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The Intersection of Class, Gender, and Health Literacy: Mapping the Social Determinants of Non-Prescribed Multivitamin Use and Public Perception

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ABSTRACT

Multivitamins rank among the most popular dietary supplements consumed globally because people commonly view them as vital for sustaining health, strengthening their immune system, and avoiding nutrient deficiencies. Public understanding about the correct application of multivitamins as well as their advantages and potential dangers shows considerable variation. This research investigates public understanding of multivitamins and examines the elements that affect their use together with prevalent incorrect beliefs. Researchers carried out a structured survey across multiple demographic groups to assess awareness of multivitamins and examine sources of information together with public perceptions of their effectiveness and safety.

A large segment of multivitamin users obtains their information from non-medical sources including advertisements and social media platforms. The spread of misinformation through aggressive marketing practices generates misunderstandings about why people need multivitamins and their safety profile which leads to dangerous consequences like excessive use and toxic reactions. The effectiveness of multivitamins in disease prevention remains unclear because some people use them as dietary substitutes instead of supplements for actual nutrient deficiencies.

The findings of this study highlight the necessity for better public instruction alongside evidence-based professional advice and tighter marketing rules to ensure responsible multivitamin use. Upcoming studies need to investigate how specific public health campaigns and policy measures can enhance multivitamin knowledge and encourage nutritional balance.

KEYWORDS: Multivitamin Supplement,Multivitamin Usage,Multivitamin Awareness,Multivitamin Side Effects
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INTRODUCTION

Multivitamins are one of the most popular dietary supplement types, promoted as a basic multi-health requirement for boosting the immune system and maintaining optimal health as well as providing nutrients to avoid some deficiencies. As previously noted by the National Institutes of Health (2020)[1] multivitamins have taken a fair share of the dietary supplement market and millions of people globally consume them on a daily basis. The use of multivitamins to prevent deficiency and another associated ailment is therefore disputable particularly among individuals with healthy diets[2, 3].

Factors that would influence general public perceptions of multivitamins would be the healthcare provider's advice, advertisements, as well as exposure on social media. Findings of the study based on a survey conducted among people with diverse characteristics bring to light the trends of multivitamin awareness, uptake, and fallacies associated with these products. Survey data underscores key observations:

Knowledge & Awareness: The majority of the participants were under 30 years of age, and they all claimed to have some sort of knowledge about multivitamins, although there were significant variations in the depth of that knowledge. Several of them obtained information on multivitamins through non-medical means, like family, friends, and social media. The non-medical reference group was relatively older than the medical reference group[4].

Reasons for Consumption: Common reasons for multivitamin use were mainly to fill nutrient gaps, to boost immunity, and to increase energy levels. However, many of the respondents thought that multivitamins could be taken as a meal substitute or as an overall health improver without medical necessity.

Perceived Necessity: No consensus was reached on whether a multivitamin should be taken by everyone or not. Some respondents say everybody should take it, others admit it is only needed in deficit persons or under some special conditions[5].

Decision-Making Factors: Most participants preferred health professionals as their choice of information when selecting a multivitamin. Some others depended on family, friends, or online information to choose one.

Awareness of Risks: Hearing that overdose could be harmful for health was a generalized understanding of most respondents. But specific risks of overconsumption of fat-soluble vitamins (A, D, E, K) were not clear to many until that time[6].

Side Effects & Safety Concerns: Some respondents said they had varying degrees of side effects, including mild to strong conditions such as nausea, or epigastric discomfort after consuming multivitamins[7].

Public Awareness Needs: In the future, most respondents, believe that there should be more public education on the use of multivitamins because misuse and misinformation are of gradual top consideration.

Research Objectives

Given these findings, this study aims to:

1. Take a closer look at how much people really know about using multivitamins.

2. Pinpoint the main reasons why people take them and the sources of information that sway their choices.

3. Explore any misunderstandings and knowledge gaps surrounding the need for and safety of multivitamins.

4. Assess how healthcare professionals, media, and advertisements influence public views on these supplements.

5. Offer well-researched suggestions to boost public understanding and promote responsible use of supplements.

Significance of the Study

The general public's understanding of multivitamins is often quite limited, which can lead to some serious issues like taking too many, depending on supplements instead of eating well, and even facing negative health consequences. Research has shown how misinformation can really shape the way people use these supplements . Moreover, some studies suggest that while multivitamins might not actually help you live longer, they could offer some cognitive perks for older adults

This study aims to build on what we already know by adding insights from surveys about how people really feel about multivitamins and how they make decisions regarding them. The results will be valuable for shaping future public health initiatives, regulatory measures, and healthcare provider strategies to encourage safe and evidence-based use of multivitamins.

