



# მედიცინისა და მენეჯმენტის თანამედროვე პრობლემები

საერთაშორისო, რეცენზირებადი, რეფერირებადი  
სამეცნიერო ჟურნალი

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From the Editor-in-Chief



ძვირფასო კოლეგებო!

შემოთავაზებული სამეცნიერო ნაშრომთა ჟურნალი განკუთვნილია მედიცინის, ეკონომიკის, მენეჯმენტის, ფიზიკური მედიცინისა და რეაბილიტაციის დარგის სპეციალისტებისათვის.

ჩვენ ვიმედოვნებთ, რომ ავტორთა მიერ წარმოდგენილი ნაშრომები ხელს შეუწყობს სამეცნიერო პოტენციალის გაძლიერებას.

მარინა ფირცხალავა  
ბიოლოგიურ მეცნიერებათა დოქტორი,  
პროფესორი, აკადემიკოსი,  
უნივერსიტეტ გეომედიის რექტორი

Dear colleagues!

The proposed scientific journal is intended for specialists in medicine, management, physical medicine and rehabilitation, economics.

We hope that the works presented by the authors will help to strengthen the scientific potential.

Marina Pirtskhalava  
*Doctor of Biological Sciences,  
Professor, Academician,  
Rector of University Geomedi*



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## Scientific Report

## Establishing the relationship between the coach and the adolescent in the volleyball training process

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### Abstract

An athlete's psychological preparation is a psychological pedagogical process in which the necessary physical attributes for a volleyball player are developed and positive personal qualities are fostered. The outcome of psychological preparation is also the formation of the athlete's sporting character. The coach directly leads the psychological preparation of the trainees. The coach should know best what type of psychological training a volleyball player needs. The main objective of our research is to examine the issues related to the establishment of the interaction between the coach and the adolescent in the volleyball training process. The paper discusses issues such as methods for improving management skills in volleyball training, the coach's role in forming self-awareness and self-assessment and the importance of self-control for young volleyball players.

**Keywords:** Managing the volleyball player's training process, psychological preparation of the athlete, positive personal development, relationship building.

### Introduction

Psychological factors play a significant role in achieving high results in both training and competition processes. Today, the training process for athletes is unimaginable without psychological preparation. Sports competition is not only a test of athletes' physical abilities but also a competition between personalities. Before an athlete competes, they develop as

a person over an extended period. The success of an athlete's efforts depends on how they have been shaped as an individual. As we have already mentioned, an athlete's psychological preparation is a psychological pedagogical process in which the necessary physical attributes for a volleyball player are developed and positive personal qualities are fostered. The outcome of psychological



preparation is also the formation of the athlete's sporting character.

The coach directly leads the psychological preparation of the trainees. The coach should know best what type of psychological training a volleyball player needs.

In addition to all of the above, volleyball helps young players gain psychological experience that will be beneficial not only during volleyball matches but also in their everyday lives.

The main objective of our research is to examine the issues related to the establishment of the interaction between the coach and the adolescent in the volleyball training process.

**Research method.** Finding and analysing literary material [1-5], studying the information collected over the years at the Georgian State University of Physical Education and Sports.

**Research results.** First and foremost, volleyball as a mechanism creates conditions for young players through which certain skills are formed and developed in athletes, which depend on various factors of different intensities, durations, and quantities in volleyball (this can be one factor, or several together).

Depending on the situation, young volleyball players are accustomed to changing the intensity of their attention, either strengthening or weakening it at certain moments. In everyday life, there are not many games or actions that develop such a skill of attention concentration in children.

Volleyball also greatly helps children in

selecting and processing information received from the environment.

From the vast flow of information, they must choose only what they need at the moment, which reflects information already present in their memory. Children also become accustomed to making decisions quickly. Cognitive processes such as receiving information, associating connections, memory storage, utilizing that storage, and the ability to make quick decisions particularly develop when a coach set demands that require the use of the aforementioned skills, of course, considering the capabilities of the children. The volleyball coach required the children to focus on several factors at once, which may cause their informational overload. This, in turn, complicates the development of cognitive abilities such as quick decision-making. Additionally, if the tasks set by the coach exceeds the children's capabilities, it may hinder their cognitive development.

The process of training young volleyball players involves improving management skills. People always try to manage the things or situations related to them. The ability to manage situations develops a person's self-confidence and personal strength; the lack of this ability in a person leads to feelings of helplessness, the sensation that all their efforts are futile and that they cannot change anything.

Feelings of helplessness are often characteristic of children and adolescents, which somewhat hinders their self-confidence and resilience at this age. Because of this, they often have a heartbreak and



sometimes even lose their respect.

When working with children, in any field, It is very important to develop their ability to manage themselves, not a sense of helplessness.

A lack of confidence in a child and adolescence can be overcome by creating circumstances where it will identify the ability to manage and control any event or volleyball, which in turn wakes up the faith and awakes self-confidence and has a positive impact on it.

Volleyball offers a variety of development opportunities to those involved, but their misuse by the coach will only exacerbate the child's feelings of helplessness. Volleyball offers many ferrous developments involved in it, although the trainer's misguided use of the child is even more aggravated.

When the coach offers players exercises that are appropriate to their abilities and they know what to do, they will feel that they can perform a particular exercise, that is, manage the situation, and if the demands of training exceed the players' abilities, they will feel helpless. Unfortunately, coaches do not take into account the age characteristics of children and in most cases, children give up on training (run away from the group). From the voluminous information flow already present in their memory, they have to select only what is needed at that particular moment.

Unfortunately, many young players feel helpless when they comply with the requirements for him, which may be the reason he does not even know exactly what to do.

### **Methods for improving management skills in volleyball training.**

All coaches, and especially those who work with children and adults, should be able to introduce children to confidence in themselves and not to be helpless. To accomplish this, the coach should apply to the following:

1. In order for (children) a young man to be able to make a volleyball requirement satisfaction, the coach should manage the training process to improve their programs gradually (consistently).

2. The goals set by the coach to the children should not be difficult achievement and should be consistent with their age characteristics and preparation.

3. The coach should offer exercises to the volleyball players they can perform.

4. The coach is obliged to explain to the trainees the goals of the exercise, which they are required to do this during this exercise and that they should work only in the light of their goals.

5. It is advisable for children to play mostly with their level of adversaries, to avoid being in a situation during the game that they cannot cope with, when the team has to play many games against stronger or sometimes weaker teams, the coach must ensure that most of the games still match the abilities of their players.

6. During the game, the coach should focus more on the actions of the players rather than the achieved results. During the course of the game, the coach should evaluate the individual actions of the players. Analyse the specific actions performed by the players



during the game. In this way, the coach will show the children the connection between the actions they performed and the results achieved. This, in turn, will help the children understand their own strengths.

7. It is important for the coach to always emphasize the players' efforts toward achieving the goal. If the coach discusses the actions that lead to winning the game (movement, ball reception, help in defence, passing, etc.) after the game, this will be enough for the children to connect them to the achieved results. If the actions discussed by the coach after the game require more precision (passing, defending, shooting), then training should focus specifically on refining those skills in order to achieve the desired results in the future.

8. The coach, despite the achieved results, should recognize the players for making the right decisions at the right times.

If a player knows from his coach that the right moment to attack occurs when he is free, then a pass is well made, and the coach should praise him, regardless of whether the ball went in or not. This way, the player develops the ability to make the right decisions in specific situations and will know what to do in similar circumstances in the future.

Children and adolescents develop the ability to manage the situation and make correct decisions while playing volleyball, which is very important. They feel that with tireless effort; they will always achieve the desired results. Developing such psychological aspects for children that will allow them to feel safe and capable will benefit them at any stage of their lives.

If a child discovers their ability to manage a situation during a volleyball game or practice, they become self-confident and feel their strengths, it is likely that they will continue to train in this sport. The coach is obliged to compile a list of actions that empower children's belief in themselves.

Self-belief is related to the feeling of one's own strength. Self-belief is an inner trust in oneself. In order to achieve a certain goal, self-belief is an internal process where a person has a real sense of existing difficulties on one hand while feeling capable of overcoming those difficulties on the other hand. Therefore, self-belief is always based on a person's real capabilities. Consequently, a person who has self-belief, in contrast to someone who is deprived of it, knows what abilities they possess and what they need to do to maximize those abilities.

With the help of a coach, they become aware of the difficulties present in the goal achievement process and know what actions to take to overcome these difficulties. Self-belief increases when a player feels their strength during practice or a game.

For young players, self-belief is extremely important in the process of shaping themselves as both volleyball players and full-fledged individuals:

- Self-belief largely determines the progress of young players. It enables the volleyball player to cope with the most challenging and tense situations during the game without losing hope for victory.

- Self-belief helps a person to cope with difficult situations in life and promotes their development of self-awareness and self-



evaluation. **Self-awareness and self-esteem of a volleyball player.** Self-awareness is based on a person's perception and understanding of themselves, while self-esteem is the likes and dislikes of everything a person perceives about themselves.

Self-awareness and self-esteem are generally not dependent on any specific activity; they are determined by their life experiences. The self-awareness and self-esteem of children and adolescents are unstable and easily change according to the situation. Their self-awareness and self-esteem are largely related to victories and defeats, so self-evaluation greatly depends on specific situations. For example, if a young person plays volleyball, their self-awareness and self-esteem are influenced by the results achieved during the game.

**Let's consider three conditional groups of trainees:** the first group consists of children whose self-awareness and self-esteem are not heavily dependent on their sports success. In such a group, it is possible to maintain and even strengthen players' self-confidence and their ability to manage situations.

The coach should pay special attention to the adolescents for whom volleyball plays a very significant role in their lives. In such cases, there may be no activity that is more interesting or enjoyable for them than volleyball. For such a player, volleyball is so important that he becomes indifferent to other problems, as volleyball can even become harmful in his life.

Example: Mariam is 13 years old and has recently started playing for the youth team. Her only concern and goal are to play well,

and when she fails to do so, she feels helpless. She demands a lot from herself, which is why she is always tense during practice and games; even the simplest comment from the coach affects her strongly. Therefore, Mariam suffers a lot. Recently, she missed several games due to an injury she sustained. Mariam is experiencing depression and considers giving up volleyball.

In this case, Mariam is not only putting her own sports career at risk but also undermining her capacity for self-awareness and self-evaluation. If a young athlete's self-awareness and self-evaluation are equated with their achievements in sports, this is dangerous and detrimental for them.

**The players in the second group** find themselves in a similar situation. Their self-awareness and self-evaluation are linked to their sports achievements at their age; such a condition adversely affects their self-awareness and self-evaluation, as they will inevitably experience both victories and defeats throughout their athletic lives, having both positive and negative periods.

In this case, the coach must separate their attitude towards the children as athletes and as individuals. There are two ways to do this:

1. The coach should focus on aspects of the players' lives that are not directly related to volleyball but have certain significance for children.

2. Proper planning and execution of training sessions. Developing the necessary skills for playing volleyball among the players contributes to a good psychological preparation environment, allowing the coach to foster children's self-awareness and self-



evaluation, regardless of varying degrees of achievement.

**Players in the third group** have very weak self-awareness and self-assessment. Volleyball, on the contrary, is the best means for the development of self-awareness and self-assessment for them, because in this case, their self-awareness and self-assessment are determined not by the outcome of the game, but by the effort and dedication they show directly during the game process.

**The coach's role in forming self-awareness and self-assessment.** The relationship among players can be crucial in shaping a player's self-awareness and self-assessment. In this case, the coach's actions are very responsible. It is absolutely unacceptable for the coach, especially in the presence of teammates, to use such expressions such as, for example, "Are you an idiot?" and "You always act like a fool!" are also unacceptable, as well as expressions that emphasize that the player not only makes mistakes at this moment but also has no prospects for good gameplay at all. For example: "You will never be able to do this, you can only make mistakes!" and others.

The coach's influence on children is very positive if he does not resort to the aforementioned "strategy" and instead presents players with clear and defined goals; - helps them achieve these goals; - avoids giving remarks that emphasize the child's physical attributes; - when discussing mistakes, explains to the players where and when the mistake was made, and gives them the opportunity to correct it.

**The importance of self-control for young volleyball players:** In order for a volleyball

player to show their best game and avoid impulsive actions, self-control is extremely significant.

During volleyball games, situations often arise that encourage children to learn self-control. For example: Salome is 12 years old and plays on the school team. She practices three times a week. Salome loves volleyball very much and tries to play as well as possible. She expects the same from her teammates. Several times, when her teammates made mistakes, Salome became very angry and even insulted them. The coach explained to Salome that her behaviour is wrong, resulting in the girl trying to control herself. When a teammate makes a mistake during the game, she encourages them or does not notice anything at all. She is more focused on her own actions, and as Salome's mother says, she has also become less impulsive in her daily life.

- Giorgi also plays volleyball; once during a game, he responded to the referee because, in his opinion, the decision to penalize Giorgi was incorrect. The coach did not field Giorgi in the second game and explained that the reason was his lack of self-control exhibited during the previous game, after which Giorgi always tries to control himself.

These examples indicate how children can be taught greater self-control. Any opportunity that is properly utilized by a coach will only be beneficial for the young ones. In the case of Salome and Giorgi, the coach made good use of the created situation. Many coaches, however, do not pay any attention to such situations created during the game in the process of child development.





## Conclusion

The possibilities of volleyball discussed above contribute to the development of personal, social, and psychological skills in children. The positive emotions experienced while playing volleyball in everyday life make this sport more valuable.

Positive emotions are beneficial for everyone. In the case of children and adolescents, volleyball can be one of those activities that is associated with positive emotions. If the positive emotions experienced during

volleyball outweigh the negative emotions children encounter in other life situations,

they will definitely continue to play and gain the valuable experiences that volleyball provides.

Volleyball should represent for the child: fun, an opportunity to improve sports skills on a daily basis. A team that respects them is a source of positive emotions (positive feelings, a sense of satisfaction, pride); a place where they feel the support of players and coaches. A place that resembles home.

## მწვრთნელის და მოზარდის ურთიერთკავშირის ჩამოყალიბება ფრენბურთის წვრთნის პროცესში

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### აბსტრაქტი

სპორტსმენის ფსიქოლოგიური მომზადება ფსიქოლოგიურ-პედაგოგიური პროცესია, სადაც მიმდინარეობს ფრენბურთელისათვის აუცილებელი ფიზიკური მონაცემების განვითარება და მასში დადებითი პიროვნული თვისებების აღზრდა. მწვრთნელი უშუალოდ ხელმძღვანელობს აღსაზრდელთა ფსიქოლოგიურ მომზადებას. თუ როგორი ფსიქოლოგიური მომზადება სჭირდება ფრენბურთელს ყველაზე უკეთ მწვრთნელმა უნდა იცოდეს. ჩვენი კვლევის ძირითად მიზანს წარმოადგენს მწვრთნელის და მოზარდის ურთიერთკავშირის ჩამოყალიბების საკითხების შესწავლა ფრენბურთის წვრთნის პროცესში. ნაშრომში განხილულია ისეთი საკითხები, როგორიცაა ფრენბურთის წვრთნის პროცესში მართვის უნარის გაუმჯობესების მეთოდები, მწვრთნელის როლი თვითშემეცნებისა და თვითშეფასების ჩამოყალიბებაში და ახალგაზრდა ფრენბურთელის თვითკონტროლის მნიშვნელობა.

**საკვანძო სიტყვები:** ფრენბურთელის წვრთნის პროცესის მართვა, სპორტსმენის ფსიქოლოგიური მომზადება, დადებითი პიროვნული აღზრდა, ურთიერთობის ჩამოყალიბება.





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**Reasoned Opinion****Some structural features of physical activity of younger school-age students (6-9 years old)***Tristan Gulbiani<sup>1\*</sup>, Manuchar Dvali<sup>1</sup>*<sup>1</sup>Georgian State University of Physical Education and Sport, Faculty of Coaches, Tbilisi, Georgia

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**Abstract**

The paper discusses the physical activity of younger school-age students (6-9 years) and the positive impact of physical exercises on the body of adolescents. The opinion was expressed that the formation of muscle mass and the musculoskeletal system of adolescents as a result of physical exercises does not always proceed evenly and consistently.

**Keywords:** physical performance of younger schoolchildren, muscle mass hypertrophy, aerobic and anaerobic training regimen, cardiorespiratory performance results, calendar age of younger schoolchildren, biological development, health promotion.

**Introduction**

The results of the studies showed that in younger (6-9 years old) schoolchildren, along with the increase in the dynamics of physical performance, the formation of physical qualities (strength, speed, flexibility, endurance, coordination, dexterity) takes place.

It is known that with each year of the life of schoolchildren of this age, significant changes occur in a number of physical factors that determine the effectiveness of muscular work capacity.

From a generalized point of view, these Properties are formed under the influence of the fact that with increasing

physical activity in aerobic training, the muscle mass of adolescents increases (muscle hypertrophy) (S.A. Dushanin, Moscow, 1984). It is currently scientifically proven that most of the physical functions of the body of younger school-age students improve between the ages of 6 and 10 (V.G. Kondrashov, Moscow, 1986). At the same time, maximum aerobic capacity is not related to the dynamics of those indicators that reflect the potential cardiorespiratory work capacity.

Based on the above, it is necessary to conduct a detailed study of the dynamics of physical performance in younger schoolchildren. Identification of the characteristics of the cardiorespiratory system is a determining and limiting factor in the muscular activity of the



body.

**Research method.** Finding and analysing literary material [1-3], studying the Information collected over the years at the Georgian State University of Physical Education and Sports.

**Research results.** Analysis of the effectiveness of the aerobic mechanism has shown the advantage of dynamic muscular activity over other functional activities. First of all, this concerns the strength of the anaerobic metabolism barrier.

The intensity of physical activity varies significantly among primary school-age children (6-9 years) and is independent of their biological development rate.

The heterogeneity of physical activity in primary school students, which is determined by the ability, strength, realization of potential capabilities and efficiency, has been established. It was found that physical working capacity is a key factor in the physical work of primary school students, regardless of their calendar age and level of biological development.

It was revealed that the structure of physical activity of primary school-age students is heterogeneous (non-uniform) in terms of functional changes in the cardiovascular system, quantitative indicators of physical abilities, and intense muscular activity.

It is desirable to include sports games in the physical activities of school-age students. Foreexample: mini-football, mini-basketball, handball, etc.

Particular attention should be paid to the inclusion of children of younger school age in the general physical education system, both in school and sports sections, where their individual physical abilities should be taken into account.

In relation to the degree of correlation of specific cardiorespiratory work, physical work should be moderately associated with indicators of aerobic efficiency. The main factor in the internal structure of physical work in schoolchildren (6-9 years old), regardless of calendar age and biological development, is a given that reflects the stability of the cardiovascular respiratory system under conditions of physical exertion.

## Conclusion

It was revealed that physical education of younger schoolchildren is one of the main links in the physical education system.

Based on many years of scientific observations, it has been proven that reasonable and standardized physical exercises conducted with younger schoolchildren become the basis for their physical development and the establishment of a healthy lifestyle in the future.



## უმცროსი სასკოლის ასაკის მოსწავლეების (6-9 წლის) ფიზიკური დატვირთვის ზოგიერთი სტრუქტურული თავისებურებები

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### აბსტრაქტი

ნაშრომში განხილულია უმცროსი სასკოლის ასაკის მოსწავლეთა (6-9 წლის) ფიზიკური აქტივობა და ფიზიკური ვარჯიშების დადებითი გავლენა მოზარდების ორგანიზმზე. გამოითქვა მოსაზრება, რომ ფიზიკური ვარჯიშების შედეგად მოზარდების კუნთოვანი მასისა და კუნთოვანი სისტემის ფორმირება ყოველთვის თანაბრად და თანმიმდევრულად არ მიმდინარეობს.

**საკვანძო სიტყვები:** უმცროსი სასკოლის ასაკის მოსწავლეების ფიზიკური მაჩვენებლები, კუნთოვანი მასის ჰიპერტროფია, აერობული და ანაერობული ვარჯიშის რეჟიმი, კარდიორესპირატორული მუშაობის შედეგები, უმცროსი სასკოლის ასაკის მოსწავლეების კალენდარული ასაკი, ბიოლოგიური განვითარება, ჯანმრთელობის ხელშეწყობა.

