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INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/19855
DOI URL: <http://dx.doi.org/10.21474/IJAR01/19855>



RESEARCH ARTICLE

MILK CONSUMPTION PATTERNS ACROSS SOCIO-ECONOMIC AND DEMOGRAPHIC PROFILES: A LITERATURE-BASED STUDY

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Manuscript Info

Manuscript History

Received: 07 September 2024
Final Accepted: 14 October 2024
Published: November 2024

Abstract

This study analyses existing literature on milk consumption patterns in relation to socio-economic and demographic factors. By reviewing previous research, the study examines the influence of variables such as gender, age, education, income, employment and geographic location on milk consumption behaviours. Findings suggest that consumption patterns are heavily influenced by these factors, with implications for public health policy, dairy marketing strategies, and future research directions in consumer behaviour.

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Introduction:-

Since milk is essential for baby feeding and for reducing nutritional poverty in all other age groups, it is a special food item that must always be available in the market. (Uzunoz and Akcay, 2012). Customers view milk as a significant source of calcium, proteins, and vitamins, and they believe it is beneficial for overall health and bone health in particular. (Blackett al., 2002; Lonnerdal, 2003). For a healthy lifestyle, it is therefore advised to use adequate amounts of milk and milk products (Tiryaki and Akbay, 2010).

While it is advised that people drink adequate amounts of fluid milk and milk products for a healthy lifestyle, different countries may have different fluid milk consumption habits and preferences (Uzunoz and Akcay, 2012). Various studies have reported significant differences in consumption pattern and consumers' fluid milk consumption behaviour and preferences between developed and developing countries (Kilic et al., 2009; Tiryaki and Akbay, 2010; Yayar, 2012). For instance, according to a report of Euromonitor (2010), liquid milk consumers of India have comparatively higher lactose tolerance capacity even in their adulthood. Consumers in developing countries have a number of dairy species or milch animals to choose from like buffalo, cow, goat, camel, and sheep in comparison with developed countries where almost all milk is produced by cows (Faye and Konuspayeva, 2012). Moreover, in contrast with developed countries like US and UK which have high food safety standards and where most of the milk is consumed in its pasteurized form, developing countries, especially, in India consumers strongly prefer raw milk to pasteurized milk, and there is hardly any government regulation of the safety and quality of milk (Handford et al., 2016).

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In the recent years, significant changes have taken place in the fluid milk consumption patterns of Indian consumers (Ohlan, 2012a; Ohlan, 2016). In addition to the increasing population and income, the expanding impact of international corporations and retail chains in India, have facilitated improved consumer access to dairy products (Ohlan, 2012b). Kubendran and Vanniarajan (2005), in this regard, concluded that Milk consumption patterns vary from one consumer to the next in terms of quantity, method, source, brand preference, and other factors. Abdulai et al. (1999) in their study of household food demand in India also noted the changing consumption pattern owing to the changing demographics and other factors. They also emphasized that these changing patterns of consumption are causing the demand function to shift over time. Studies have estimated that the sale of fresh/pasteurized milk is expected to rise as urban consumers are turning away from unpackaged offerings in India, specifically middle - class consumers are set to drive retail volume growth of pasteurized offerings (Euromonitor, 2010).

Income-induced diet diversity, the effects of globalization, rising urbanization, and shifting lifestyles have all contributed to changes in India's food consumption patterns in recent years (Ohlan, 2016). Further information about the evolving consumption patterns of Indian consumers may be found in the most recent National Sample Survey Office (NSSO) report, which was published in 2014. These changing consumption patterns not only affect the strategy formulations of policy makers and business enterprises but also play a remarkable role in predicting economic growth (Singh, 2018). Therefore, it becomes essential to examine the determinants of consumption pattern.

Prior studies have established that, to explain differences in food intake patterns and behaviors across various contexts, socioeconomic and demographic factors are crucial variables. (e.g., Furst et al., 1996; Patterson et al., 1995; Tepper and Rosenzweig, 1999). Given this, the current study has made an effort to assess the association between the kind and frequency of milk consumption and socioeconomic and demographic factors, including gender, age, education, employment, income, and location.

Research Objectives:-

1. To examine existing literature on the relationship between socio-economic and demographic factors (gender, age, income, education, occupation and area) and milk consumption.
2. To analyse demographic factors (age, gender, education, income, occupation and location) influencing milk consumption patterns.

Research Methodology:-

This study is a systematic literature review, utilizing a descriptive, qualitative approach. The methodology focuses on synthesizing findings from prior studies rather than collecting primary data. The data is sourced exclusively from secondary literature, including journal articles, government reports, industry publications, and relevant theses on milk consumption. Databases such as JSTOR, PubMed, ScienceDirect, and Google Scholar were searched using keywords like "milk consumption," "socio-economic profile," "demographic factors," and "dairy consumption pattern". A thematic analysis approach was applied to organize findings into categories based on socio-economic and demographic factors. Key themes identified in the literature were analysed, and significant patterns in milk consumption across different consumer profiles were highlighted.

