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Research Article

Knowledge and Attitudes Toward Herbal Medicine Among Pharmacy Students in Koshi Province, Nepal

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Abstract

Background: Herbal medicine also known as botanical medicine involves using plants and plant extracts to treat various health conditions. It is one of the oldest forms of health care, with roots in healing practice across cultures including Ayurveda, traditional Chinese medicine, and indigenous healing traditions. Herbal medicine relies on the medicinal properties of different plant parts such as leaves, roots, flowers, and seeds. **Method:** A descriptive cross-sectional study was conducted in different collages of koshi province which teaches pharmacy subjects. The self-administered 25 item structured questionnaires were used to access the knowledge and attitude of students. **Result:** A total of 321 students participated in this study of whom 169 (52.6%) were female and 152 (47.4%) were male. The age of the respondent was between 16 to 37 years. Among respondents 86% exhibits good knowledge, 97.5% demonstrated positive attitude. **Conclusion:** The study concludes that majority of students had good herbal medicines related knowledge and attitude however, there is a room for improvement of knowledge. This study recommends to carryout various measures such as practical workshops, field visits, research projects, to fill in the gaps of knowledge and information related to herbal medicines.

Keywords: Knowledge, Attitude, Herbal medicines, Pharmacy students

INTRODUCTION

Since ancient times, people have utilized plants as medicine, and many of the modern medications we use are made from plants. [1] Herbal medicines are widely utilized in the world's healthcare system to treat and prevent a wide range of illnesses. According to World Health Organization (WHO), herbal medicine is defined as a set that includes herbs, herbal materials, herbal preparations and finished herbal products that contain, as active ingredients, parts of plants, other plant materials or combinations thereof. In certain countries, herbal medicines may usually contain natural organic or inorganic active ingredients that are not of plant origin. [2]

As consumer demand for herbal medications increases, so does their usage on a global scale. According to estimates from the World Health Organization, 80% of people in poor countries get part of their basic treatment from herbal remedies. This is attributable to patients' strong acceptance of them, who value their high level of efficacy and safety as well as their active participation and sense of autonomy in selecting herbal remedies. [2]

Due to increasing demand and the risks of patients using herbal medicine concurrently with conventional medicine, a pharmacist should understand the importance of their role with regards to herbal medicine as several disorders are made worse by the interactions of herbs. [3] According to the World Health Organization, the most accessible health professionals to the public are community pharmacists, also known as retail pharmacists. These pharmacists have the duty of supplying prescription and non-prescription medications safely, as well as providing appropriate counseling at the time of dispensing. [1] It has been suggested that pharmacist need to have the authority to act as health care professionals, describe every product that is stocked in and anticipate it at their pharmacy.[4]

Various treatments have been employed from ancient times to preserve and improve people's general health and well-being. Over time, several conventional techniques that were beyond the purview of allopathic medicine were altered to become well-known medical practices that are today referred to as "complementary and alternative medicine." The use of complementary and alternative medicine (CAM) ranges from 9.8 to 76% worldwide. However, almost 90% of people in India alone rely on it for their primary healthcare needs. Numerous factors, including personal, religious, and spiritual convictions, as well as CAM's perceived effectiveness, affordability, safety, and ease of use, have contributed to its increasing acceptability. Despite the availability of modern medical products, almost 80% of the population in Africa, Asia, and Latin America still uses traditional medicine. Among the notable Asian nations are China (40%), Pakistan, and India (99%).[5]

Historically, ethnopharmacological applications and indigenous remedies have been the foundation of modern therapeutic medicine. These methods are now acknowledged resources for discovering novel pharmaceutical sources. Numerous therapeutic plants found in Nepal are in danger of going extinct because to the globalization of herbal medicine, unchecked exploitation, and a lack of coordinated conservation measures. It follows that the sustainable use and management of medicinal plants, founded on traditional knowledge, is essential. [6]

Herbal medicines are becoming more popular and widely used by people all around the world for treating various health issues. Given that pharmacy students are future pharmacists, it's crucial for them to have a good understanding of herbal medicines. This includes knowing how these natural remedies work, their benefits, potential side effects, and how they might interact with conventional drugs. By evaluating their knowledge, we can identify any gaps or areas that need improvement. This way, we can ensure that they are well-prepared to provide accurate and safe advice to patients who choose to use herbal products. This study aims to make sure that future pharmacists are equipped with the necessary knowledge to support and guide patients in the use of herbal medicine effectively and safely.

We aimed to assess level of knowledge pharmacy student possess regarding the classification, identification and common uses of herbal medicines, and to evaluate the understanding of students regarding the potential benefits and risks associated with the use of herbal medicine.

METHODOLOGY

The study utilized a Quantitative method to investigate knowledge and attitudes of herbal medicine among pharmacy students. This study is a descriptive cross-sectional study method where the knowledge and attitudes of pharmacy students is obtained. The research was conducted on different colleges of Koshi province teaching pharmacy Program. A structured questionnaire was developed after reviewing articles relevant to the study. The questionnaires consist of the following categories: Demographic characteristics of the student: Age, Sex, Religion, Marital status, education level, work experience in pharmacy field and any training of workshops on herbal medicines. Knowledge: the second part (fifteen questions) enquired related to knowledge about herbal medicines, uses, side effect, drug interaction, scientific name. Attitude: the third part (ten questions) includes positive and negative statements about herbal medicines. Knowledge score was determined based of standard cutoff point to categorized the outcome such as inadequate (<5), moderate (6-10), adequate (>15). Attitude score was determined based of standard cutoff point to categorized the outcome such as poor attitude and good attitude. The data collected was entered and analyzed using IBM SPSS version.20.