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## Original Research

## The Impact of Teej Songs/Music on Emotional Upliftment and Social Upliftment: A Cross-sectional Study

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### Abstract

#### Introduction

Music, as a universal language, evokes emotional and social responses that foster joy and bonding. Despite this, the impact of Teej songs on the emotional and social upliftment of Hindu women in Nepal is underexplored. This study investigates how Teej songs influence these aspects among women.

#### Methods

A descriptive cross-sectional design was employed with convenience sampling to gather data through an online survey of 427 females. Ethical approval was obtained from IRC-YHSA. The semi-structured questionnaire collected sociodemographic information, social media usage, song preferences, and included 5 items on emotional upliftment and 9 items on social upliftment. Descriptive and Chi-square tests were performed using SPSS.

#### Results

Chi-square tests indicate that Teej music significantly enhances emotional upliftment ( $\chi^2 = 9.61$ ,  $p = 0.037$ ) and social connectivity ( $\chi^2 = 6.68$ ,  $p = 0.035$ ). The data show a strong preference for both traditional and modern Teej songs, which play a key role in increasing social awareness. The predominant use of digital platforms like YouTube highlights changing music consumption trends.

#### Conclusion

The study confirms that Teej songs substantially boost emotional and social well-being. Both traditional and modern Teej music effectively promote emotional upliftment and social connectivity. The high engagement with digital media underscores the need to blend cultural traditions with modern technology. Teej music remains an essential cultural asset, enhancing community bonding and personal upliftment. Ongoing promotion and research are crucial for maximizing its impact on social cohesion and emotional health.

**Keywords:** Emotional Upliftment, Celebration, Cultural Music, Hindu Women, Social Upliftment, Teej Songs/Music.



## Introduction

Music, a universal language, has the profound ability to evoke deep emotional and cognitive responses, making it an essential component of human life. Research highlights music's capacity to generate joy and emotional depth through rhythm and melody [1]. Beyond mere enjoyment, music provides valuable insights into various brain functions, as noted by ancient Greek scholars [2]. Its unique ability to foster social bonding and communication underscores its importance in promoting social well-being. This recognition has led to the development of music therapy, which seeks to leverage these benefits to improve mental health and social cohesion.

According to Lia Peralta, music has shaped cultures and societies worldwide for generations. It possesses the power to alter moods, shift perceptions, and inspire change. While the personal nature of music might obscure its broader cultural impact, its influence on society is profound and historically rooted.

In Nepal, the Teej festival exemplifies the significant role of music in cultural and social practices. Celebrated by Hindu women who observe fasting, worship Lord Shiva, sing songs, and perform dances, the Teej festival integrates both traditional and contemporary music forms. This annual event showcases vibrant performances that bring together different generations, fostering joy and solidarity through cultural expression. The festival not only serves as a cultural celebration within Nepal but also extends to some parts of India, instilling renewed vigor and strength in participants and offering a respite from daily challenges. Studies, such as those by Monsoon et al. (2014), reveal that Teej, a vibrant monsoon festival in Rajasthan, India, remains cherished for its rituals, customs, and celebration of nature, emphasizing its role in connecting and maintaining relationships through shared cultural values [3].

With the advent of digital technology, the dissemination of Teej songs has expanded through platforms like YouTube and other online media. This technological advancement enables women to share their musical expressions and social messages more widely, promoting cultural heritage and community solidarity. The performance and sharing of Teej music not only serve as a means of cultural preservation but also enhance social cohesion and collective identity, fostering empathy, supporting networking, and building resilience within communities. This contributes to both cultural enrichment and economic growth.

This research aims to explore the role of Teej music in cultural preservation, community building, and individual well-being in the context of Nepal. Contemporary Teej songs, however, sometimes face criticism for diminishing traditional values due to modern influences and inappropriate elements. Studies, such as Niraula (2023), reveal that modern lyrics in Teej songs often focus on fashion and lifestyle, contrasting with traditional themes of marriage and longing, thereby shifting the tension between tradition and modern consumer influences [4].

The primary focus of this study is to investigate the impact of Teej music on emotional and social upliftment. It addresses questions regarding the importance of the Teej festival for Hindu women, how it is celebrated, and the influence of modernization and technology on this tradition. The study will examine how contemporary practices affect emotional well-being and social connections, highlighting the need to maintain and sustain traditional practices while adapting to modern influences. This research aims to contribute insights into women's emotional awareness, social awareness, and overall well-being, offering valuable perspectives for national development, women empowerment, and interpersonal relationship skills.





## **Theoretical Perspective, Review of Literature, and Hypothesis Development: Teej Songs/Music and Emotional Upliftment Theoretical Perspective**

The theory of Emotional Contagion posits that emotions can be transferred from one person to another through nonverbal cues, such as music [5,6]. During Teej, the communal experiences of singing and listening to traditional songs lead to a shared emotional state among participants, thereby enhancing overall emotional upliftment [7,6]. Social Identity Theory suggests that engaging in cultural rituals [8] like Teej, reinforces group identity and strengthens social bonds [6,1]). The collective participation in Teej songs and music fosters a sense of belonging, which contributes to emotional well-being and community cohesion [2,7, &8].

### **Empirical Research Studies**

**Research by Rickard, (2011) found that music significantly influences emotional responses by engaging underlying psychological mechanisms. Their study demonstrated that music could evoke strong emotional reactions, enhancing mood and emotional well-being [9]. Similarly, another study by Zaatar et al. (2024) revealed that music profoundly influences brain regions involved in sensory, cognitive, and emotional processing [1]. It underscores music's potential for therapeutic applications in cognitive disorders and enhancing social bonding [3]. Moreover, a study by Yi and Kim (2023) revealed that community music activities promote well-being through diverse and flexible approaches, emphasizing social components and musical accomplishments [10]. Researchers findings indicate that participation in music activities promotes social cohesion and collective emotional experiences [9,10]. Thoma et al., (2015) investigated everyday music listening as a powerful tool for emotional regulation and enhancing social interaction [11]. Together, these studies provide empirical support for**

**the hypothesis that participation in Teej songs and music can lead to significant emotional upliftment among festival participants.**

### **Hypothesis Development**

Based on the theoretical and empirical foundations, the hypothesis that participation in Teej songs and music significantly enhances emotional upliftment among participants during the festival is developed. The theory of Emotional Contagion explains how shared emotional experiences through music can elevate individual moods, while Social Identity Theory underscores the importance of cultural rituals in fostering a sense of belonging and social connection. Empirical evidence from studies on music's emotional and social impact further supports this hypothesis, suggesting that communal music activities during Teej can lead to improved emotional well-being and strengthened community ties. Thus, researchers proposed hypothesis; H1: Participation to Teej songs and music significantly enhances emotional upliftment among participants during the festival.

### **Theoretical Perspective**

#### **Social Identity Theory**

Social Identity Theory, proposed by Tajfel and Turner (1979), posits that individuals derive a sense of identity and self-esteem from their membership in social groups [12]. Participating in cultural activities such as Teej songs and music can reinforce this group identity, fostering a sense of belonging and unity among participants. This theory suggests that through shared cultural practices, individuals reaffirm their social identity, leading to stronger social bonds and community cohesion [12,5,9]. The communal nature of Teej celebrations, where music and dance play a central role, can thus enhance participants' identification with their cultural group, promoting social solidarity and cohesion.



## Social Capital Theory

Social Capital Theory, as discussed by Putnam (2000), emphasizes the value of social networks and the benefits derived from them [13]. Participation in Teej song and music activities can be seen as a form of social capital that strengthens community ties. These activities provide opportunities for interaction, cooperation, and the building of trust among community members [13, 4, 8]. By engaging in collective musical experiences, individuals can form and reinforce social networks, fostering a sense of mutual support and collective identity. This theory underscores the role of cultural activities in generating social capital, which in turn enhances social cohesion and community well-being.

## Literature Review

There is considerable evidence supporting the idea that Teej song and music activities can strengthen community bonds by providing shared experiences that promote social interaction and solidarity. For instance, a study by Van der Merwe & Morelli (2022) found that community music engagement fosters social cohesion by addressing power disparities and promoting unconditional welcome [14]. Joyful musical rituals create hope, which encourages cooperation, trust, and a sense of belonging, ultimately enhancing social cohesion and improving quality of life [14].

Similarly, a Nepal-based study highlighted that Nepal's Teej festival fosters joy and happiness among women, providing a sense of freedom and reunion with family within patriarchal societies [7]. Another study by Dalzell et al. (2015) emphasized the importance of cultural practices in the construction of social identity [15]. Dalzell et al. (2015) noted that participation in traditional music and dance helps individuals connect with their cultural heritage, reinforcing their social identity and fostering group cohesion. This aligns with the Notion that Teej songs and

music, as integral parts of Nepali cultural heritage, can enhance social upliftment by strengthening participation, cultural identity, and a sense of belonging [15]. A study by Grootaert et al. (2004) on social capital underscores the role of cultural activities in creating social networks and building trust. Similarly, a study by Laing & Mair (2015) found that music festivals can foster inclusion by enhancing participation, skill development, and education about social justice [16]. However, organizers often focus on attendees rather than local residents, limiting broader community engagement. This perspective supports the hypothesis that Teej music activities can foster stronger social connections and community bonding, as well as uplift through the creation of social capital [7,17].

## Hypothesis Development

Based on the theoretical perspectives and literature, the following hypothesis can be developed:

**Hypothesis:** Participation in Teej song and music activities fosters stronger social upliftment, connections, and bonding within the community. The theoretical focus provided by Social Identity Theory suggests that engaging in cultural activities like Teej songs reinforces social identity, leading to stronger social bonds. Social Capital Theory further supports this by highlighting the role of such activities in building social networks and trust. Empirical evidence from studies on community cohesion, cultural practices, and social capital indicates that participation in communal musical activities enhances social connections and a sense of belonging. Therefore, it is hypothesized that participation in Teej song and music activities will significantly contribute to social upliftment and stronger community bonding.

**Hence, the proposed hypothesis in this study is:**





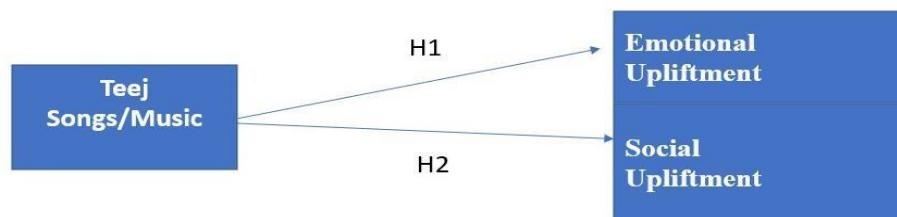
**H2:** Participation in Teej song and music activities fosters stronger social connections within the community.

### Conceptual Framework

This study explores the influence of Teej songs and music on emotional and social dimensions through two hypotheses. **H1** posits that participation in Teej songs and music significantly enhances emotional upliftment among participants during the festival,

suggesting that the cultural experience fosters positive emotional states. **H2** proposes that such participation strengthens social connections within the community, highlighting the role of shared cultural activities in building social bonds. The framework connects cultural engagement with individual well-being and community cohesion, aiming to show how Teej activities contribute to enhanced emotional health and stronger social networks.

**Impact of Teej Songs /Music on Emotional Upliftment and Social Upliftment**



*Figure 1: The Impact of Teej Songs and Music on Emotional Upliftment and Social Connection among Participants.*

### Methodology

Descriptive cross-sectional design was adopted to collect data from June to July 2024.

### Sample and sampling method

Female population, active in social media and residing in Nepal were included in the study and who did not complete the survey or provided inconsistent responses were excluded from the study. A convenience sampling method was deployed by sharing the Google document link on various social media platforms, including Facebook, Twitter, and LinkedIn. Google form was used as due to its user-friendly interface and wide acceptance for academic [18]. The total number of respondents was 427. Sample size was estimated as including 10% non-response rate and the total sample were 427 with response rate of 50%.

### Data Sources and Measurement

Semi structured questionnaire was designed to gather comprehensive information on the impact of teej songs/music on emotional upliftment and social upliftment. Part one includes: Sociodemographic information includes age, marital status, religion, family structure, occupation. Part two includes: use of social media and preference of music. Part three includes 5 items to measure emotional upliftment with 5-point Likert scale, ranging from 1(strongly agree) to 5 (strongly disagree). Part four includes 9 items to measure social upliftment with 5-point Likert scale ranging from 1(strongly agree) to 5 (strongly disagree). It takes around 15 mins to fill up the form. Data were analyzed by using descriptive analysis and inferential analysis including chi-square test in SPSS.

### Ethical consideration

Ethical approval was taken from Institutional



Review committee of Yeti Health Science Committee Participants were required to read and agree to an informed consent attached to Google form that explains the purpose of the study, their rights as participants, and the measures taken to protect their privacy. All responses were stored securely on Google form encrypted servers and downloaded for analysis using a unique participant ID to ensure anonymity. To ensure confidentiality, all survey responses were stored on encrypted servers accessible only to the research team.

### **Representation and Bias:**

While our sample includes a diverse range of ages, genders, and occupations, it may not fully represent the general population due to the convenience sampling method. Potential biases include a higher representation of individuals interested in health topics and those with internet access.

### **Validity and Reliability of instruments**

#### **Emotional Upliftment**

##### **Reliability Test**

The Cronbach's Alpha of .817 and .820 (based on standardized items) for 5 items indicates high internal consistency. This significant value confirms that the instrument is reliable for measuring the intended constructs.

##### **Factor Analysis**

The factor analysis indicates that the reliability test is significant. The communalities, ranging from 0.466 to 0.676, suggest a moderate to high level of variance explained by the factors.

The total variance explained by the principal component analysis is 58.326%, with an initial eigenvalue of 2.916 for the first component. The component matrix shows loadings between 0.683 and 0.822, indicating strong correlations. Therefore, the factor analysis is significant, demonstrating that the items measure a common underlying

construct effectively.

level of variance explained by the factors. The total variance explained by the principal component analysis is 58.326%, with an initial eigenvalue of 2.916 for the first component. The component matrix shows loadings between 0.683 and 0.822, indicating strong correlations. Therefore, the factor analysis is significant, demonstrating that the items measure a common underlying construct effectively.

### **Social Upliftment**

#### **Reliability Test**

Cronbach's Alpha of .884, consistent across standardized items, indicates high internal consistency for 9 items. This significant value confirms the instrument's reliability and suitability for the study.

#### **Factor Analysis**

Communalities range from 0.429 to 0.565, and component loadings vary from 0.655 to 0.752. These values demonstrate moderate to high factor loadings, indicating that the instrument effectively measures the intended construct. The significance of these results supports the instrument's reliability for the study.

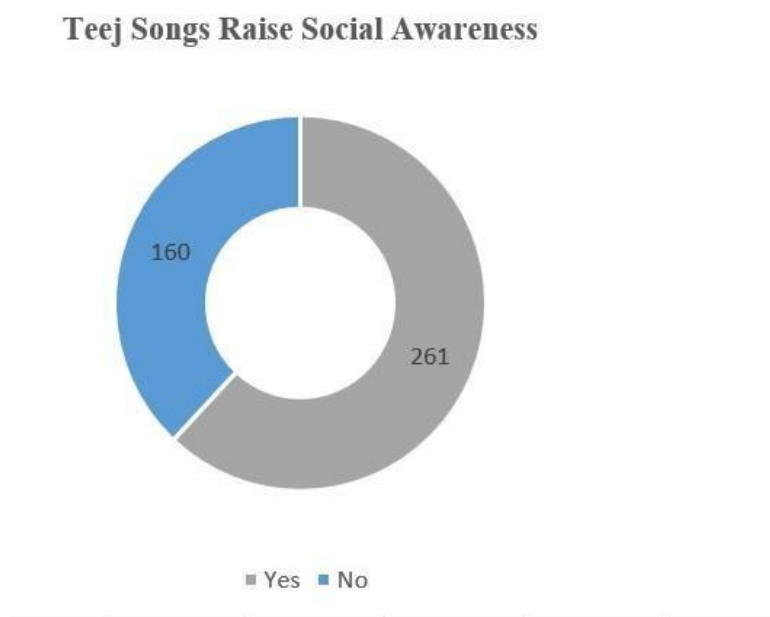
### **Results**

In a study examining the impact of Teej songs and music on emotional and social upliftment, reliability and validity tests were conducted, demonstrating significant values for the instruments used. Descriptive and chi-square tests were applied to analyze the association among traditional songs and music, modern songs and music, and both (traditional and modern) among participants.



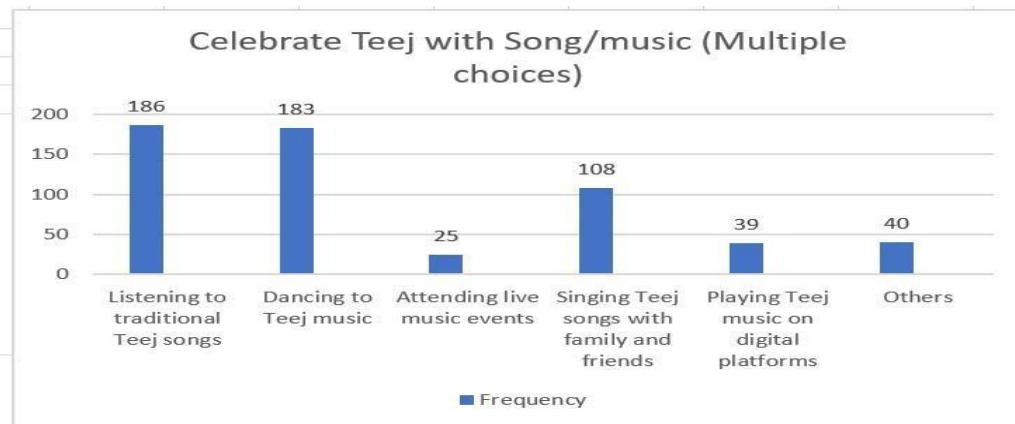
Variables	Frequency	Percent
<b>Age</b>		
18 to 34	218	51.4
35 to 49	109	25.7
50 to 65	97	22.9
Mean Age=27.07; Std. Deviation=7.71; Minimum=18.00, Maximum=65.00,		
<b>Marital Status</b>		
Single	258	61.1
Married	163	38.6
Divorced/Widowed	1	.2
<b>Religion</b>		
Hinduism	373	88.0
Buddhism	39	9.2
Christianity	12	2.8
<b>Family Structure</b>		
extended family	109	25.8
nuclear family	314	74.2

The majority of participants are aged 18 to 34 (51.4%), followed by 35 to 49 (25.7%) and 50 to 65 (22.9%). Most are single (61.1%), with Hinduism being the predominant religion (88%). Additionally, 74.2% live in nuclear families, while 25.8% live in extended families. The mean age is 27.07 with a standard deviation of 7.71.



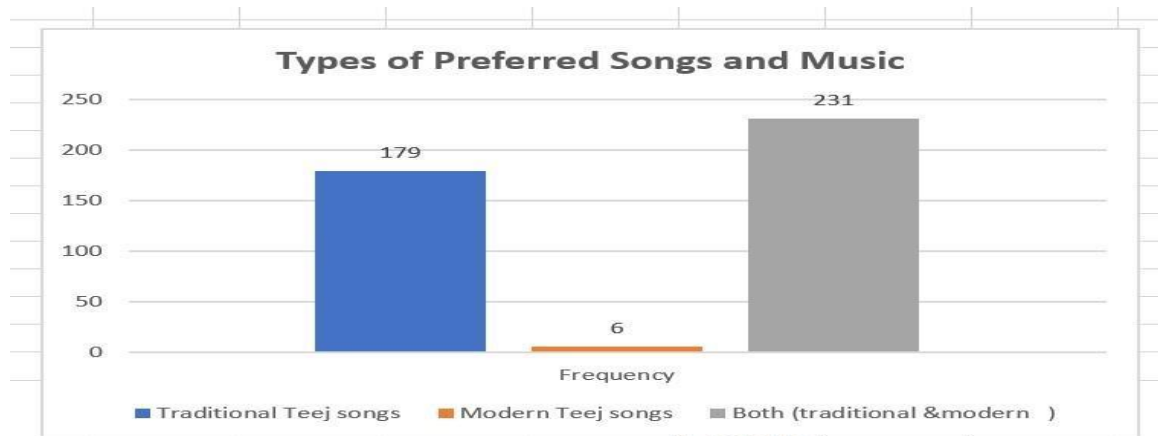
*Figure 2: Teej Songs and Social Awareness among Participants*

261 participants believe Teej songs raise social awareness, while 160 do not. A majority of respondents see Teej songs as effective in promoting social awareness.



