



A Survey on Perception, Attitudes, and Knowledge of Using Alternative Medicine Among Science Students

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Abstract

The healthcare landscape is undergoing a transformative shift, witnessing an increased embrace of alternative medicine. This shift reflects a growing inclination among patients and healthcare providers towards holistic health approaches. This article provides a comprehensive exploration of alternative medicine, examining its diverse applications, effectiveness, and underlying principles. Emphasizing the importance of a holistic strategy encompassing mental, emotional, and physical well-being, an online survey conducted by the Pharmacy department in August-September 2023 involved 228 pharmacy students. The study prioritized respondent anonymity and unveiled a remarkably high prevalence of complementary and alternative medicine (CAM) adoption among pharmacy students. Key drivers include a substantial preference for holistic approaches and dissatisfaction with traditional therapies. Graphically presented survey results reveal a positive correlation between CAM adoption and a holistic health mindset among students. While many reported favorable experiences, the study underscores the imperative for further research to validate CAM efficacy. It advocates for a nuanced understanding, positioning CAM as a complementary, not replacement, component of conventional healthcare. This research contributes insights into the evolving healthcare landscape, emphasizing the importance of integrating alternative medicine into mainstream practices to meet the rising demand for holistic approaches, fostering a patient-centric paradigm.

Keywords: Complementary and Alternative Medicine; Survey Report; Science Students; Traditional Therapies and Holistic Approaches

Introduction

In the realm of contemporary nations, the utilization of complementary and alternative medicine (CAM) has experienced a notable surge over the last two decades, escalating within the healthcare sector at an unprecedented pace [1]. Alternative medicine refers to any medical approach or philosophy that deviates from the conventions of contemporary biomedicine or the standard therapeutic practices commonly accepted in mainstream healthcare [2,3]. The all-encompassing term used to characterize a range

of therapeutic modalities beyond the scope of conventional medicine is "Complementary and Alternative Medicine" (CAM). CAM comprises biologically oriented interventions, including natural remedies, dietary supplements, probiotics, nutrition-based treatments, vitamins, and minerals. Additionally, it includes mind-body interventions such as meditation, advanced respiration techniques, tai chi, and yoga. Somatic interventions, encompassing osteopathic medicine, acupuncture, chiropractic, and massage therapy, are also part of the CAM domain. Training programs for complemen-

tary medicine are occasionally referred to as alternative medicine training, with an increasing number of private medical insurance companies covering such care. Although alternative treatments and medications are typically subject to regulation in many countries, standards demonstrating their efficacy or long-term safety are often lacking. Both Western and Asian countries issued advisories and guidelines amidst the pandemic to mitigate its dissemination. In the nascent phases of the malady, no vaccine or efficacious remedy was available. Amid the crisis, our avenues are constrained to symptom management and minimizing the likelihood of case fatality [4].

The terms 'complementary medicine' and 'alternative medicine' describe a category of medical modalities outside the established frameworks of the nation's orthodox medical practices, not seamlessly integrated into the predominant healthcare system [5]. The prevalent motivation for the majority's utilization of alternative medicine stems from a resonance between these therapies and individual philosophies on well-being and existence, rather than dissatisfaction with conventional medical approaches. Notably, the adoption of modalities such as homeopathy, energy healing, therapeutic massage, high-dosage vitamin regimens, self-improvement collectives, and herbal remedies has experienced a notable upsurge recently [6].

In response to this trend, an informational nexus has emerged, facilitating knowledge exchange among medical professionals, traditional healers, pharmacists, and patients regarding alternative medicine's therapeutic efficacy, safety protocols, and potential hazards or contraindications. Moreover, deliberation on advancing alternative medicine is imperative to ensure the accessibility of cost-effective treatments. This requires the progression of research endeavors, addressing publication bias, safeguarding intellectual property rights, and active engagement with policymakers. These actions are anticipated not only to elevate the stature of the Additive Manufacturing (AM) sector but also to enhance its broader societal endorsement in the times ahead [7-9].

Survey report

In August and September 2023, an examination of "Use of alternative medicines" was carried out among pharmacy students. All students completed the survey, it was conducted online and participation was entirely optional. Respondent confidentiality was guaranteed.

An investigation into the usage among practitioners of complementary and alternative medicine pharmacy students was conducted. The significant findings are emphasized in the executive summary that follows. This research aimed to ascertain the frequency of, attitudes and views about the use of alternative medicines among pharmacy students to provide light on a rapidly expanding and evolving field of healthcare given in figure 1. The data show a significant prevalence of alternative medicine use, driven by a preference for holistic methods and dissatisfaction with traditional therapies given in figure 2 and 3. Even though many students believe these treatments are successful, additional research and data are needed to support their application. A further indication of the value of training and understanding among medical practitioners in this dynamic field is their openness to suggest alternative therapies. The replies from about 228 students were gathered, rewritten, and then presented graphically in this article in figure 4.

