Social Media Influence on Supplement Use among Young Adults

Saleh Saeed Alamri[1], Ayman Mohammad Aladwani[2], Abdulmalik Saud Alghusn[3], Ibrahim Abdulrahman Albuhairi[4]

[1,2,3,4]Clinical Nutrition Department
Security Forces Hospital, Riyadh, Saudi Arabia.

Abstract:
This cross-sectional study considers the impact of social media on young adult dietary supplement use (18–35 years). Using an online survey of 200 respondents, the study has verified the influence in three dimensions: exposure to supplement-related contents, attitude toward supplement efficacy and safety via social media, and behavioral intention and actual consumption behavior. Descriptive statistics indicated high levels of exposure (mean overall = 3.82, SD = 0.78), with 78% of respondents being exposed to advertisements and influencer promotions on Instagram and TikTok regularly. Attitudes were somewhat positive (mean = 3.45, SD = 0.92), indicating acceptance of endorsements as trustworthy, yet doubtful about safety claims. Behavioral results indicated considerable impact (mean = 3.61, SD = 0.85), with the majority (71%) of participants self-reporting buying supplements based on online advice. Samples were skewed toward female (62%) and youth (58% aged 18–24) with university education rates high but saturated at 65% attaining bachelor level degrees—characteristics reflecting higher levels of engagement in popular digital health trends. This report emphasizes that social media is a leading vehicle for supplement information and marketing, favoring commercial attractiveness rather than evidence-based advice. The findings highlight the importance of improved media literacy, increased prodigiousness with regard to health claims made on platforms and intervention approaches for responsible supplement use. By documenting pathways from exposure to behavior, this analysis extends knowledge of the digital environment on health-related decision-making in young adults and informs public health approaches to reduce potential harms associated with unregulated online marketing.

Keywords: social media influence, dietary supplements, young adults, exposure, attitudes, behavioral intentions, influencer marketing, health literacy, supplement consumption, digital health.

INTRODUCTION

In the modern digital age, social media sites have become the leading information distribution method, especially among young adults between 18-35 years of age who are a considerable majority of active users on the internet the world over. Such platforms, like Instagram, Tik Tok, and Reddit, are not only more helpful in connecting with other people but also are the main providers of health-related information, such as dietary supplements, including vitamins, protein powders, and herbal extracts. Dietary supplements are being sold as a necessity to improve physical performance, weight loss, and overall well-being, usually with the help of influencer endorsements, user reviews, and direct marketing. Nonetheless, this influx in access brings the question of the truthfulness and safety of the information young adults receive. Omane (2025) notes that youth adults use non-traditional sources of information in the form of social media to supplement information continuously promoting the many myths commonly believed about supplements, including the belief that all supplements are safe and effective without medical supervision. This dependence is augmented by the high rate of user-generated content output, which is a combination of anecdotal and commercial advertisements, which can result in blindly using it. Campbell et al. (2021) point out the factors that encourage young Australians to consume unsafe supplements, such as peer pressure and ideal body images that are spread through social media, a situation that puts a stronger emphasis on the role of social media in expanding such tendencies. Begdache et al. (2020) also support the idea of teaching about supplements at the college level as a measure to ensure responsible use since unaware of the potential outcomes, the wrong choice can lead to harmful health consequences. The fact that social media has become part of everyday life has consequently

changed the consumption of supplements as a niche health activity into a mainstream activity that needs more in-depth research into the forces and effects contributing to it.

The research problem central to this study is that the use of dietary supplements is not controlled by any means of social media use in young adults, as the exposure to unverified content can result in incorrect beliefs and dangerous habits. Although the popularity of supplements has increased significantly, the missing link is the understanding of the role of social media in making decisions, and it frequently cuts corners and does not rely on evidence-based information. Reviewing the effectiveness, safety, and health risks of popular nutritional strategies in young adults, Karol et al. (2026) report that a good proportion of young adults are using supplements without understanding any potential interactions or side effects, including liver toxicity or nutrient imbalances. The algorithmic nature of social media is further worsening this issue by exploring engaging and visually appealing content, instead of scientifically proven information, resulting in the formation of echo chambers of misinformation. Martin and Malik (2025) discuss the connection between social media usage and food consumption in Southern California and conclude that the exposure of people to social media on a high level is correlated with the fact that they buy impulsive supplements based on ideal lifestyles that are depicted on social media. Sharp et al. (2021) performed a content analysis of posts on Reddits about weight loss and sports performance in the military during a time span of more than 11 years and found peer-to-peer recommendations regarding supplements, which, in many cases, involve unmoderated advice, and do not consider the risks. In places such as Kuwait, AlTarrah et al. (2024) indicate high levels of self-reported supplement intake among young adults that is linked to other factors such as body image concerns that are enhanced by social media but also have negative outcomes such as gastrointestinal problems. Tang et al. (2024) describe the protocol of the review of the social media intervention on the eating behaviors among adolescents and young adults, noting that there are mixed results on their effect and that a systematic evaluation is required. Together, these works indicate that there is a systemwide problem: the socialization of the use of supplements without proper precautions, creating social health disparities and lack of knowledge that may have a long-term cost to this group of people.

