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Health Behaviors Based on an Active Lifestyle Among Generation Z: A Thematic Analysis

Hamed. Azimi Nojadeh¹, Fatemeh. Abdavi^{1*}, Zühal. Yurtsızoglu²¹ Department of Sport Management, Faculty of Physical Education & Sports University of Tabriz, Tabriz, Iran² Department of Sport Management, Faculty of Physical Education & Sports, Sivas Cumhuriyet University, Sivas, Türkiye

* Corresponding author email address: fatemehabdavi@yahoo.com

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Objective: The aim of the present study was to identify health behaviors based on an active lifestyle among Generation Z.

Methods and Materials: This study was classified as applied and qualitative research. The method used in this study was Brown and Clark's six-step thematic analysis. In order to achieve the desired goal, images and videos related to health behaviors, active lifestyle, and Generation Z that were available on the YouTube platform were extracted using Andy Search's artificial intelligence. Then, articles published in the Scopus citation database that were in this field were extracted, and finally the top ten articles were identified using RStudio software. All of these items were analyzed and coded using Maxqda 2020 software, and finally eight themes for health behaviors and active lifestyle among Generation Z were identified.

Findings: These themes included unhealthy behaviors and barriers, environmental and ethical issues, generational signs specific to Generation Z, mental and social health issues, the role of the environment and society, sports behaviors and physical activity, healthy eating and diet, and the role of technology and digital in health.

Conclusion: Overall, the results of this research indicate that to promote an active lifestyle among Generation Z, strategies must be adopted that are consistent with the digital, social, and motivational characteristics of this generation.

Keywords: Health Behaviors, Active Lifestyle, Generation Z, Thematic Analysis

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1. Introduction

In recent years, technological advancements and urbanization have significantly altered human lifestyles, leading to reduced physical activity and more sedentary behavior (1). These changes have contributed to a surge in chronic conditions such as diabetes, cardiovascular disease, and obesity, further intensified by poor nutrition and psychological stress (2). The World Health Organization identifies physical inactivity as a major contributor to these diseases and certain cancers (3). This growing trend of inactivity poses serious threats to both physical and mental health (4) and is now recognized globally as one of the most pressing public health challenges of the 21st century (5).

However, a number of studies have demonstrated that leading an active lifestyle and engaging in regular physical activity can greatly improve people's mental health, reduce the onset of chronic diseases, and improve their quality of life (6). As a result, everyone in the community now believes that regular exercise and an active lifestyle have a favorable impact on aging and general health (7). In fact, it has been demonstrated that regular exercise has a number of positive health advantages, especially in lowering the negative consequences of chronic illnesses (8). Modifiable habits, such as exercise, a good diet, abstinence from smoking, and moderate alcohol use, have also been shown to improve health and lower the risk of non-communicable disease-related deaths (9). Nevertheless, the World Health Organization's (WHO) recommendations for regular physical activity are mainly ignored, even though the general public is well aware of these advantages (10). In this regard, one of the World Health Organization's priorities is behavior modification that promotes health and leads to a healthy lifestyle. This shift in behavior can be achieved by removing things that are detrimental to human health and encouraging positive behaviors, including stress reduction, physical exercise, healthy eating, and spiritual development (11). However, a number of things need to be taken into account in order to reach these criteria, and health behaviors are unquestionably very important and will have a big impact on health outcomes (12). It is safe to say that healthy habits are crucial to overall health and well-being. In particular, physical and mental performance, morbidity, and mortality are strongly correlated with nutrition, alcohol use, and physical activity (13). Understanding health behaviors is crucial because they have a big influence on both individual and social health outcomes. To put it simply, health behaviors are "actions that people consciously take to

improve and maintain their health regardless of their current health status." Examples of these behaviors include disease prevention, personal hygiene, exercise, and dietary choices (14).