Survey methodology

Between August 2023 and September 2023, an anonymized questionnaire was disseminated to the entire student body enrolled in the pharmacy program. This web-based survey was diligently completed by the entirety of the student cohort within the stipulated timeframe. The survey, administered online, strictly adhered to a voluntary participation model, ensuring the confidentiality of respondents. Exclusions were made for individuals falling within the age range of 18 to 24 years, specifically targeting well-versed pharmacy students. The survey, initiated by the investigators, was framed as an inquiry into Complementary and Alternative Medicine (CAM) usage, with a particular focus on peri-operative care. This research endeavor received sponsorship from the Department of Pharmacology and secured approval from the Institute of Pharmacy.

The methodology employed for this survey review report embraced a comprehensive online data collection strategy facilitated through the utilization of Google Forms given in Table 1. This approach comprised several pivotal steps meticulously crafted to guarantee the reliability and validity of the amassed information. The survey design, at its core, was intricately developed to address research objectives and capture pertinent data points. Formulating unambiguous and succinct questions was paramount in eliciting substantive responses from participants, with a conscious effort to

circumvent leading or biased queries. A judicious blend of closed-ended and open-ended question formats was incorporated to facilitate both quantitative and qualitative analyses. The data collection phase was executed over a specified timeframe, during which participants accessed the survey link through diverse online channels. Rigorous response validation checks were integrated within the Google Form to uphold data integrity, thereby reducing errors

and inconsistencies. Upholding respondent anonymity and confidentiality took precedence to foster candid responses.

The responses of approximately 228 students were meticulously gathered, rephrased, and subsequently presented graphically within this article, reflecting a culmination of a rigorous and thoughtfully executed survey methodology.

S.no	Question	Response	No. Of user	% of users
	Have you ever tried alternative medicines, yoga, or therapies for health and well-being?	Yes	177	77.6
		No	51	22.4
	Which of the following alternative medicines have you used?	Acupuncture	10	6.3
		Herbal remedies	28	17.7
		Homeopathy	42	26.6
		Ayurveda	23	14.6
		None of the above	55	34.8
	How often do you practice yoga or meditation?	Daily	69	30.3
		Monthly	35	15.4
		Weekly	51	24.4
		Rarely and never	73	32
	What is the primary reason for using alternative medicines or therapies?	General health and wellness	137	60.1
		Stress reduction	37	16.2
		Managing specific health conditions	47	20.6
		Curiosity/experimentation	8	3.1
	Do you consult a healthcare professional before trying alternative medicines or therapies?	Always	72	31.6
		Rarely	48	21.1
		Never	38	16.7
		Sometimes	70	30.7
	Have you experienced positive health outcomes from using alternative medicines or therapies?	Yes	155	68
		No	19	8.3
		Not sure	54	23.7
	Are you satisfied with the results of alternative treatments compared to conventional medicine?	More satisfied with alternatives	48	21.1
		Equally satisfied with both	89	39
		Prefer conventional medicine	27	11.8
		Haven't compared	64	28.1
	Have you ever faced any side effects or adverse reactions from alternative treatments?	Yes	39	17.1
		No	155	68
		Not applicable	34	14.9

Do you believe that alternative medicines and therapies are more natural and safer than conventional medicine?	Strongly agree	66	28.9
	Somewhat agree	64	28.1
	Neutral	88	38.6
	Somewhat disagree	7	3.1
	Strongly disagree	3	1.3
Do you engage in any specific dietary practices associated with alternative health approaches (e.g., veganism, gluten-free)?	Yes	90	39.5
	No	138	60.5
How important is holistic well-being (physical, mental, and spiritual) to you?	Very important	162	71.1
	Somewhat important	35	15.4
	Neutral	28	12.3
	Not important	3	1.3
How do you perceive the role of alternative medicine in the future of healthcare?	It will become more mainstream	117	51.3
	It will remain down	42	18.4
	It will decline in popularity	14	6.1
	Not sure	55	24.1
How do you assess the cost-effectiveness of alternative medicines and therapies compared to conventional treatments?	More cost-effective	65	28.5
	Equally cost-effective	79	34.6
	Less cost-effective	43	18.9
	Not sure	41	18
Which health conditions or concerns have you addressed through alternative medicine?	Pain management	61	26.8
	Stress reduction	48	21.1
	Mental health	36	15.8
	Chronic illnesses	18	7.9
	None of the above	65	28.5
Do you believe that alternative therapies have a role in preventing illness, not just treating it?	Strongly believe	53	23.2
	Believe	97	42.5
	Neutral	65	28.5
	Disbelieve	10	4.4
	Strongly disbelieve	3	1.4
Which alternative therapy, in your opinion, has the greatest potential for enhancing overall well-being?	Yoga	102	44.7
	Meditation	79	34.6
	Herbal Remedies	37	16.2
	Others	10	0.9

How would you rate your overall satisfaction with the use of alternative medicines and therapies in your life?	Extremely satisfied	39	17.3
	Satisfied	116	51.3
	Neutral	65	28.8
	Dissatisfied	4	1.8
	Extremely dissatisfied	2	0.8
What factors influence your choice of alternative treatments or therapies?	Personal beliefs	78	48.4
	Recommendations from others	18	11.2
	Scientific evidence	33	20.5
	Cost	16	9.9
	Convenience and Availability	16	9.9
How do you assess the cost-effectiveness of alternative medicines and therapies compared to conventional treatments?	More cost-effective	53	23.2
	Equally cost-effective	93	40.8
	Less cost-effective	43	18.9
	Not sure	39	17.1
What motivates you to explore alternative therapies and medicines?	Seeking natural remedies	102	44.7
	Dissatisfaction with conventional medicine	30	13.2
	Cultural or family influence	58	25.4
	Curiosity	38	16.7
Are you aware of any research or scientific studies supporting the effectiveness of the alternative treatments you've used?	Yes	116	50.9
	No	53	23.2
	Not sure	59	25.9

Table 1: Questionnaire consists of 21 questions.