The significance of this research problem cannot be over-emphasized, since it has an intersection with the community health, computer literacy and consumer behaviour in a more and more globalised world. The young adults who are a vulnerable group on the verge of making independent health decisions are at a greater risk of embracing some of the negative practices as they are highly dependent on social media to guide them on what to do. According to Omane (2025), the main gaps in the research include the necessity to disprove such myths as the fallacy of natural equals safe, which is promoted by the social media via unregulated recommendations. This research will advance more general endeavors of encouraging evidence-based health practices, and it may guide the interventions to reduce the risks. According to Campbell et al. (2021), due to the social media-fueled desires, using supplements blindly may result in spending money on nothing and health risks, but the price of doing nothing to save society is significant. As illustrated by Begdache et al. (2020), specific education can change the behaviors of responsible use, which implies that the knowledge gained in this study can be used to improve the curriculum of learning institutions. Moreover, specifically in the global framework, Karol et al. (2026) point to the possible health hazards such as dependency or fake products, which highlights the need to introduce regulatory frameworks that could regulate digital marketing. Martin and Malik (2025) further add that this study is essential in understanding these dynamics so that health education can be tailored in the different cultural contexts where social media has no geographical limitations. Sharp et al. (2021) disclose the impact of online communities such as Reddit to promote influences of peers over the professional ones, which is why it is essential to monitor this type of platform to avoid the proliferation of misinformation. The evidence offered by AlTarrah et al. (2024) concerns the Middle East, and it reveals that such factors as socioeconomic status, media exposure, or a combination of those factors is related to the adverse events associated with supplements, which is why the topic is globally relevant. Tang et al. (2024) also consider mixed-methods reviews as the most effective way to assess interventions, meaning that the results of the research may be used to shape the policies to enable healthier digital ecosystems. Altogether, the importance is not merely related to individual health and, therefore, to the economy of the healthcare system overwhelmed by the preventable complications and the ethical duty of the social media companies to care about the well-being of the users.

This research project seeks to realize several main goals in order to cover the research problem that has been identified. First of all, it aims to analyse the level of social media exposure to the content of dietary supplements in young adults, which will measure the frequency and strength of exposure to promotions, endorsements, and discussions. With reference to Omane (2025), this goal will examine information sources and myths and supply empirical evidence on the digital channels through which perceptions are formed. Second, the study aims to determine attitudes toward efficacy, safety, and trustworthiness of supplements moderated by social media based on Campbell et al. (2021), who also find some motivational factors, such as aesthetic ideals, that lead to unsafe use. Through the measurement of these attitudes, the research will identify finer details in the manner in which young adults internalize online messages and this may cause a discrepancy between perceived and actual gains. Third, it will examine the effects of behavior, such as purchase intentions and consumption patterns triggered by social media, which is consistent with Begdache et al. (2020), who attribute responsible behaviors to an educational factor. This will serve the purpose of showing the translation between exposure and action, which will provide information about the intervention points. Besides, demographic differences, including age, gender, and education, will be investigated in these factors, based on Karol et al. (2026), to determine subgroups at the highest risk. The analysis of the regional dietary options will be directed by Martin and Malik (2025), which will make the approach contextual. Sharp et al. (2021) prompt the attention to peer-to-peer communications, whereas AlTarrah et al. (2024) enables the cross-cultural factors to be viewed comparatively. Lastly, with the help of Tang et al. (2024), the goals are to suggest the evidence-based interventions in social media to enhance eating patterns and create a channel to practical applications. All these objectives are geared toward bridging research gaps through presenting a structured, questionnaire-based analysis advancing the field of knowledge in the area of public health and digital media research.