As discussions around public health and chronic disease prevention have intensified, the concept of a healthy and active lifestyle has gained significant attention—especially since the late twentieth century—highlighting the vital role of physical education in promoting public health (15). Current evidence shows that an active lifestyle not only enhances quality of life but also helps prevent chronic illnesses and supports overall public well-being (16). This lifestyle involves regularly incorporating physical activity into daily routines, which greatly benefits both physical and mental health. Activities may range from structured forms like sports to informal ones such as walking, cycling, or doing household chores. The key goal is to reduce sedentary behavior and limit prolonged sitting, now recognized as a major global health concern (17). Ultimately, maintaining an active lifestyle through consistent physical activity is essential for improving both physical and mental well-being (18). Generation Z—typically defined as those born between 1995 and 2010—displays unique behaviors, needs, and attitudes compared to previous generations, largely because they were the first to grow up fully immersed in digital technology (19). Although generational boundaries can overlap, Gen Z is generally recognized as the cohort raised in an era of widespread digital access (20). Originating as a term in the U.S. and Europe, Generation Z is often called “digital natives,” having been exposed from an early age to smartphones, the internet, and digital applications that shape their social lives and daily routines (21). This constant digital exposure influences their responses to environmental changes and affects their health behaviors through factors such as digital information consumption, online resource use, and patterns of virtual communication (22). Generation Z's deep immersion in digital technology makes them more inclined than previous generations to adopt products and services related to digital entertainment (20). As most of them are in adolescence, a critical period for forming lifelong health habits, their health-related behaviors carry lasting significance (23). Adolescence—defined by the World Health Organization as ages 10 to 19—is a dynamic stage of physical, mental, and behavioral development, offering a key window to establish healthy lifestyle patterns that can persist into adulthood (23). However, these behaviors are also shaped by various environmental factors, including family, peers, school settings, socioeconomic

status, cultural norms, and family health perceptions (24). Which is a window of opportunities for establishing healthy lifestyle habits and can be tracked into adulthood (24). However, it should also be mentioned that environmental factors like family, peers, the school environment, the social environment, the family economic status, the cultural features of the society in which they live, family members' health perceptions, and the health behaviors of these individuals all have an impact on the health behaviors of this generation (25). The importance of an active lifestyle has been widely documented in research. Joubert et al. found that modifying risk factors—such as adhering to medication and adopting healthy habits—can prevent over 80% of strokes (26). Similarly, Williams and colleagues reported that health education and regular physical activity significantly reduce long-term cardiovascular complications (27). Chan et al., in a study from Singapore, highlighted the global trend among older children and adolescents of not meeting dietary and physical activity guidelines, contributing to rising obesity rates (24). Nascimento and colleagues found that overweight children of hypertensive parents who engaged in physical activity had better cardiovascular and metabolic markers than inactive peers (27). Gautam et al. noted that adolescents from lower socioeconomic backgrounds tend to adopt unhealthier behaviors, while those from wealthier families are more likely to practice health-promoting habits, including active living and balanced diets (29). Moreover, Mashood and colleagues demonstrated that incorporating project-based learning and physical literacy fosters physical fitness and long-term engagement in activity (28).

Given the powerful role of physical activity and lifestyle in health outcomes, lifestyle is now recognized as a critical determinant of health-related behaviors (29). This underscores the relevance of studying sports participation and active living specifically among Generation Z. Research has shown that lifestyle modifications—such as increased physical activity, healthy eating, reduced alcohol intake, smoking cessation, and stress management—can improve chronic conditions and reduce key metabolic risk factors like hypertension, hyperglycemia, dyslipidemia, and obesity (30).

Despite this, limited studies have explored active lifestyle-related health behaviors in Generation Z. Most existing research focuses on general links between exercise and health, with few examining cultural, social, and psychological drivers of motivation and commitment to an active lifestyle. A deeper understanding of Gen Z's health

behaviors is essential for designing targeted interventions to enhance their well-being. This research aims to address that gap by identifying health behaviors related to an active lifestyle among Generation Z and answering the central question: What are the health behaviors based on an active lifestyle among Generation Z?

2. Methods and Materials

2.1 Study Design

This study is designed within the interpretive paradigm to identify health behaviors based on an active lifestyle among Generation Z. To achieve this objective, a qualitative approach with an emphasis on thematic analysis has been employed. One of the key advantages of qualitative research is its ability to provide a comprehensive exploration of individuals' lived experiences and their social environment (31). Among qualitative research methods, thematic analysis is widely used. Thematic analysis is a qualitative approach for identifying, analyzing, and interpreting patterns of meaning or themes within data (32). It is also a flexible and cost-effective tool that can be applied within various theoretical frameworks and research paradigms (33). Thematic analysis has been widely employed in various disciplines such as psychology, sociology, and anthropology. It is now increasingly being used in pharmaceutical research, healthcare studies, and other scientific fields (34). Although its implementation can be challenging, thematic analysis is widely used in mixed-methods studies due to its applicability across research questions, qualitative traditions, and contexts (35).