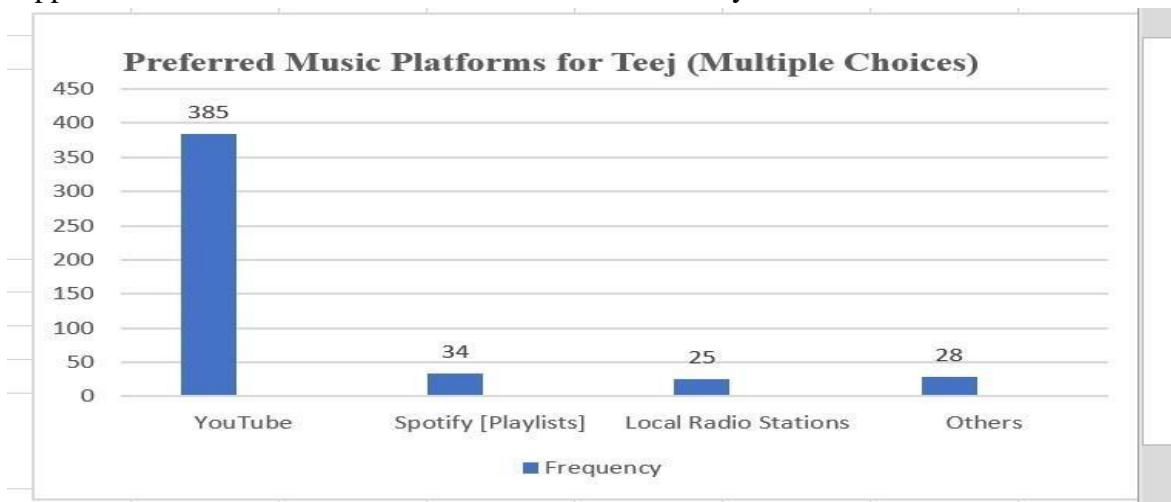
*Figure 3: Frequency of Celebrate Teej with Song/music among Participants.*

Listening to traditional Teej songs (186) and dancing to Teej music (183) are the most popular ways to celebrate. Other activities include singing with family and friends (108), attending live events (25), playing music on digital platforms (39), and other methods (40).



*Figure 4: Illustrate the types of Preferred Songs/Music among Participants.*

The data shows the following preferences: Traditional Teej songs are preferred by 179 participants, while 6 favor modern Teej songs. A significant number, 231 participants, enjoy both traditional and modern Teej songs. This indicates a strong inclination towards traditional Teej music, but also a notable appreciation for a mix of both traditional and modern styles.



*Figure 5: Frequency of Preferred Music Platforms for Teej among Participants.*



YouTube is the most popular platform with 385 selections, followed by Spotify playlists (34), local radio stations (25), and other platforms (28), reflecting diverse listening preferences.

**Table 2: Association between Group (Traditional, Modern, & Both Teej Songs/Music) among Participants**

Variables	Traditional Teej songs/Music	Modern Teej Songs/Music	Both (Traditional & Modern Songs/Music	Chi-Square	P-Values
<b>Emotional Upliftment</b>				6.618 <sup>a</sup>	.037
Low Level of Emotional Upliftment (Median)	108	3	111		
High Level of Emotional Upliftment (Median)	63	3	110		
<b>Social Upliftment</b>				6.684 <sup>a</sup>	.035
Low Level of Social Upliftment (Median)	111	3	115		
High Level of Social Upliftment (Median)	60	3	106		

This study discovers the influence of Teej songs and music on emotional and social dimensions through two hypotheses. **H1** posits that participation in Teej songs and music significantly enhances emotional upliftment among participants during the festival. The chi-square value for emotional upliftment is 6.618 with a p-value of .037, indicating a significant difference. Therefore, **H1** is supported. This suggests that Teej music, regardless of type, positively impacts emotional upliftment.

**H2** proposes that such participation strengthens social connections within the community. The chi-square value for social upliftment is 6.684 with a p-value of .035, also indicating a significant difference. Thus, **H2** is supported, suggesting that Teej music activities significantly enhance social connections. Based on these results, it is recommended to promote participation in both traditional and modern Teej music to enhance emotional and social upliftment within the community. Further research could explore the specific elements of Teej music that most effectively contribute to these benefits.

## Discussion

The study supports both hypotheses regarding Teej songs/music. Significant Chi-square values (9.61 for emotional upliftment,  $p = 0.037$ ; 6.68 for social upliftment,  $p = 0.035$ ) validate that Teej music enhances both emotional and social dimensions. Previous research aligns with these findings: Viola et al. (2023) highlighted that music, whether listened to or actively performed, promotes personal and social well-being [19]. Similarly, Miranda and Gaudreau (2011) found a responsive relationship between music and emotional health, noting that music listening improves positive affect and reduces stress [20]. Rickard (2021) supports this, showing that both experimental and everyday music exposure effectively boosts emotional states [9].

The study reveals that Teej music significantly enhances social connections, with a chi-square value of 6.68 ( $p = 0.035$ ). This corroborates previous evidence indicating that music fosters community cohesion [21,22,9&23. Hallam (2010) highlights that active music engagement benefits social development, helping individuals understand societal values and norms while enjoying the process [22]. Savage et al. (2021) argues that music's evolution



primarily served social bonding, integrating archaeological, biological, and psychological evidence to demonstrate music's role in enhancing social cohesion and cultural evolution [23]. Additionally, Forbes (2024) notes that singers, as community leaders, can address social connection crises through group singing, reinforcing music's role in promoting positive social interactions and well-being [23]. According to Neupane (2022), during Teej, women dress in vibrant red sarees and traditional jewelry, symbolizing love, passion, and marital bliss [24]. The festival includes singing traditional Teej songs and performing dances that express devotion and joy. In Nepal, Teej songs, celebrated annually in September and August, are integral to sharing personal experiences and addressing social issues [25]. Promoting Teej music can thus strengthen emotional well-being. In this study, the discussion centers around the role of Teej songs in fostering personal and social awareness. The data reveals a predominantly young demographic, with a mean age of 27.07 years ( $SD = 7.71$ ), consisting mainly of single individuals and those from nuclear families. This demographic profile aligns with previous research indicating that younger adults are more engaged in cultural and social activities [20].

A significant finding is that 261 participants believe Teej songs enhance social awareness, reflecting a widespread perception of these songs as a vehicle for promoting social values. This supports earlier studies suggesting that music can serve as a powerful tool for socialization and awareness [7,26, &16]. The preference for traditional Teej songs among 179 participants, along with the enjoyment of both traditional and modern songs by 231 participants, highlights a dual appreciation that bridges cultural heritage and contemporary influences. This aligns with findings by Ashforth & Mael (1989) and Niraula (2023), who noted that traditional music often retains

cultural significance while adapting to modern tastes [8,4].

The popularity of YouTube as the primary platform for accessing Teej songs, with 385 selections, underscores the role of digital media in contemporary music consumption. This trend is consistent with research by Marzo et al. (2024) and Thapa et al. (2023), which observed a significant shift towards digital platforms for music listening and entertainment [27,28]. The high engagement with both traditional and modern Teej songs suggests a dynamic interaction between maintaining cultural traditions and embracing modernity, reinforcing the idea that cultural practices evolve while retaining core elements [3,9,27].

Overall, the findings suggest that Teej songs effectively contribute to social and personal awareness, connection, bonding, and upliftment. The blend of traditional and modern elements in these songs resonates with a broad audience, indicating their continued relevance and impact in the digital age. This underscores the importance of integrating both traditional and contemporary elements in cultural practices to foster greater social connectivity and awareness [28,29,30,&4].

### **Recommendation**

Based on the findings, it is recommended that cultural organizations and community leaders actively promote Teej songs and music to enhance both emotional and social well-being. Given the significant values indicating that Teej songs and music foster emotional upliftment and social connectivity, efforts should be made to encourage its continued practice. This includes integrating Teej songs into community events and digital platforms to reach wider audiences. Additionally, since the majority of participants scored well with both traditional and modern songs and music, it is important to consider incorporating both types while reflecting cultural values and minimizing





Excessive modernization. It is essential to avoid inappropriate lyrics in songs and to respect cultural and traditional norms. These findings suggest that celebrating Teej festivals with songs and music can preserve traditional culture, enhance personal and social branding, and help spread cultural practices within wider communities, potentially increasing tourism, business etc. Moreover, it provides an opportunity for women to express their feelings, experiences, and demonstrate their singing and dancing abilities. Overall, the findings suggest that this is one of the best ways to deliver meaningful messages. Future research should explore how different types of Teej songs and music can be used to address specific social issues and emotional needs, enhancing the effectiveness of music in community cohesion.

#### Limitations

The study is limited by its reliance on self-reported data, which may introduce response biases. Additionally, the focus on a specific demographic (students, teachers, and others) may not fully represent the impact of Teej songs and music across all groups. Furthermore, the study exclusively utilized a female population, which limits the ability to generalize findings to the male population. The study's cross-sectional design also restricts the ability to assess changes in socio-emotional well-being over time.

#### Conclusion

This study highlights the significant role of Teej songs and music in enhancing both emotional and social dimensions of well-being. The data, with a mean age of 27.07 years,

years, revealed a young demographic predominantly engaging with both traditional and modern Teej music. The Chi-square analysis confirms that Teej music significantly promotes emotional upliftment and social connectivity, aligning with previous research on music's impact on well-being. The preference for traditional Teej songs, along with a strong inclination towards both traditional and modern music, underscores a blend of cultural heritage and contemporary influences. The high engagement with digital platforms, especially YouTube, reflects a shift in music consumption habits, reinforcing the importance of integrating traditional cultural practices with modern technology. Overall, Teej songs play a vital role in fostering social awareness, community bonding, and personal upliftment, making them a valuable cultural asset in the digital age. This underscores the need for continued promotion and research into the effects of Teej music on social cohesion and emotional health.

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Data privacy has been maintained and respected in accordance with the wishes of participants and the organization.

#### Task Distribution

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## ტიჯის სიმღერების/მუსიკის გავლენა ემოციურ და სოციალურ ამაღლებაზე: ჯვარედინი კვლევა

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### აბსტრაქტი

#### შესავალი

მუსიკა, როგორც უნივერსალური ენა, იწვევს ემოციურ და სოციალურ რეაქციებს, რომლებიც ხელს უწყობს სიხარულსა და კავშირების დამყარებას. აღნიშნულის მიუხედავად, ტიჯის სიმღერების გავლენა ნეპალში ინდუსტრი ქალების ემოციურ და სოციალურ ამაღლებაზე არასაკმარისად არის შესწავლილი. წარმოდგენილი შრომა იკვლევს, თუ როგორ მოქმედებს ტიჯის სიმღერები აღნიშნულ ასპექტებზე ქალებში.

#### მეთოდები

427 ქალის ონლაინ გამოკითხვის საშუალებით, მონაცემების შესაგროვებლად გამოყენებულ იქნა აღწერითი ჯვარედინი კვლევის დიზაინი, მოსახერხებელი შერჩევის გამოყენებით. ეთიკური დამტკიცება მიღებული იქნა IRC-YHSA-სგან. ნახევრად სტრუქტურირებული კითხვარი აგროვებდა სოციოდემოგრაფიულ ინფორმაციას, სოციალური მედიის გამოყენებას, სიმღერების პრეფერენციებს და მოიცავდა 5 პუნქტს ემოციური ამაღლების და 9 პუნქტს სოციალური ამაღლების შესახებ. აღწერითი და ბი-კვადრატ ტესტები ჩატარდა SPSS-ის გამოყენებით.

#### შედეგები

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## დასკვნა

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**საკვანძო სიტყვები:** ემოციური ამაღლება, ზეიმი, კულტურული მუსიკა, ინდუისტი ქალები, სოციალური ამაღლება, ტიჯის სიმღერები/მუსიკა.

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## Scientific Report

# The health-improving role of sport based on the example of Georgian wrestlers' achievements at international sporting events

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### Abstract

In the modern world, observing sports, particularly wrestling, from both a physical and a scientific-medical perspective, is of paramount importance. The trends and dynamics of this sport develop over time and change over the years and, as it turns out, it is positively correlated with improvements in mass health levels. This article is based on the analysis method developed by the United World Wrestling Organization (Performance Data Analysis – PDA), which allows us to study the current global trends in wrestling, technical and tactical characteristics by weight category, evaluate the performance of Georgian athletes in important international competitions, and draw appropriate conclusions. The paper analyzes statistical data, important facts, and the performance of Georgian wrestlers in major competitions held in 2021, including the Olympic Games, World and European Championships.

**Keywords:** Performance Data Analysis (PDA), Championships, standing position, „suflex“, take downs are often executed, GUT WRENCH, The choke with pull-ups (LIFTS), Athlete, wrestler, The post-COVID period, "WIN-LOST".

### Introduction

The current method of analysis developed by the International Wrestling Federation, based on the Internet platform (Performance Data Analysis - PDA), allows for the creation of a vast number of scientific and research works in wrestling. It is possible to obtain data as a result of qualitative analysis of wrestling elements executed at major

championships over the last four years, therefore, it is clear in which direction world wrestling is heading when it comes to the technical and tactical parameters of this sport. Georgian wrestlers have won 67 medals at the Olympic Games, World and European Championships in a four-year cycle. Our team is considered one of the strongest teams in the world. Along with the above statistics, the



work also includes an analysis of the performance of Georgian athletes.

PDA analysis contains electronic tables and graphs that review: (Basic information about matches; Review of all matches – standing/parterre points and technical/other points; Overview by weight category – standing/parter points & WQ/min; Overview by weight category – technical/other points and WQ/min; Overview per national team – basic data (standing/parter – technical/other points and WQ/min); Performance of national teams – points WIN / national teams – points LOST / national teams; Review of medal matches (I-II, III-V); Review of % points for all matches (final, bronze medal match); Review of timekeeping points per minute (all matches); Most successful wrestler (MSW), best wrestlers by technique, techniques for all wrestlers "WIN" and "LOST").

The materials are presented on a publicly available PDA platform. PDA analysis allows national teams to conduct research, improve crucial components, and advance the level of wrestling in the country. What's more, it is possible to work on scientific papers based on the materials.

Part I of the paper will discuss the outstanding events of 2021, important trends, and the performance of Georgian athletes at the championships.

## **Main body**

### **Greco-Roman wrestling**

#### **2021 – European Championship**

The 2021 European Championship was hosted by Poland. It is worth noting that

1483 points were scored in 198 matches, which is an average of 7.49 points per match. Most of the points scored are accumulated in the 2nd minute, which is logical, since this is when the “passivity” point is recorded, and the athletes are given the opportunity to perform movements from the ground.

56.98% of the overall points are scored in the standing position, and the remaining 43.02% in the “parterre”. Nevertheless, if we analyze individual movements, the most popular is the GUT WRENCH, which makes up 27.11% of the elements performed.

Statistics show that the style and dynamics of the tricks performed vary dramatically depending on the weight. For example, in relatively light weights (up to 77), wrestlers try to grab their opponent from the chokehold and perform high-amplitude throws, while in heavy weights (from 77), they more actively use flips on the ground. In the standing position, the highest number of points is recorded using “passivity”, as for tricks, the so-called „suflex“ and take downs are often executed.

One noteworthy detail was observed at the 2021 European Championships. In 9 out of 10 weight categories, more points are scored standing than on the parterre. The exception is the 77 kg weight category, where 51.37% of tricks are performed on the “parterre” - the difference here is minimal. The biggest difference between the two directions is recorded in 97 kg (52.48%), where 76.24% of tricks are performed standing, and only 23.76% from the floor.

The Georgian team competed in all ten weight categories at the continental championship.



Our total at the competition was 1 gold, 1 silver, and 2 bronze. Shmagi Bolkvadze became the champion in the 72 kg weight category, Iakob Kajaia won silver in the 130 kg, and Leri Abuladze (63 kg) and Ivango Rikadze (82 kg) won bronze medals. As for the technical-tactical analysis, it is worth noting that, unlike the general trend, the national team scores more points in the snatch (76) during the attack than in the standing position (47), while most of the points lost (69 points) come in the standing position, only 21 on the ground. This means that the Georgian team has a high performance in the snatch and is one of the best, although it scores relatively fewer points from the standing position and concedes more. If we express it as a percentage, 62% of the points scored by the team in the mentioned tournament were made from the ground and only 38% from the standing position, while, as we saw above, these figures are almost equal in modern wrestling. If we turn to the defense component, up to 77% of the points lost come from the standing position.

The team's main "weapon" is the choke turn. Out of 123 points accumulated by the Georgian national team at the mentioned championship, 26 points were gained by activity, second to the technique points, making up 56. According to separate data, our athletes were distinguished in several components, among which Nugzar Tsurtsumia was in 3rd place by points gained from "suflex" - movement, with which the wrestler from Khobi gained 4 points. In the prior-mentioned GUT WRENCH, Leri Abuladze took second place, gaining 16

points, and Iakob Kajaia, 14, took third place in the calculation.

In this analysis, the champions' column is separated, which allows us to deeply analyze Shmagi Bolkvadze's wrestling. The athlete from Adjara played a total of 4 full matches (24 minutes), scored 12 points, and only gave up 2. Half of the points he earned were due to his activity; he knocked down his opponents on the ground twice (4 points), "blocked" his opponent on a counterattack once, and earned a point due to an incorrectly protested challenge by his opponent once. Of the 2 points he lost, 1 was due to passivity, the other - for leaving the zone. Bolkvadze lost only in the finals of the mentioned championship, by just a few seconds; the rest of the time he either won or the score was 0-0 on the scoreboard. The Georgian athlete won all matches against his opponents by at least 2 points and gained the continental championship title with pragmatic, powerful wrestling, primarily in the standing position.

### **2021 – Olympic Games**

The Olympic Games were held in Tokyo in the summer of 2021. As you know, due to the pandemic, the event was held a year later than in 2020. In 115 matches, athletes scored 798 points, which is more than 10 hours spent on the mat and an average of 6.94 points accumulated per match.

Unlike the European Championship, the increased percentage of points scored in the standing position is noticeable - 59.15%. Although only 40.85% of the tricks in the choke are completed, if we consider individual movements, there are the "parterre" movement and the GUT WRENCH that are





The most popular. 23.06% of the points are accumulated by flips from parterre.

According to the accumulation of points, the most productive weight category turned out to be the 67 kg weight category. Athletes in this weight category scored 161 points. The trend is also maintained that athletes are more actively collecting points in the standing than in the parterre. However, in the heavyweight category, it is the opposite. (55.05% in snatch, 44.95% in standing).

At the Olympic Games, the Georgian national team won 4 out of 6 possible licenses and finished the competition with a silver medal. Iakob Kajaia took second place in the 130 kg weight category, Ramaz Zoidze (67 kg) lost the bronze match, and Lasha Gobadze (87 kg) and Giorgi Melia (97 kg) withdrew from the competition at an early stage.

As for the technical-tactical analysis, in Tokyo, Georgian athletes gained 38 points and lost 34, unlike the European Championship, there is practically no difference between the points lost and gained in both the standing and snatch. It is also worth noting that Ramaz Zoidze scored 18 of the 38 points gained.

Georgian athletes scored the most points in standing (52.63%), and in the parterre - 47.37%. This time, the wrestlers also scored the most points in parterre with a turn (GUT WRENCH) - 10, and in second place were the points received from warning opponents (9).

According to separate data, 2 Georgian athletes can be distinguished. Ramaz Zoidze scored a total of 8 points in two standing

movements - HIP TURNING THROW and FORWARD BENDING THROW, and took the leading places in both indicators. Lasha Gobadze scored 2 points in each, the side and ground counterattacks, and was also among the leaders in this movement.

### **2021 – World Championship**

The 2021 World Championship was held in Oslo, Norway. The total number of matches was 278, and 2099 points were accumulated. The athletes spent almost 23 hours on the wrestling mat, scoring an average of 7.55 points per match.