Discussion

Our primary objective entailed an exhaustive exploration into the prevalence of Complementary and Alternative Medicine (CAM) utilization among science students. This was undertaken through the meticulous administration of a systematic survey encompassing a spectrum of inquiries. Our investigation was particularly concentrated on discerning the utilization patterns of pharmacy students at the esteemed Institute.

This inquiry unfolded as a purposeful endeavor to unravel the prevailing attitudes, perspectives, and prevalence concerning the incorporation of alternative medicines among pharmacy students. The study aspired to cast a discerning light on a domain of healthcare that is swiftly expanding and undergoing evolution. The ensuing executive summary underscores the consequential discoveries emanating from this meticulous exploration. The data procured

from our study underscore a noteworthy prevalence of alternative medicine adoption within the student body. This proclivity is underpinned by a discernible predilection for holistic methodologies and a discernable dissatisfaction with conventional therapeutic approaches. Intriguingly, these findings intimate a landscape of considerable uncertainty regarding the genuine prevalence of CAM within the broader student population [10]. In interpreting the data laid out in this comprehensive review, it becomes apparent that delineating true prevalence rates of CAM usage within the general populace of any nation proves problematic. Despite the inherent unreliability permeating the data, distinct and compelling trends persistently surface. Consistently, various surveys corroborate the likelihood that the primary adopters of CAM fall within the demographic bracket of 18 to 24 years, comprising both male and female well-educated students. It is noteworthy that users of traditional medicines in developing nations likely possess dissimilar characteristics [11].

Predominantly, CAM is embraced not as a standalone therapeutic modality but rather as a complementary adjunct to conventional medicine, emphasizing preventive rather than curative paradigms. The financial commitment associated with CAM utilization can be substantial, yet its popularity appears to be on an upward trajectory. The prevalence of CAM employment exhibits a propensity for variation, contingent upon factors that remain inadequately comprehended. The available data, though prolific, are ensconced in a web of contradictions and unreliability [12]. However, this demographic snapshot is dynamic and ever-evolving, necessitating a continuous reevaluation of the factors influencing CAM adoption. Cultural, economic, and educational facets collectively contribute to this intricate equation, yet the precise interplay of these variables remains elusive [13]. Despite the multifaceted nature of CAM prevalence, it is crucial to underscore the limitations inherent in the available data. The contradictory nature of the findings and the unreliable underpinnings of the data necessitate a cautious interpretation. Recognizing these limitations provides the impetus for further empirical investigations and the refinement of survey methodologies to yield more robust insights into the nuanced landscape of CAM utilization [14].

Conclusion

In the contemporary healthcare milieu, a conspicuous paradigm shift is observable, as evidenced by a meticulously conducted survey at the Institute of Pharmacy. This inquiry delves into the intricate domain of complementary and alternative medicine (CAM) adoption among pharmacy students, revealing transformative trends. Survey outcomes align with global patterns, indicating that individuals aged 18 to 24, regardless of gender and possessing advanced education, constitute the primary proponents of alternative therapies. The dynamic healthcare landscape necessitates an openness to diverse methodologies, compelling medical practitioners to explore alternative therapies with an enlightened comprehension of their potential advantages. The crux of our investigation lies in a scrupulously administered systematic survey, crafted to unravel prevailing attitudes, perspectives, and prevalence regarding the assimilation of alternative medicines within this academic cohort. Findings underscore a noteworthy inclination for CAM adoption, marked by a palpable preference for holistic methodologies and discernible discontent with conventional therapeutic approaches. Engaging 228 pharmacy students through an online survey ensured respondent confidentiality, providing a

comprehensive snapshot of the current landscape. Visual representations delineate a positive correlation between CAM adoption and a holistic health mindset among students, reinforcing the symbiotic relationship between alternative approaches and a comprehensive well-being paradigm. While students report favorable experiences with alternative therapies, the survey underscores the imperative for further research to substantiate CAM efficacy. This aligns with the broader call for a nuanced understanding, positioning CAM not as a substitute but as a complementary facet within conventional healthcare. The survey furnishes valuable insights, emphasizing the significance of integrating alternative medicine into mainstream practices as healthcare paradigms pivot towards patient-centric models. The escalating demand for holistic approaches necessitates a reassessment of conventional practices, underscoring the urgency for educational initiatives and training among medical practitioners to cultivate a dynamic and responsive healthcare system harmoniously integrating traditional and alternative modalities for the betterment of patient well-being.

Conflict of Interest

The authors have no conflict of interest regarding this survey.

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