Literature Review

Public Awareness and Understanding of Multivitamins: Multivitamins are a popular choice among various demographic groups, often seen as a must-have for maintaining good health. The National Institutes of Health (NIH, 2022) reports that multivitamins make up a large chunk of the global dietary supplement market,

with millions relying on them for health upkeep and disease prevention. However, the public's grasp of their real benefits, risks, and proper usage is still pretty hit or miss.)According to the survey data from this study, a majority of respondents (65%) feel confident that they understand multivitamins well, while 35% either know very little or are uncertain about specific aspects. This finding echoes earlier research by , which revealed that even though many people claim to understand multivitamins, they often lack a deeper knowledge of how they work, leading to misuse or an overdependence on them.

Perceived Necessity and Reasons for Use: The ongoing debate about whether multivitamins are a must-have for everyone is still a hot topic in the scientific community. In a recent survey, 54 out of 126 respondents (43%) felt that multivitamins are essential for all, while another 43% argued they're only necessary for those with deficiencies or specific health conditions. The remaining 14% believed that if someone maintains a balanced diet, multivitamins aren't needed at allResearch indicates that while multivitamins can help prevent nutrient deficiencies, they don't necessarily offer extra health benefits for those who already have a well-rounded diet. The U.S. Preventive Services Task Force (USPSTF, 2022) found that there isn't enough evidence to back the use of multivitamins for preventing chronic diseases. However, certain groups—like pregnant women, older adults, and those with dietary restrictions—might need to consider supplementation.

In this study, participants shared various reasons for taking multivitamins, including:

- Boosting immunity (38%)

- Filling nutrient gaps (28%)

- Increasing energy levels (24%)

- Treating specific deficiencies (19%)

- Replacing meals (5%)

These results shed light on a common misunderstanding: that multivitamins can serve as a substitute for proper nutrition, which isn't supported by science. Multivitamins should be seen as a supplement to, not a replacement for, a healthy diet.Sources of Information and Role of Media: We can't overlook how information sources play a huge role in shaping how the public views multivitamins. This study revealed that a notable 43% of respondents turned to healthcare professionals for guidance, which is definitely in line with best practices. On the flip side, 33% sought out information from social media platforms like YouTube, Instagram, and TikTok, while 24% relied on advice from family and friends. This trend raises some red flags about the potential for misinformation.

People who get their supplement information from social media are more likely to misinterpret dosage guidelines and the associated risks. This kind of misinformation can lead to overuse, unnecessary consumption, or even ignoring medical advice altogether. The findings of this study back up these worries, showing that participants who leaned on social media were more inclined to think that multivitamins could substitute for meals or that they were essential for everyone. (vertising also plays a significant role in influencing consumer behavior. The marketing of multivitamins often inflates their benefits, making consumers believe they are crucial for optimal health, even when there's no deficiency present. This advertising impact is especially pronounced among younger audiences, who are constantly bombarded with supplement promotions on digital platforms.

Awareness of Risks and Side Effects: While multivitamins are generally seen as safe, taking too much of certain vitamins and minerals can actually lead to health issues. This study revealed that:

- 52% of respondents were fully aware of the risks associated with vitamin toxicity

- 43% had heard about it but didn't have detailed knowledge

- 5% were completely unaware that taking too much could be harmful

This aligns with research from the Mayo Clinic (2023), which cautions that overdosing it with fat-soluble

vitamins (A, D, E, K) can lead to toxicity and negative health effects[8]. For instance, too much vitamin A can harm the liver and cause neurological problems, while excessive vitamin D might result in hypercalcemia and kidney damage.

When it comes to side effects, 52% of those surveyed said they had never experienced any adverse effects, while 33% reported mild symptoms like nausea or stomach upset, and 14% faced more serious side effects. Previous studies have pointed out that some multivitamins contain high levels of iron, calcium, or synthetic additives, which can lead to gastrointestinal issues or interact with medications. Need for Increased Public Awareness: One of the standout findings from this survey was that a significant majority (90%) of respondents felt there should be more public awareness about multivitamin use, especially concerning:

- The actual benefits versus exaggerated claims

- The potential risks of overuse

- The importance of consulting healthcare professionals

This backs up recommendations from the WHO (2023) and USPSTF (2022), which stress the need for public health campaigns to tackle misinformation and promote evidence-based supplement use. Educational initiatives could include:

- Regulating supplement advertisements to avoid misleading claims

- Social media campaigns that debunk myths about

Multivitamins

Encouraging healthcare professionals to offer clearer guidance on supplement use.

