Social Communication Influencing Behavior Modulations for the Management of Lifestyle Diseases – A Cross-sectional Study amongst the College Goers

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Abstract:

Youth is a critical phase that epitomizes cognitive, physiological, and psychological growth leading to an individual's and community's well-being. Unfortunately, various lifestyle or non-communicable diseases(NCDs) have percolated, resulting in significant adverse effects; on the present health outcomes, which are transited into adulthood. Recent social communication tools provide a colossal prospect for educating audiences of diverse social strata to adopt lifestyle modifications for better health. This study sought to evaluate the social communication modes influencing health-behaviour modulations for managing NCDs amongst Durgapur, West Bengal, India college students. The study included youth; a primary survey was conducted amongst 87 undergraduate and postgraduate students from May to June 2022. The results revealed that 14% were overweight and obese. They spend significant time on social media, using channels like television, radio, and social networking sites, exposing them to multiple health promotion campaigns. 78% were intrigued and influenced by these initiatives. 70% of them pursue the recommended propaganda demonstrated, which guides modulated living to prevent NCDs. Almost all students opting for change experienced a positive result. However, only half of the population had continued the reform lifestyle. There is no ambiguity about social communication's importance in achieving better health for our youth. The standards policies integrated with the action can create a paradigm shift. It is suggested to have automated sourced content, recommended audio-visuals, peer-reviewed, acknowledged, and from the reputed antecedent. The various cost-competent interventions, preventive tools, and social media propagation promote delayed onset, reducing mortality and morbidity in young adults.

Keywords:

Chronic disease, Social networking, Social media, Communication, Non-communicable diseases, Health information systems, Primary prevention.

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Introduction

The youth epitomize the development potential and well-being of any community. A healthy population implies productivity, aggrandizement, independence, and good quality of life. Unfortunately, various lifestyle diseases, which are also known as "Non-communicable Diseases,"; have percolated in this age group resulting in a significant adverse effect; on the present health outcomes of an individual and also transited in adulthood (Pan American Health Organization (PAHO), 2017). The disease is non-transmissible but chronic. It comprises mental health conditions, cardiovascular disease, strokes, cancer, diabetes, COPD (Chronic obstructive pulmonary disease), and so on. The World Health Organization (WHO) reports that in the global arena, one in two disability-affected life years and one in five deaths among adolescents are the direct effects of NCDs (Bureau of Health Education, 2013). It can be rightly connoted that the invisible epidemic, around 70% of premature deaths amongst adults, has its genesis in health-related behaviours from childhood to adolescence (WHO, 2022). These include alcohol, tobacco, processed food, sedentary living, etc.

On the brighter side, NCDs can be kept at bay by imbibing positive health behaviours (United Nations Development Group (UNDG), 2022). Lifestyle modifications must be established early in life rather than after the lethal diseases have been impacted (De Wet-Billings, 2021). It is mandated to collaborate on a good and healthy lifestyle so that the youth do not live under the burden of diseases or with disability-adjusted life years (DALY). Therefore, it is imperative to emphasize decreasing the various risk factors associated with these diseases (Borgia, 2016). Understanding the youth's comprehension - awareness programs, knowledge sharing, and performance evaluation are required to promote preventive measures and better health.

The concept of health education, information edification, and communications are cost-effective ways to disseminate information to understand the risk factors (Pheiffer, 2021). The knowledge aids in determining the attitude, which hails in behaviour modulations (Research Triangle Institute (RTI), 2022). An individual's perception of the threat of the ailment gets enhanced with the individual's belief in the efficacy of the commended health behaviour. It will envisage the likelihood of the individual adopting the behaviour and module the lifestyle to prevent diseases (Kumar et al., 2021). To cater to these needs, various social communication tools are utilized in the present era, such as television, radio broadcasts, social media (FB, Instagram, Youtube, etc.), posters, brochures, hoarders, etc. The advent of new technologies, mobile devices, television, radio, the internet, and various digital health trackers have provided an enormous prospect to educate audiences of diverse social strata (Ayedee & Kumar, 2020). It guides about the complications of the diseases and the modes to be imbibed to prevent them, incorporating lifestyle alterations about good food habits, physical activities, and diminishing tobacco or alcohol intake (RTI, 2022). The disease portfolio among the youth is rampantly increasing (Burke & Şen, 2018). With the help of social communication modes, which continue to grow and dominate, especially amongst the youth, they can be the eminent modus to reach the strata.

Objective:

This study sought to evaluate the social communication modes influencing health-behaviour modulations for managing lifestyle diseases among Durgapur, West Bengal, India college students.

Material and Methodology:

Study Design, Population, and Period

Lifestyle diseases have affected all strata of the population in India and globally. Data reveals that NCDs account for 71% of global and 63% of Indian mortality (WHO, 2018). NCDs are broadly linked with older age groups; nevertheless, the disease significantly impinges on the youth. The study thence included the youth (15 years to 24 years). It was conducted amongst undergraduate and postgraduate students of NSHM, Knowledge Campus, Durgapur, West Bengal, India. The period for the study was from May 2022 to June 2022.