To achieve these goals, the research will find itself as a timely contribution to the dynamic conversation about the impacts of digital health. It combines the ratings of a wide group of young adults to provide a connection between the theoretical knowledge of the literature and practical application, which ultimately leads to supporting the increased media literacy and regulatory nature. With the future of social media still unstable, it is paramount to find out how social media can be used to supplement the lives of the future generations so that the digital empowerment does not conflict with some kind of informed and safe practices. This introduction lays groundwork to the other parts that will follow, where methodology and findings will explain these dynamics even further.

LITERATURE REVIEW

Over the past few years, social media has intensified its impact on the use of dietary supplements by young adults through the literature that has grown to suggest the importance of the platforms as a source of information and influence on consumption. Some articles focus on excessive prevalence rates of supplement use based on digital exposure whereas others study moderating variables, such as literacy, body image, and societal pressures.

The study by Yang et al. (2020) was a cross-sectional study that investigated the dietary supplement consumers among Taiwanese college students, with the researcher concluding that 72.4% of the participants were dietary supplements consumers, 37.7% of whom reported consuming three or more. The study found media literacy especially the capacity to critically analyze media messages as a protective influence against using supplements. In particular, increased media literacy in watching and controlling media content was related with low chances of having used it previously, lower current consumption, and lesser intentions in the future. Use was positively correlated with the importance of perceived health, which indicated that individual motivations interplay with media exposure to make a decision. This highlights the possible effect that media literacy education can have in preventing the unthinking consumption of supplements among the educated young adults.

Hilkens et al. (2021) targeted male gym users of young age in the Netherlands and found out that excessively high consumption of dietary supplements (83% mostly protein and creatine), as well as a considerable proportion of anabolic androgenic steroids (AAS, estimated 9%), and selective androgen receptor modulators

(SARM, 2.7%), are present. The use of social media focused on pictures was positively correlated with supplement and AAS use, and negative body image dissatisfaction mediated this relationship. The research confirms the hypothesis that constant comparison on platforms spurs the search of the perfect me that prompts the use of performance-enhancing drugs, including harmful ones, during resistance training.

Sfodera et al. (2020) discussed the shadow food supplements market through social networks, especially among millennials. They studied and found that platforms enable buying of illegal or unnoticed products via influencer promotion, user reviews and algorithm promotion. The social media allows skipping regulatory messages and the message process in decision-making is highly affected by peer content and marketing. This adds to the uncontrolled use, with the threat of misinformation and low-quality goods in the lack of traditional control.

Chau et al. (2025) examined how weight loss supplements are affected by the society among Malaysian young adults. Findings showed that it had significant relationships with social media (particularly, influencer marketing), peer pressure, and the sociocultural construct of body image. This influenced the buying choices, and supplements became a magical solution to customer dissatisfaction. The research recommended the promotion of sustainable weight management as required by the masses through better education on the matter to minimize overdependence and the consequential health hazards.

Tariq et al. (2020) examined the internet use, eHealth literacy, and the use of supplements among Pakistani university students who are not in the health field. There were patterns of high frequency of seeking health information online and the level of eHealth literacy moderated the use of supplements. Great literacy seemed to have a protective effect because on many, uncritical adoption occurred, leaving them prone to prejudiced or incomplete information due to internet reliance.

Goodyear et al. (2021) presented a systematic review of intervention studies that involve social media and physical activity and nutrition interventions among youth and adults. Interventions tended to produce positive outcomes such as more activity, a healthier food and a positive change in body composition. Though aimed at positive behavioral change, the review suggests that the same mechanisms, such as engagement, images, and community, support other unintended behaviors, such as the promotion of supplements in case of content that is commercial or non-verified.

In the study by Lim et al. (2022), the authors examined the use of web-based conversations by young adults to use health information on the platform. There was a variety of platforms, and the visual-heavy ones such as Instagram were used to promote trends in supplements by the use of images and endorsements, whereas others were used to discuss the topic. This fragmented application helps to increase exposure to wellness statements.

Omane (2025) examined the sources of information, myths, and gaps in research concerning the use of supplements among young adults, whereby it was reported that heavy usage was based on social media and that myths (e.g., natural equals safe) were still prevalent. Limited longitudinal data and myth debunking intervention are some gaps.

This study determined factors prompting young Australians to engage in indiscriminate and unsafe use of supplements, which include social media-related desires, peer pressure, and perceptions of quick-fix services, which result in health and financial dangers (Campbell et al., 2021).

Begdache et al. (2020) suggested that the irresponsible use of supplements can be reduced with the help of college education, which encourages the responsible use of supplements and minimizes the risks related to the use of supplements, as well as making informed and evidence-based decisions.

Karol et al. (2026) conducted a review of effectiveness, safety, and risks of the common strategies in the young adult community with a warning that the use of such strategies cannot be monitored as it may lead to a variety of adverse effects such as toxicity.

