first major technological advances. The utilization of technology within pharmacies to develop customized software that fully automates the recording of a patient's prescription refill history and cross-references it with other prescriptions obtained from different pharmacies empowers pharmacists to effectively oversee and administer the patient's comprehensive healthcare and well-being. [40]



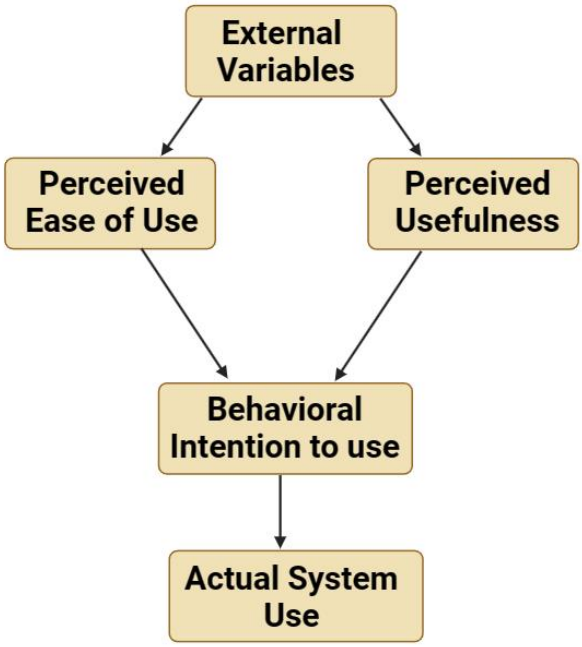
B) Computerized technologies in nursing

The integration of advanced computer technologies in the health services industry necessitates modifications in both the organisational structure and job descriptions within the organisation. Additionally, individual-level changes are evident, as employees are required to adapt their daily operations. The integration of electronic technologies into nursing practice

has become an essential aspect of the healthcare system. Numerous studies present diverse perspectives on the subject matter, ranging from those that endorse technology as a facilitator of health to those that express opposition towards computerisation due to its perceived tendency to distract nurses from patient care. It was hypothesised that young nurses possessing a significant level of computer proficiency would exhibit a higher degree of openness towards the incorporation of technology into their professional practice. The user's material is insufficient in length to be rephrased in an academic style. Could you kindly supply additional information? Nurses often experience professional and psychological challenges when faced with technology-related issues. These challenges require them to adapt to new working techniques, acquire more expertise and abilities in the field of technology, and effectively integrate these elements into the delivery of high-quality healthcare. The rapid advancement of scientific technology has compelled nurses to adjust and revise their therapeutic treatment approach. The user's content does not contain any information to rework in an academic manner. Given nursing's significant societal interconnectedness, it carries a social responsibility to deliver healthcare services that are firmly rooted in the promotion of knowledge and professional competence. The nursing profession is dedicated to the preservation and promotion of public health, preventing disease, and providing holistic care while upholding an ethical code. Nursing professionals must stay informed about the advancements and developments in health services that offer high-quality treatment options in order to define the boundaries of their practice. Nurses must maintain up-to-date knowledge of technological advancements that facilitate the achievement of these goals, as the academic curriculum equips nursing students with the necessary skills for professional development, including independent critical thinking and decision-making abilities founded on comprehensive integrated knowledge. [42]

6. Technology Acceptance Model (TAM)

The primary focus of the Technology Acceptance Model (TAM) is in the intention of end users to utilise the technology. The focus of our study is on the model used to identify the various elements influencing the intention of nurses to adopt computerised technology. This choice is based on the fact that nurses are the primary users within the healthcare system. Once decision-makers possess knowledge of these issues, they will be able to focus their efforts on effectively planning for the integration of computerised technology into health systems. The Technology Acceptance Model (TAM) posits that the perceived usefulness and simplicity of use are the key factors influencing the adoption and usage of a new digital technology by consumers. The degree to which system users anticipate the new technology will enhance their ability to perform their jobs is known as perceived usefulness. The idea of perceived usability is the belief that a technology system will be simple to use. [43]