The thematic analysis process typically involves six key stages: familiarization with the data, generating initial codes, searching for themes, reviewing and refining themes, defining and naming themes, and producing the final report (36). This study follows the same process.

This approach allows researchers to uncover hidden patterns in both textual and visual data. The study collected data from multiple sources, including YouTube videos, images, and ten top-ranked articles from the Scopus database, focusing on health behaviors and active lifestyles. This multi-source method provided a more comprehensive perspective on the topic. The data selection criteria included relevance to the topic, publication timeframe, and suitability for Generation Z. The content selected for analysis was recent to ensure relevance to Generation Z's current health behaviors, with a focus on videos and images with high engagement metrics (views, likes, and comments) to reflect

stronger resonance with this audience. The collected data were prepared as written texts (for videos) and descriptive analyses (for images). Visual materials were segmented into meaningful units and reviewed multiple times to ensure a comprehensive understanding. Codes were cross-checked for consistency, and verbal descriptions within videos were incorporated to clarify meaning. Thematic analysis was then applied to extract themes and conceptual patterns, providing insights into Generation Z's health behaviors and guiding strategies for promoting active lifestyles.

2.1.1 Ensuring cultural, linguistic, and geographical diversity

Given YouTube's global and multilingual reach, several steps were taken to enhance the diversity and comprehensiveness of the analysis:

- While initial searches were conducted in English, additional keywords in other languages were used to gather content from various cultural backgrounds.
- Video selection prioritized geographic diversity by examining creators' locations or profiles.
- During analysis, cultural elements such as symbols, body language, values, dietary habits, and types of physical activity were carefully observed to ensure representation across different contexts.
- Supplementary data—including subtitle languages, tagging locations, and comment languages—were also used to assess cultural and regional diversity.

These measures ensured that the final analysis offered a broad and culturally diverse perspective on Generation Z's health behaviors, reflecting YouTube's global context.

2.2 Data Collection

This study used both visual and textual data to explore health behaviors related to an active lifestyle among Generation Z. Videos and images from YouTube were selected using keywords such as "Generation Z health," "active lifestyle," and "health behaviors," with an emphasis on ensuring geographic, cultural, and linguistic diversity. To collect relevant content, Andisearch AI technology, which utilizes natural language processing (NLP) and machine learning, was employed. Unlike traditional search engines, Andisearch provides contextually relevant results by analyzing the intent and concepts behind the search terms.

2.2.1 How to confirm and evaluate the outputs

To ensure the validity and relevance of the results suggested by Andisearch in relation to the research objectives, the following steps were taken:

Manual Review: All suggested results (including videos, related pages, and channels) were manually reviewed to ensure their conceptual and thematic alignment with the research objectives.

Cross-analysis with other tools:

To evaluate the reliability of Andisearch, a subset of the same keywords was tested using traditional search engines (such as Google and YouTube Search), and the results were compared.

In addition, scholarly articles and publications in this field were utilized as supplementary sources to examine the theoretical aspects and previous research findings related to the research topic. The articles were retrieved from the reputable Scopus database, and selection criteria such as recent publication dates, quality, and direct relevance to the research topic were applied.

Given the large number of articles published on the subject, the researchers identified the top ten articles in this domain using Rstudio software, and coding was conducted on these selected articles.

2.2.2 The process of identifying top articles

All articles were retrieved from the Scopus database to ensure academic rigor and reliability. Bibliometric data, including titles, publication years, authors, citation counts, keywords, and source journals, were extracted and analyzed using RStudio. Citation count, H-index, and journal ranking (Q1 or Q2) were used to identify influential articles. After extracting the top 10 most-cited articles, a content review ensured their relevance to the research on Generation Z and active lifestyles. Articles that were relevant in title but not aligned with the research focus were excluded. Data collection began with converting visual content into text, which was recorded as analytical notes. These notes, along with scholarly article content, were categorized and prepared for thematic analysis. A targeted search strategy was used to retrieve relevant articles, with the procedure, including keywords and filters, detailed in [Table 1](#).

2.2.3 The process of identifying top articles

Data collection was systematically conducted, beginning with the conversion of visual content into text, which was

recorded as analytical notes. These notes, along with the content from scholarly articles, were then categorized and prepared for thematic analysis, ensuring a comprehensive and precise exploration of the topic. A targeted search

strategy was employed to retrieve relevant articles from the Scopus database. The search procedure, including keywords, Boolean operators, and applied filters, is detailed in [Table 1](#).