The wrestlers scored 54.07% of their points in standing and 45.93% in parterre, which is similar to the statistics recorded at the European Championship. It is worth noting that the highest number of points at the World Championship was recorded in “passivity” (18.06%), which indicates pragmatic wrestling. 2nd and 3rd places come from points gained from the choke - 17.44% from the choke with a twist (GUT WRENCH) and 17.68% from the choke with pull-ups (LIFTS).

According to statistics, the most points (314) were collected in the 77kg weight category. In this weight category, 50.96% of the points are scored on the snatch, a similar situation is in 82 kg, where 51.09% of the tricks are performed on the so-called parterre. Only in these two weight categories are most of the tricks performed on the “parterre”. In the remaining 8 weight categories, the points scored in the standing position are higher. The biggest difference in this regard is observed in the heavyweight category, where the difference was



approximately 29%, and 64.66% of the points were scored in the standing position, while in the snatch, 35.34%.

The Georgian team traditionally participated in the World Championship with 10 athletes and won 5 medals. Leri Abuladze won silver in the 63kg category, while Nugzar Tsurtsumia (55kg), Ramaz Zoidze (67kg), Lasha Gobadze (87kg), and Iakob Kajaia (130kg) won bronze medals.

As for the technical-tactical analysis, unlike the European Championship, the national team scored more points in the standing position (81) than in the clean and jerk (55). Most of the points lost (58 points) came from the standing position, only 22 from the ground.

Unlike the European Championship, the team's performance follows the general trends, and this time Georgian athletes also scored more points in the standing position (59.56%) than in the floor position (40.44%). The most points were obtained by the GUT WRENCH in the parterre (28), and in second place were the points obtained by warning the opponents (24). It is worth noting that in the parterre, the team is one of the best in the defensive component, and only 27.50% of the tricks performed were on the "floor position". According to separate data, 3 Georgian athletes can be distinguished. Leri Abuladze took one of the leading places with points obtained from the GUT WRENCH in the parterre. he performed 6 spins and, accordingly, obtained 2 times more points. A popular element among the leaders, the so-called TAKEDOWN was performed by

Nugzar Tsurtsumia, obtaining 6 points from it. Ramaz Zoidze stood out in two components. The Adjarian athlete scored 16 points with the "HIP TURNING THROW" and was first in this indicator, and in the second movement (FORWARD BENDING THROW), he scored 4 points and was third. In total, Zoidze scored 33 points in 4 matches and was the best from our team in this indicator.

## Conclusion

In 2021, in the post-COVID period, all three large-scale events were held - the Olympic Games, the European and World Championships. A total of 591 matches were held at these three tournaments, where wrestlers scored an average of 7.32 points. It is worth noting that several trends were identified. First of all, more points are scored in standing than in parterre, although the difference between them is not so great. This indicator was similar at all three events. The wrestlers' "main weapon" is the GUT WRENCH - with this movement, athletes scored the most points at the European Championships and the Olympics, and it was the 2nd most popular movement at the World Championships. It is worth noting that strong teams are equally successful in both standing and parterre, and there is a noticeable balance in both points gained and lost.

The Georgian national team ended 2021 with 10 medals (1 gold, 2 silver, 7 bronze). The most consistent wrestler is Iakob Kajaia. The Tskaltubo heavyweight won silver medals at the Olympic Games and Continental Championships, and bronze at the World Championships. Noteworthy Leri Abuladze, who competed in a non-Olympic weight





category and managed to win medals at both major tournaments, and was also one of the leaders of the GUT WRENCH movement, mentioned more than once above. The gold medal won at the European Championships was the only one for the team in 2021. As noted, Shmagi Bolkvadze managed to win with pragmatic, powerful,

and offensive wrestling. The most offensive member of the team this year was Ramaz Zoidze - the athlete from Adjara won bronze at the World Championships, but his wrestling style was also outstanding, thanks to which Ramaz was one of the best not only among Georgians, but also in the world, both in terms of scoring points and his diverse tricks.

## სპორტის გამაჯანსაღებელი როლი ქართველ მოჭიდავეთა საერთაშორისო სპორტულ ღონისძიებებზე მიღწევების მაგალითზე

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### აბსტრაქტი

თანამედროვე სამყაროში სპორტზე, კერძოდ, ჭიდაობის სახეობაზე დაკვირვება, არა მხოლოდ ხალიჩაზე, არამედ სამეცნიერო-სამედიცინო პერსპექტივიდანაც, უმნიშვნელოვანესია. ამ სპორტის სახეობის ტენდენციები და დინამიკა დროთა განმავლობაში ვითარდება და წლებთან ერთად იცვლება და, როგორც ირკვევა, პოზიტიურ კავშირშია მასობრივი ჯანმრთელობის დონის გაუმჯობესებასთან. ამდენად, ეს სტატია ეფუძნება გაერთიანებული მსოფლიო ჭიდაობის ორგანიზაციის (Performance Data Analysis – PDA) მიერ შემუშავებულ ანალიზს, რომელიც საშუალებას გვაძლევს შევისწავლოთ ჭიდაობის მიმდინარე გლობალური ტენდენციები, ტექნიკური და ტაქტიკური მახასიათებლები წონითი კატეგორიების მიხედვით და შევაფასოთ ქართველი სპორტსმენების გამოსვლა მნიშვნელოვან საერთაშორისო ასპარეზობებში და გავაკეთოთ შესაბამისი დასკვნები. ნაშრომში განხილულია სტატისტიკური მონაცემები, მნიშვნელოვანი ფაქტები და ქართველი მოჭიდავეების გამოსვლა 2021 წელს ჩატარებულ ძირითად შეჯიბრებებში, მათ შორის ოლიმპიურ თამაშებში, მსოფლიოსა და ევროპის ჩემპიონატებზე.

**საკვანძო სიტყვები:** შესრულების მონაცემთა ანალიზი, ჩემპიონატები, დგომში, „სუპლექსი“, მოგვერდი, „შიგა გასაღები“, ჩოქბჯენი, სპორტსმენი, მოჭიდავე, პოსტკოვიდური პერიოდი, "მოგება-წაგება".

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**Scientific Report****The Role of Business Communication in the Dental Market***Levan Lazviashvili*

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2025 2Revised: March 11,  
2025 2Accepted: March 17,  
2025,**Abstract**

In order to gain a reputation for a medical center in dentistry, at the initial stage it is necessary to study the target audience, which is associated with familiarizing themselves with the conditions that ensure trust in their clinic. It is necessary to talk with patients on this topic during the initial consultation. It is the messages coming from the patients that should be reflected in the subsequent advertising campaign. Patients pay attention to: the degree of persuasiveness of doctors, effective communication tactics, the absence of aggressive persuasion, the flexibility of the character and behavior of medical personnel, and in general, the explanation of the entire business process.

**Keywords:** Treatment plan. Team interaction. Financial transparency. Process perspective. Organizational problem.

**Main content**

The clinic management should imagine itself in the place of a potential patient and name the criteria by which it would assess reliability, for example:

- Offering a reasonable fee and informing the rate in advance;
- Implementing positive discrimination for a certain segment [1];
- Taking into account insurance contributions;
- Differentiating pension contributions;
- The ratio between price and cost calculation;
- Offering additional treatments within a single treatment process.

Since patients are the source of information about the dental center and are able to recommend it to reference groups [2] (it is no longer necessary to spend additional costs on integrated marketing communications to attract them), it is important that both the doctor and the administrator carry out responsible marketing and receive information from patients about their satisfaction. A convincing presentation of a dental clinic means that the clinic should place substantiated facts on the website about the competence of doctors who should solve a specific problem. At the same time, preference

should be given to documentally confirmed true information about them from their practical biography, which goes along the line of rational thinking of patients, rather than praising doctors [3]. The website should reflect information about the interior of the dental center, about suppliers of medical technologies, and justification of price differences [4].

## Research

The research clinics have decided to purchase the following technologies: 1. Using the Flexion Twin microscope, it is possible to detect microcracks and fractures in the tooth root that are not visible to the naked eye. 2. iTero Element 2 is a scanner designed to make the doctor's work faster, better and more efficient. It allows for the integration of modern digital technologies into workflows. 3. Amann Girrbach Artex is a particularly precise, flexible and clear system for simulating functional jaw movements. In the case of cosmetic medicine. The central benefit: maintaining beauty.

The following organizational problems should be considered when managing a dental clinic:

1. Shifting priorities from the Production sphere to the spheres of marketing, finance and management technologies. In order to avoid organizational risk, it is advisable to have an optimal ratio between potentially strong financial

management and adequate business processes.

2. The organization's top management continues to do absolutely everything, instead of focusing on solving strategic problems. As a result, neither strategic objectives nor current tasks are set properly. To change the psychological climate in the organization, personnel must see the strategic perspective, perceive the goals and significance of their activities.

3. If the formulation of the enterprise's mission and strategic goals is carried out in the form of a PR campaign, this leads to a discrepancy between the declared mission and strategic goals. As a result, personnel are disoriented. It is important that strategic goals should reflect reality and provide appropriate material and moral incentives, a sense of time and effort.

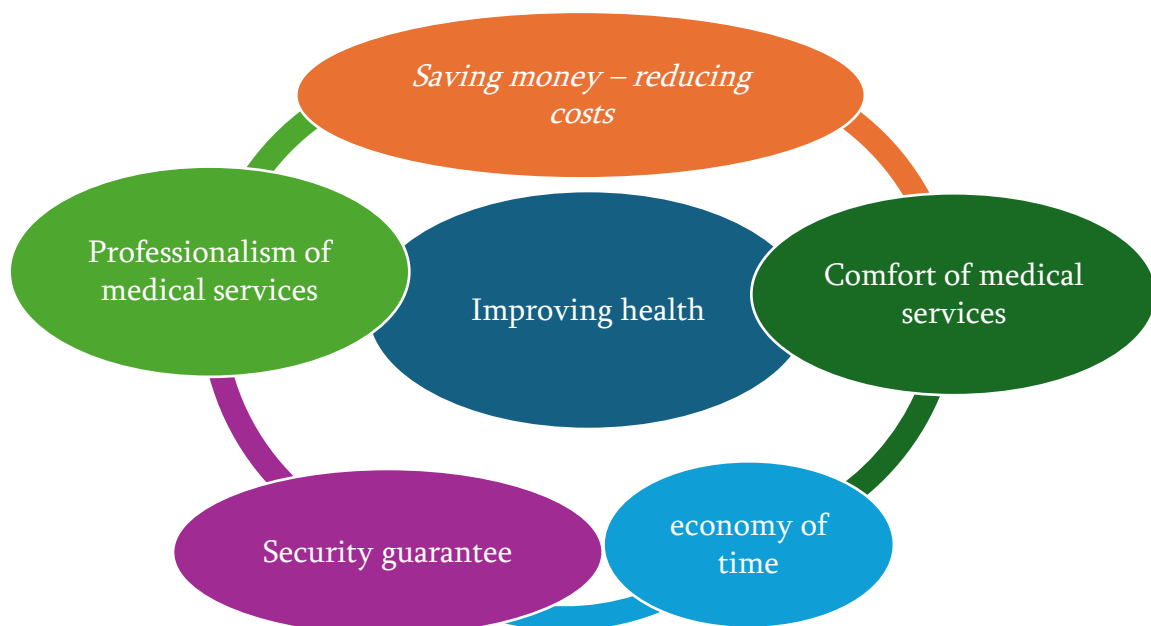
4. The organization's management does not have complete information about the real course of business processes. The solution is to implement the linear programming method in the management decision-making process.

5. Lack of proper analysis of all components of the internal and external environment: market conditions, the activities of business partners, their reliability, cash flow. Rational decision-making should be made in a clear situation. Table 1 provides indicators related to financial, consumer, business processes, and learning.

**Table 1.** What types of indicators are used in dental centers?

	<i>Task</i>	<i>Indicator</i>	<i>Intended purpose</i>	<i>Strategic initiative</i>
Financial perspective	Financial analytics	Profit rate	Profitability level of at least 25%	Optimal capital structure
Consumer perspective	Patient interest in quality service. Comparison report with benchmark center	Market share Patient satisfaction level	Satisfaction index = 75%	Market expansion. Service improvement
Internal business process perspective	Rationalization of treatment processes.	Exclusive access to safe medical technology	Development of production projects. Competitive advantage.	Improving market options
A perspective on learning and growth	Business environment improvement and effective communication consulting research.	Satisfaction of medical staff	Taking advantage of new opportunities. Maintaining a relationship.	Enhancing innovative potential

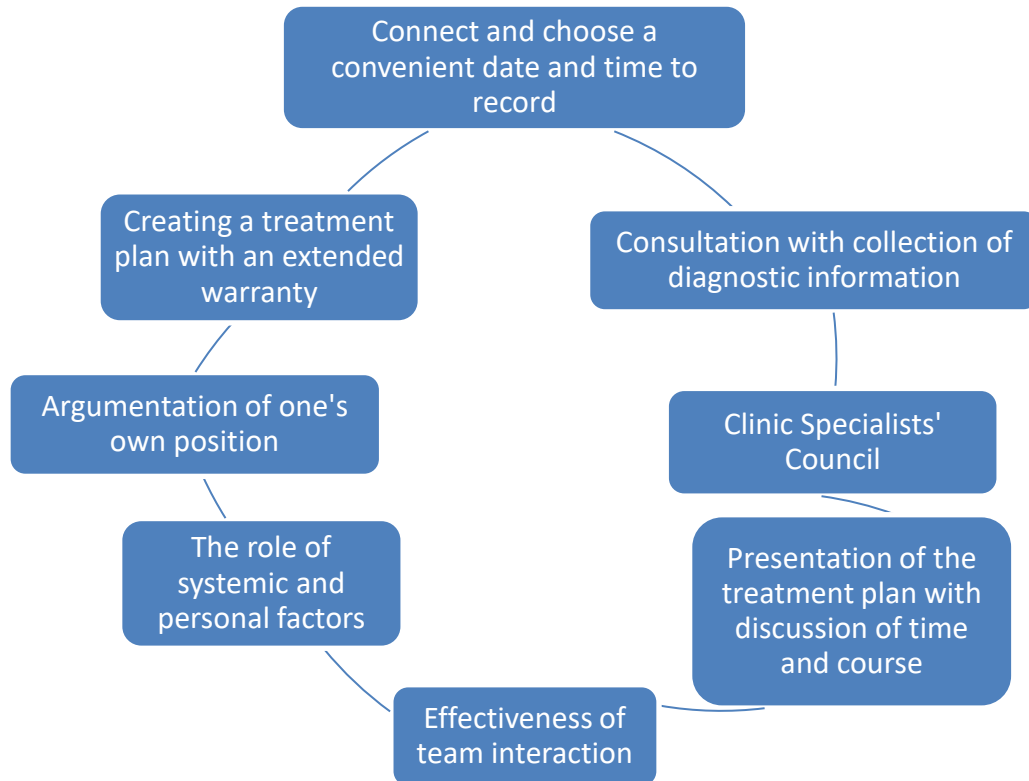
Scheme 1 illustrates the benefits of medicine in a social and economic context.

**Scheme 1. Benefits of medicine.**




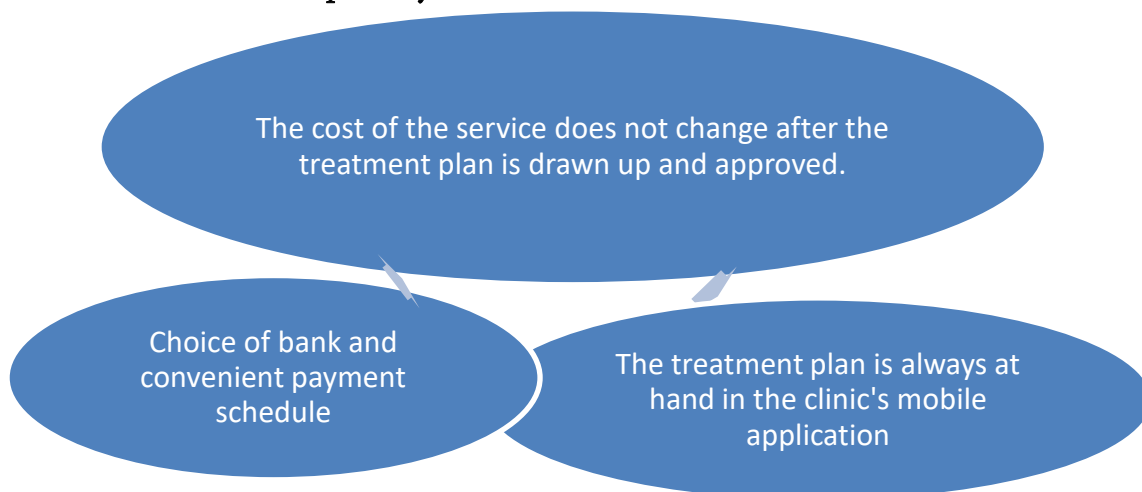
Scheme 2 is related to the role of effective communication in a group, in which horizontal cooperation is of fundamental importance.

➤ **Scheme 2. Program "Team and Effective Functional Communication":**



Scheme 3 indicates the priority of financial openness in a medical organization.

**Scheme 3. Financial transparency.**







## Conclusion

There is a significant connection between increasing profits and ensuring business reputation. I believe that the increase in financial profitability in a dental center, as in a medical organization, is determined by the following factors: 1. Increasing working hours; 2. Increasing the number of primary patients; 3. Price changes; 4. Increasing the number of patients treated; 5. Offering expensive options for complex treatment.

Program "Leadership Position and Achievement of Important Goals": Determination of personal position and

degree of responsibility; Responsible attitude to managing emotions; Personal contribution to increasing the effectiveness of communication and improving interaction; Discussion and evaluation of alternative ways to achieve goals. Program "Teamwork: Successes and Victories": Group effects and barriers, their impact on the effectiveness of team interaction; Systemic and personal factors of teamwork problems; Algorithm for reporting news and discussing the contribution of team members; Methods for studying situations and identifying activities to achieve goals.

## ბიზნეს კომუნიკაციის როლი სტომატოლოგიურ ბაზარზე

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### აბსტრაქტი

სტომატოლოგიაში სამედიცინო ცენტრის რეპუტაციის მოპოვების მიზნით, საწყის ეტაპზე აუცილებელია მიზნობრივი აუდიტორიის შესწავლა, რაც უკავშირდება მათი კლინიკისადმი სანდოობის უზრუნველყოფი პირობების გაცნობას. აღნიშნულ თემატიკაზე პაციენტებთან საუბარი აუცილებელია პირველადი კონსულტაციის დროს. სწორედ პაციენტების მხრიდან წამოსული გზავნილები უნდა აისახოს შემდეგ სარეკლამო კამპანიაში. პაციენტები ყურადღებას აქცევენ: ექიმების დამაჯერებლობის ხარისხს, ეფექტური კომუნიკაციის ტაქტიკას, აგრესიული დარწმუნების არარსებობას, სამედიცინო პერსონალის ხასიათისა და ქცევის მოქნილობას, და ზოგადად, მთლიანი ბიზნეს-პროცესის განმარტებას.

**საკვანძო სიტყვები:** სამკურნალო გეგმა, გუნდური ურთიერთქმედება, ფინანსური გამჭვირვალობა, ბიზნეს-პროცესის პერსპექტივა, ორგანიზაციული პრობლემა.



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## Scientific Report

## The inflationary effect of geopolitical risks and economic growth

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**Abstract**

In recent years, geopolitical risks have become a major factor influencing the dynamics of the global economy and trade. Unfavorable geopolitical events in global markets become the catalyst for significant fluctuations, which leads to a decrease in economic activity, affects inflation, which can lead to price changes. Geopolitical risks and inflation are interconnected. Geopolitical tensions can affect the state of the economy, macroeconomic indicators and lead to an increase in inflation. During geopolitical risks, investors believe that the country is unstable and begin to withdraw their assets. This will certainly lead to a depreciation of the currency and an increase in imported goods. In Georgia and similar developing countries, geopolitical risks have a significant impact on inflation rates. Georgia's main trading partners are China, the European Union, Russia, and Turkey. The deterioration of geopolitical relations with the above-mentioned countries affects exports and imports, which in turn affects inflation.