7. Conclusion

Two key problems were clarified by the current study: first, the connection between pharmacy, nursing, and sustainability; and second, the significance of computerized technology in pharmacy and nursing practice as a tool for sustainability. We place a lot of emphasis on personal and professional development with a thorough understanding of the

population's needs in the educational part of nursing courses. It is especially crucial that future pharmacists and nurses have sustainable knowledge and skills for diagnosing and treating emergencies as part of their curricula because pharmacists and nurses are the first line of defences in treating the populace among healthcare providers during emergencies. The technological advances that are currently occurring in all facets of life are also present in any medical care, including the work of licensed medical doctors, pharmacists, and nurses. It is crucial to develop specific programs to train pharmacists and nurses on how to use computerized technology because the results indicated that they need greater technological expertise to implement the recording and reporting system fully. Following the discovery that the nursing and pharmacy professions accepted computer technology more readily. Maintaining the collaboration between pharmaceutical and nursing teams, as well as multi-professional teams specialising in digital technology, is of utmost importance for the purpose of advancing the development of digital solutions that can effectively enhance patient outcomes. The initiation of this collaboration occurred when a team of computer specialists joined forces with the pharmaceutical and nursing teams, facilitating a partnership between pharmacists and nurses in the development of the software they utilised. There is a consensus among scholars that the amalgamation of these attributes will yield sustainable practices in the fields of pharmacy and nursing. However, it is important to acknowledge that significant progress still needs to be made, and further investigation is necessary to comprehensively comprehend the appropriate implementation of sustainable nursing techniques and sustainable pharmacy approaches.

8. Future prospective

In examining the forthcoming period, the importance of obtaining training in computerised technology for pharmacists and nurses is essential in guaranteeing the long-term viability of the healthcare system. The healthcare industry is currently undergoing significant transformations due to rapid progressions in technology. The incorporation of these technological breakthroughs into the responsibilities of pharmacists and nurses has the potential to yield a multitude of advantages. The following discourse presents future ideas regarding the indispensability of computerised technology training for healthcare workers. [45,46]

The utilisation of computerised technology has the potential to enhance efficiency and accuracy in a multitude of jobs, including but not limited to medicine distribution, patient

record management, and treatment planning. The utilisation of technology by pharmacists and nurses has the potential to yield substantial benefits, including mistake reduction, increased efficiency, and enhanced patient safety.[47]

The practice of making decisions based on empirical evidence and analysis of data. The increasing prevalence of electronic health records (EHRs) and health informatics necessitates healthcare workers to possess proficient skills in extracting valuable insights from extensive datasets. Pharmacists and nurses can utilise these insights to facilitate educated decision-making pertaining to patient care, drug interactions, and treatment options.[48]

The future of healthcare is anticipated to incorporate a heightened focus on telehealth and remote patient monitoring. Pharmacists and nurses who have received training in technology possess the ability to actively interact with patients via digital platforms, offer virtual consultations, and remotely monitor the health status of patients.[49]

The advent of computerised technology has facilitated the study of individual patient data, thereby empowering pharmacists to customise prescription regimens and treatment programmes according to the specific requirements of each patient. Nurses have the capability to utilise technology in order to monitor the progress of patients and make necessary adjustments to their care plans.[50]

pharmaceutical management has become more intricate due to the complexity of pharmaceutical regimens. In order to mitigate medication errors, identify potential drug interactions, and educate patients on appropriate medication administration, pharmacists must utilise technology.

Patient Engagement: The utilisation of technology provides pharmacists and nurses with novel avenues to actively involve patients, hence enhancing their adherence to treatment plans and lifestyle suggestions. Continuous assistance and education can be facilitated through the utilisation of mobile applications, wearable devices, and internet platforms.

Continuing Education and Training (CET): The healthcare industry is undergoing tremendous advancements, necessitating experts to remain abreast of the most recent breakthroughs. The acquisition of computerised technology training will be imperative for pharmacists and nurses in order to effectively utilise online courses, webinars, and resources that augment their competencies and understanding.

The significance of interdisciplinary collaboration is growing within the healthcare sector, emphasising the importance of collaborative care. Proficiency in digital communication, secure patient information sharing, and active participation in multidisciplinary care teams are essential skills for pharmacists and nurses when interacting with fellow healthcare professionals.[51]

The potential for further transformation in the healthcare sector lies in the adoption and integration of emerging technologies, namely artificial intelligence, machine learning, and blockchain. Pharmacists and nurses who have received training in technology will possess enhanced capabilities to comprehend and proficiently apply these advancements.

The increasing digitisation of healthcare necessitates a heightened focus on safeguarding patient data privacy and adhering to regulatory norms, such as the Health Insurance Portability and Accountability Act (HIPAA). The utilisation of computerised technology training has the potential to assist healthcare workers in effectively navigating the intricacies associated with these complications.[52]

In last, it is imperative for pharmacists and nurses to obtain comprehensive training in computerised technology in order to maintain their effectiveness, efficiency, and adaptability within a dynamic healthcare environment. The adoption of technology in healthcare has the potential to not only augment the quality of patient care, but also bolster the long-term viability of the healthcare system through the facilitation of improved results, cost reduction, and the empowerment of healthcare professionals to remain at the cutting edge of their respective domains.

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