This literature review brings together existing research and fresh survey insights to give us a well-rounded view of how the public perceives and feels about multivitamin use. The findings highlight those misunderstandings still linger, largely fueled by marketing tactics and dependence on non-medical information. There's a clear need for public education and regulatory actions to promote responsible use and avoid any potential misuse.

METHOD

This study uses a quantitative survey-based research design to explore how much the public knows about, thinks about, and uses multivitamins. We created a structured questionnaire to gather information on people's knowledge, usage habits, where they get their information, and any misconceptions they might have about multivitamins. By taking a descriptive cross-sectional approach, we aim to shed light on the current public understanding at a specific moment in time.

For data collection, we designed the survey using Google Forms and shared it through various online platforms, such as social media, email groups, and academic networks, to reach a wide range of participants. The questionnaire featured both multiple-choice and open-ended questions, focusing on these key areas:

1. Demographic Information (Age, Gender)

2. Knowledge of Multivitamins

3. Reasons for Multivitamin Use

4. Perceived Necessity of Multivitamins

5. Sources of Information on Multivitamins

6. Awareness of Risks and Side Effects

7. Experience with Multivitamin Side Effects

8. Perceptions on Public Awareness and Misinformation

The survey was available for responses for one month, encouraging broad participation.

In terms of our sample population, we aimed to include individuals from various age groups and backgrounds to get a well-rounded view of public awareness regarding multivitamins. In total, 126 participants completed the survey. To make the key findings more accessible, we used graphs and frequency tables,

which helped to highlight knowledge gaps and common misconceptions. The goal of this analysis was to explore any correlations between demographic factors and perceptions of multivitamins.

RESULT

Demographic Breakdown:

1) Age Groups:

- Under 18: 6 respondents (5%)
- 18-30: 90 respondents (71%)
- 31-50: 18 respondents (14%)
- Above 50: 12 respondents (10%)

2) Gender Distribution:

- Male: 60 respondents (48%)
- Female: 66 respondents (52%)

These demographics highlight a younger population, making the findings especially relevant to current consumer trends and the influence of digital information.

Data Analysis

The data we gathered was examined using descriptive statistical methods to uncover patterns and trends. We categorized the responses into measurable groups, such as:

Awareness Levels (Clear understanding, somewhat aware, not aware)Sources of Information (Doctors, social media, Family/Friends)Perceived Necessity (Essential for all, only for deficiencies, Not needed with a healthy diet)Risk Awareness (Aware of toxicity, Unaware of risks)

To make the key findings more accessible, we used graphs and frequency tables, which helped to highlight knowledge gaps and common misconceptions. The goal of this analysis was to explore any correlations between demographic factors and perceptions of multivitamins[9-11].

Ethical Considerations

This study adhered to ethical guidelines for survey-based research, ensuring:

1) Voluntary Participation: Participants were made aware that joining the study was entirely voluntary, and no incentives were provided.

2) Anonymity & Confidentiality: We did not collect any personal identifiers, ensuring that participant privacy was upheld.

3) Informed Consent: Before taking the survey, participants were informed about the study's objectives.

4) Data Protection: All responses were securely stored and used exclusively for academic purposes.

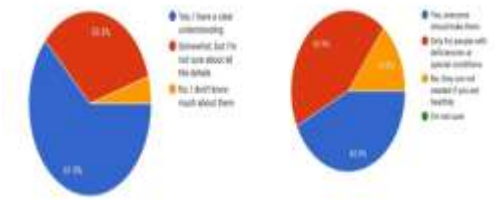
CONCLUSION

This research study delved into how well the public understands, perceives, and behaves regarding multivitamin use, using both survey data and existing literature as a foundation. The results show that while there's a solid level of general awareness, there are also some pretty significant misconceptions about the necessity, benefits, and risks associated with multivitamins.

