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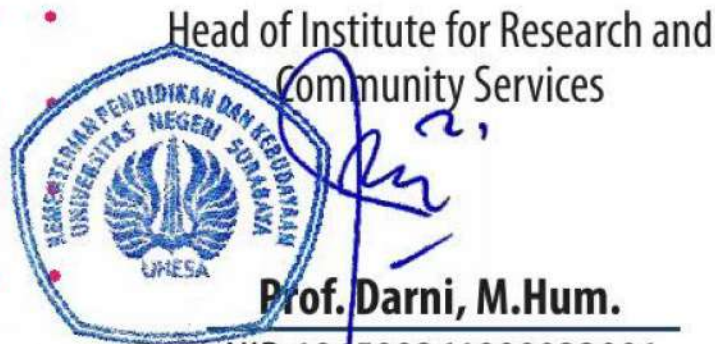
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Nutridrink TOGA as an Alternative to Maintain Body Immunity Against Covid

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ABSTRACT

Family medicinal plants have played an important role since ancient times in maintaining health, maintaining stamina and treating diseases. Therefore, the TOGA plant has become part of local wisdom in the life of Indonesian society until now. This study aims to determine the level of acceptance of family medicinal plants drinks as an alternative to maintaining body immunity against covid. In addition, it explains the factors that cause the high acceptance of Family medicinal plants nutridrink, namely personal factors, socio-cultural factors and psychological factors. This study applies qualitative research methods using descriptive analysis. This research was conducted by distributing questionnaires to students at the State University of Surabaya at random. The findings show that the acceptance rate of family medicinal plants nutridrink as an alternative to maintaining immunity against covid is very large. The factors that cause the high acceptance of family medicinal plants nutridrink are personal factors, socio-cultural factors and psychological factors. The activity of consuming family medicinal plants nutridrink, apart from being influenced by cultural learning, is influenced by family, reference groups and psychological factors, namely individual attitudes.

Keywords: Medicinal Plant, Nutridrink, Immune Body, Covid

1. INTRODUCTION

Many countries have used traditional beverages made from family medicinal plants and are now increasingly popular due to pandemic Covid. Indonesia is one country that has a wealth of family medicinal plants and as well as nutridrink herb from various tribes spread across various regions of Indonesia from Sabang to Merauke. Family medicinal plant utilization and processing is able to increase economic value and beauty, as well as satisfaction value. There are many varieties of family medicinal species found in yard such as tuber, leaf, rubber, bark, spices, leaves, fruit, skin, stem or flower [1]. Health research results in 2010 also showed that from the society that consumes nutridrink, 55.3% consume nutridrink in liquid form (Infusum/decoct), while the rest (44.7%) Consume nutridrink in the form of powders, choking, and pills/capsules/Tablets [2].

Pandemics today, the community seeks to keep the immune system good to prevent and fight the spread of viruses. Common causes of cold are coronavirus and rhinovirus. Adenovirus, Coxsackieviruses, Mycovirus, and paramyxovirus, human breathing virus syncytial, or known as influenza viruses. Still many new viruses are constantly being identified [3]. The main priority of human is to have a healthy body. The development of the advancing era, changed the human mindset to health. To have a healthy body needs to be done several ways one of them pay attention to the intake of nutrients in the body [4]. WHO (World Health Organization), works with research institutes to select traditional medicinal products that can be investigated for efficacy and clinical safety for the treatment of covid.

Family Medicinal Plants efficacious to maintain the immunity of the body. Knowledge of native medicine in Indonesia is wide enough because of the considerable

diversity of local cultures [5]. Indonesian people are hereditary accustomed to drinking potions prepared from family medicinal plants planted in the yard. In addition, herbal teas, prepared by a variety of plant species, are considered a hereditary tradition that cannot be separated into the daily lives of local people [6]. Various types of toga plants are easily found in the yard such as Ginger (*Zingiber officinal*), Temulawak (*Curcuma Xanthorrhiza* ROXB), Kencur (*Kaempferia galanga* L.), turmeric (*Curcuma longa* linn), fragrant lemongrass (*Cymbopogon nardus* (L.) rendle), lime (*Citrus × aurantiifolia*) [7].

