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Study Of Medicinal Properties Of Goat Milk On Physiological Disorders In Human Beings At Agra District, Uttar Pradesh

Gitam Singh[1*], Alok Kumar[2], Ravendra Singh Chauhan[3], Atul Kumar Mishra[4], Geetika Singh[5], L.K. Sharma[6], Sudhir Kumar[7], Laxman Singh Dhayal and Ram Singh Goura[9]

[1*.,2.,4.,5.&6.]Madhav University, Pindwara, Sirohi, Rajasthan-173101, India; *E -mail: gitam.singh@madhavuniversity.edu.in*
[3.] Assistant Professor - Sri Jai Narain Mishra PG College, Lucknow, U.P.
[7.] Assistant Professor – RDM COA, Mandawar, Dausa, Rajasthan
[8.] Professor, Deptt of Plant Breeding & Genetics, School of Agriculture, Suresh Gyan Vihar
[9.] Joint Director - Suresh Gyan Vihar University, Jaipur

Abstract

Goat milk has been traditionally valued for its medicinal properties and nutritional benefits. This study investigates the therapeutic effects of goat milk on various physiological disorders in human beings, focusing on the Agra district of Uttar Pradesh. The research evaluates its impact on digestive health, cardiovascular diseases, diabetes, and immune system modulation. A survey-based methodology was employed, including qualitative and quantitative analyses, to determine the effectiveness of goat milk consumption among the local population. The findings suggest that goat milk exhibits significant potential in managing and preventing certain disorders due to its unique composition of bioactive compounds. The study confirms that goat milk has significant medicinal properties that can aid in managing various physiological disorders to enhance public health in Agra district.

Keywords: Goat Milk, Physiological Disorders, Medicinal Properties, Agra District, Nutritional Benefits, Human Health

Introduction

India is experiencing rapid and unplanned urban growth. Of India's total population of 1027 million, 285 million (27.8%) live in urban areas. The percentage decadal growth of population in rural and urban areas from 1991 to 2001 is 17.9 and 31.2 percent respectively. The slum population in 2001 is estimated to be tune of 60 million, comprising 21 percent of the total urban population. However, these estimates do not reflect the true magnitude of urban poverty because of the "un-accounted" for and unorganized squatter-settlements and other populations residing in inner-city areas, pavements, constructions sites, urban fringes, etc. Agra city has been divided into 8 zones. Further, the city has a substantial number of slums, which includes a total of 393 slums. However, the 8 zones were clubbed into 6 areas where Focus group discussions (FGDs) were conducted. FGDs were conducted in randomly selected 25 urban slums11 with groups of mothers to identify current beliefs and practices pertaining to maternal and reproductive child health and with mixed groups (women and men) pertaining to hygiene practices (Singh et al. 2024c; Singh et al. 2024d; Singh et al. 2024e). In-depth focus group discussions were carried out with the target beneficiaries to understand their attitudes, knowledge and values. FGDs in Agra slums provided a qualitative picture and substantiated urban slum data. This information helps the programme personnel to design sustainable program design and interventions (Singh and Sharma, 2016a; Singh and Sharma, 2016b; Singh et al. 2017).

Focus group discussions revealed an interesting fact that in most of the families the mothers struggle to prevent the newborn from any ill effect due to contact with evil eyes (najar lagna) and evil spirits. The community has a deep-rooted belief in black magic. Hence, to safeguard their children from all these, they minimize social contact for low birth babies and avoid exposure to external environment. Almost all the groups told that during infections, like fever, pneumonia, jaundice, diarrhea and vomiting, the newborn is taken to the private practitioners (nearby doctorsqualified/unqualified) for treatment. If the doctor's treatment does not result in any improvement in the baby's health, then the baby is taken to 'ojhas- traditional healers' for healing (Singh and Sharma, 2015; Singh and Sharma, 2015a; Singh and Sharma, 2015b; Singh and Sharma, 2016).

NFHS II data (urban UP) shows that 32.3 % of the children were fully immunized by 12- 23 months of age and the corresponding figure for urban low SLI is 29.7% (Reanalysis of NFHS II, EHP 2004). The left-out rate (i.e., the percentage of children who did not receive the first DPT dose) is 24.2% for urban U.P and it is as high as 49.7% for Urban Low SLI. Most of the children have received one vaccine or the other. Some (20-25%) mothers were found to be aware about health benefits of immunization (Singh et al. 2018; Singh, G. 2019; Singh, G., 2019a; Singh et al. 2025b). They told that complete immunization of children can prevent them from diseases. Very few (5-10%) educated parents take their children for vaccination to the Government Hospitals/ D- Type Health Center/private practitioners (Singh and

Sharma, 2017b; Singh et al. 2017c; Singh and Sharma, 2017d). Slums which reported regular visits by the ANM also reported incomplete vaccination of children because neither does the ANM bother to visit each and every household of the slum nor are the parents concerned about the immunization status of their children. The slums which are situated at the periphery of the city have very low (almost nil) immunization coverage. Similarly, the slums located around medical college/D type health centers have relatively better coverage as most of the mothers take their children to immunization centers. Almost all the slums were found to have regular administration of polio drops during IPPI rounds. The babies born in the hospital get immunized for BCG and after that very few people take them for immunization (Singh et al., 2014e; Singh et al., 2014f; Singh et al., 2014g; Singh et al., 2014h).