Table 1. Search strategy in Scopus citation database

Search strategy in Scopus citation database
TITLE-ABS-KEY ("Health behavior") AND ("active lifestyle") AND (LIMIT-TO (EXACTKEYWORD , "Physical Activity") OR LIMIT-TO (EXACTKEYWORD , "Male") OR LIMIT-TO (EXACTKEYWORD , "Female") OR LIMIT-TO (EXACTKEYWORD , "Exercise") OR LIMIT-TO (EXACTKEYWORD , "Young Adult") OR LIMIT-TO (EXACTKEYWORD , "Health Status") OR LIMIT-TO (EXACTKEYWORD , "Physical Fitness") OR LIMIT-TO (EXACTKEYWORD , "Healthy Lifestyle") OR LIMIT-TO (EXACTKEYWORD , "Sport") OR LIMIT-TO (EXACTKEYWORD , "Active Lifestyle") OR LIMIT-TO (EXACTKEYWORD , "Healthy Diet") OR LIMIT-TO (EXACTKEYWORD , "Health Care Personnel") OR LIMIT-TO (EXACTKEYWORD , "Environmental Factor") OR LIMIT-TO (EXACTKEYWORD , "Health Care Policy") OR LIMIT-TO (EXACTKEYWORD , "Health Behaviors")) AND (LIMIT-TO (SUBJAREA , "SOC") OR LIMIT-TO (SUBJAREA , "PSYC") OR LIMIT-TO (SUBJAREA , "HEAL")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))

Table 2. Top ten articles published in Scopus in the field of health behaviors and active lifestyle

Paper	DOI	Total Citations	TC per Year	Normalized TC
Physical Activity Behavior Change: Issues in Adoption and Maintenance	10.1037//0278-6133.19.suppl1.32	447	17.19	1.00
A bidirectional relationship between physical activity and executive function in older adults	10.3389/fnhum.2014.01044	160	14.55	3.40
Relationships of Land Use Mix with Walking for Transport: Do Land Uses and Geographical Scale Matter?	10.1007/s11524-010-9488-7	150	9.38	1.00
Physical activity on prescription in primary health care: a follow-up of physical activity level and quality of life	10.1111/j.1600-0838.2007.00678.x	118	6.56	1.00
Physical Activity and Motor Skills in Children with and without Visual Impairments	10.1249/MSS.0b013e318183389d	113	6.65	1.00
Urban Environment and Children's Active Lifestyle: SoftGIS Revealing Children's Behavioral Patterns and Meaningful Places	10.4278/ajhp.100914-QUAN-310	105	7.50	1.56
Stability of leisure-time physical activity during adolescence—a longitudinal study among 16-, 17- and 18-year-old Finnish youth	10.1034/j.1600-0838.2002.00250.x	100	4.17	1.00
Top 10 Research Questions Related to Physical Literacy	10.1080/02701367.2016.1124671	74	7.40	1.66
Co-producing active lifestyles as whole-system-approach: theory, intervention and knowledge-to-action implications	10.1093/heapro/dax053	69	9.86	3.00
Home and Recess Physical Activity of Hong Kong Children	10.1080/02701367.1999.10608051	65	2.41	1.00

The analysis was conducted in the following steps:

2.3 Data Analysis

In this study, the data analysis process was conducted using Braun and Clarke's six-phase thematic analysis approach (37). This method provides a structured framework for identifying and interpreting patterns (themes) within qualitative data. The collected data included textual content extracted from YouTube videos and images, as well as relevant information from scientific articles. MAXQDA2020 software was utilized as a powerful tool for organizing and analyzing qualitative data in this process.

2.3.1 Familiarization with the Data

In this phase, researchers familiarized themselves with the collected data. All textual and descriptive content from videos and images was reviewed multiple times to gain a thorough understanding. The data were imported into MAXQDA software, where initial notes on key ideas were recorded.

2.3.2 Generating Initial Codes

In this stage, initial coding was performed on the content extracted from YouTube images and videos obtained via Andisearch AI, along with the text from the ten top-ranked scholarly articles. The coding process involved identifying and categorizing segments related to health behaviors and an active lifestyle.

2.3.3 Searching for Themes

The generated codes were carefully reviewed and organized into broader conceptual groups, forming the initial themes of the study that reflected key patterns in Generation Z's health behaviors. Codes with semantic or conceptual similarities were merged, reducing their total number. MAXQDA software facilitated theme identification and classification through graphical tools, such as conceptual maps.