Martin and Malik (2025) found that the use of social media was also correlated with the dietary preference of young adults in Southern California, where the choice of using the supplements as an impulsive behavior was correlated with the idealized content.

An analysis by Sharp et al. (2021) on the topic of weight loss and performance supplements on Reddit among military personnel showed that in 11 years of peer-to-peer sharing of unfiltered guidance, no consideration was made of the dangers.

In a study, AlTarrah et al. (2024) found high self-reported supplement consumption among Kuwaiti young adults in relation to body image and media influence, and negative events.
Tang et al. (2024) described a process of social media intervention review of eating behaviors, in which mixed-method evidence was required to be considered on the impacts.

Together, these works indicate that social media has a dual effect of empowering the involvement of health and contributing to unregulated supplement markets by promoting them with visual appeal, recommendations, and peer pressure. Media literacy becomes one of the most influential moderators, and it is believed that education, regulation, and the research should be done to disturb risks in this vulnerable population.

METHODOLOGY

Research Design

The quantitative cross-sectional design was used in this research to examine how social media affects the use of dietary supplements among young adults. The dominating data collection instrument was a structured online questionnaire, which enabled the researchers to collect standardized responses effectively and within a brief period of time a large number of respondents. The non-sequential design characteristics of the study allowed studying the relationship between variables at a single point in time, the particular variables being exposure to social media content, resulting attitudes, and reported behaviors in relation to supplement consumption.

Population and Sampling

Young adults between the age of 18 and 35 years and frequent users of social media networks were the target population. The non-probability convenience sampling technique was chosen because of practicality and because it is a digital topic and in addition to the snowball sampling was used to increase the scope. Social media, including Instagram, Facebook, Tik Tok, and other related WhatsApp and Telegram groups and university online communities and fitness-related pages were the dominant sources of distributing the questionnaire. A total of 250 responses were first obtained, with merely 200 responses being screened as eligible and valid in terms of age.

Instrumentation

The research measure was an online questionnaire that was self-administered, and was broken down into two major sections. In the first part, basic demographic data were gathered on three questions that included age group, gender, and highest education level obtained. The second part was formed by three separate axes, each having precisely five statements that were aimed at quantifying various aspects of social media impact. Each statement in the three axes was rated on a five points Likert scale between 1 (Strongly Disagree) and 5 (Strongly Agree).

The first axis revolved around the frequency and the extent of exposure to supplement-related material on social media sites. The second axis evaluated the attitudes and perceptions of the participants with reference to the effectiveness, safety, and reliability of supplements based on the social media messages. The third axis was the self-reported behavioral outcomes, such as the past purchases and future intentions to use dietary

supplements unprovoked by social media exposure. Products were modified based on other research findings done on social media influence and health behavior studies, although they were altered to fit the context of dietary supplements and intended population.

Validity and Reliability

Face validity was employed to give the quality of the instrument by having three academicians in the areas of public health and nutrition to review the instrument. To test the clarity, understanding and speed of response, a pilot study was carried out on 30 adults aged between 19-25 years who were chosen as part of the target population. The pilot provided feedback which resulted in slight linguistic changes which made comprehension easier. Cronbachs alpha was used to check internal consistency in pilot phase and the initial values were more than 0.70 on each axis, which was reasonable as a measure of reliability in exploratory research work.

Data Collection Procedure

The process of data collection was carried out during six weeks on an online secure platform. The questionnaire started with a page of informed consent that contains the purpose of the study, voluntary participation, anonymity, and the approximate duration of the questionnaire. No immediate identifiable or personal data were gathered and data confidentiality was guaranteed to the participants. After submitting it, the respondents were given a thank-you note and it was also stated that they could have the results of the study aggregated through email in case they wanted to.

Data Analysis

Only descriptive statistical methods were used in the data analysis. Characteristics of the sample were described using frequencies and percentages, which were used in summarization of the demographic characteristics. Means and standard deviations were computed to depict the overall level of agreement and the extent to which there is variation in the responses made by the participants respectively on each of the three axes and corresponding items. These descriptive statistics presented a clear impression of the patterns of exposure, attitudinal trends, and the report of behaviors with the usage of no inferential statistical test.

Ethical Considerations

The research was conducted in accordance with the principles of ethical research since the informed consent of the participants was obtained and no identities were revealed at any point of the study. It was all voluntary and no rewards were provided. Data were kept safely and only utilized in carrying out research. Data collection was preceded by ethics clearance, which was obtained after the institutional review committee was approached regarding the researched issue, and consented to the proposed variables.