**Keywords:** Geopolitics, risk, inflation, economic growth.**Introduction**

Geopolitical risks often have a short-term impact on the market, but they can also become long-term if they develop into a long-term conflict and inflationary pressures become long-term. In such cases, it is important for governments and central banks to pursue sound monetary and fiscal policies to ensure economic stability and limit inflation.

Geopolitical risks lead to a weakening of

international trade, increasing commodity prices, which leads to an increase in inflation. In addition, geopolitical shocks can undermine investment and consumption, but tightening financial conditions are accompanied by a decrease in inflation. Against the background of a geopolitical crisis, governments may increase spending and taxes, and central banks may change monetary policy, depending on the current economic situation [1].



**Geopolitical risks and demand, supply.** A one standard deviation increase in the geopolitical risk index (GPR index) can lead to an average increase in inflation in the country by about 2% and a decrease in GDP by 1.5%.

Geopolitical shocks cause a change in supply, the fact of deficit appears, and the risk of wars increases, which is accompanied by a decrease in human and physical capital, all of which is directly related to the increase in inflation, the concomitant process

of which is a decrease in GDP. As for demand, along with the increase in public debt and money supply, geopolitical shocks cause an increase in public spending [2].

1. The chart shows the historical genesis of the relationship between geopolitical risk and inflation in both developed and developing economies. It clearly increased during the First and Second World Wars and in the 1970s, although a downward trend is observed in the 1980s and 1990s.

### Global inflation and global geopolitical risk /1 chart/

---- Global inflation /left scale/

---- Geopolitical Risk Index /Right scale/



**Source:** Caldara, D., et al., Do Geopolitical Risks Raise or Lower inflation? /2024/

The demand side plays an important role in raising inflation - increasing government spending, money supply, although it should be noted that geopolitical shocks mainly act as supply shocks [3].

Geopolitical risks have increased significantly since the outbreak of the war between Russia and Ukraine, which led to an increase in global inflation to 1.2% by the end of 2022, and a decrease in global GDP by 1%. Against the background of increasing geopolitical risks, it is important to implement the right monetary and fiscal policies so as not to worsen the economic downturn.

After the post-pandemic period, a new stage begins in the global economy, the main challenge of which is the differences in inflation and economic growth dynamics between the economies of different countries of the world. The USA, China, and Europe are worth noting.

It is worth noting that global inflation is approaching the pre-pandemic trend and is steadily slowing. Here is the updated economic forecast of the IMF: The average global GDP growth rate in 2000-2019 was 3.7%, and is forecast to 3.3% in 2025 and 2026. In 2015-2019, global inflation was 3.2.

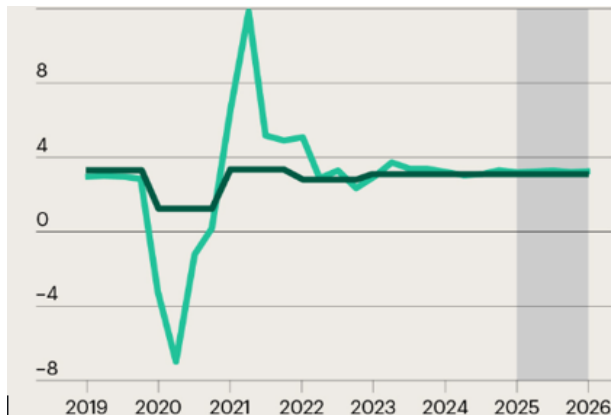
### New challenges for the world economy.

## Completion of the post-pandemic cycle

*Global GDP, %*

--- Real GDP growth

--- Potential growth in real GDP

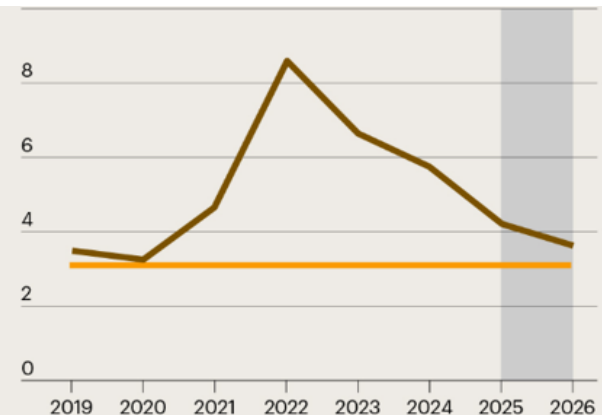


*Global inflation, %*

--- On average per year

--- On average for 2015 – 2019 Chart 2

2026. In 2015-2019, global inflation was 3.2 % before the pandemic, and will decrease to 4.2% in 2025 and 3.5% in 2026. /See chart 2/



Source: International Monetary Fund / Year / Title of the report. URL

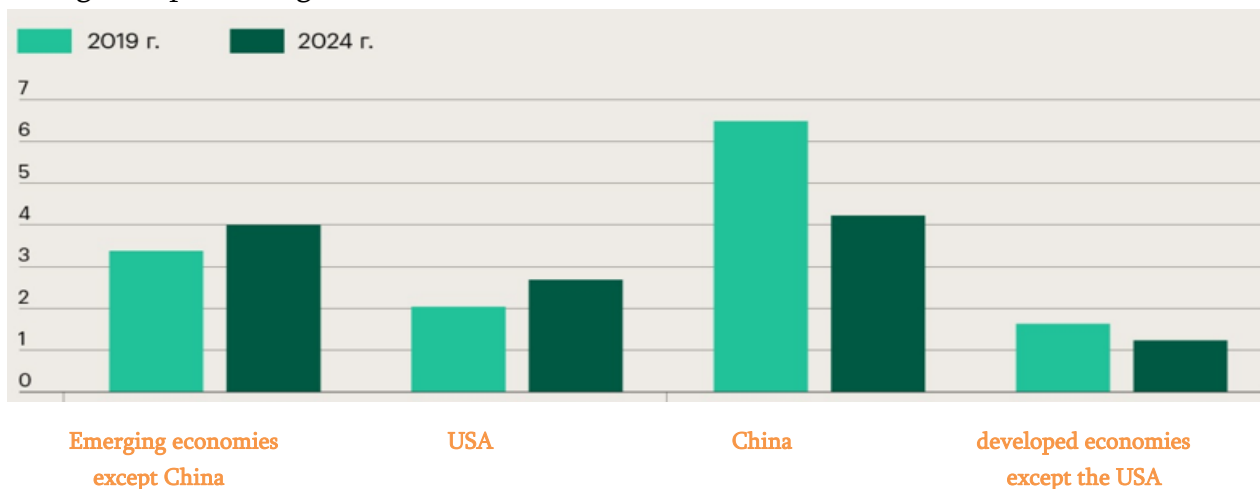
<https://econs.online/articles/ekonomika/novyy-etap-mirovoy-ekonomiki/>

It is noteworthy that there is a large difference between the world's largest economies. For example, compared to the pre-pandemic period, the US economy is growing above

its potential and economic growth is fixed, while Europe, on the contrary, is facing slow growth, and China is undergoing a rather sluggish recovery. /See chart 3/

divergence: potential growth of economies, %

Chart 3



Source: International Monetary Fund <https://econs.online/articles/ekonomika/novyy-etap-mirovoy-ekonomiki/>



The rapid increase in the US standard of living compared to other developed economies is due to increased productivity, driven by innovations in the technological sector, a more favorable business environment, more capital inflows, and increased investment, which provides higher incomes. China's economic growth rate has almost caught up with the economies of developing countries, while it was much higher before the pandemic [4].

Inflationary effect of geopolitical risks in Georgia. Geopolitical risks have a significant impact on inflation rates in Georgia and in developing countries in general. The increase in geopolitical risks leads to a decrease in investor confidence, which is followed by a depreciation of the Lari and an increase in inflation. The depreciation of the Lari, in turn, leads to an increase in prices for imported goods, especially for products such as food, medicines and fuel.

Global and regional events have a significant impact on the Georgian economy. The deterioration of geopolitical relations with Georgia's main trading partners /China, the European Union, Russia, Turkey/ affects exports and imports, which creates inflationary pressures.

Several directions for reducing geopolitical risks can be identified in Georgia:

- Diversification of the economy, with the support of new partners;
- Increasing foreign exchange reserves to

regulate inflation;

- Strengthening energy independence;
- Increasing and stimulating national production, which will ensure a decrease in dependence on imports.

All of the above will contribute to reducing inflation and the country's economic stability.

Geopolitical risks, inflation and economic growth are interconnected in Georgia. In 2020-2024, inflation in the country increased as a result of the impact of the global pandemic and the Russia-Ukraine war. The National Bank regulates the inflation rate through monetary policy, using monetary instruments, namely interest rates and managing foreign exchange reserves. The National Bank of Georgia aims to maintain an inflation rate of 3%. In 2024, the inflation rate in Georgia was relatively stable, although minor fluctuations were still observed.

Monitoring inflation rates is important because it reflects price stability, which is directly related to the purchasing power of the population and the economic well-being of the country in general [5-10].

**Conclusion.** Inflation management remains a key challenge in Georgia amid global challenges. After the restoration of tourism, economic growth was strong in 2021-2023, with increased engagement in regional economic activities and investment attraction, which directly impacts the country's economic well-being.



## გეოპოლიტიკური რისკების ინფლაციური ეფექტი და ეკონომიკური ზრდა

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### აბსტრაქტი

ბოლო წლებში, გეოპოლიტიკური რისკები გლობალური ეკონომიკისა და ვაჭრობის დინამიკაზე გავლენის ძირითად ფაქტორად იქცა. გლობალურ ბაზრებზე არასასურველი გეოპოლიტიკური მოვლენები ხდება სწორედ მნიშვნელოვანი რყევების კატალიზატორი, რაც იწვევს ეკონომიკური აქტივობის შემცირებას, გავლენას ინფლაციაზე, რამაც შეიძლება გამოიწვიოს ფასების ცვლილება. გეოპოლიტიკური რისკები და ინფლაცია ურთიერთდაკავშირებულია. გეოპოლიტიკურმა დაძაბულობამ შეიძლება გავლენა მოახდინოს ეკონომიკის მდგომარეობაზე, მაკროეკონომიკურ მაჩვენებლებზე და გამოიწვიოს ინფლაციის ზრდა. გეოპოლიტიკურ რისკების დროს ინვესტორები თვლიან, რომ ქვეყანა არასტაბილურია და იწყებენ თავიანთი აქტივების გატანას. ეს, რა თქმა უნდა, გამოიწვევს ვალუტის კურსის ვარდნას და ზრდის იმპორტირებულ საქონელს. საქართველოსა და მსგავს განვითარებად ქვეყნებში, გეოპოლიტიკური რისკები მნიშვნელოვან გავლენას ახდენს ინფლაციის მაჩვენებლებზე. საქართველოს მთავარი სავაჭრო პარტნიორები არიან ჩინეთი, ევროკავშირი, რუსეთი, თურქეთი. ამ ქვეყნებთან გეოპოლიტიკური ურთიერთობების გაუარესება მოქმედებს ექსპორტსა და იმპორტზე, რაც გავლენას ახდენს ინფლაციაზე.

**საკვანძო სიტყვები:** გეოპოლიტიკა, რისკი, ინფლაცია, ეკონომიკური ზრდა.

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## Original Research

## Adolescent awareness on Sexual and Reproductive Health in Nepal

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## Abstract

## Introduction

Adolescents face various sexual and reproductive health challenges, including teenage pregnancy, sexually transmitted infections (STIs), and lack of parental communication regarding sexual health. Despite the importance of SRH education, many adolescents in Nepal still have limited access to reliable and comprehensive SRH information. This study explores the level of adolescent awareness regarding sexual and reproductive health in Kathmandu.

## Methods

A school-based, analytical cross-sectional study was conducted with 200 adolescents aged 16 to 19 years in Kathmandu. Google sheet was used for the data collection from 2025 Feb to March 2025 using self-administered questionnaires consisting of socio-demographic information, knowledge on SRH. Descriptive statistics (mean, percentage, and frequency) and inferential statistics (chi square test) were applied to analyze the data using SPSS version 26 v.

## Results

Out of 200 adolescents, 60% of the participants were aged 18-19 years, with a higher percentage of male students (57.5%). Majority of participants' (80%) have adequate knowledge on sexual and reproductive health. A majority of the participants (67.5%) of participants felt they had enough SRH information, yet 53% were uncertain whether all participants had the necessary knowledge. Parent-adolescent communication on SRH was generally low, with friends being the most common source of SRH information (36.5%). There is significant association between knowledge level on sexual and reproductive health with age, gender, ethnicity and religion (p0.00).

In conclusion, while adolescents in Nepal demonstrate a basic understanding of sexual and reproductive health, there is a need for improved communication and information dissemination to address gaps in knowledge and enhance overall sexual health outcomes.

**Key Words:** Adolescent, Awareness, Sexual and Reproductive Health.



## Background

Adolescence is a critical stage in human development, characterized by significant physical, psychological, and social changes. This period marks the transition from childhood to adulthood, during which individuals undergo rapid changes in their bodies, thoughts, emotions, and behaviors. As adolescents experience these transitions, their awareness of sexual and reproductive health (SRH) becomes increasingly important. The World Health Organization (WHO) emphasizes that sexual and reproductive health encompasses not only biological aspects but also emotional, mental, and social well-being in relation to sexuality and reproduction [1].

In many societies, discussions about SRH remain taboo, especially for young people, leading to significant gaps in knowledge and understanding of key issues. This knowledge gap can result in risky behaviors such as early sexual initiation, unprotected sex, unintended pregnancies, and sexually transmitted infections (STIs), including HIV/AIDS [2]. Adolescents who lack accurate and comprehensive information are more vulnerable to these risks. In many low- and middle-income countries, including Nepal, such issues are compounded by cultural norms, limited access to formal education on SRH, and stigma surrounding discussions on sexuality [3].

In Nepal, adolescent awareness of SRH is influenced by various factors, including their educational level, parental education, access to sexual health education, and societal attitudes [4]. Pokharel et al. reported that the majority of adolescents received information about SRH from peers, social media, or other non-formal sources, rather than from trusted adults like parents or educators [4]. Such reliance on non-formal sources can lead to incomplete parents or educators [5].

Such reliance on non-formal sources can lead to incomplete or inaccurate knowledge, perpetuating myths and misconceptions about contraception, pregnancy, STIs, and safe sexual practices [6].

While many adolescents in Nepal are aware of basic aspects of SRH, such as pregnancy risk and contraceptive use, their understanding of more complex topics—like STI transmission modes, safe abortion practices, and the emotional aspects

of sexual relationships—remains limited.[6] Although many report knowledge of contraceptive methods, there is a gap in their ability to use them effectively [7].

A key determinant of adolescent SRH awareness is the level of communication between parents and children [8]. In many cultures, including Nepal, parents often struggle to discuss sexual health due to embarrassment, fear, or cultural taboos. This communication gap further limits adolescents' access to accurate information. Conversely, open dialogue between parents and adolescents is associated with healthier sexual behaviors and reduced risk-taking [9]. Despite efforts by governmental and non-governmental organizations to improve SRH education in Nepal, significant challenges remain—especially in rural areas where traditional norms may inhibit access to knowledge and youth-friendly services. A lack of comprehensive sex education, untrained educators, and limited SRH resources in schools contribute to inadequate awareness among adolescents [10].

Therefore, understanding the current level of SRH awareness and its influencing factors is essential to inform effective interventions. Empowering adolescents with appropriate knowledge and skills will enable them to make informed decisions, improving their health outcomes and facilitating their overall development [11].

## Methodology

A school-based, analytical cross-sectional study was conducted to assess adolescents' knowledge of sexual and reproductive health (SRH) in Kathmandu. The total sample size was calculated using Cochran's formula. With a 90% response rate, 200 participants were included; incomplete responses were excluded. Data were collected via a self-administered Google Form questionnaire. Participants included adolescents studying in grade 10 and those enrolled in Science, PCL Pharmacy, PCL Dental Hygiene, Management, and Humanities streams. Schools were contacted through their administrative departments.

The survey tool comprised two sections:

- **Part One:** Socio-demographic data, pubertal changes, and adequacy of SRH information, based on literature from Adhikari and Sharma et al [12, 13].
- **Part Two:** Seven items assessing SRH knowledge.

Content and face validity were ensured through expert consultation and pretesting (n=20). However, full psychometric validation was not conducted and is acknowledged

as a limitation [13.]

Ethical clearance was obtained from the Institutional Review Committee (IRC), YHSA (Reference No. 2079-080-281). Four higher secondary schools in Kathmandu were purposively selected. After administrative permission, data were collected from students in grades, 10, 11 and 12, as well as PCL Pharmacy and Dental Hygiene programs. Written parental consent was obtained; adolescents also provided assent after the study objectives were explained. Completion time was approximately 20–25 minutes. Data were

checked for completeness and anonymity ensured through unique participant codes. Participants were informed they could withdraw at any time during data collection.

**Statistical Analysis:** Descriptive statistics (frequency, percentage, mean, standard deviation) were computed. The chi-square test was used to assess the relationship between knowledge and independent variables using SPSS version 26.0. The total maximum score was 11. A cut-off score of  $\geq 6$  indicated adequate knowledge, based on standard scoring practices in KAP (Knowledge, Attitude, Practice) studies [14].

## Results:

Table 1: Distribution of participants according to socio-demographic characteristics

Variables	Frequency	Percentage (%)
<b>Age Group</b>		
16-17	80	40.0
18-19	120	60.0
<b>Gender</b>		
Male	115	57.5



Female	85	42.5
<b>Ethnicity</b>		
Brahmin/Chhetri	141	70.5
Janajati	57	28.5
Others*	2	1.0
<b>Religion</b>		
Hinduism	181	90.5
Buddhism	14	7.0
Others**	5	2.5
<b>Residence</b>		
Urban	151	75.5
Rural	49	24.5
<b>Family Type</b>		
Single	138	69.0
Joint	62	31.0

\*Others include Muslim, Madhesi \*\*others include Christianity, Muslim

Table 1 shows sociodemographic information of 200 participants. Majority of the participants (60%) belong to age groups 18-19 years. More than half (57.5%) were male followed by Brahmin/Chhetri (70.5%) religion. Almost all of the participants were Hindu (90.5%) and resides in urban (75.5%) and stay in single family type (69%).

**Table 2: Pubertal Changes Information**

**n = 200**

Variables	Frequency	Percentage (%)
<b>Pubertal changes on girls****</b>		
Growth of pubic hair	45	22.5
Breast Development	64	32.0
Menstruation	57	28.5
Changes in Voice	39	19.5
<b>Pubertal Changes on boys****</b>		
Growth of pubic hair	45	22.5
Growth of muscles	53	26.5
Experience of Wet dreams	56	28.0



Variables	Frequency	Percentage (%)
Changes in voice	60	30.0
<b>Experiencing Pubertal changes</b>		
Yes	196	98.0
No	4	2.0
<b>Reproductive and Sexual Information provider</b>		
First Degree relatives	36	18.0
Friends	73	36.5
Social Media	33	16.5
All of the above	52	26.0
Others***	6	3.0
<b>Types of Information</b>		
Ready for marriage	24	12.0
Interspouse life	27	13.5
Pregnancy or impregnate	24	12.0
Sexual Hygiene	80	40.0
Sexual intercourse	44	22.0

\*\*\*Others includes teachers, aunt, uncle, cousin

\*\*\*\*Multiple responses

Table 2 depicts various questions related to puberty changes. It includes five questions with two multiple response questions.