Sample Setting and Size

The sampling methodology adopted; considered the college-going students by employing a cross-sectional survey through a random sampling procedure. A sample of 87 participants was considered for the study. The average literate rate in Durgapur city is 86.02 % (Census Population, 2022).

Sample Sources of Data and Data Collection

The primary survey was conducted. Informed consent was obtained from each participant, and the questionnaire comprised qualitative and quantitative questions, which individual students filled out. A descriptive analysis was performed.

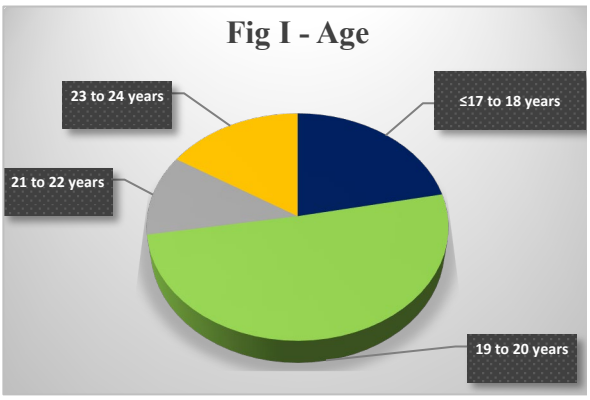
Statistical Analysis

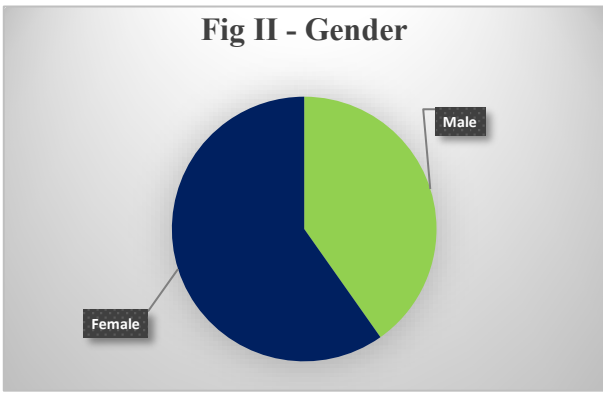
The Excel data was screened for any inconsistencies and the presence of outliers. The analysis was done on the same platform. Tables and figures were formatted.

Findings:

Eighty-seven students participated in the survey. Table I describes the demographic information of the students. Fig. I connoted the age distribution of the entrants. The mean age was 19.83, while it ranged from 17 years to 24 years. 21.83% of the students were "less than equal to 17 - 18 years", 50.57% between "19 to 20 years", 11.49% between "21 to 22 years", and 16.09% between "23 to 24 years". Most respondents were female (59.77%) (Fig II). 79% of students were pursuing graduation, while 21% had their post-graduation degree from the institute (Fig III).

Table 1: Demographic Details of the Participants (n = 87)				
Sl no	Variables		Numerically	Percentage
1.	Age Distribution	≤17 to 18 years	19	21.83
		19 to 20 years	44	50.57
		21 to 22 years	10	11.49
		23 to 24 years	14	16.09
				Mean Age = 19.83
2.	Gender	Male	35	40.22
		Female	52	59.77
3.	Educational Qualification	Pursuing Graduation	69	79.31
		Pursuing Post Graduation	18	20.68





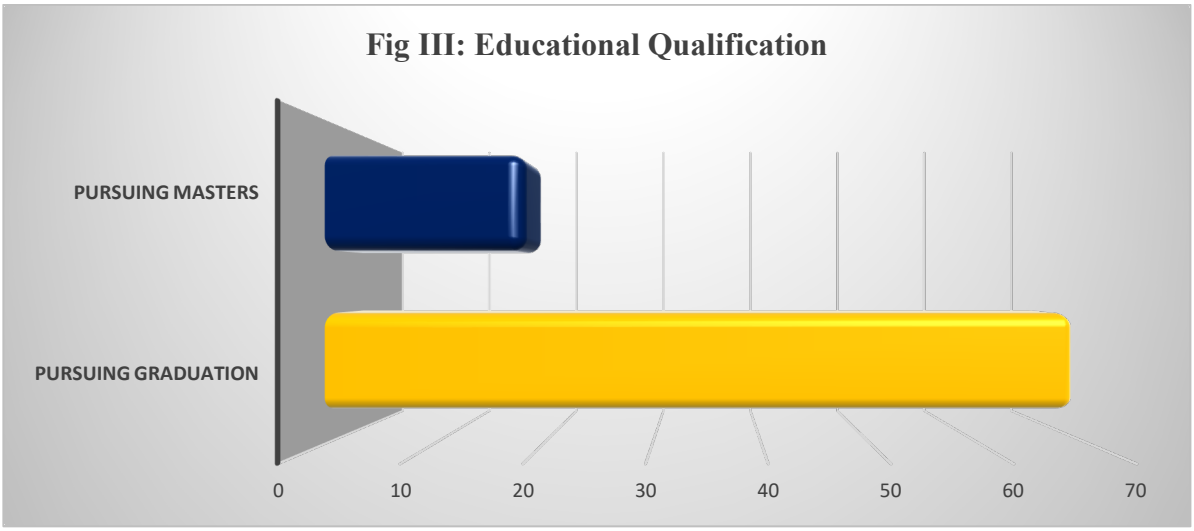
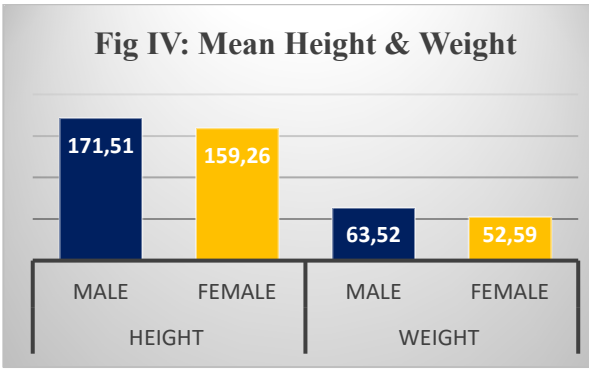