2.3.4 Reviewing Themes

At this stage, the initial themes were reviewed and refined. The data were re-examined to ensure each theme aligned with the relevant content and that themes were distinct from one another. Themes lacking coherence or significance were either eliminated or merged with others.

2.3.5 Defining and Naming Themes

At this stage, each theme was thoroughly examined to assess its relevance to the research data and its role in explaining Generation Z's health behaviors. Names were assigned to each theme to capture its core meaning. This process ensured clear, meaningful themes while maintaining the analysis' coherence and integrity. Themes were distinct yet comprehensively described the phenomena under study. Relationships between themes were also explored, resulting in a cohesive structure for the final data interpretation.

2.3.6 Preparing the Final Report

Finally, the research findings were compiled into a comprehensive report. Each theme was described using direct quotes from the data and detailed interpretations. The report was presented in a way that clearly demonstrated the relationship between the themes, the main research question, and the perspectives of Generation Z regarding health behaviors and an active lifestyle.

3. Results

In this study, thematic analysis was employed to examine health behaviors related to active lifestyles among Generation Z. RStudio software was used to extract the top 10 papers from the Scopus database, while Andisearch AI helped select images and videos on active lifestyles, health behaviors, and Generation Z. MAXQDA2020 software was used to analyze and code all relevant visual content.

- Initially, 407 codes were extracted from the data, and after merging codes with semantic similarity, 79 codes remained. The early stages of data analysis generated a large number of primary codes (407), each representing specific details from the video data. These codes served as initial identifiers for distinguishing behaviors and experiences related to Generation Z's active lifestyle and health behaviors. To simplify the analysis and ensure conceptual coherence, these codes were categorized into broader conceptual groups. *Process of Code Merging or Removal*

Conceptual Categorization and Code Merging: In this phase, conceptually similar or overlapping codes were consolidated into broader, more comprehensive categories. For example, codes related to "outdoor exercise" and "physical activities in natural environments" were merged into a single code, "exercise in nature."

Removal of Duplicate or Irrelevant Codes: Repetitive or low-significance codes that conveyed similar concepts were excluded from the analysis due to redundancy or lack of relevance to the research objectives.

Retention of Key Codes: Codes directly related to Generation Z's health behaviors and active lifestyle were retained as final, core codes.

These criteria ensured the analysis process was logical, coherent, and valid, ultimately leading to themes that provided deeper insights into Generation Z's health behaviors and active lifestyle. After further analysis, eight main themes were extracted: unhealthy behaviors and obstacles, environmental and ethical issues, generational characteristics of Generation Z, mental and social health, the role of the environment and society, sports behaviors and physical activity, healthy eating and diet, and the role of technology and digital influence on health.

To enhance transparency and auditability, a sample of the coding procedure is provided in [Table 3](#), demonstrating how concepts were extracted, coded, and grouped into conceptual

categories. This example clarifies the qualitative data analysis process and the development of the final themes.

Table 3. Analyzing and assigning concepts to semantic units

Semantic units	Concepts	Resources (image, video, article)
Physically active lifestyles contribute to better executive function.	Active lifestyles	Daly et al., 2015
Physical activity affects many aspects of health, including protection against premature mortality, coronary heart disease, hypertension, diabetes mellitus Type 2, osteoporosis, colon cancer, depression, and anxiety	Benefits of physical activity	Marcus et al., 2000
Increased physical activity improves quality of life, and subjects reaching recommended physical activity levels are more likely to have a better overall health-related quality of life and perceived health status.	Improves quality of life	Kallings et al., 2008
A recent study in america has shoen that gen z leads the way when it comes to healthy eating, with 72% american Gen z-ers reporting that they follow an eating pattern.	Healthy food pattern	Video number 2
A healthy lifestyle and proper nutrition to achieve ideal weight	Reaching ideal weight	Video number 12
Using a plate of vegetables and fruits.	Plant-based diets	Image number 2
Generation Z is more immersed in the digital world and technology and seeks online entertainment.	Digital entertainment	Image number 17

3.1 Unhealthy behaviors and obstacles

Smoking, eating poorly, drinking too much alcohol, and not exercising are all unhealthy habits. Fatigue, lack of desire, time limits, and unmet information demands are some of the obstacles that keep people from adopting healthier habits and leading active lives (38). In the present study, these behaviors and barriers were divided into two sub-themes of factors contributing to unhealthy behaviors and unhealthy behaviors. According to the thematic analysis, narcotic drugs use, caffeine, easy access to alcohol, low prices of alcoholic beverages, physical and social constraints, prolonged sitting, etc., were among the factors contributing to unhealthy behaviors. Also, items such as fastfood consumption, alcohol consumption, unhealthy diet, consumption of harmful beverages, unhealthy snacks, unhealthy foods, consumption of high-calorie foods, etc. were included in the category of unhealthy behaviors.