Permission to conduct a study was approved by institutional review committee of Purbanchal University School of Health Sciences (PUSHS-IRC). Pharmacy teaching institution permission was taken before the conduction of the study. Inform consent was obtained from the participants who voluntarily agree to participate in the study after explaining the study purpose and objectives before enrolling into the study. Participants rights of autonomy, confidentiality and non-maleficence was maintained.

RESULTS AND DISCUSSION

A total of 321 students enrolled in pharmacy Program participated in this research. Of these, a majority, 249 students (77.6%), were pursuing a Diploma in Pharmacy, while 72 students (22.4%) were enrolled in a Bachelor of Pharmacy program. The ages of the respondents ranged as follows: less than 20 years (209 students, 65.1%), between 20 to 25 years (100 students, 31.2%), and more than 25 years (12 students, 3.7%). The gender distribution was 152 males (47.4%) and 169 females (52.6%).

Regarding religion, the majority of participants identified as Hindu (273 students, 85%), followed by Muslim (24 students, 7.5%), Christian (7 students, 2.2%), and other religions (17 students, 5.3%). In terms of work experience in the pharmacy field, 173 students (53.9%) had less than one year of experience, 48 students (15%) had more than one year of experience, and 100 students (31.2%) had no working experience in the field. Additionally, 33 students (10.3%) had participated in training and workshops on herbal medicines, while 228 students (89.7%) had not.

Out of 321 participants, 45 students (14%) demonstrated inadequate knowledge, 228 students (71%) exhibited moderate knowledge, and 48 students (15%) displayed adequate knowledge based on the scoring in the 15 questions of the questionnaire.

313 out of 321 students surveyed (97.5%) expressed a good attitude towards herbal medicine. This overwhelming majority suggests a strong acceptance of herbal medicine within this group of pharmacy students. This positive attitude could be influenced by various factors such as growing consumer interest in natural therapies, perceived efficacy of herbal treatments, and

perhaps evolving curricula that include education about herbal medicines alongside conventional pharmaceuticals. Conversely, a small fraction of students, 8 out of 321 (2.5%), were reported to have a poor attitude towards herbal medicine. While this number is relatively low, it indicates that there remains a minority of students who may have reservations, concerns, or doubt towards herbal remedies. [7] This minority perspective could stem from issues such as lack of scientific evidence, variability in product quality and standardization, or insufficient regulatory oversight in the herbal medicine industry.

This study about exploring the knowledge and attitude of using traditional medicines among pharmacy students of Koshi Province is presumed to be the first to be conducted in the field.

The results suggest that the knowledge of the pharmacy students on Herbal Medicine is inadequate as it is reflected from the low percentage of correct answers. The results are similar with another study conducted in Malaysia titled "Understanding, Perceptions and Self-use of Complementary and Alternative Medicine (CAM) among Malaysian Pharmacy Students".[8] The majority of students 62.6% were seem to have inadequate knowledge about CAM. The likely reason of such findings could be due to insufficient exposure of pharmacy students toward CAM during their study. It is therefore suggested that more attention should be given to introduce courses regarding CAM in curriculum of pharmacy schools of Nepal. Similar results also reported in previous studies from Kuwait titled "Public awareness, patterns of use and attitudes toward natural health products in Kuwait: a cross-sectional survey" [9]And Pakistan titled "Complementary and Alternative Medicine: Perceptions of Medical Students from Pakistan". The significant proportion of students in this study were male (55.1%) And the mean age of respondent was 20.7 years. [10]

Our study shows that pharmacy students were deficient in knowledge on herbal medicines but possessed a high percentage of good attitude (97.5%). the results are similar with another study titled "A gap between acceptance and knowledge of herbal remedies by physicians: The need for educational intervention".[11] In this study (60.4%) physician have good attitude towards herbal medicine whereas only (40.6%) have poor attitude toward herbal medicines. Similar results is found in another study titled herbal products: a survey of student's precipitation and knowledge about their medicinal use. [12] In this study 58.73% preferred herbal products over allopathic medicine which indicates these students have good attitude towards herbal medicines.

The tradition and culture in Koshi Province encourage the use of herbal medicines. Also, the availability and simplicity of herbal medicines contribute to the increased use and many people believe that traditional recipes are not harmful and do not have side effects.

However, plants and herbal medicines are extremely complex material. In addition, there is lack of protocols and suitable methods of evaluating the products. Herbal medicinal products need to be regulated to enhance quality, safety, and efficacy. [13]

CONCLUSION

The finding of this study shed light on the crucial aspect of knowledge and attitude of herbal medicine among pharmacy students. The study revealed that while there is a reasonable level of knowledge and positive attitude towards herbal medicines, there is a room for improvement of knowledge about herbal medicines with knowledge level at 86% and a generally positive attitude at 97.5% it is cleared that student have access to information and willing to have positive mind set toward herbal medicines.

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