Results and Discussions:-

Association of socio -economic and demographic variables with choice of milk type and milk consumption frequency

To reflect an individual's socio-economic and demographic position, socio-economic and demographic parameters typically include characteristics like age, gender, marital status, education level, occupation, and income, among others (Mak et al., 2012). Socio -demographic characteristics have mainly been used as profiling variables (Dalky et al., 2017; Turrini et al., 2014; Verain et al., 2016). However, previous analyses have also illustrated how an individual's socioeconomic and demographic characteristics influence milk consumption practices (e.g., Nayaga Jr, 1999; Akbay and Jones, 2005; Tiryaki and Akbay, 2010).

It was found that there is a substantial correlation between fluid milk consumption habits and preferences and the socioeconomic and demographic features of households based on a cross-sectional survey data set from 18,278 Turkish households (Akbay, 2007). More precisely, they concluded that socio-demographic factors are important in describing consumers' level of preference for various milk varieties, such as packaged and unpacked fluid milk. In a

related study, Tiryaki and Akbay (2010) showed that certain socio-economic and demographic traits of consumers influence their decisions about whether to use processed or unprocessed milk. In addition to the consumption choices between raw and pasteurized milk, the socioeconomic and demographic characteristics of consumers have also been recognized as the determinants of consumption frequency of edible products including variety of foods and drinks (Azagba and Sharaf, 2011). Through a survey of 110 homes in Taiwan's metropolitan districts, Hsu and Kao (2001) found that demographic characteristics affect consumption patterns, such as the amount and frequency of consumption of yogurt drinks, flavour-infused milk, and fresh milk.

Gender

A significant number of investigations has examined the association between gender and food consumption frequency and consumption preferences (Furst et al., 1996; Prättälä et al., 2006; Rozin and Fallon, 1988; Rozin et al., 2006) including milk and milk products (Arganini et al., 2012; Mak et al., 2012; Tepper and Rosenzweig, 1999). The studies have indicated that male family heads have different consumption preferences than female household heads. Health worries could be the cause of the variations in consumption patterns. For example, the female-headed households have been reported to be more aware of the quality and safety of the food in comparison with the male-headed households (Akbay, 2007; Randall and Sanjur, 1981; Rozin et al., 2006). Accordingly, females were more likely than males to buy pasteurized and sterilized milk, according to a study conducted on Turkish homes by Akbay and Tiryaki (2008). In a similar vein, Watanabe et al. (1998) found that consumers' consumption patterns varied according to their gender in an effort to investigate the factors influencing their beverage choice and frequency of consumption. Additionally, research conducted in various settings has revealed results showing that the frequency and choice of milk consumption differs between men and women (Dagevos, 2005; Verain et al., 2016).

Above Researches show that food consumption is significantly influenced by gender, particularly in the context of milk and milk products. Studies show that male family heads have different consumption preferences, possibly due to health concerns. Female households are more aware of food quality and safety, leading to a higher likelihood of purchasing pasteurized and sterilized milk. Additionally, research shows that milk consumption frequency and choice differ between men and women.

Age

One of the most researched sociodemographic factors in relation to the consumption patterns of different edible food types is age. (Nayaga Jr, 1999; Cronin et al., 1982; Smallwood et al., 1995; Tepper and Rosenzweig, 1999). Studies have revealed that, among consumers of all ages, health concerns and taste preferences were the main factors determining fluid milk consumption preferences and frequency (Khan and Hackler, 1981). In this regard, Hsu and Kao (2001) established that respondents who lie in the age group of 36 to 45 opted fresh milk more in relation to the age groups of 26 to 35 and 36 to 45. Similar findings were made by Jensen and Kesavan (1993), who studied 2,996 women of different ages and found that older women drank less milk and milk products than women of younger and middle age. Additionally, researches in this area have shown that age of the consumer affects their degree of anxiety towards fluid milk's safety and clean conditions and thus has an influence on their preferences of pasteurized and unpasteurized milk (Akbay and Jones 2005).

Age has a big impact on how much milk and milk products people consume, with health concerns and taste preferences being major factors. Studies show that older consumers prefer fresh milk and consume less milk products. Age also affects consumer anxiety towards safety and hygiene conditions, influencing their preferences for pasteurized and unpasteurized milk.

Education

Since increase in the level of education enhances one's capacity to process more complicated information and make better decisions, it has been recognized that one of the main causes of variations in customers' preferences for different types of milk is education (Negassa, 2009). Healthy eating habits are favourably connected with higher education (Bus and Worsley, 2003). Numerous empirical investigations have confirmed that consumers' preferences for processed or unprocessed fluid milk vary significantly depending on their educational attainment. Using a wealth of information from two different US Department of Agriculture surveys, Tepper and Rosenzweig (1999) found that consumers with greater levels of education are more likely than those with lower levels of education to consume pasteurized or processed milk. Similarly, based on their study of 350 Turkish households, Hatirli et al. (2004) contended that customers who have greater levels of education are more likely to use milk more frequently. Additionally, studies by Schmit et al. (2002) and Tiryaki and Akbay (2010) have confirmed the link between

consumers' educational attainment and their milk consumption habits, including their favoured type of milk and the frequency of milk consumption.