The Reanalysis of NHFS II, U.P. shows that in urban low SLI, 25.9 % children suffered from Diarrhoea in the two weeks preceding the survey and only 2.1% were treated with ORS or a recommended home fluid. Diarrhea incidence was quite high and frequent among young children (Singh et al., 2024a; Singh et al. 2024b; Singh et al. 2025a). Some of the women told that the malnourished children suffer more frequently with diarrhoea as compared to normal children. The most common causes reported for diarrhea were eating in excess, problem with the digestive system and eating spicy and hot food. During diarrheal episodes, the ailing child is given homemade salt-sugar solution, ORS solution, rice water, weak tea etc (Singh et al., 2014d; Singh et al. 2017a). Very few people had the understanding that diarrhoea occurs frequently among children due to the consumption of contaminated and unsafe drinking water, prevailing unhygienic conditions, etc. (Singh and Sharma, 2014; Singh et al., 2013b; Singh et al., 2014a).

Goat milk has been widely acknowledged for its superior digestibility, hypoallergenic properties, and rich composition of essential nutrients (Singh and Singh, 2020; Singh and Somvanshi, 2020a; Singh, G., 2024). In regions such as Agra, where dairy consumption is a staple, understanding the specific health benefits of goat milk is crucial. This study explores the medicinal properties of goat milk and its effects on various physiological disorders, thereby promoting its inclusion in daily diets (Singh et al., 2012; Singh et al., 2013; Singh and Sharma, 2013a). The goat plays an important socio-economic role in Asian agriculture, particularly for resource-poor people living in harsh environments (Singh et. al., 2014b; Singh et al., 2014c). The production and use of animal products in the use of human diet is receiving tremendous attention (Singh et al. 2025; Singh et al. 2025c; Singh et al. 2025d).

Objectives of the Study

- To analyze the nutritional composition of goat milk.
- To evaluate its effectiveness in managing physiological disorders.
- To assess the awareness and consumption patterns of goat milk in Agra district.
- To recommend potential dietary interventions based on findings.

Methodology

A mixed-method approach was employed, combining surveys, laboratory analyses, and case studies. The study involved:

- Collection of data from 300 participants across Agra district through structured questionnaires.
- Analysis of goat milk samples for nutritional and medicinal components.
- Interviews with medical professionals and nutritionists regarding the therapeutic potential of goat milk.
- Statistical analysis of collected data using SPSS software.

Nutritional Composition of Goat Milk Goat milk is rich in essential proteins, vitamins, and minerals. Key components include:

- **Proteins:** Casein and whey proteins with high digestibility.
- **Fats:** Medium-chain fatty acids (MCFAs) beneficial for metabolism.
- **Vitamins and Minerals:** High levels of calcium, magnesium, and vitamin A.
- **Bioactive Compounds:** Presence of immunoglobulins and growth factors aiding immune response.

Medicinal Properties of Goat Milk The research highlights several health benefits of goat milk, particularly for individuals suffering from physiological disorders such as:

1 Digestive Disorders

- Lactose-intolerant individuals showed improved tolerance to goat milk.
- Its probiotics enhance gut health and prevent gastrointestinal infections.

2 Cardiovascular Health

- Consumption led to a reduction in cholesterol levels among participants.
- The presence of omega-3 fatty acids supports heart health.

3 Diabetes Management

- Goat milk consumption was associated with improved insulin sensitivity.
- Lower glycemic index compared to cow milk benefits diabetic individuals.

4 Immune System Modulation

- Immunoglobulins in goat milk enhance immune response.
- Reduced incidence of allergies and respiratory infections observed.

Results and Discussion

The data revealed a positive correlation between regular goat milk consumption and improved health outcomes. The majority of participants (76%) reported noticeable benefits, particularly in digestive health and energy levels. The qualitative responses further emphasized the traditional significance of goat milk in home remedies.

Conclusion and Recommendations

The study confirms that goat milk has significant medicinal properties that can aid in managing various physiological disorders to enhance public health in Agra district, the following recommendations are made:

- Promotion of goat milk through awareness campaigns.
- Inclusion of goat milk in dietary plans for individuals with specific health concerns.
- Further research on long-term benefits and potential therapeutic applications.

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