3.2 Environmental and ethical issues

The study's findings also highlighted important environmental and ethical issues. In terms of environmental concerns, activities such as exercising in natural environments, engaging in sports outdoors, purchasing

plastic-free products, using reusable water bottles, and opting for biodegradable packaging were most frequently mentioned. Ethical issues included supporting ethical brands, purchasing from health-focused companies, and avoiding cosmetics with harmful ingredients.

3.3 Generational signs specific to Generation Z

The data analysis revealed several unique characteristics of Generation Z. A key finding was the emphasis on healthy eating, which included health awareness, a preference for homemade foods, and plant-based diets. Additionally, the use of digital culture, technological innovations, and distinct styles and fashion emerged as significant factors, each with its own subcategories.

3.4 Mental and social health-related issues

This theme was one of the most important themes obtained because it had a high frequency and repetition. Issues related to mental and social health were divided into 4 categories, which included social and psychological factors, personal care and hygiene, physical health and medical concerns, and healthy lifestyle and health promotion. Each of these items also included several subcategories, some of which are shown in the Table 4.

Table 4. Mental and social health-related issue

Social and psychological factors	Personal care and hygiene	Physical health and medical concern	Healthy lifestyle and health promotion
Social pressures	Personal hygiene	Type 2 diabetes	Positive thinking
Work pressures	Skin health	High blood pressure	Release of happiness hormones
Body dissatisfaction	Skin care	Cancer	Regular check-ups

3.5 The role of the environment and society

Active lives and healthy habits are influenced both directly and indirectly by the environment and society. People can make healthy or unhealthy decisions based on the environment, which offers chances for social interaction and physical activity, and society, which establishes norms, regulations, and a common culture (39). To improve health behaviors, both factors need to be strengthened in harmony.

The findings of this study align with previous research in this area. The data analysis revealed several key factors, which were organized into various subcategories. These included Educational Tools and Practices, economic factors, cultural and supportive influences, physical and outdoor environments, social and environmental impacts, special places for Generation Z, interaction with nature, and participation in social events. As with other themes, this section is also divided into subcategories, which are summarized in Table 5.

Table 5. The role of the environment and society

Participation in social events	Interaction with nature	Special places of Generation Z	Social and environmental influences	Physical and outdoor environments	Supporting and cultural factors	Economic Factor	Educational Tools and Practices
Social classes	Using a bicycle instead of a car	Instagrammable places	Family influences	High rise buildings	Cultural background		Interactions
Participation in sporting events	Mountaineering	Cafes	Social support	Public transportation	Environmental conditions	High income	New educational tools
Participation in recreational sports	Activities in the park	Modern sports clubs	Social interaction	Green structure	Lack of Facilities		Communications

3.6 Sporting behaviors and physical activity

Active play, leisure activities, organized sports, active transportation, and physical education are some of the domains into which Carson & Hunter (2020) divided physical activity behaviors. They also divided physical activity intensity into three categories: light, moderate, and vigorous (40). The findings obtained from the present study were also consistent with these definitions, but in addition to these, it also extracted several other items.

Sports and physical activity behaviors emerged as one of the most important themes from the data analysis, further

categorized into several subthemes. After analyzing images, videos, and texts from the top articles on health behaviors and active lifestyles, sports and physical activity behaviors were divided into seven categories. This theme was identified as the main theme due to its high frequency and prominence. The seven categories include active lifestyle and physical activity, exercise and fitness training, health benefits, tools and equipment, activity duration, diverse environments, and activity intensity.

These items and their subcategories are briefly outlined in Table 6. Note that due to the diversity of codes in this section, only a selection of these items are included.