Table II describes the anthropometric distribution of the study population. The mean height and weight of the male participants were 171.51 cm and 63.52 kgs, while 159.26 cm and 52.59 kgs, respectively, for the female students (Fig IV). The Body Mass Index(BMI) (kg/m2) revealed that 2.29% of respondents were under the clutches of obesity, 11.49% were overweight, and 21.83% were underweight. 64.36% had a normal BMI (Fig V).

Table 2: Anthropometric Distribution of the Study Population

Sl no	Variables		Numerically	Percentage
1.	Height (mean ht in cms)	Male	171.51	
		Female	159.26	
2.	Weight (mean weight in kgs)	Male	63.52	
		Female	52.59	
3.	Body Mass Index	Underweight	19	21.83
		Normal	56	64.36
		Overweight	10	11.49
		Obesity	2	2.29



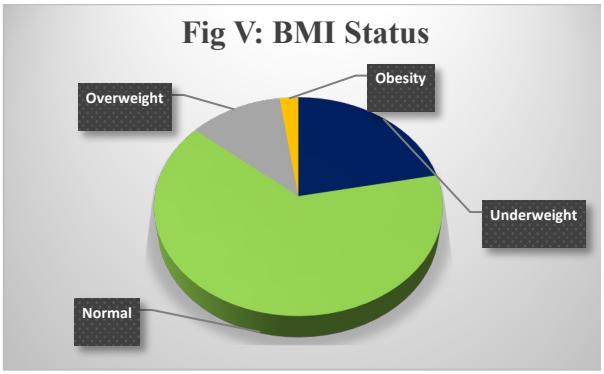
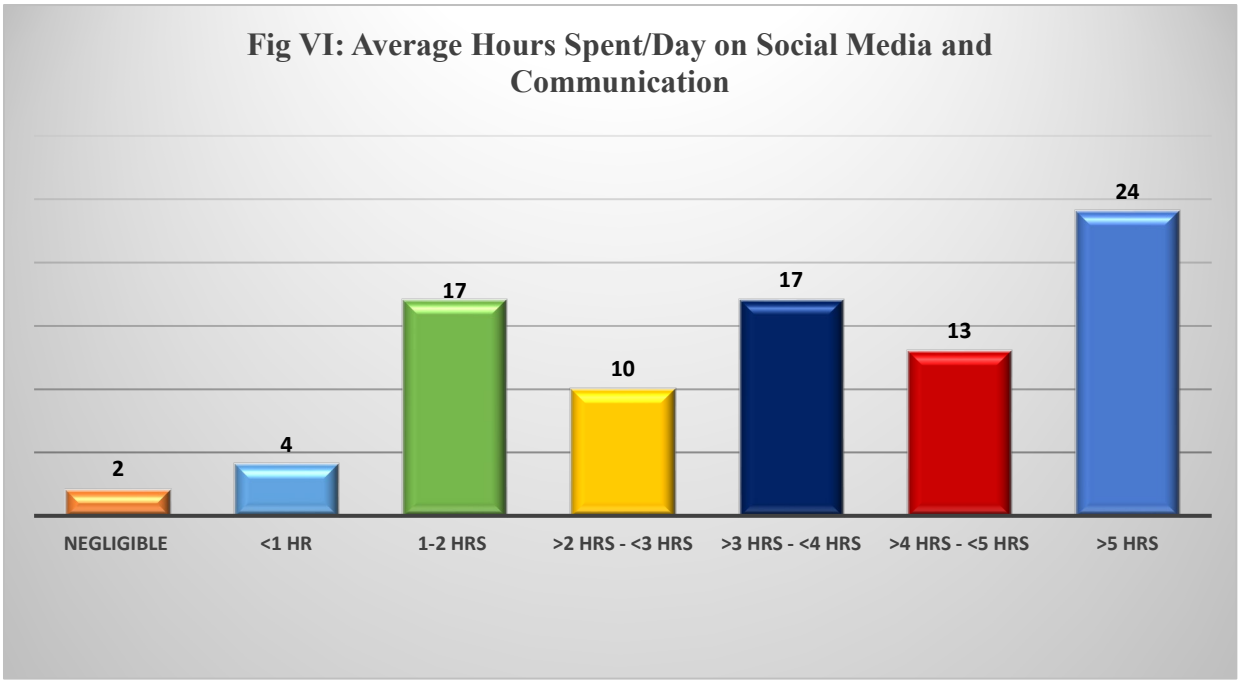