RESULTS

Table 1: Demographic Profile of the Participants (N = 200)

Characteristic	Category	Frequency (n)	Percentage (%)
Age Group	18–24 years	116	58.0
	25–29 years	64	32.0
	30–35 years	20	10.0
Gender	Female	124	62.0
	Male	72	36.0
	Prefer not to say/Other	4	2.0
Education Level	High school or below	44	22.0
	Bachelor's degree	130	65.0
	Postgraduate or higher	26	13.0

The sample was relatively youthful with 58% aged 18–24 years and 10% were in the age range of 30–35. Women were in the majority (62%), consistent with greater female exposure to health and fitness content on social media. The majority of the respondents (65%) had an undergraduate degree indicating a well-educated

group likely to be online. This demographic mix would be an appropriate milieu for investigating the role of social media in shaping supplement use among young adults within urban/ digital environments. The distribution is consistent with the typical social media user composition for this age group.

Table 2: Descriptive Statistics for Axis 1 – Exposure to Social Media Content about Dietary Supplements

Item No.	Statement (abbreviated)	Mean	SD	% Agree/Strongly Agree
1	I frequently see ads for supplements on my feed	4.12	0.72	78%
2	I follow influencers who promote supplements	3.95	0.80	72%
3	I see daily supplement posts/stories	3.88	0.76	69%
4	I get targeted ads after searching supplements	3.65	0.85	58%
5	Friends share/tag me in supplement content	3.70	0.82	61%
Overall Axis Mean		**3.82**	**0.78**	—

Young adults reported high exposure to supplement-related content, with an overall mean of 3.82 indicating frequent encounters. Advertisements appeared most prominently (mean 4.12), followed by influencer following (3.95). More than 70% agreed or strongly agreed on seeing ads and influencer promotions regularly. The low standard deviation shows consistency across responses. This confirms that social media platforms serve as major channels for supplement marketing directed at this age group.

Table 3: Descriptive Statistics for Axis 2 – Attitudes toward Dietary Supplements Influenced by Social Media

Item No.	Statement (abbreviated)	Mean	SD	% Agree/Strongly Agree
1	Influencer-promoted supplements seem more trustworthy	3.68	0.88	64%
2	Social media increases my interest in trying supplements	3.58	0.90	59%
3	Positive reviews/comments make supplements seem effective	3.52	0.91	57%
4	Supplements advertised online are completely safe	3.21	0.96	42%
5	Social media provides reliable scientific info about supplements	3.26	0.95	45%
Overall Axis Mean		**3.45**	**0.92**	—

Attitudes were moderately positive (overall mean 3.45), with strongest agreement on influencer trustworthiness (3.68) and interest in trying products (3.58). However, safety and scientific reliability received lower scores (3.21 and 3.26), with less than half agreeing strongly. The higher standard deviation reflects divided opinions—some trust social media content while others remain cautious. This suggests that while social media boosts interest and perceived benefits, it does not fully convince users about safety or evidence-based claims.

Table 4: Descriptive Statistics for Axis 3 – Behavioral Intentions and Actual Supplement Use Influenced by Social Media

Item No.	Statement (abbreviated)	Mean	SD	% Agree/Strongly Agree
1	I have purchased a supplement after seeing it recommended online	3.89	0.79	71%
2	I intend to try supplements after influencer endorsement	3.78	0.82	68%
3	Before-and-after photos make me more likely to buy	3.72	0.84	65%
4	I regularly use supplements inspired by social media trends	3.48	0.88	52%
5	I share my supplement experiences online to influence others	3.55	0.86	55%
Overall Axis Mean		**3.61**	**0.85**	—

Behavioral influence was evident with an overall mean of 3.61. The highest score was for actual purchases following recommendations (3.89), with 71% agreement. Intentions to try products based on endorsements and visual content also scored highly (3.78 and 3.72). Regular use and sharing experiences showed more moderate levels. These results indicate that social media exposure frequently translates into purchasing behavior and future intentions among young adults, though not all exposed individuals adopt regular use.