Table 6. Sporting behaviors and physical activity

Theme	Subcategories	
Active Lifestyles and Physical Activity	Having physically active friends	
	Using the stairs instead of the elevator	
	Limiting sedentary times	
	Healthy leisure time	
Exercise and Fitness Training	Patterns of active lifestyles	
	Personal trainers or coaches	
	Having an exercise program	
	Movement skills	
	Regular participation in physical activities	
Health benefits	Improved fitness	
	Physical and mental health	
	Getting fit	
	Vascular health	
Tools and equipment	Simple equipment	
	Treadmill	
	Using smartwatches	
Duration of activity	Long-term	
	Short-term	
Diverse environments	Sports at school	
	Activities at home	
	Activities in sports halls	Sports pools
		Sports stadium
		Modern sports clubs
	Outdoor space	Urban spaces
	Beaches	
	Parks	
Physical activity level	Light activity	Doing housework
		Activities in the yard
		Stretching Exercises
	Moderate activity	Cardiovascular training
		Resistance exercise
	Vigorous activity	Weightlifting
		Bodybuilding
	Group activities	Ball sports
		Group classes
	Individual activities	Roping
		Cycling
Running		

3.7 Healthy eating and diet

Eating fresh, varied, nutrient-dense foods, controlling portion sizes, and limiting sugar and saturated fats are all components of healthy eating (41). A balanced diet of fruits, vegetables, whole grains, and a minimal intake of processed foods and sugary beverages are all components of healthy eating, according to Lohan (42).

The results of the analyses in this study also supported these definitions, with healthy nutrition and diet identified as key factors in maintaining an active lifestyle and healthy behaviors. This theme was further divided into seven subcategories: dining environment, brand display, food selection, nutritious foods and dietary components, weight management and lifestyle, general health and disease prevention, and healthy eating and nutrition. Each subcategory contained its own unique elements, and a summary of this classification is presented in Table 7.

Table 7. Healthy eating and diet

Theme	Subcategories
Dining environment	Aesthetics of food plates Healthy cafes and restaurants
Brand display	Promoting specific products Health-oriented brands
Food selection	Use of healthy fats Healthy snacks Fruit smoothies Nuts Special diet Using organic and natural foods
Nutritious Foods and Dietary Components	White meat consumption Green and nutritious seeds Healthy oils Use of dairy products Fresh vegetables and fruits
Weight Management and Lifestyle	Quitting unhealthy eating habits Percent body fat Decreased body mass index Weight control
General Health and Disease Prevention	Coronary heart disease Chronic diseases Cardiovascular Health Protection against premature mortality
Healthy Eating and Nutrition	Adequate Water Intake Avoid fast food Use of natural sugars Avoid artificial sugars Healthy food pattern

3.8 Technology and digital role in health

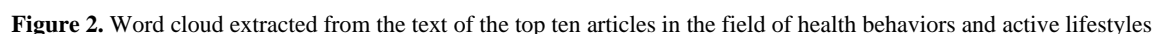
With the promise of improved access, effectiveness, and results, digital health technologies are revolutionizing the way healthcare is delivered and improved (43).

Given that Generation Z lives in a digital world, it is unsurprising that the role of technology and digital media emerged as a key theme in health behaviors. Data analysis revealed several factors within this theme, including the use

of smart technologies, influence from lifestyle influencers, advanced equipment, digital tools for better sleep, virtual networks, online exercise programs, digital habits, sharing content on platforms like Instagram and TikTok, and using movement reminder apps. After completing the coding process and extracting related concepts and themes, the final model of health behaviors and active lifestyles was developed from the analysis of YouTube images, videos, and the top ten Scopus articles in this field, as shown in [Figure 1](#).



overlapping, but these similarities reflect the dynamic relationships between health dimensions. In holistic health studies, themes often emerge due to shared characteristics. Additionally, [Figure 2](#) displays a cloud diagram from the top ten Scopus articles, highlighting the most frequently used terms.