Table III describes social communication and its influence on behaviour modulations. The study population conceded that most youth (27.58%) spend "more than 5 hours a day" indulging in various social platforms, such as watching TV, browsing multiple sites on social networks, listening to the radio, and so on. 6.88% of students spend "less than an hour or have negligible time," 19.54% for "1 to 2 hours", 11.49% for "more than 2 hrs to less than 3 hrs", 19.54% for "more than 3 hrs to less than 4 hrs" and 14.94% for "more than 4 hrs to less than 5 hrs" (Figure VI). Fig VII displayed that Whatsapp (82 responses) was the most frequently used social communication mode amongst the youth of the study, followed by Youtube (77), Facebook (66), and Instagram (63).

Table 3: Social Communication Influencing Behavior Modulations Amongst the Study Population

Sl no	Variables		Numerically	Percentage
1.	Average hours spent watching TV/ Social Media, surfing/listening to the radio, etc	Negligible	2	2.29
		Less than 1 hour	4	4.59
		1 to 2 hours	17	19.54
		More than 2 hrs to less than 3 hrs	10	11.49
		More than 3 hrs to less than 4 hrs	17	19.54
		More than 4 hrs to less than 5 hrs	13	14.94
		More than 5 hrs	24	27.58
2.	Most frequently used social communication	Facebook	66	
		Whatsapp	82	
		Instagram	63	

	platform (anyone or more)	Twitter	14	
		Linkedin	9	
		Youtube	77	
		TV	13	
		Radio	8	
		Others	12	
3.	Frequency of following the health promotes/benefits (e.g., weight loss/healthy eating habits/lifestyle modulations/no smoking/no drinking campaigns, etc.).	Always	12	13.79
		Frequently	17	19.54
		Sometimes	39	44.82
		Rarely	11	12.64
		Never	8	9.19
4.	Influenced by health promotions through social communication	Always	13	14.94
		Frequently	16	18.39
		Sometimes	44	50.57
		Rarely	6	6.89
		Never	8	9.19
5.	The aspect of daily habit requires alteration	Smoking	6	
		Drinking	4	
		Fitness & and physical activity	42	
		Food habits	52	
		Sleeping habits	40	
		Stress	42	
		Tobacco Chewing	2	
		Others	2	
6.	Taken the Initiative to Change Lifestyle to Gain Better Health	Yes	71	81.60
		No	16	18.39
7.	Positive Impact with Reformed Lifestyle	Yes	66	75.86
		No	5	5.74
		NA	16	18.39
8.	Continuum of the reformed lifestyle	Yes	44	50.57
		No	27	31.03
		NA	16	18.39
9.	Social Platform to Improve Lifestyle Diseases.	Poor	5	5.74
		Average	8	9.19
		Good	34	39.08
		Very Good	26	29.88
		Excellent	14	16.09