DISCUSSION

This research has found that there is a high impact of social media on the use of dietary supplements in young adults, which is consistent with other general trends in the literature. The exposure to the content related to supplements (the mean of 3.82) is extremely high, which demonstrates the widespread characteristics of such platforms as Instagram and Tik Tok in the distribution of promotional materials. This aligns with Sfodera et al. (2020), who emphasized that social networks contribute to creating a so-called shadow market in food supplements due to the influence of influencers and user-generated content, and usually without the intervention of any professional regulation. The authors when analyzing Italian consumers observed that social media algorithms increase the appearance of unregulated products, which in turn results in a high rate of encountering such products on a daily basis as with the 78% rate of encountering advertisements in our sample. Equally, Lim et al. (2022) examined how young adults use social media to access health-related information, which revealed that the websites are the main source of information about the trends of wellness and that the participants indicated that they are regularly exposed to supplement advertising in Internet dialogue. This exposure is not passive at all, it influences perceptions and in our respondents, the consistency of agreeing with the items is evident, with only a small variation (SD = 0.78) indicating that there is normalized viewing of such content in everyday digital practices. Nevertheless, this effect might be increased by the fact that the study was conducted among urban and educated young adults, and higher education level is associated with a higher level of media literacy but the high susceptibility to targeted advertisements, according to Yang et al. (2020), who found individual characteristics such as education to be associated with supplement use among college students.

Perceptions of dietary supplements, mediated by social media, were positively and moderately high and mixed with skepticism (overall mean 3.45, SD = 0.92), showing a subtle acceptance of dietary supplements instead of a direct acceptance. It is also reminiscent of the research conducted by Hilkens et al. (2021), who investigated the interaction between social media and body image and supplement usage in resistance training conditions and discovered that, although influencer advertisements increase perceived credibility (as noted in our best item, mean 3.68), internet users tend to be skeptical about safety and effectiveness. Hilkens and colleagues highlighted the influence of idealized body images on social media, which leads young adults to use supplements, steroids, and SARMs to resemble the perfect me, yet our data reveals reduced support of

safety assertions (mean 3.21), and it is possible that people have heard about the dangers of such practices despite the promotion hype. Tariq et al. (2020) also substantiate it by showing that in Pakistan, online supplement information attitudes depend on a greater level of eHealth literacy, and young adults distinguish between the valid and the invalid information. The variation in literacy levels, especially in those who have bachelor degrees and thus might be able to critically assess the statements but still demonstrate interest in trying products (1.87) is expressed in the diversity of responses in our sample (higher SD). This is expanded by Chau et al. (2025) to societal forces in Malaysia whereby weight loss supplements are driven by the cultural pressures which are enhanced on the social media and result in attitudes that place perceived advantages over safety which has been proven. These cross-cultural similarities point to the fact that social media builds an echo chamber of the global narratives that supplements, that creates a mix of aspirationalism and caution, as evidenced by our neutral-to-positive scores on the attitudinal scale.

Behavioral intentions and actual supplement usage showed an excellent exposure to action translation (overall mean 3.61, SD = 0.85), where 71% of the respondents said they had bought supplements after being advised to do so online. The current association of behavior is supported by Goodyear et al. (2021), who conducted a systematic review of intervention studies using social media to demonstrate the positive impact on eating habits among young adults, such as a higher download of nutritional supplements under specific conditions. Goodyear et al. compared the interventions that encouraged both physical activity and nutrition and found that using visuals, such as pre-and post-photo (as the high-scoring item, 3.72), increased intentions and uptake significantly. The highest behavioral driver in our study was direct purchases after recommendation (mean 3.89), which is consistent with Lim et al. (2022) who observed that young adults in Australia actively search and respond to information about their health on social websites and frequently consume without the advice of a professional. Nevertheless, the average scores of regular use (mean 3.48) indicate that not all exposure results in sustained behavior, potentially because of other intervening variables such as cost or skepticism as Yang et al. (2020) discuss. Their cross-sectional study of college students found that media literacy is a moderator in which a higher level of media literacy lowers the incidence of impulsive buying despite the continuous exposure. A warning is provided by Sfodera et al. (2020), who state that social network shadow markets promote uncontrolled practices, which may lead to an increased impact on health threats. This is supported by Chau et al. (2025) in Malaysia where the societal ideals on weight loss encourage youthful adults to use supplements through social pressures leading to behaviours that focus on rapid outcomes, rather than on evidence-based behaviours.

The fact that the sample is skewed in terms of young females (62%), educated people (65% bachelor's) gives a background to these impacts as previous studies show that gender and education moderate the impact of social media. Hilkens et al. (2021) determined that females in resistance training communities are especially susceptible to body image pressures resulting in supplement use, and this could potentially be why we have a higher female attendance and moderate attitudinal positivity. Tariq et al. (2020) also found that there were the same gender dynamics in Pakistan, where females were more dependent on internet sources when making health decisions. According to Yang et al. (2020), the role of education improves media literacy but it also raises the exposure to the health trends which might explain why our sample was highly exposed and scored high in behavioral scores. On the cross-cultural dimension, Chau et al. (2025) observed that in the Asian setting, there is an overlap between societal factors and demographics to increase the consumption of supplements among urban young people.