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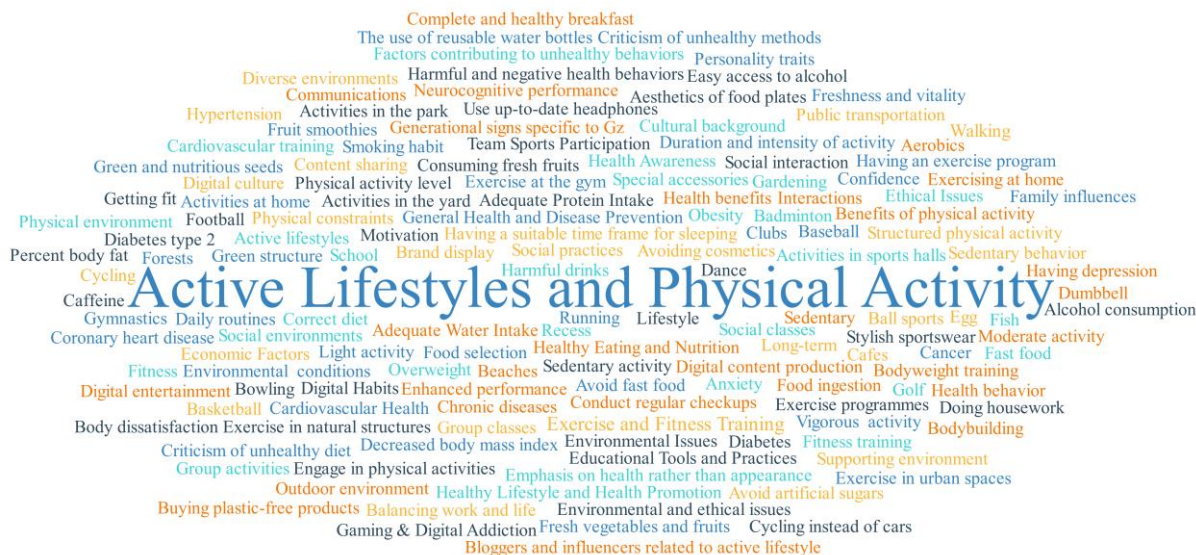


Figure 3. Cloud codes

4. Discussion and Conclusion

The goal of this study was to identify health behaviors related to an active lifestyle in Generation Z. To achieve this, AndySearch AI was used to extract photos and videos, while the top ten relevant Scopus articles were analyzed. A six-step thematic analysis resulted in eight key themes: unhealthy behaviors and obstacles, environmental and ethical issues, generational traits of Generation Z, mental and social health, the role of the environment and society, sports behaviors and physical activity, healthy eating and diet, and the role of technology and digital media in health. Each theme had several subcategories, which are detailed in the results section and summarized in tables. The study's findings align with much of the existing research on health behaviors and active lifestyles. A key theme identified was nutrition and healthy diet, with sub-themes such as general health and disease prevention. As Joubert et al. (2022) concluded, modifying risk factors—such as adhering to medications and adopting healthy habits—could prevent more than 80% of strokes and diseases linked to poor eating habits. (26). The results of Williams and colleagues' study also showed that some long-term cardiovascular (CV) issues can be prevented or significantly reduced in patients through health education initiatives and an active lifestyle that includes regular exercise (44).

The use of new educational tools and methods was another subtheme obtained from the present study, which was in line with the research of Williams and her colleagues. Another major theme that emerged from the study was economic, environmental, and social factors, demonstrating

that society and the environment can have a significant impact on health behaviors and active lifestyles. These findings were also in line with those of Gautam and colleagues, who found that children and adolescents from lower socioeconomic backgrounds were more likely than their peers to engage in unhealthy behaviors, such as substance abuse, early smoking initiation, consumption of high-energy foods, and low physical activity, while children and adolescents from wealthier families were more likely to engage in health-promoting behaviors, such as eating more fruits and vegetables, dairy products, leading an active lifestyle, and maintaining a healthy diet (45). These studies represent only a small portion of the evidence supporting the current study's findings. One key advantage of this study is its comprehensive approach, whereas previous research has typically focused on specific aspects. Another benefit is the choice of Generation Z as the sample, as they are a particularly sensitive social group.

This study also examined Generation Z's health habits related to an active lifestyle. The results indicated that growing up in the digital age has shaped their unique perspective on physical exercise and health. Personal preferences, heavy use of technology, and changing health-related attitudes significantly influence their choices and maintenance of healthy behaviors. Social, cultural, and environmental factors also play a role, and institutional supports, such as educational initiatives and public regulations, can encourage healthy living. These findings align with prior research but highlight the need to update health promotion strategies tailored to Generation Z's specific needs and characteristics. The conclusions'

generalizability is somewhat limited by limitations like the study's qualitative design and the particular statistical population; as a result, future research should examine more facets of this problem with larger samples and mixed methodologies. According to the study's overall findings, methods that align with Generation Z's digital, social, and motivational traits should be used in order to encourage an active lifestyle.

Authors' Contributions

All authors equally contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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None.

Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, data were collected from publicly available YouTube videos shared by content creators. Given the public nature and accessibility of these videos, explicit informed consent from the individuals appearing in them was not considered ethically necessary.

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