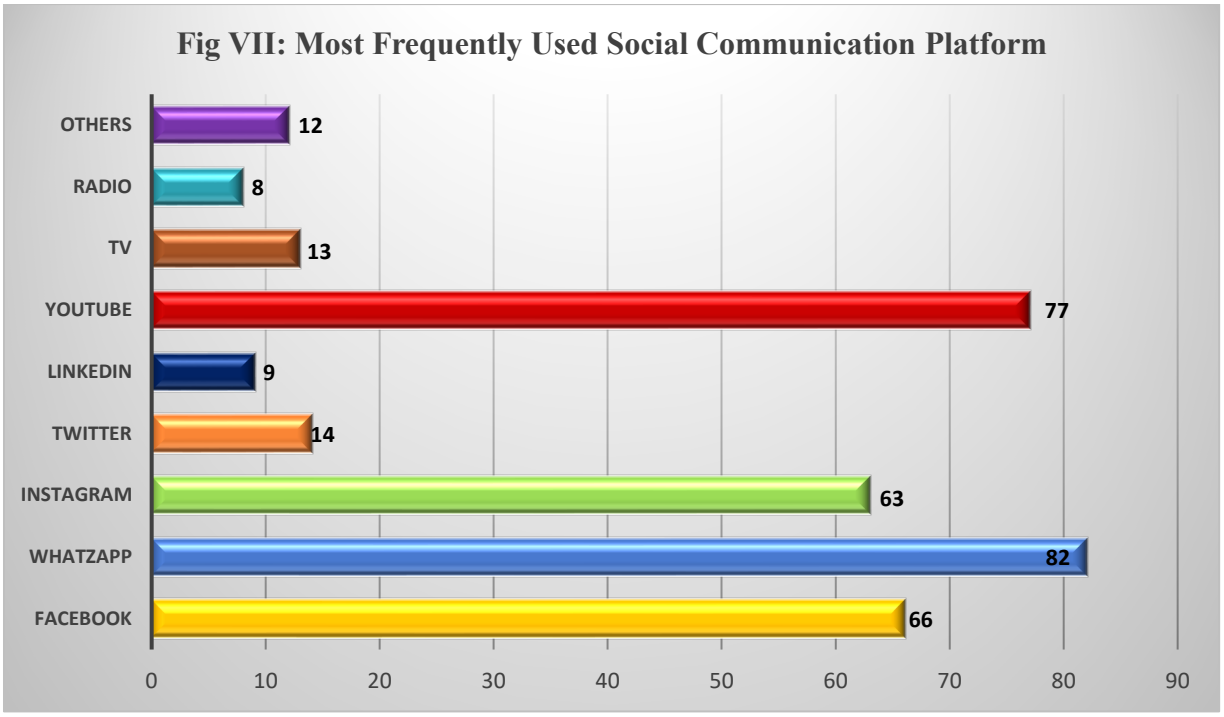


Fig VIII depicted that 13.79% of students "always" watch, 19.54% tend to view "frequently," 44.82% "sometimes," 12,64% "rarely" while 9.19% "never" watch; the various health promotes and benefits, such as weight loss programs, healthy eating habits, lifestyle modulations, no smoking or no drinking campaigns and so on. Fig IX demonstrated that 14.94% of students readily get influenced by health promotions propagated through various social communications, while 18.39% "frequently," 51.72% "sometimes," 6.89% "rarely" and 8.04% "never" got inclined. Fig X revealed that a more significant number of the students desired to alter their lifestyle in correspondence to food habits (52), fitness & and enhancing physical activity (42), stress (42), and sleeping disorders (40). A small section emphasized quitting smoking (6), drinking (4), and tobacco chewing (2).

Fig VIII: Frequency of Watching the Health Promotes

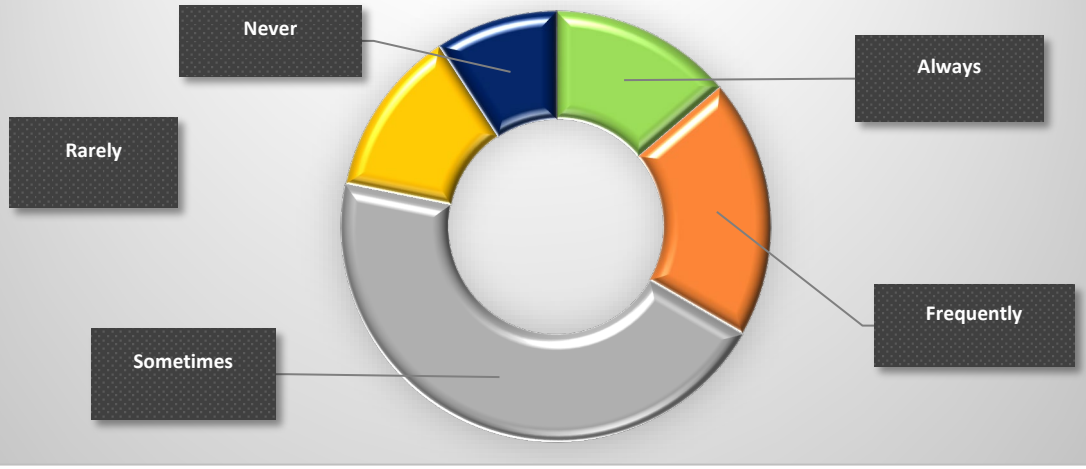


FIG IX: Influenced by Health Promotions Through Social Communication

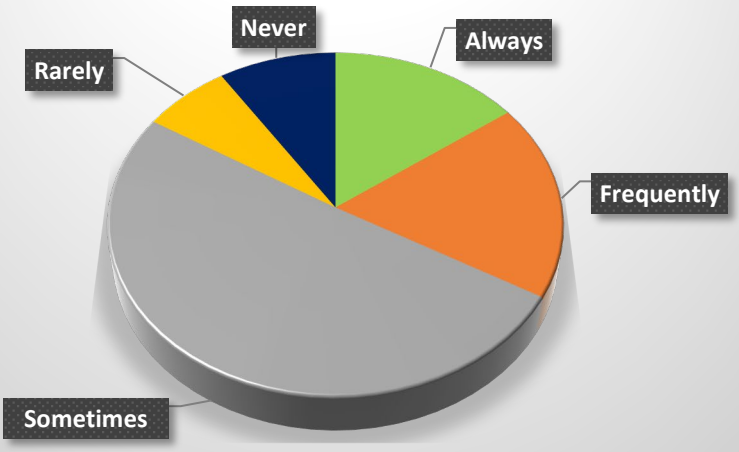


FIG X: Aspect of Daily Habit Requires Alteration

Fig XI interpreted that 81.60% of students had taken some intuitive/s to gain better health and lifestyle. 75.86% of students had experienced a positive response to the new initiatives, while 5.74% did not have the desired outcome. 50.57% of respondents had continued to follow a reformed lifestyle, while 31.03% had discontinued (Fig XII). 16.09% expressed that social platforms aided in improving their lifestyle at an "excellent" level, while 29.88% thought as "very good," 39.08% as "good," and 9.19% as "average" and 5.74% as "poor" (Fig XIII).