Education has an important role in customers' preferences for milk types, as it enhances their capacity to comprehend complicated data and come at wiser conclusions. Healthy eating habits are favourably connected with higher education. Empirical studies show that highly educated consumers are more preferred to use pasteurized or processed milk, use milk more frequently, and have a link between their educational attainment and milk consumption habits.

Income

Empirical researches have demonstrated that socioeconomic factors, particularly income level, account for a substantial variation in milk consumption patterns (Akbay and Tiryaki, 2008; Smallwood et al., 1995; 1993; Uzunoğlu and Akçay). For instance, Hatırlı et al. (2004) opined that as the income level increases the consumption frequency of milk also increases. Additionally, they pointed out that consumers in higher income brackets were more concerned about safety and clean milk practices, which is why they favoured processed or pasteurized milk over raw milk, which was preferred by those in lower income brackets. Similarly, household income and the likelihood of milk consumption are positively correlated (Hsu and Kao (2001). Additionally, Tiryaki and Akbay (2010) confirmed the link between milk consumption pattern and income in a recent survey of Turkish households. Above study's findings demonstrated that customers with greater incomes typically had different preferences for milk types as well as differences in the proportion and frequency of milk consumption.

Researches show that economic factors, particularly income level, significantly influence milk consumption patterns. Higher income individuals tend to prefer processed or pasteurized milk over raw milk, as they are more concerned about safety and clean practices. Additionally, household income and milk consumption likelihood are positively correlated. Higher income customers generally have different preferences for milk types and frequency.

Employment

According to various studies, consumers' employment status—that is, whether they are employed or unemployed, part-time or full-time, the type of employment, how many hours they work, whether they work day or night shifts, etc.—influences their food consumption patterns, including the foods they choose to consume and how often they consume it (Ates and Ceylan, 2010; Dong and Kaiser, 2001). In particular, a person's profession has a big impact on the kinds and quantities of goods and brands they choose to purchase. In this context, studies by Ates and Ceylan (2010) and Dong and Kaiser (2001) highlighted the relationship between an individual's choice for milk intake and their kind of employment, such as full-time or part-time. Similarly, it was found that housewives and jobless people were more likely to pick raw or unprocessed fluid milk, whereas working people were more likely to prefer processed or pasteurized fluid milk, based on data from a cross-sectional nationwide survey conducted in Turkey (Tiryaki, G.Y., 2008; Tiryaki and Akbay 2010). Additionally, research by Nayga et al. (1999) and Tepper and Rosenzweig (1999) demonstrated that consumers' work position had a direct impact on how frequently they purchase and consume milk.

Studies show that consumers' employment status, including full-time, part-time, and shift work, significantly influences their food consumption patterns. Professions also significantly influence the types and quantities of goods and brands purchased. For example, housewives and jobless individuals tend to prefer raw or unprocessed milk, while working people prefer processed or pasteurized fluid milk.

Area

Urbanization and location of home have been considered important factors in understanding patterns of food consumption (Tepper and Rosenzweig, 1999). Nayga et al., (1999) asserts that food consumption patterns, including eating habits and food preferences, vary depending on the needs and lifestyles of consumers in various geographic areas. In this regard, it was emphasized that regional effects are important aspects in determining families' fluid milk consumption choices (Akbay, 2007; Akbay and Tiryaki 2008). According to a thorough comparison of regional effects on milk consumption patterns, Ates and Ceylan (2010) found that there are significant variations in quality-of-life indicators as well as demographic and socioeconomic differences among populations based on region (rural, suburban, urban, and metropolitan), which directly affects milk consumption preferences (raw and pasteurized) and frequency. Similarly, additional research has confirmed the regional impacts on consumers' food consumption choices and milk intake frequency (Davis et al., 1983).

It notes that food habits vary across different regions, shaped by consumers' needs and lifestyles. Researches by various scholars indicate that regional factors, quality of life, demographics, and socioeconomic differences impact milk consumption preferences and frequency. These differences are observed across rural, suburban, urban, and metropolitan areas, affecting choices between raw and pasteurized milk.

Conclusion:-

The study concludes that milk consumption is influenced by socio-economic status, demographic characteristics, and emerging health and environmental concerns. According to the review, a complex interaction between demographic and socioeconomic factors affects milk consumption trends. Food intake is greatly influenced by factors such as gender, age, education, income, employment position, and location, especially when it comes to milk and milk products. Male headed households have different consumption preferences due to health concerns, while female headed households are more aware of food quality and safety. Age also affects milk consumption frequency and choice, with older consumers preferring fresh milk and less milk products. Higher education is positively correlated with healthy dietary patterns, while income level influence milk consumption patterns. Employment status and professions also influence food consumption, with housewives and jobless individuals preferring raw or unprocessed milk. Regional factors also impact milk consumption preferences and frequency. The long-term effects of these changes on dairy production and consumption should be investigated further.

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