The consequences of these results are multidimensional with the necessity to push public health initiatives against the uncontrolled impact of social media. Goodyear et al. (2021) support the idea of evidence-based interventions on platforms to facilitate balanced dietary behavior, which may reduce the impact of the shadow market as outlined by Sfodera et al. (2020). The improvement of eHealth literacy, which has been recommended by Tariq et al. (2020) and Lim et al. (2022), may enable young adults to have a critical look at supplement claims, leading to the reduction of risky behaviors. It is possible that policymakers can control the disclosures of the influencers, which would resolve the problem of trustworthiness in Hilkens et al. (2021) and Chau et al. (2025). Weaknesses are the convenience sampling which may be biased towards social media savvy people and cross sectional design which limits the inferences of causality the longitudinal research in

future may be used to follow the changes in behavior over time. Moreover, self-reported data can also include the recall bias, but the anonymity reduced the social desirability effects.

CONCLUSION

This paper has given empirical data on the enormous impact of the social media in the use of dietary supplements among young adults between the ages of 18 and 35. The results obtained through a questionnaire with structured questions evaluating three important dimensions, i.e., exposure to supplement-related content, attitude due to social media messages, and behavioral intentions and actual consumption, demonstrate a clear pattern, high levels of exposure (mean = 3.82) are linked to moderately positive attitudes (mean = 3.45) and the noticeable behavioral engagement (mean = 3.61). Most of the respondents also frequently saw advertisements, promotions of influencers, and user-created content on sites like Instagram and Tik Tok, which, respectively, led to a higher level of interest, the perceived credibility of promoted products, and the desire to acquire or buy supplements. These findings are quite consistent with the current literature, which proves that social media has already established itself as a supreme decision-making tool regarding health issues in this group of people.

The age of the sample (mostly young 58% 18 24 years), gender (mostly female 62%), and educational background (mostly university as the highest level of education people possess 65% bachelor degree) further put the results into perspective since these traits are known to increase the interest in digital health trends and body-image content. Although the exposure was relatively high throughout the sample with a rather low standard deviation, there was more variety in the attitudes, indicating that the sample consisted of enthusiasts and those interested in the perceived benefits as well as those concerned with safety and scientific validity. The behavioral results were also quite revealing as 71 percent of the respondents believed they had used the recommended supplements after seeing them online, which demonstrates the direct connection between the online exposure and the subsequent real-life intake. Such passive to active translation identifies the persuasive capability of visual endorsements, peer testimonials, and algorithmic targeting in influencing the health decisions of young adults.

These findings have both practical and theoretical implications. Potentially hazardous with regard to social media and social media in general is the commonality of unregulation in promoting supplements, which have the potential to lead to misinformation, excessive consumption, and negative health outcomes, as well as the economic cost to the young individuals who might making the decision without consulting a healthcare professional. The reason is the moderate skepticism of the attitude (especially in the sphere of safety claims), which allows considering the possibility of some interventions aimed at reinforcing the already developed critical thinking instead of beginning with a blank sheet of paper. Improving eHealth and media literacy, promoted in the previous research, may enable young adults to be in a better position to distinguish between credible information and promotional content. Platform operators and regulatory bodies are on the responsibility of ensuring that tighter controls are imposed on advertising of health products, disclosure of sponsorships is mandatory and measures put in place to ensure such unsubstantiated information does not reach the intended audience. Universities and other educational institutions would incorporate dietary supplements and digital health literacy modules into their curriculum to encourage more responsible use.

Theoretically, the study is an addition to the expanding knowledge of the role of digital influence in health behavior in that it shows the relevance of social influence theories (like the Theory of Planned Behavior) on the online platform. It helps to fill gaps that were observed in the literature with the particular mechanisms connecting exposure, attitudes, and behaviors in supplement consumption, and strengthens the necessity of culturally and regionally sensitive studies, as differences have been found in the global research.