Fig XI: Taken Initiative to Change Lifestyle to Gain Better Health

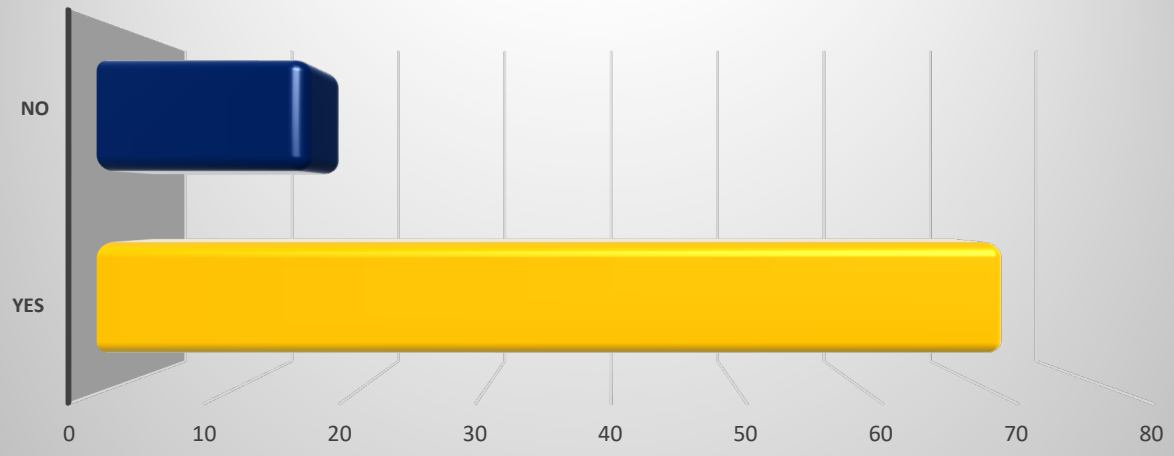
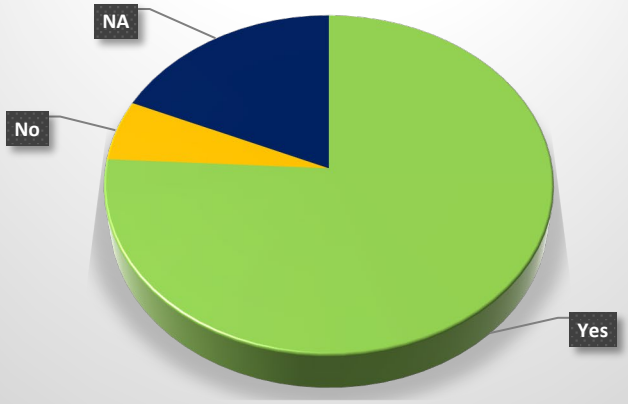
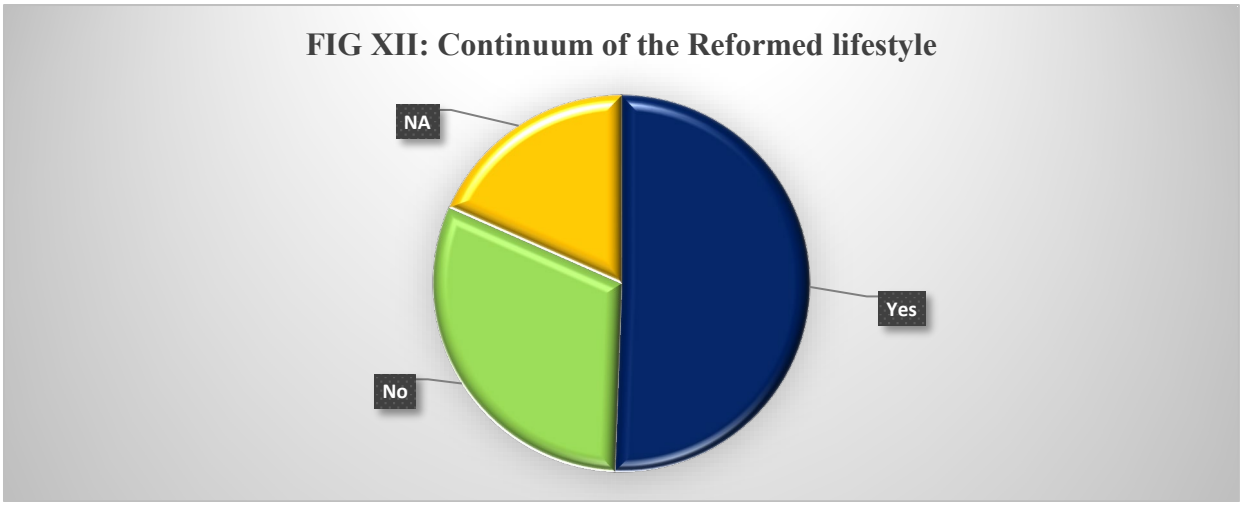
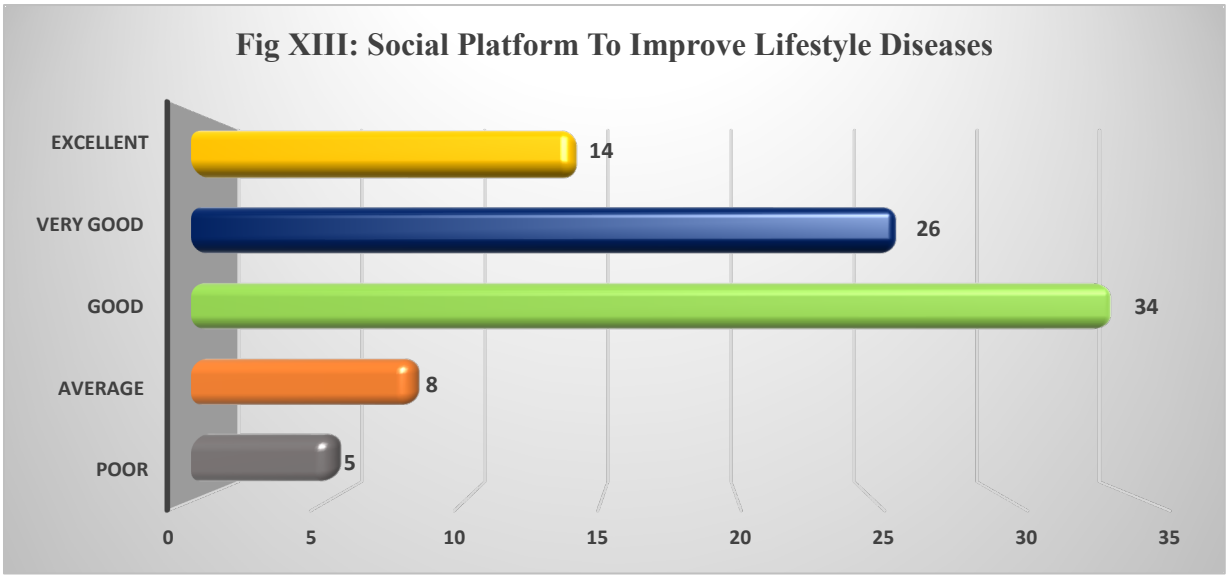