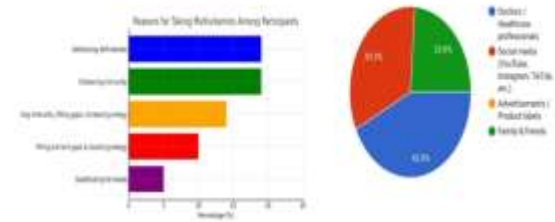
Multivitamins are indeed important for certain groups, like pregnant women, older adults, and those with dietary deficiencies. However, many people take them without consulting a healthcare professional, often swayed by marketing, social media, and other non-medical sources. The World Health Organization (WHO, 2023) and the U.S. Preventive Services Task Force (USPSTF, 2022) both stress that for those who eat a balanced diet, taking multivitamins regularly isn't necessary. Yet, almost half (43%) of the survey participants thought that multivitamins are essential for everyone, which really underscores the influence of misinformation.

Moreover, while 52% of respondents recognized that taking too many vitamins could be harmful, 43% didn't have a clear understanding of the risks of toxicity. This gap in knowledge can lead to overconsumption, negative health effects, and potential interactions with medications. The cautions that taking too many fat-soluble vitamins (A, D, E, K) can build up in the body, resulting in toxicity and even organ damage.

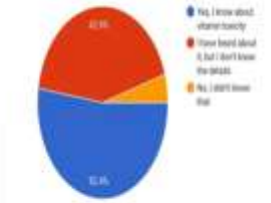
The study also highlighted that social media (33%) and advice from family and friends (24%) are significant sources of information about multivitamins, which raises the risk of receiving misleading or incomplete health advice. Research by Dickinson et al. [12] backs this up, showing that people who turn to non-medical sources for supplement information are more likely to buy into exaggerated health claims.



Awareness of Multivitamins According to Public Survey



Sources of Information on Multivitamins According to Public Survey



Awareness of Risks and Side Effects

REFRENCES

1. DeFilipp, Z., et al., *National Institutes of Health consensus development project on criteria for clinical trials in chronic graft-versus-host disease: III. The 2020 treatment of chronic GVHD report.* Transplantation and cellular therapy, 2021. **27**(9): p. 729-737.
2. Naveed, S., et al., *Appraisal of Techniques, Investigation and Analysis of Vitamin (B7) Biotin.* Open Access Library Journal, 2015. **2**(09): p. 1.
3. Naveed, S. and H. Sadia, *Awareness about glutathione: a miracle antioxidant.* International Journal of Current Pharmaceutical Review and Research, 2015. **6**(1): p. 1-7.
4. Sadia, H., et al., *To prescribe or not to prescribe in the elderly: a qualitative exploration of prescribing dilemmas among Pakistani healthcare providers.* BMJ open, 2025. **15**(4): p. e094545.
5. Naveed, S., H. Dilshad, and F. Qamar, *Manufacturing of new formulation of Pyridoxine HCL by direct compression method.* J Sci Innov Res, 2014. **3**(4): p. 450-453.
6. Ghauri, A.O., F. Qamar, and S. Naveed, *Regimental and Diet-o-therapy during pregnancy and their effects.* International Journal of Natural Medicine and Health Sciences, 2021. **1**(1): p. 20-31.
7. Sadia, H., et al., *Toxicity profiling and antihyperuricemic activity of Goubion: a polyherbal formulation.* Evidence-Based Complementary and Alternative Medicine, 2023. **2023**(1): p. 7088628.
8. Fedorov, Y. and A. Kovpak, *Vitamin D toxicity and clinical consequences of hypervitaminosis.* SSP Modern Pharmacy and Medicine, 2025. **5**(2): p. 1-8.
9. Mehboob, S., J. Iftikhar, and Z.S. Saify, *Zoo Botanica.* 2025.
10. Naveed, D., H. Sadia, and U.N. Siddiqui, *FROM CRAVINGS TO CARCINOGENESIS: A REVIEW OF SUGAR'S DUAL ROLE IN ADDICTION AND CANCER.* Pakistan Journal of Medical & Cardiological Review, 2026. **5**(2): p. 1086-1100.
11. Naveed, D. and U.N. Siddiqui, *Hyaluronic Acid: Nature's Versatile Biopolymer for Health, Healing, and Beauty.* International Journal of Trends in Health Sciences, 2025. **3**(1).
12. Hathcock, J.N., et al., *Vitamins E and C are safe across a broad range of intakes1, 2.* The American journal of clinical nutrition, 2005. **81**(4): p. 736-745.