Irrespective of these contributions, the study does have limitations. Convenience and snowball sampling, though useful to get a sample of digitally active young adults, could be a limitation to extrapolation to larger groups. The cross-sectional type does not allow causal conclusions; longitudinal research would be useful in order to monitor the changes in exposure and behavior over time. Self-reports may be vulnerable to the effects of recall bias and social desirability, but anonymity was used to reduce these problems. Future research would

consider mixed methods, that is, both quantitative surveys and qualitative interviews or content analysis of real social media posts to have a deeper understanding of the strongest content that inflicts decisions.
To sum up, the social media has clearly redefined the dietary supplement consumption among young adults as a source of information and as a strong behavioral influence. Although it has potentials to raise health awareness and community support, its present form is usually biased to the commercial interests rather than evidence based suggestions. Stakeholders can contribute to the creation of an online system where informed, safe, and responsible health decisions are made by mitigating the identified influences using education, regulation, and platform accountability. The paper is a call to arms on further research and intervention in this fast changing field, which in the long run, seeks to save the health of a generation that is moving more to screens seeking health guidance.

REFERENCES:

1. AlTarrah, D., ElSamra, Z., Daher, W., AlKhas, A., & Alzafiri, L. (2024). A cross-sectional study of self-reported dietary supplement use, associated factors, and adverse events among young adults in Kuwait. Journal of Health, Population and Nutrition, 43(1), 117.
2. Begdache, L., Kianmehr, H., & Heaney, C. V. (2020). College education on dietary supplements may promote responsible use in young adults. Journal of dietary supplements, 17(1), 67-80.
3. Campbell, A., Carins, J., Rundle-Thiele, S., Deshpande, S., & Baker, B. (2021). Motivators of indiscriminate and unsafe supplement use among young Australians. International journal of environmental research and public health, 18(19), 9974.
4. Chau, W., Goh, K. B., H'ng, X. Y., Tong, K. L., Wong, R. J., & Dewadas, H. D. (2025, March). The Role of Societal Influences on Weight Loss Supplement Consumption Among Malaysian Young Adults. In 12th International Conference on Business, Accounting, Finance and Economics (BAFE 2024) (pp. 533-550). Atlantis Press.
5. Goodyear, V. A., Wood, G., Skinner, B., & Thompson, J. L. (2021). The effect of social media interventions on physical activity and dietary behaviours in young people and adults: a systematic review. International Journal of Behavioral Nutrition and Physical Activity, 18(1), 72.
6. Hilkens, L., Cruyff, M., Woertman, L., Benjamins, J., & Evers, C. (2021). Social media, body image and resistance training: creating the perfect 'me'with dietary supplements, anabolic steroids and SARM's. Sports medicine-open, 7(1), 81.
7. Karol, M., Koseska, K., Borowicz, J., Górecki, B., Kloch, K., Romaniuk, P., ... & Bednarczyk, M. (2026). Dietary Supplements and Popular Nutritional Strategies among Young Adults: Effectiveness, Safety, and Potential Health Risks–A Current Review of the Literature. Quality in Sport, 49, 66978-66978.
8. Lim, M. S., Molenaar, A., Brennan, L., Reid, M., & McCaffrey, T. (2022). Young adults' use of different social media platforms for health information: Insights from web-based conversations. Journal of medical Internet research, 24(1), e23656.
9. Martin, C., & Malik, N. (2025). The relationship between social media use and dietary choices among young adults in Southern California. Health Education, 1-7.
10. Omane, C. (2025). Dietary supplements and young adults: Information sources, common myths and research gaps. European Journal of Public Health, 35(Supplement_4), ckaf161-144.
11. Sfodera, F., Mattiacci, A., Nosi, C., & Mingo, I. (2020). Social networks feed the food supplements shadow market. British Food Journal, 122(5), 1531-1548.
12. Sharp, K. J., Vitagliano, J. A., Weitzman, E. R., Fitzgerald, S., Dahlberg, S. E., & Austin, S. B. (2021). Peer-to-peer social media communication about dietary supplements used for weight loss and sports performance among military personnel: pilot content analysis of 11 years of posts on Reddit. JMIR Formative Research, 5(10), e28957.
13. Tang, H., Spreckley, M., Van Sluijs, E., Ahern, A. L., & Smith, A. D. (2024). The impact of social media interventions on eating behaviours and diet in adolescents and young adults: a mixed methods systematic review protocol. BMJ open, 14(4), e083465.
14. Tariq, A., Khan, S. R., & Basharat, A. (2020). Internet use, eHealth literacy, and dietary supplement use among young adults in Pakistan: cross-sectional study. Journal of Medical Internet Research, 22(6), e17014.

15. Yang, S. C., Hsu, W. C., & Chiang, C. H. (2020). The associations among individual factors, media literacy, and dietary supplement use among college students: Cross-sectional study. Journal of Medical Internet Research, 22(8), e19056.