**Table 3: Knowledge on Sexual and Reproductive Health**

n = 200

Variables	Frequency	Percentage (%)
<b>Risk of early age sexual intercourse#</b>		
Poor grades in school performance	18	9.0
Female will get pregnant	91	45.5
Might contract STI/HIV/AIDS	76	38.0
No any impact	15	7.5
<b>Pregnancy knowledge#</b>		
Before menstruation: 14 days before	89	44.5
After menstruation: 14 days after	83	41.5





Variables	Frequency	Percentage (%)
During Menstruation	16	8.0
Anytime	12	6.0
<b>Familiarity with contraceptives</b>		
Yes	163	81.5
No	37	18.5
If yes,		
Pills	35	17.5
Condom	103	51.5
Pills, Condom, Depo	36	18.0
<b>Acceptable for use of contraceptives</b>		
Yes	158	79.0
No	42	21.0
<b>Any side effects if abortion is done</b>		
Yes	176	88.0
No	24	12.0
<b>Information on AIDS/STIs</b>		
Yes	189	94.5
No	11	5.5
<b>Mode of transmission of STI/AIDS#</b>		
Unprotected sexual contact	169	28.4
Multiple partners	151	26.2
Blood transfusion	141	22.4
Syringe sharing	146	23.0

#Multiple responses<sup>2</sup>

Table 3 presents data on adolescents' knowledge of sexual and reproductive health (SRH) among a sample of 200 participants. It details their understanding of risks associated with early sexual intercourse, pregnancy knowledge, familiarity with contraceptives, acceptance of contraceptive use, awareness of abortion side effects, information on AIDS/ STIs, and modes of STI/AIDS transmission.

This data highlights areas where SRH education may need enhancement to better inform and protect adolescents.

**Table 4: Adequacy of sexual and reproductive health information****n = 200**

Variables	Frequency	Percentage (%)
<b>All adolescents might know about sexual and reproductive health</b>		
Yes		41.0
No		6.0
I don't Know	106	53.0
<b>Enough information on sexual and reproductive health</b>		
Yes	135	67.5
No	65	32.5
<b>Like to receive sexual/reproductive information</b>		
Alone	98	49.0
In group	102	51.0

Table 4 presents data on the adequacy of sexual and reproductive health (SRH) information among 200 adolescents. It reveals that 41% believe all adolescents should be knowledgeable about SRH, while 53% are uncertain. Regarding their own SRH information, 67.5% feel adequately informed, whereas 32.5% do not. Preferences for receiving SRH information are nearly split, with 49% favoring individual sessions and 51% preferring group settings. These findings highlight the need for targeted educational strategies to address knowledge gaps and accommodate diverse learning preferences among adolescents.

**Table 5: Level of Awareness on sexual and reproductive health****n=200**

Knowledge Level	Frequency	Percentage (%)
Adequate Knowledge	160	80.0
Inadequate Knowledge	40	20.0

Table 5 depicts that Majority of adolescence have adequate knowledge while only 20%of them have inadequate knowledge.

**Table 6: Association between Level of knowledge and selected socio-demographic variables**

n=200			
Variables	Adequate Knowledge (n, %)	Inadequate Knowledge (n, %)	p-value
Age Group			
16–17 years	64 (80.0%)	16 (20.0%)	0.000
18–19 years	96 (80.0%)	24 (20.0%)	
Gender			
Male	92 (80.0%)	23 (20.0%)	0.000
Female	68 (80.0%)	17 (20.0%)	
Ethnicity			
Brahmin/Chhetri	113 (80.1%)	28 (19.9%)	0.000
Janajati/Others	47 (79.7%)	12 (20.3%)	
Religion†			
Hinduism	145 (80.1%)	36 (19.9%)	0.000
Buddhism/Others	15 (78.9%)	4 (21.1%)	
Family Type			
Single	110 (79.7%)	28 (20.3%)	0.000
Joint	50 (80.6%)	12 (19.4%)	

† *p-value calculated using Fisher's Exact Test.*

Table 6 depicts that there is significant association between knowledge level on sexual and reproductive health with age, gender, ethnicity and religion ( $p=0.00$ )

## Discussion

### Adolescent Knowledge on Sexual and Reproductive Health in Nepal

Adolescent awareness of sexual and reproductive health (SRH) in Nepal has significant implications for improving public health and addressing adolescent-specific challenges. This study's findings provide critical insights into the socio-demographic factors influencing SRH knowledge among adolescents. This discussion elaborates on key results and their implications within the Nepali context.

### Socio-Demographic Characteristics of the Sample

Most participants (60%) were aged 18–19, aligning with the typical higher secondary school age. This period is marked by rapid biological, emotional, and social transitions that increase vulnerability to SRH risks.[15] The slight male predominance (57.5%) may reflect urban education trends in Nepal, where boys often have more access to academic resources [16].

The majority of respondents were Brahmin/Chhetri (70.5%), reflecting the region's demographic makeup [17]. Similarly, most participants were Hindu (90.5%), aligning with national census data [18]. A large portion resided in urban areas (75.5%), which is consistent with urbanization trends in the country [19]. Furthermore, 69% lived in single-family households, suggesting a shift toward nuclear family structures in urban Nepal [20].

### Pubertal Changes and Information Sources

Almost all participants (98%) reported experiencing pubertal changes, aligning

with global adolescent health data [21]. However, peers (36.5%) were the main source of SRH information, followed by family members (18%) and social media (16.5%). The reliance on peers is concerning due to the possibility of misinformation [22]. Cultural stigma may contribute to parents' reluctance to discuss SRH openly with their children [20]. Adolescents reported the most awareness on sexual hygiene (40%) and sexual intercourse (22%), while critical topics like pregnancy and marital readiness were less frequently discussed (12%), indicating gaps in comprehensive SRH education [23].

### Knowledge on Sexual and Reproductive Health

While many adolescents recognized the risks of early sexual activity 45.5% mentioned pregnancy and 38% STIs including HIV/AIDS 7.5% reported no perceived negative outcomes, underscoring significant gaps in awareness. This supports the need for comprehensive, school-based SRH programs. A promising 81.5% of participants were aware of contraceptive methods, and 79% expressed support for their use. However, only 36% used more than one method (e.g., condoms and pills), possibly due to barriers such as stigma, misinformation, or limited availability [24]. Awareness of the risks of unsafe abortion was also high (88%), indicating improved understanding of its consequences, which are a leading cause of maternal morbidity in Nepal [25].

Overall, 80% demonstrated adequate SRH knowledge, but 20% had insufficient awareness. This improvement may be due to



ongoing health and education initiatives [26]. However, the remaining knowledge gap highlights a need for broader and more inclusive interventions.

Factors such as limited access to reliable information, prevailing taboos, and rural-urban disparities contribute to knowledge gaps [27]. Girls and adolescents from marginalized backgrounds are especially at risk [28]. Adolescents from joint families may face communication restrictions, whereas those from single-parent households may benefit from more open dialogue [29].

### **Adequacy of SRH Information and Learning Preferences**

While 67.5% believed they had sufficient SRH knowledge, 32.5% felt inadequately informed. Preferences for group (51%) and individual (49%) education formats were nearly equal, supporting the need for flexible delivery methods tailored to different learning styles.

### **Implications for SRH Education and Communication**

These findings suggest an urgent need to strengthen SRH education in urban schools. The limited role of parents highlights the importance of involving families and communities to break cultural taboos [26]. School curricula should incorporate culturally appropriate, evidence-based SRH content [20].

With peers and digital media emerging as key influencers, it is essential to provide accurate SRH information through peer-led sessions and social media platforms [30]. These strategies can improve reach, credibility, and engagement among adolescents.

### **Statistical Associations and Knowledge Gaps**

Chi-square analysis revealed significant associations between SRH knowledge and socio-demographic factors:

- **Age:** Older adolescents (18–19) had higher knowledge levels, likely due to greater exposure and maturity [31.]
- **Gender:** Males had better knowledge, possibly reflecting gender disparities in access to information [32].
- **Ethnicity:** Brahmin/Chhetri adolescents had more adequate knowledge, likely linked to socioeconomic advantages.
- **Religion:** Hindu adolescents showed greater knowledge, possibly due to varying religious openness to SRH discussions.
- **Family Type:** Adolescents from single-parent households were more informed, possibly due to more direct parent-child communication.

### **Recommendations**

1. **Strengthen SRH Education in Schools:** Introduce culturally appropriate, age-sensitive content early in the curriculum.
2. **Promote Parental Involvement:** Develop training programs to help parents initiate SRH conversations.
3. **Leverage Peer Education:** Train adolescents as peer educators with support from health professionals.
4. **Utilize Social Media:** Launch targeted, evidence-based digital campaigns to promote SRH literacy.
5. **Improve Access to Contraceptives:** Expand adolescent-friendly services, especially in rural areas.
6. **Community-Based Interventions:** Involve local leaders and youth groups to normalize SRH discourse.



7. **Address Cultural Barriers:** Design respectful, community-endorsed initiatives to reduce stigma.

8. **Further Research:** Investigate rural and marginalized adolescents' SRH Knowledge and needs.

### Conclusion

The study underscores the need for improved SRH education in Nepal,

especially in urban settings. Although a majority of adolescents have adequate SRH knowledge, significant disparities persist Based on age, gender, ethnicity, and family Structure.

Comprehensive and inclusive educational efforts, coupled with community and parental engagement, are essential for improving SRH outcomes.

## მოზარდების ცნობიერება სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ ნეპალში

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### აბსტრაქტი

#### შესავალი

მოზარდები სხვადასხვა სქესობრივი და რეპროდუქციული ჯანმრთელობის გამოწვევების წინაშე დგანან, მათ შორის მოზარდობის ორსულობა, სქესობრივი გზით გადამდები ინფექციები და სქესობრივი ჯანმრთელობის შესახებ მშობლებთან კომუნიკაციის ნაკლებობა. რეპროდუქციული ჯანმრთელობის შესახებ განათლების მნიშვნელობის მიუხედავად, ნეპალში ბევრ მოზარდს ჯერ კიდევ შეზღუდული წვდომა აქვს სანდო და ყოვლისმომცველი რეპროდუქციული ჯანმრთელობის შესახებ ინფორმაციაზე. წარმოდგენილი შრომა იკვლევს მოზარდების ცნობიერების დონეს სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ კატმანდუში.

#### მეთოდები

კატმანდუს სკოლაში ჩატარდა ჯვარედინი ანალიტიკური კვლევა 16-დან 19 წლამდე ასაკის 200 მოზარდზე დაკვირვებით. მონაცემთა შესაგროვებლად გამოყენებულ იქნა Google Sheet მეთოდი 2025 წლის თებერვლიდან მარტამდე პერიოდისათვის, თვითშევისებადი კითხვარების გამოყენებით კითხვარები შეიცავდა სოციალურ-დემოგრაფიულ ინფორმაციასა და ცოდნას სქესობრივი ჯანმრთელობის შესახებ. მონაცემების გასაანალიზებლად გამოყენებული იქნა აღწერითი სტატისტიკა (საშუალო, პროცენტული მაჩვენებელი და სიხშირე) და ინფერენციული სტატისტიკა (ხი-კვადრატის ტესტი).





## შედეგები

200 მოზარდიდან მონაწილეთა 60% 18-19 წლის იყო, მათ შორის უფრო მაღალ პროცენტულ მაჩვენებელს შეადგენდა მამრობითი სქესის სტუდენტები (57.5%). მონაწილეთა უმრავლესობას (80%) აქვს საკმარისი ცოდნა სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ. მონაწილეთა უმრავლესობას (67.5%) მიაჩნდა, რომ მათ ჰქონდათ საკმარისი ინფორმაცია სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ, თუმცა 53% არ იყო დარწმუნებული, ჰქონდა თუ არა ყველა მონაწილეს საჭირო ცოდნა. მშობელსა და მოზარდს შორის კომუნიკაცია სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ ზოგადად დაბალი იყო, მეგობრები კი ინფორმაციის ყველაზე გავრცელებული წყარო იყო (36.5%). მნიშვნელოვანია კავშირი სქესობრივი და რეპროდუქციული ჯანმრთელობის შესახებ ცოდნის დონესა და ასაკს, სქესს, ეთნიკურ კუთვნილებასა და რელიგიას შორის ( $p=0.00$ ).

## დასკვნა

მიუხედავად იმისა, რომ ნეპალში მოზარდები ავლენენ სქესობრივი და რეპროდუქციული ჯანმრთელობის საბაზისო ცოდნას, საჭიროა გაუმჯობესებული კომუნიკაცია და ინფორმაციის გავრცელება ცოდნაში არსებული ხარვეზების აღმოსაფხვრელად და სქესობრივი ჯანმრთელობის საერთო შედეგების გასაუმჯობესებლად.

**საკვანძო სიტყვები:** მოზარდი, ცნობიერება, სქესობრივი და რეპროდუქციული ჯანმრთელობა.

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## Reasoned Opinion

## About national character and "a model person" to be taken into account in management

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2025,**Abstract**

In scientists' opinion, national character study within one or another society must be expressed in investigation of some personal characteristics incidence, while "a model person" is such a type, to which the majority of given society members must belong. It is believed that totally different types are represented in each nation, but one of them are of frequent occurrence and others are seldom or very rare. Despite the fact that in some cases empirical data confirm hypothesis of modal persons' existence, it became obvious that there should be much more intracultural differences (between different population classes and strata) than intercultural ones. On other side, it turned out that "modal person: is a complex of distinctive signs peculiar to one part of nation, in opposition to its other part and respectively, question of national character as a unity of behavioral, emotional and other characteristics peculiar to each member of nation, either had to be taken off or raised in completely different manner. This fact led Inkeles and Levinson to pessimistic conclusion: "With the current limited state of knowledge and research methods, it cannot be asserted that any nation has a national character". The situation was aggravated by the fact that when speaking about national character, some people imply temperament first of all, while others pinpoint attention upon personality traits and still others emphasize value orientations etc. Consequently, despite the existence of different approaches to this problem and more than six decades of research, there are currently totally different views not only on what the national character is, but also on its existence at all, whether it is a more important trait than those elements of personality which unite all the people worldwide, or those which distinguish even the individuals, which are the most similar to each other. As a result, despite the existence of different approaches to this problem and more than sixty years of research, there are currently completely different viewpoints not only on what national character is, but also on whether it exists at all, whether it is a more important trait than those elements of personality that unite all people in the world, or those that distinguish even the individuals most similar to each other.

Keywords: national character, study, problem, a model person.



## Introduction

The study of national character, which dates back to the German romantics, was initially associated with the study of customs, morals, beliefs, features of family life, methods of upbringing, economics, etc., the interpretation of which was carried out within the framework of the cultural paradigm. As well as the study of other areas of human activity, the study of national character was also particularly influenced by the theory of psychoanalysis, within the framework of which the first systematic attempt to interpret the mentioned concept was made. The famous physician-psychoanalyst A. Kardiner became interested in ethnological problems and tried to combine the psychoanalytic concept with the field research of ethnologists, on the basis of which he formulated the generalizing basic concept of the “basic personality structure”. In his theory, he offered society a model of the relationship between the practice of raising children in a given culture, the type of personality, and the social institutions common to that culture (“institution” was defined by A. Kardiner as a means through which an individual is influenced in the process of his growth and development). According to A. Kardiner, it is the psychological makeup of a person, which is characteristic of a given society and determines all the behavioral characteristics of its members, that is the connecting axis of a society or culture.

## Main part

I

1.1. A. Kardiner's ideas were based on the

assumption that in a given society, in a given culture, the existence of a “basic personality structure”, which is to a greater or lesser extent characteristic of all members of a given society, is explained by the fact that its formation is influenced by a single cultural practice. Models of family organization, infant care, and child rearing, which are “primarily social institutions,” differ across cultures but are relatively uniform within a culture, which contributes to the development of somewhat similar traits (i.e., similar psychological traits) in all members of a given society. By adapting to these “primary social institutions,” the author argues, the human psyche undergoes a specific correction, resulting in a particularly deformed mental structure, the structure of its ego. The result of this deformation is the formation of the “primary personal structure” of a given society. Mythology, art, folklore, political institutions, and the economic system (“secondary social institutions”) are formed only as attempts by the individual to compensate for the traumas he or she has experienced in early childhood. If these traumas are approximately similar in representatives of a given society, their compensation models are also similar to each other [8, p. 1945].

The proposed concept of a national character, based on an attempt to combine psychoanalytic theory with ethnographic material, was not very successful, since it was not possible to prove the existence of a direct connection between the upbringing of a child and the structure of the personality, and this connection itself was eventually called into question.



Attempts to overcome the contradictions of the indicated concept were initiated by K. Du Bois, who introduced the concept of “modal personality”, which denotes the most widespread type of personality, which is simply statistically determined, i.e. the type to which the largest number of members of a given society belong. Within the framework of this approach, psychological, primarily projective, methods were mainly used: the Rorschach test (interpretation of strange inkblots), the test of incomplete sentences, and the thematic apperception test. Despite the initial popularity of this concept, field studies have shown that no single personality type is significantly dominant in any society.

1.2. Research in this area was given a new impetus by the social order associated with the US involvement in World War II. The idea arose in US military circles that understanding the psychology of their enemies would be useful for planning actions during and after the war. “It would also be useful to know the psychological characteristics of our allies, especially if they ever turned into our enemies. In a similar way, the study of the American national character can contribute to raising the moral level and fighting spirit [3, p. 108].

To realize the above idea, famous American anthropologists (R. Benedict, M. Mead, K. Klachkon and others) went to Washington to participate in the study of the national character. According to M. Mead’s memoirs, since 1943, in Washington, in various government departments, there were a lot of psychologists and anthropologists who were studying the problems of the national character, cultures and technologies for studying the distances between them.

Nevertheless, the “military order” caused considerable difficulties among anthropologists. Previously, the subject of research was primitive peoples who existed in rather isolated conditions. The scientific basis of the previous period, developed for such studies, turned out to be absolutely unsuitable for the study of “civilized” nations. In this regard, M. Moore, together with his colleagues, developed a method of distance analysis (A. distance) to reveal the national character of representatives of civilized cultures, which was a study of documents intended for modernity as if they were dealing with the study of the culture of past centuries [9, p. 1953].

1.3. In the early forties, theoretical and methodological approaches related to the study of national character are usually grouped into two main directions: cultural-centered and personality-centered. The first direction is associated with three methodological approaches. In the first, the concept of “national character” is relatively weakly connected with the individual personality and is practically combined with the concept of “cultural model of behavior”. So, for example, M. Mead distinguished three main aspects of the study of national character: 1) a comparative description of some cultural configurations of public institutions characteristic of a particular culture; 2) a comparative analysis of the care of infants and the upbringing of children; 3) the study of interpersonal relationships characteristic of a particular culture - such as relationships between parents and children and relationships between peers. R. Benedict’s work “The Chrysanthemum and the Sword”,





which interprets the Japanese character, was written from this perspective. According to the Americans themselves, the most exotic opponent for them in World War II was Japan. The behavior of the Japanese government, Japanese soldiers, their fanaticism, paradoxical behavior in the trenches - all this caused the greatest astonishment of Americans. Scientists saw the specificity of the Japanese character in the peculiarities of raising children in Japanese families, which was characterized by a sharp change in the method of upbringing when the child reached a certain age. It should be noted that within the framework of this methodological approach, national character is presented to us as a special way of distributing and regulating values and behavioral models within a culture.

## II

2.1 The second methodological approach combines the views of those scientists who interpret national character as a system of attitudes, values, and beliefs adopted among members of a given society. So, for example, e. Fram puts forward the concept of “social personality”, which was defined as a more or less conscious system of ideas, beliefs, attitudes, values, and feelings. According to his concept, the rise of the Nazis to power in Germany is explained by the prevalence of the so-called authoritarian type of personality in this country. Such a type of personality is docile and submissive towards superiors, but dominates and treats subordinates with contempt. Some representatives of this direction, in particular J. Gorer, in studying the national character of the Japanese again

turned to the category of “basic personal structure”.

2.2 The third direction of national character studies within the framework of the cultural-centered approach was oriented towards the search for national self-concepts through the analysis of cultural products - literature, art, philosophy. This direction was based on the following idea: in order to understand the people, it is necessary and sufficient to understand the worldview of their elite, since it is connected with the worldview of the whole people, but is expressed in a clearer form. Undoubtedly, the worldview of the elite reflects the dominant values, which are common to the whole nation, but how adequate this reflection will be, remained unclear.

## III

3.1 If all three approaches of the culture-centered direction are united by the idea of describing socio-cultural phenomena in their psychological perspective, the personality-centered direction should first of all provide a theoretical basis for the psychological explanation of differences and peculiarities in human behavior, and then in the institutions, values, and norms characteristic of a given people. The question of whether a certain type of personality can dominate in any society remained open. Prominent representatives of this direction, ethnologists A. Inkels and D. Levenson, attempted to describe the national character through the concept of a “modal personality structure.” In their view, “national character corresponds to relatively firmly preserved personal traits and personality models (personality types) that are



typical of adult members of a given society” [5, p. 983].