FIG XII: Positive Impact with Reformed Lifestyle







This study portrayed that 14% of the young adults in the study population were overweight and obese. The students spend significant time on social media, using various channels, such as television, radio, or social networking sites. These platforms exposed them to multiple health promotion campaigns about weight loss programs, healthy eating habits, lifestyle alterations, alcohol or tobacco consumption, etc. 78% of students were intrigued and tended to follow these initiatives. The majority of the students were influenced by health promotions. They understood the importance and value of lifestyle modulations to achieve better health. 70% of them pursued the recommended propaganda demonstrated by social communications, which acts as a guide for modulated living to prevent the incidence of any NCDs. Almost all students who opted for change experienced a positive result. However, only half of the population had continued the reform lifestyle.

Discussions:

This manuscript elaborated on the primary research conducted on college-going students (young adults), understanding their involvement and participation in the various social communication mediums, the effectiveness of mass media campaigns on lifestyle practices, and the ability to reform for a better healthcare regime. The traditional tactics in managing NCDs had primarily focused on therapeutic care for patients with established disease profiles. The strategy did not outturn the maximum benefit which was required. The human-centric health programs with a joint venture of public and private sector stakeholders are the need of the hour

(World Economic Forum, 2017). It decreases the risk factors contributing to NCDs and provides targeted care to the concerned people.

The burden of the lethal disease compelled global leaders to confab and paved a roadmap for a healthier population. On September 19, 2011, a summit was conducted, "Insights to Motivate Healthful, Active Lifestyles," with the stakeholders, United Nations General Assembly - Prevention and Control of Non-communicable Diseases, and the International Food Information Council Foundation, represented by 34 countries (Fernstrom et al., 2012). The public and private collaborators provided their proficient and expert insights. The feasible and best practices were discussed by integrating scientific initiatives and behavior-focused elucidation to influence people to accomplish and attain healthier lives with an active lifestyle to reduce the incidence of NCDs (Genay-Diliautas & Malgouires, 2018). The timely interpolations need to start from an early age to amend unhealthy lifestyles. If it lingers for a prolonged period, the risk factors lead to NCDs. The education imparted through mass media is vital in bringingbehaviourall change, which might be missed in any community-based arbitration due to limited spread (Jeet et al., 2020). Various countries around the globe engage in these interventions, although the nature and efficacy differ. The prevention, control, and transmogrify of the various risk factors can be mitigated amongst the population to adopt a healthy lifestyle (United Nations International Children's Emergency Fund (UNICEF), 2022). The challenge is to choose the mode and not just augment the documentation of the issue. It requires an action plan of generating, executing, and sustainable initiatives that can cause positive and measurable changes (Arena et al., 2015).