#### IV

4.1 Having failed in their attempts to define national character, culturologists and anthropologists increasingly began to use the concept of “mentality” to denote the psychological characteristics of ethnic groups. This term, which comes from the French historians of the “Annals” school, is used to denote a phenomenon that is opposed to “collective representations”, the collective unconscious, etc. In their opinion, “mentality” is a system of images, ...which underlie human representations of the world, of one’s place in it, and, consequently, determine human actions and behavior” [4, p. 52].

#### V

5.1 We find an extensive discussion of mentality in the work of the famous Russian linguist V.I. Kolesov. Speaking about the history of the study of national mentality, which has a two-century tradition, the author notes that the first researchers - sociologists and historians - noted the mental differences of primitive peoples from modern people, although the authors spoke not about mentality itself, but about “forms of the soul” and “mental functions”. Later, psychologists also began to talk about mentality, when they discovered the similarity of such “functions of the soul” with the worldview of a child entering life. The next stage was the identification by medievalists of the distinctive features of the medieval type of thinking in the late 1920s, which gave impetus to the study of the mentality of a medieval person. A little later, as V. I. Kolesov notes, philosophers also became interested in this, generalizing the results of specific

studies, on the basis of which they concluded that it is necessary to study such forms of worldview that differ from the usual modern forms of public opinion. An important factor in the study of the problem of mentality was the work of linguists who, since the late 1960s, began to study the manifestations of mentality in the categories and forms of folk languages, although it should be noted that the connection between language and thinking had been studied even before that. It is enough to name the works of Wilhelm von Humboldt, which became the theoretical basis for research in this direction, as well as the symbolic forms of the language of A.A. Potebny and the “pictorial” forms of I.A. Baudouin de Courtenay.

The problem of mentality as a scientific basis, according to V.I. Kolesov, was formulated by the French conceptualists, according to whom “mind - idea” underlies any research, and the task of the scientist is to determine the connections that exist between the word-term and the object-thing (words and things).

#### VI

6.1 The French episteme as a unit of mentality, according to V.I. Kolesov, has a superficial, external character and does not reach the depths of the subconscious. This was achieved by German philosophy, which came to the recognition of the concept as the basic unit of mentality, to which the hermeneutic definition corresponds exactly. The problem arose within the boundaries of French conceptualism, was formalized within the framework of Anglo-American nominalism, but was finally formed within the boundaries of “German-Russian realism” [6, p. 9].



The researcher gives a number of definitions of the indicated term, which are proposed by representatives of various sciences:

“Foreign medieval historian: the picture of the world of people of the past, which a person possesses: it is internally contradictory, depends on many reasons (gender, age, rank), and therefore it is better to talk about mentality separately. This is the mind of specific people in their relationship to others” [6, p. 11].

Social psychologists define mentality as a specific feature of the mental life of people, characteristic of a specific culture, which is politically and economically conditioned at a given historical moment (knowledge + beliefs). This is the national character in the process of development. Professor V. E. Semyonov says that mentality is a historically formed long-term mindset, the unity of conscious and unconscious values, norms, attitudes in their cognitive, emotional and behavioral embodiment, which is characteristic of a particular group (unity) and its representatives [7, p. 12].

## Conclusion

From the point of view of ethnologists, mentality is a system of ethnic ideas about priorities, norms and models of behavior in specific circumstances, which is based on unconscious complexes (ethnic constants) formed in the social environment; this is a system of values that creates the cultural environment of existence. Accordingly, we are talking about those ethnic data (talents) that are formed in a certain social environment. Mentality is the generally accepted attitudes and uniform reactions of

of the consciousness of an ethnos to various manifestations of the environment.

Culturologist: Mentality is the spiritual equipment of a person, which includes language, mind, consciousness, thought, “I”. Mentality is not necessarily a positive phenomenon, but without the active work of language or thought, it appears to us as a completely irrational phenomenon.

The culturologist admits that in a narrow sense, mentality is primarily language and words.

The historian, philologist and philosopher of Eastern culture perceives mentality as a naive picture of the world, striving for integrity, and not for completeness (like a scientific picture); it is pragmatic, aesthetically designed and operates in the modality of desire (dream); logic is secondary here, since they think not with concepts, but with prototypes: this is concrete non-discursive thinking through mental images-symbols. Ultimately, mentality is a system of conceptual or semantic fields.

Summarizing the “interdisciplinary approaches” to the specified phenomenon, V. I. Kolesov comes to the conclusion that “mentality, with its signs, is a single naively perceived image of the three-dimensionality with its value orientation, which has existed for a long time, regardless of specific economic and political conditions and is based on ethnic inclinations and historical traditions: it manifests itself in the feelings, mind, will of each member of society on the basis of the unity of language and upbringing and is part of the national spiritual culture, which creates the ethnomental space of the people in the given territory of its existence” [7, p. 11].

## ეროვნული ხასიათისა და „სამოდელო პიროვნების“ შესახებ მართვაში გასათვალისწინებლად

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აბსტრაქტი

მეცნიერთა თვალსაზრისით თანახმად, ეროვნული ხასიათის კვლევა ამა თუ იმ საზოგადოების ფარგლებში გარკვეული პირადული მახასიათებლების გავრცელებადობის ხარისხის შესწავლას უნდა წარმოადგენდეს, ხოლო „სამოდელო პიროვნება“ ისეთი ტიპია, რომელსაც მოცემული საზოგადოების წევრთა უმეტესობა განეკუთვნება. ითვლებოდა, რომ თითოეულ ერში სრულიად სხვადასხვა ტიპებია წარმოდგენილი, მაგრამ ერთნი განსაკუთრებით ხშირად გვხვდება, ხოლო სხვები - იშვიათად ან ძალიან იშვიათად. მიუხედავად იმისა, რომ ზოგიერთ შემთხვევაში, ემპირიული მონაცემები ადასტურებდა მოდალური პიროვნებების არსებობის ჰიპოთეზას, ნათელი გახდა, რომ შიდაკულტურული განსხვავებები (მოსახლეობის სხვადასხვა კლასებსა და ფენებს შორის) შეიძლება გაცილებით დიდი ყოფილიყო, ვიდრე კულტურათაშორისი. მეორე მხრივ, გამოდიოდა, რომ „მოდალური პიროვნება“ ესაა ერის ერთი ნაწილისთვის ჩვეული ნიშან-თვისებების კომპლექსი, მისი სხვა ნაწილის საპირისპიროდ, და შესაბამისად, საკითხი ეროვნული ხასიათის, როგორც ერის ყველა წევრისთვის ჩვეული ქცევითი, ემოციური და სხვა მახასიათებლების ერთობლიობის შესახებ, ან საერთოდ უნდა მოხსნილიყო, ან სრულიად სხვაგვარად ყოფილიყო დაყენებული. ამან ინკელსი და ლევენსონი პესიმისტურ დასკვნამდე მიიყვანა: „შემეცნების და კვლევითი მეთოდის ამჟამინდელ შეზღუდულ მდგომარეობაში არ შეიძლება იმის მტკიცება, რომ რომელიმე ერს ეროვნული ხასიათი აქვს“. მდგომარეობა იმითაც გართულდა, რომ ეროვნული ხასიათის შესახებ საუბრისას ერთნი პირველ რიგში ტემპერამენტს გულისხმობდნენ, მეორენი ყურადღებას აქცევდნენ პიროვნულ ნიშნებს, მესამენი - ღირებულებით ორიენტაციებს და ა.შ. შედეგად, მოცემული პრობლემისადმი სხვადასხვა მიდგომების არსებობისა და სამოც წელიწადზე მეტი ხნის კვლევების მიუხედავად, ამჟამად სრულიად განსხვავებული თვალსაზრისები არსებობს არა მხოლოდ იმაზე, თუ რა არის ეროვნული ხასიათი, არამედ იმაზეც, საერთოდ არსებობს ის თუ არა, არის თუ არა ის უფრო მნიშვნელოვანი ნიშანი, ვიდრე პიროვნების ის ელემენტები, რომლებიც მსოფლიოში ყველა ადამიანს აერთიანებს, ან ისინი, რომლებიც ერთმანეთს ყველაზე მეტად მსგავს ინდივიდებსაც კი განასხვავებენ.

საკვანძო სიტყვები: ეროვნული ხასიათი, კვლევა, პრობლემა, სამოდელო პიროვნება.



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**Reasoned Opinion****Problems of teamwork in the health care system**

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**Abstract**

To improve the economic efficiency and quality parameters of healthcare organizations, in clinics and polyclinics, at all levels of management, we should use the three-person team management method, because in constantly changing conditions, the provision of medical services through such a team system more accurately corresponds to the urgent needs of healthcare. Such systems have functioned to some extent before, but at the modern level of scientific and technical innovations, it is necessary to modernize and intensify this method. Such teams will coordinate the more operational, cost-effective and high-quality implementation of specific goals.

**Keywords:** Healthcare institution, medical service team, coordination, team management method.

**Introduction**

All countries around the world, in accordance with their economic situation, are trying to implement a flexible policy in the field of health care for the population. The development of health care policies and programs is carried out with the assistance of the World Health Organization (WHO), for which it prepares relevant documents to resolve various issues and also provides consultations to those who need such assistance.

WHO, on its part, is trying to manage health care and public health problems in the conditions of global changes, its efforts are directed towards the development of health care, research into new technologies,

Scientific progress and the introduction of various medical innovations, and by their financing in some cases.

One of the important decisions of WHO is the definition of the health care system and the formation of its content, which shed light on many issues in a new way. Thus, the definition of the health system is as follows: the system includes the provision of medical care (individual and public), primary and secondary prevention, treatment, care and rehabilitation, and the actions necessary to provide services. Important here are: financing, resource generation and management functions, governance activities in various sectors. market, resources (medical,





managerial, auxiliary), medical equipment, new technologies, medical devices, sources of financing and the system, information and computer technologies, management and leadership [1].

### Main Text

The priorities noted in the introduction were considered at the 2008 Tallinn WHO Conference. Of particular interest to us is the part of the report prepared by the WHO Secretariat in April 2016 on the issue of training human resources for 20-330 years in the report "Global Strategy for Training Human Resources for Health" [2]. Paragraphs 25 and 26 of this report accurately reflect the state and development prospects of the Georgian healthcare system. In particular, the article deals with the effectiveness, fair distribution, retention, satisfaction and optimization of motivation of healthcare cadres. Here, there is a focus on the manifestation of attitudes and attention towards cadres, which takes into account the geographically uneven distribution of specialists, which leads to an unfair approach towards them. Georgia paid attention to this problem in a timely manner, it was resolved by adopting the so-called "Mountain Law", on the basis of which doctors, nurses and others working in primary healthcare institutions located in high-mountainous villages are given increased salaries and pensions. In addition, they are provided with appropriate infrastructure, the stability of expenses is taken into account here and, what is more, the service is stable. WHO recommendations take into account the need to equip medical and sanitary service facilities with information and

communication technologies and raise their qualifications to a new level, their professional training, study and master new progressive knowledge and skills, in order to effectively and qualitatively conduct management activities and provide medical services. Improve management and leadership.

In order to increase the efficiency of the activities of healthcare facilities and the quality of medical services, we believe that the three-person team / group method of management should be used in healthcare facilities at all levels of management, since in constantly changing conditions, the provision of medical services through a group system is exactly consistent with healthcare. Such systems have traditionally operated here, but against the backdrop of the modern development of science and technology, it is necessary to update this classical method and conduct activities using methods that are consistent with modernity.

First of all, a team in the healthcare system is a group consisting of two or more people who combine their actions and labor efforts, coordinate them to achieve specific goals, to which they aspire and consider themselves responsible for their implementation towards each other. Thus, the definition of a medical service team includes four main components: 1. Team members are doctors, nurses, managers, support staff, etc., but at a minimum it can consist of only 2 members - a doctor - a nurse, and their relationship is regulated in a constantly changing situation [3]. The work of team members - medical services are aimed at performing a specific goal - surgery, examination, care, treatment,



etc[4].

Team members are focused on the goal - the daily plan - the implementation of medical services and feel mutual responsibility for the results. Teamwork in the healthcare system is a daily task that is characterized by high interdependence, and the team can provide the level of coordination of activities, information dissemination and resource exchange that is necessary to obtain the desired result.

Although the team is the same group of people, their names are not mutually exclusive, the content is very different. An

employer, a teaching clinic doctor can gather a group of people, but he cannot gather a team. The concept of a team assumes that all its members are subject to a single mission – activity and have collective responsibility [Tab. 1]. The difference between a team and a group is given on the example of the activities of the medical personnel of the US Army [3]. The personnel include: surgeons, nurses, anesthesiologists and technicians. The surgical team, consisting of 8 specialists, successfully operated and had the sole goal of saving people. They had 4 trucks at their disposal to transport the team's equipment and were on standby for an hour.

**Table 1. Difference between teams and groups [3]**

Group	Team
Has a designated strong leader Individual approach to the goal is the same as the organization's output - the product of individual labor Meetings "necessary and sufficient". Efficiency is determined indirectly in the form of impact on the business (e.g. financial performance) Each member of the group has their own circle of meetings, makes decisions independently, performs special work tasks.	The role of the leader is transferred from one to another, individual and interdependent (each subordinate to each) with a specific vision or goal. The solution is the product of collective labor. At meetings, time-limited discussions are held and all problems are solved, and the effectiveness is determined directly in the form of an assessment of collective labor. Meetings, decision-making and work assignments are carried out jointly.

Here we would like to note the factors that contribute to the efficiency of team activities, which are trust in the work and in each other. Disputes and conflicts between each other about the case, which is natural when performing medical services and this prevents better decisions for the performance of the case. Loyalty - because there is an open discussion about all ideas and team members

simultaneously act towards common goals and making the right decisions. Team members consider themselves accountable to each other and all these qualities converge on a result-oriented approach, mainly on the interests of the team, which expresses collective success and high-quality service delivery.



these qualities converge on a result-oriented approach, mainly on the interests of the team, which expresses collective success and high-quality service delivery.

After the privatization of healthcare facilities began in Georgia and healthcare facilities independent of the state, or medical service facilities under private law, emerged. The idea emerged that healthcare facilities treat people, others make money, in our opinion, treatment requires compensation or expenses, this is the income of the other party, profit. Accordingly, teamwork is underway, both in public and private structures. The law on mutual cooperation is in force in Georgia, and the law also worked well in the fight against Covid-19. The state has a Ministry of Health with its own budget, health facilities, an insurance fund, and most importantly, research and educational institutions and universities, state policy and a state program aimed at ensuring the health of the population.

Healthcare policy is necessary so that the population of Georgia knows how much importance the government attaches to protecting the health of the country's population, takes all measures and makes decisions. The facilities of the Ministry of Healthcare are provided with highly qualified medical personnel, administrators and managers, are equipped with modern medical devices and equipment, communication and computer technologies, and have a well-functioning infrastructure. In recent years, budget financing has been increasing annually, the State Insurance Fund, the Pension Fund, innovations are being introduced, international-style hospitals are being built, and the entire

system being built, and the entire system is functioning properly.

The healthcare system has been introduced with a flexible structure of management [5]. The system is so flexible that teamwork at the highest levels of management is successful.

There are about three hundred inpatient institutions, outpatient - polyclinic institutions, about 2500 rural doctors in the country, which is a great strength, the beginning of teamwork is at least the primary healthcare institution, which is the main provider. Here, a team is formed with a rural doctor, nurses, midwives and a representative of healthcare authorities and a first aid brigade. Such a team is always ready to provide medical services. In the conditions of a family doctor (city), a team is formed with a doctor - a medical sister, a registrar, diagnostic cabinets-laboratories, doctors of various fields and a manager. A patient who comes to the clinic is a patient of this clinic, lives in the territory determined by the clinic, they will not be served here from other settlements, to meet a member of the service team - a doctor, they will fill out a registration card, after waiting, they will go through registration and stand in a live queue with the doctor, interview with the doctor, receive the necessary information, materials, Form 100, medicines and referrals, if necessary and desired, send to another specialist doctor, send to a diagnostic laboratory, pass analyzes, etc. Receive laboratory research information and use it according to its purpose. This path of the patient is made according to the guideline and is not subject to change. It is almost the same scheme in hospital conditions, but he must definitely submit Form 100 to the hospital,



then he will go through an interview and be sent to the doctor. As we have mentioned, the doctor has his own team prepared in advance, which acts to fulfill the set goal and together with the team resolves the issues necessary for the patient's service.

Here we would like to consider an effective business model that operates in a modern

clinic [Tab. 2]. This clinic is a private structure, it is not attached to any geographical area of the city, in this sense it operates in a fully competitive environment, and the work teams created here work more on finding patients, retaining them and providing quality treatment [6]. The business model looks like this:

**Table 2. Patient movement center [ibid]**

Patient movement center and its subsequent procedural elements
Identifying interest in the service by website
Calls or applies in writing
Makes an appointment
Receives a doctor's consultation
Purchases a treatment program
Leaves a review
Returns to the dispensary program

## Conclusion

In the above cases, a team is created around a doctor, there is registration with a doctor, specifically a letter of appointment, after the consultation the patient acquires the program, gets acquainted with it, makes a decision and joins the dispensary program. This team in such a case is oriented towards the result - on obtaining profit, therefore the patient is valuable to him if he is a target patient, if he becomes an asset before he comes to the doctor, a convincing conversation is held with him about how professional specialists will decide on his program effectively and in a timely manner. With this attitude, he will appear before the doctor, who, with his

consultation and conversation, has turned this patient into their customer.

In this model, the team consists of 7 people and the work around the patient lasts a total of two hours, one hour of which is completely devoted to the doctor, the actual success of the team at that time - the result, the receipt of profit - depends on his behavior, knowledge, culture, experience and dedication to the work [7]. Accordingly, what is embedded in the content of the team requires the fulfillment of all conditions at an absolutely perfect level, which is why the team is "we" and not "me". The team creates leaders, and they are always successful.

## ჯანმრთელობის დაცვის სისტემაში გუნდური მუშაობის პრობლემები

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### აბსტრაქტი

ჯანდაცვითი ორგანიზაციების ეკონომიკური ეფექტიანობისა და ხარისხობრივი პარამეტრების გასაუმჯობესებლად, კლინიკებსა და პოლიკლინიკებში, მენეჯმენტის ყველა დონეზე, საჭიროა, მართვის სამკაცრიანი ჯგუფური მეთოდის გამოყენება, რადგან, მუდმივად ცვალებად პირობებში, სამედიცინო მომსახურების ასეთი გუნდური სისტემის მეშვეობით, მიწოდება მეტად ზუსტად შეესაბამება ჯანდაცვის გადაუდებელ მოთხოვნებს. ასეთი სისტემები გარკვეულწილად ფუნქციონირებდა ადრეც, მაგრამ მეცნიერულ-ტექნიკური ინოვაციების თანამედროვე დონეზე, აუცილებელია ამ მეთოდის მოდერნიზებული ინტენსიფიკაცია. ასეთი გუნდები კოორდინაციას გაუწევენ კონკრეტული მიზნების მეტად ოპერატიულ, რენტაბელურ და ხარისხიან შესრულებას.

**საკვანძო სიტყვები:** ჯანდაცვის დაწესებულება, სამედიცინო მომსახურების გუნდი, კოორდინაცია, გუნდური მართვის მეთოდი.

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## Original Research

## Evidence-Based Efficacy and Recommendations for HPV Vaccination in International and National Practice

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## Abstract

**Background:** Human papillomavirus (HPV) is a major causative agent of cervical cancer and other anogenital and oropharyngeal malignancies. Prophylactic vaccination against HPV has proven effective in preventing high-risk HPV infections and their associated precancerous and cancerous lesions.

**Objective:** This article presents a comparative review of the immunogenicity, efficacy, and safety profiles of the quadrivalent (Gardasil 4) and nonavalent (Gardasil 9) HPV vaccines. It synthesizes current clinical guidelines from major health authorities and professional societies in the United States and Europe, and discusses updated national vaccination strategies, with a focus on recent policy changes in Georgia

**Methods:** A systematic literature search was conducted in PubMed, Cochrane Library, PMC, CDC, and Merck databases for publications from 2019 to 2025. Only peer-reviewed articles and official guidelines were included.

**Results:** Both Gardasil 4 and Gardasil 9 demonstrate equivalent protection against HPV types 6, 11, 16, and 18. Gardasil 9 induces a stronger immune response against five additional oncogenic types (31, 33, 45, 52, 58) and shows higher immunogenicity in the 9–15 age group compared to older cohorts. Network meta-analyses confirm significant reductions in CIN2+ lesions associated with HPV 16 and 18 following vaccination. Recent WHO and ECDC guidelines increasingly favor Gardasil 9 and support simplified dose regimens, including one-dose strategies for population-wide coverage. In Georgia, HPV vaccination is now freely available to females aged 10–45 and males aged 10–26 under a revised national program.

**Conclusion:** Gardasil 9 is the preferred vaccine for broad-spectrum HPV protection. Updated guidelines and evidence support a two-dose schedule for adolescents and a three-dose schedule for older or immunocompromised individuals. Georgia's expanded HPV vaccination program aligns with global efforts to achieve cervical cancer elimination through equitable access and optimized vaccine strategies.

**Key Words:** Human papillomavirus (HPV), Prophylactic vaccination, Immunogenicity, Vaccine efficacy, Vaccine safety, HPV elimination strategy, Gardasil.





## Introduction

Human papillomavirus (HPV) is a leading etiological factor in the development of cervical cancer, genital warts, and several anogenital and oropharyngeal malignancies. To date, more than 400 types of HPV have been identified. According to the World Health Organization (WHO), HPV is responsible for approximately 5% of all cancer cases. Persistent and recurrent benign lesions, such as genital and common warts, are even more prevalent. HPV is resistant to many disinfectants and relatively stable under environmental conditions. Currently, no antiviral treatment exists that can inhibit viral replication; management is based on lesion removal or stimulation of the host immune response [1].

Virtually all sexually active individuals become infected with HPV at some point in their lives, and in most cases the infection is asymptomatic. Condom use can reduce the risk of transmission but does not provide complete protection, as it does not fully cover the skin of the genital area.

In approximately 90% of cases, the human immune system is capable of clearing the infection without intervention. However, persistent infection with high-risk oncogenic HPV types is the principal cause of cervical cancer and is also associated with cancers of the vulva, vagina, oral cavity/pharynx, penis, and anus [2].

In some cases, HPV infection leads to the development of anogenital warts. In other instances, it may trigger the formation of atypical cells that can progress to cancer.

According to global statistics, HPV was responsible for 620,000 new cancer cases in women and 70,000 in men in 2019 [2]. Cervical cancer remains the fourth most common cancer among women worldwide; in 2020, there were 604,000 new cases and approximately 342,000 deaths, around 90% of which occurred in low- and middle-income countries. The highest rates of incidence and mortality are observed in sub-Saharan Africa, Central America, and Southeast Asia. Regional disparities in cervical cancer burden are linked to inequalities in access to vaccination, screening, and treatment, as well as risk factors such as HIV prevalence, gender and social biases, and poverty.

Women living with HIV have a six-fold increased risk of cervical cancer compared to the general population, and HIV is implicated in approximately 5% of all cervical cancer cases. HIV has a disproportionately large impact on younger women, and in about 20% of cases where children lose their mothers to cancer, cervical cancer is the cause.

Persistent HPV infection of the cervix (the lower part of the uterus opening into the vagina) causes approximately 95% of cervical cancer cases if left untreated. The transformation of abnormal cells into carcinoma typically takes 15–20 years, but among immunocompromised women, such as those with untreated HIV infection, this process can accelerate to 5–10 years. Risk factors for progression include HPV oncogenicity, immune status, co-existing sexually transmitted infections, high parity, early age at first pregnancy, hormonal contraceptive use, and smoking [3].



To date, more than 400 HPV types have been identified, accounting for 5% of all cancers globally (WHO). Persistent benign lesions such as genital warts and common verrucae are even more prevalent. HPV is resilient to many disinfectants and relatively resistant to environmental conditions. There are no antiviral drugs targeting HPV replication; current treatments focus on lesion removal or • enhancement of the host's immune response • [4].

HPV-related cancers can be prevented via vaccination (Vaccines to Treat Human Papillomavirus Could Be a Significant Innovation in the Fight Against Cervical Cancer [10].

Three vaccines are commonly available:

- **Cervarix** – bivalent (HPV types 16 and 18),
- **Gardasil 4** – quadrivalent (HPV types 6, 11, 16, 18),
- **Gardasil 9** – nonavalent (includes additionally types 31, 33, 45, 52, 58).

Since the introduction of bivalent and quadrivalent vaccines in 2006, clinical trials and post-licensure studies have demonstrated their high effectiveness in preventing high-risk HPV infections, precancerous lesions, and invasive cancers [6]. These prophylactic vaccines are most effective when administered before exposure—typically during adolescence. They are not therapeutic for those already infected or with established HPV-related lesions; however, they may help prevent new infections with different types or re-infection with the same type [7].

Nevertheless, therapeutic vaccines based on HPV peptides show limited efficacy: only about 54% of women with advanced cervical intraepithelial neoplasia (CIN 2/3) experienced lesion regression in phase II/III trials [8].

Currently, two recombinant vaccines are in use:

- Bivalent *Cervarix* (HPV 16/18) [9],
- Nonavalent *Gardasil 9* (types 6, 11, 16, 18, 31, 33, 45, 52, 58) [5].

Gardasil 9 has largely replaced the earlier quadrivalent vaccine and represents a critical tool for reducing cervical cancer burden by preventing infections with oncogenic HPV types associated with disease progression.

**Objective of this article:** To review, analyze, and summarize current clinical recommendations for implementing population-wide HPV vaccination programs. By synthesizing guidelines from leading oncology and gynecology societies in the USA and Europe, this review aims to provide updated strategic insights into cervical cancer prevention through effective vaccination programs.

## Materials and Methods

A systematic search was conducted using databases including PubMed, PMC, Cochrane and the CDC. Key search terms included “Cervarix,” “Gardasil 4,” “Gardasil 9,” and “HPV vaccine efficacy,” covering the period from 2019 to 2024. Non-peer-reviewed sources and review articles were excluded from the analysis.

## Review of HPV Vaccination Guidelines



This review article examines HPV vaccination guidelines issued between 2019 and 2025, focusing on several key parameters: the optimal age for initiating vaccination within the target population, gender inclusivity of the vaccination cohort, and the preferred vaccine regimens and dosing schedules. The review included guidelines published in English and excluded recommendations developed specifically for special populations, such as individuals with immunodeficiencies.

As a result of the search, recommendations from various scientific organizations regarding human papillomavirus (HPV) vaccination were identified. These include guidelines from the Advisory Committee on Immunization Practices (ACIP), the American Academy of Family Physicians, the American Cancer Society, and the American College of Obstetricians and Gynecologists.

European bodies such as the European Society of Gynecologic Oncology and the European Federation for Colposcopy were also represented.

Additionally, national guidelines were considered, including those from the U.S. Centers for Disease Control and Prevention (CDC) and immunization advisory committees, as well as global recommendations from the World Health Organization (WHO), which outline international strategic approaches to HPV vaccination.

The primary rationale behind the universal recommendation for HPV vaccination is to enhance protection against HPV infections and thereby reduce the associated risk of cancer development—most notably cervical cancer—which remains a significant public health concern.

Table 1.

List of recommendations included in this study

Organization / Year	Optimal Vaccination Age	Target Sex	Upper Age Limit	Recommended Vaccine	Dosing Schedule
World Health Organization, 2022 [11]	9–14 years	F	20 years	Based on local HPV epidemiology	1 or 2 doses
American Academy of Family Physicians, 2021[12]	11–12 years	F and M	26 years	–	2 doses
Centers for Disease Control and Prevention, 2021 [13]	11–12 years	F and M	26 years	–	2 doses
National Cancer Institute, 2021 [14]	11–12 years	F and M	26 years	–	2 doses
American College of Obstetricians and Gynecologists, 2020 [15]	11–12 years	F and M	26 years	–	–
American Cancer Society, 2020 [16]	9–12 years	F and M	26 years	–	–
Advisory Committee on Immunization Practices, 2019 [17]	11–12 years	F and M	26 years	–	–
ESGO / European Federation for Colposcopy, 2019 [18]	9–13 years	F and M	25 years	–	2 doses



### **Vaccination Age and Target Population**

Three out of eight reviewed recommendations suggest initiating HPV vaccination at the age of 9, which is the lowest approved age according to the Summary of Product Characteristics for the available vaccines. The majority of the recommendations propose starting vaccination at age 11, and all recent guidelines from 2023 designate age 12 as the optimal point to begin HPV vaccination programs. Conversely, all reviewed recommendations emphasize that vaccination should be administered before the age of 15 to ensure immunity prior to the onset of sexual activity.

### **Sex of the Target Population**

Most recommendations advocate for vaccinating both girls and boys. Only one guideline suggests initiating vaccination exclusively among girls, with male coverage dependent on financial feasibility and the willingness of the female population to participate in vaccination programs.

### **Upper Age Limit for the Target Population**

Most recommendations consistently advocate administering HPV vaccination up to the age of 25–26 years. None of the guidelines reviewed recommend routine vaccination beyond age 26. Notably, all recommendations published in 2023 consistently endorsed the use of Gardasil 9 as the preferred vaccine.

### **Recommended Vaccination Schedule**

As of 2022, all professional societies and public health organizations advised vaccination schedules in accordance with the

respective Summary of Product Characteristics. Specifically, children under the age of 15 are recommended to receive a two-dose regimen, whereas those aged 15 and older should follow a three-dose schedule.

In a significant shift, the World Health Organization (WHO) became the first body in 2022 to recommend a one-dose HPV vaccine regimen. This approach, supported by public health data, is deemed to offer comparable individual protection to that of the two-dose schedule, while being simpler to implement. The WHO emphasized that this strategy could accelerate vaccination coverage among girls and lead to faster establishment of community-wide immunity [19].

In some contexts, WHO also considers it appropriate to implement a single-dose schedule regardless of prior planning. Emerging studies suggest that one dose may elicit immune responses comparable to two- and three-dose regimens among adolescents, though longer-term data are still under investigation.

Recent studies have confirmed that a single dose of the HPV vaccine can elicit an immune response comparable to that of two- or three-dose regimens in adolescent populations. However, long-term data regarding the durability of protection are still being clarified.

### **Comparative Efficacy of HPV Vaccines**

According to the 2020 guidance from the European Centre for Disease Prevention and Control (ECDC) [20], an indirect comparison of the efficacy of available HPV vaccines was conducted.

Analysis of the immunogenicity of the 9-valent (9vHPV, Gardasil 9) and quadrivalent (4vHPV, Gardasil 4) vaccines revealed the following [20]:

1. Both 9vHPV and 4vHPV vaccines demonstrate comparable efficacy against HPV types 6, 11, 16, and 18.
2. The 9vHPV vaccine induces a stronger immune response against additional HPV types 31, 33, 45, 52, and 58, which are not included in the 4vHPV formulation.
3. Immunogenicity of the 9vHPV vaccine is higher in boys and girls aged 9–15 years compared to women aged 16–26 years.

In the comparison of 4vHPV and bivalent (2vHPV) vaccines, the ECDC report also indicates:

1. Comparable efficacy of 4vHPV and 2vHPV vaccines in both males and females.
2. Higher immunogenicity of both vaccines in boys aged 9–15 years compared to females aged 16–26 years for the specific HPV types included in each vaccine.

### **Safety**

All HPV vaccines have demonstrated a similar safety profile. Local reactions such as pain and redness at the injection site are the most common, while systemic effects like headache and fever are rare and generally mild. No serious adverse events have been reported.

### **Effectiveness in Preventing Cervical Neoplasia**

In a recently published network meta-analysis by Lin et al. (2023) [21], the authors conducted a comparative assessment of the efficacy of HPV vaccination in preventing the development of cervical intraepithelial

neoplasia grade 2 and above (CIN2+) associated with HPV infection.

### **According to the results of this analysis:**

- Vaccination with the 2vHPV vaccine compared to placebo significantly reduced the risk of CIN2+ associated with HPV type 16 by 94% (RR = 0.06; 95% CI: 0.02–0.19), and with HPV type 18 by 92% (RR = 0.08; 95% CI: 0.01–0.67).
- Vaccination with the 9vHPV vaccine compared to placebo also significantly reduced the risk of CIN2+ associated with HPV type 16 by 99% (RR = 0.01; 95% CI: 0.00–0.80).

### **Perspectives on the Development of Therapeutic HPV Vaccines: Challenges and Strategies to Enhance Efficacy**

The aforementioned vaccines are prophylactic; however, active research is currently underway to develop therapeutic vaccines against HPV, which are crucial for protecting individuals already infected with the virus and preventing the progression of HPV-associated tumors. HPV therapeutic peptide-based vaccines offer advantages in specificity and safety by targeting defined epitopes, thereby minimizing the risk of allergic or autoimmune reactions. Nevertheless, these peptide-based vaccines typically have limited immunogenicity and often fail to elicit a strong immune response. Therefore, more effective strategies are needed to enhance the immunogenicity of peptide-based HPV vaccines [22].

### **Specifics of HPV Vaccination in Georgia**

According to new regulations introduced in 2025 [23], HPV vaccination is provided free of charge in Georgia for the following groups:

- Girls and women aged 10 to 45 years;
- Boys and men aged 10 to 26 years.

For children aged 15 years and younger, the vaccination schedule consists of 2 doses with a minimum interval of 6 months.

For women aged 15 to 45 and men aged 15 to 26, a three-dose schedule is recommended: 0 – 2 – 6 months. The minimum interval between the first and second doses must be at least 1 month, and between the second and third doses at least 3 months.

For girls and boys aged 10–12 years, vaccination is conducted according to the National Immunization Calendar at the healthcare facility of their registration and is fully funded by the state (including the visit and physician consultation).

For women aged 13–45 and men aged 13–26, vaccination is available at any healthcare facility participating in the HPV immunization program and is fully free of charge for patients (including the vaccination visit and medical consultation).

## Conclusions

The recommendations of all reviewed scientific societies unanimously emphasize the importance of vaccinating children against HPV before the onset of sexual activity. Over time, as new evidence has emerged demonstrating the efficacy of HPV vaccination in preventing cervical cancer-related infections, these recommendations have evolved. Recent guidelines increasingly advocate for the use of the 9-valent vaccine,

which offers broader protection against a wider range of HPV types.

A notable innovation in recent guidelines is the endorsement of a single-dose vaccination regimen for population-based programs. This approach is aimed at simplifying program logistics, thereby making large-scale immunization efforts more feasible.

Global data confirm the pivotal role of HPV vaccination in the prevention of cervical cancer. Gardasil 9 provides protection in up to 90% of cases, and reduced-dose regimens (1 or 2 doses) maintain immunogenicity in adolescents while enabling broader population coverage. The WHO's "90–70–90" strategy outlines a practical plan for cervical cancer elimination. Key challenges remain, including unequal access in low- and middle-income countries and insufficient vaccination coverage among boys. These findings provide a foundational basis for shaping national and regional vaccination strategies.

Gardasil 9 is the vaccine of choice for the broadest HPV coverage, considering its properties and efficacy.

A two-dose regimen is sufficient for the 9–14 age group, which reduces costs and improves adherence.

A three-dose schedule is recommended for older and immunocompromised individuals. In Georgia, HPV vaccination is administered to females aged 10 to 45 and males aged 10 to 26.

Future directions include continued surveillance to assess long-term immunity over 20 years and expansion of vaccination programs.



## მტკიცებულებებზე დაფუძნებული ეფექტურობა და რეკომენდაციები ადამიანის პაპილომავირუსის ვაქცინაციისათვის საერთაშორისო და ეროვნულ პრაქტიკაში

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აბსტრაქტი

შესავალი

ადამიანის პაპილომავირუსი (HPV) საშვილოსნოს ყელის კიბოს და სხვა ანოგენიტალური და ოროფარინგეალური ავთვისებიანი სიმსივნეების ძირითადი გამომწვევი აგენტია. HPV-ს წინააღმდეგ პროფილაქტიკური ვაქცინაცია ეფექტური აღმოჩნდა მაღალი რისკის HPV ინფექციების და მათთან დაკავშირებული კიბოსწინარე დაზიანებების პრევენციისთვის.

**მიზანი:** სტატია წარმოადგენს ოთხვალენტური (გარდასილ 4) და არავალენტური (გარდასილ 9) HPV ვაქცინების იმუნოგენურობის, ეფექტურობისა და უსაფრთხოების პროფილების შედარებით მიმოხილვას. კვლევაში სინთეზირებულია შეერთებული შტატებისა და ევროპის ძირითადი ჯანდაცვის ორგანოებისა და პროფესიული საზოგადოებების მიმდინარე კლინიკურ მითითებები და განხილულია ეროვნული ვაქცინაციის სტრატეგიები, განპირობებული თანამედროვე საქართველოში მიმდინარე მოვლენებით.

**მეთოდები:** 2019 წლიდან 2025 წლამდე, ჩატარდა სისტემატური ლიტერატურული კვლევა PubMed-ში, Cochrane Library-ში, PMC-ში, CDC-სა და Merck-ის მონაცემთა ბაზებში. გამოყენებულ იქნა რეცენზირებული სტატიები და ოფიციალური მითითებები.

**შედეგები:** როგორც „გარდასილ 4“, ასევე „გარდასილ 9“ ავლენს ექვივალენტურ დაცვას ადამიანის პაპილომავირუსის მე-6, მე-11, მე-16 და მე-18 ტიპების წინააღმდეგ. „გარდასილ 9“ იწვევს უფრო ძლიერ იმუნურ პასუხს ხუთი დამატებითი ონკოგენური ტიპის (31, 33, 45, 52, 58) წინააღმდეგ და ავლენს უფრო მაღალ იმუნოგენურობას 9-15 წლის ასაკობრივ ჯგუფში, ხანდაზმულ ჯგუფებთან შედარებით. ქსელური მეტაანალიზები ადასტურებს ვაქცინაციის შემდეგ ადამიანის პაპილომავირუსის მე-16 და მე-18 ტიპებთან დაკავშირებული CIN2+ დაზიანებების მნიშვნელოვან შემცირებას. ჯანმო-ს და ევროპის დაავადებათა კონტროლისა და პრევენციის ცენტრის ბოლოდროინდელი რეკომენდაციები სულ უფრო მეტად ემხრობა „გარდასილ 9“-ს და მხარს უჭერს გამარტივებული დოზირების რეჟიმებს, მათ შორის ერთჯერადი დოზის სტრატეგიებს მოსახლეობის ფართო მასებისთვის. საქართველოში, ადამიანის პაპილომავირუსის ვაქცინაცია ამჟამად თავისუფლად ხელმისაწვდომია 10-45 წლის





ქალებისთვის და 10-26 წლის მამაკაცებისთვის, გადახედული ეროვნული პროგრამის ფარგლებში.

### დასკვნა

„გარდასილ 9“ არის ფართო სპექტრის ადამიანის პაპილომავირუსისგან დაცვის სასურველი ვაქცინა. განახლებული რეკომენდაციები და მტკიცებულებები ადასტურებს ორდოზიან გრაფიკს მოზარდებისთვის და სამდოზიან გრაფიკს ხანდაზმული ან იმუნოკომპრომეტირებული პირებისთვის. საქართველოს გაფართოებული HPV ვაქცინაციის პროგრამა თანხვედრაშია საშვილოსნოს ყელის კიბოს ელიმინაციის გლობალურ ძალისხმევასთან, თანაბარი ხელმისაწვდომობისა და ოპტიმიზებული ვაქცინაციის სტრატეგიების გზით.

**საკვანძო სიტყვები:** ადამიანის პაპილომავირუსი (HPV), პროფილაქტიკური ვაქცინაცია, იმუნოგენურობა, ვაქცინის ეფექტურობა, ვაქცინის უსაფრთხოება, HPV ელიმინაციის სტრატეგია, გარდასილი.

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უნივერსიტეტ გეომედის მულტიპროფილური საუნივერსიტეტო კლინიკა





## უნივერსიტეტ გეომედის სარეაბილიტაციო კლინიკა


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