The comparative study between social media and no social media by researcher Mita et al., 2016; comprehended the impact on reducing NCDs. The study stratified the results considering the bias on outcomes, using social media alone, and the social manifestations and media richness. The trials showed that social media could potentially improve the primary consequences—more studies needed to be incorporated to generalize the findings. The likelihood of NCDs can be categorized as ecological, genetic, medical, social, demographical, and self-management components. Thus, the preventive mechanism must include lifestyle practices, awareness, and health policies at national and global levels targeting the niche (Budreviciute et al., 2020). The strategy can lead to better dietary habits, physical activity engagement, less smoking and drinking, and controlled metabolic irregularities.

In low- and middle-income countries, NCDs are increasing exponentially. The understanding of the low-cost initiative, social media happens to be a which can be highly effective in these parts of the globe to proliferate better health and good lifestyle (Rao, 2017). However, the data and research studies are scarce on the role of social media in managing and preventing NCD. The prime function of social communication comprises health instruction, sharing information, providing psychosomatic support, self-management, and capacity building (Islam et al., 2019). It is vital to develop social mediations to address the social determinants of these diseases (Adgoy, 2019). The Theory of Change (ToC) implies a specific intervention, or an amalgamation of interventions, to achieve an explicit and definitive development change, analyzed and established on available data and evidence. It is suggestive that social intercessions require focusing on guaranteeing health behaviour information reaches the entire community (Webber et al., 2020). The people who are at higher social risk need to be identified. It will increase their opportunity for proper support and treatment (Wohn & Bowe, 2016).

Lifestyle modification aims at health behavioural alterations competencies such as clinical assessment with interventions and treatment of chronic pain. It can be done independently or with physical therapy. The first line of intercession is a novel approach that can reduce the socioeconomic burden (Dean & Söderlund, 2015). With the advent of new technical support, seeking health information from online health resources is easy. The eHealth literacy mode can

alter the perception of an individual. The Comprehensive Model of Information Seeking (CMIS) was implemented by author Mazlan et al., 2021 to evaluate aspects that influenced online health information-seeking behaviour. The study's findings confirm the direct connections between the individuals' trust in eHealth Literacy and the significant effect on their behaviour (Lin & Kishore, 2021). However, concerns were raised about the unmet information need, the significance of the interpretation, and self-management (Albalawi & Sixsmith, 2015).

Social communication and healthcare are a powerful combo. Social media lets the youth create their online identity, build a strong peer group and connect. It provides valuable support allowing them to interact beyond geographical borders (Kumar, 2021). Social Communication has its risks and hurdles as well. It can be misused or misinterpreted. Healthcare providers can propagate erudition through these channels and stop misleading and erroneous information (Wong et al., 2014). The challenges include conveying incorrect details, compromised data confidentiality and privacy, enhanced commercial interests, monitoring, and evaluation, regulation protocols, equity at accessibility, no standards operating procedure, etc.

To accomplish this goal, professionals must create engaging, accurate, informative, and well-timed content. The opportunity to reach them exists in healthcare delivery, education, and policy. Presently, there is no or little guidance on youth engagement with health concerning social media usage. It is difficult to protect the target populace from negative influences. To overcome this hurdle, it is suggested to have automated sourced content, recommended materials, and peer-reviewed acknowledged and reputed antecedent encouraged (Goodyear et al., 2018). Hence, social media guidelines at the national and international levels are required to evade adverse consequences. The experts can abide by the policy to promote explicit and authentic visual or audio content. The study considered in this study is a small section of society. Future studies with robust sample sizes and populations can be deliberated to generalize the findings.

Conclusion:

Social communication creates a conducive atmosphere that advocates for the population to alter their behaviour from undesirable to alacrity. It covenants in recognizing and providing solutions for common issues in the system (Newberry, 2021) It can be concurrent with smoking, drinking, bad food habits, sedentary and stressful lifestyles, etc. It aids in enhancing the knowledge and understanding of the problem so that it can be diagnosed early for better disease management, promoting a sustainable behavioural alteration (Tamilselvi & Gowri, 2018). The propagative medium can reach the remotest corner of the globe. The reach is extensive and impactful (Nancy & Dongre, 2021).

There is no ambiguity about the importance and paramount of social communication. The standards policies integrated with the action can create a paradigm shift. Social communication can be an effective and efficient mode of communication influencing behaviour modulations among the masses. The various cost-competent interventions, preventive tools, and social media propagation promote delayed onset, reducing mortality and morbidity among young adults.

Disclosure Statement:

There is no conflict of interest reported by the authors.

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