Nutridrink offers health drink products that are efficacious to maintain and improve the body immunity with the basic ingredients of toga crops combined with fruits. Plant material can consist of leaves, fruits, gum, rhizome, bark, stems, flowers, and seeds of one species or several species, collected from the surrounding forest [8]. Herbal drinks, such as herbal teas, juices and potions are consumed both for recreational and healing purposes [9]. [10] stated that the quality aspects of traditional beverages must meet the criteria, such as (1) organoleptic, namely: The drink should have a taste of good, fragrant aroma, suitable texture, attractive colors, attractive presentation, adapted to the tastes that consume it; (2) Chemical, namely: the drink does not contain additional chemicals such as savory material, chemical aroma Enhancer, chemical emulsifiers, preservatives so that it really make natural drink; (3) Nutrition, namely: beverages should contain the necessary nutritional elements of the body; and (4) microbiological, i.e.: the drink does not contain mushrooms, mold, or bacteria, so it is healthy to consume. By observing the above criteria and conditions, beverages made from medicinal plants can be accepted by various nations in the world and as capital diplomacy through traditional beverage fields.

Research results [11] Explained that there are two factors that are the first sociopsychological factor, the community as a speaker stating family medicinal plants can be utilized for first aid to health problems, can be one source of community income, make beautiful home yard, reduce the cost of family expenditure for the drug. While the second factor is the Sociogenic planting toga not a new experience, the community responds positively, according to the field of science, and become a guarantee in the task. One of the ways that can be taken in creating local products to fit the preferences of today's consumers is to innovate the name, form, trend of presentation and packaging of products [12].

The diversity of consumers in buying a product is influenced by a variety of factors both from consumers

and outside consumers. Some factors that can affect purchasing behavior include social culture, personal and psychological factors [13]. As for the decision of consumer purchase is influenced by four main psychological factors: motivation, perception, learning, and trust and attitude [14]. Did [15] Traditional drinks are not solely for women but also for men and children. This family medicinal plants drink has several advantages, such as low oxidation and mild-inflicted side effects. Based on the thought researchers have a purpose to know the level of admission family medicinal plants drink as an alternative to maintain immunity to the body against the Covid.

2. RESEARCH METHODS

This type of research uses qualitative approaches. The purpose of obtaining research data on the level of acceptance of nutridrink family medicinal plants consumption in the middle pandemic covid to improve the immunity of one's body. Researchers spread 137 questionnaires to students at the State University of Surabaya randomly (random). This research uses qualitative descriptive data analysis techniques. Indicators used in the variable receiving nutridrink rate as follows: 1) personal factors are the personal preference aimed at knowing consumers 'preference for the taste and benefits of family medicinal plants nutridrink compared to medical drugs, 2) The social aspect of culture is related to perception, customer attitudes towards products, product motivation, product knowledge, product confidence, and lifestyle. 3) Psychological factors are part of the family environment and reference groups. Data obtained from the questionnaire and interviews are then exposed and interpretation in depth.

3. RESULTS AND DISCUSSION

Table 1. Respondents gender characteristics

	Frequency	Percent	Valid Percent	Cumulatif Percent
Valid Men	40	29.2	29.2	29.2
Women	97	70.8	70.8	100.0
Total	137	100.0	100.0	

The characteristics of the respondent by gender can be seen from the table above. Out of 137 respondents were the female gender of 197 respondents (70.8%) And men amounting to 40 respondents (29.2%).

Table 2. Respondents age characteristics

Valid	Frequency	Percent	Valid Percent	Cumulatif Percent
14	2	1.5	1.5	1.5
16	4	2.9	2.9	4.4
18	21	15.3	15.3	19.7
19	40	29.2	29.2	48.9
20	36	26.3	26.3	75.2
21	25	18.2	18.2	93.4
22	4	2.9	2.9	96.4
23	2	1.5	1.5	97.8
28	1	0.7	0.7	98.5
32	1	0.7	0.7	99.3
51	1	0.7	0.7	
Total	100	100.0	100.0	100.0

Characteristics of respondents based on age range can be seen in the table above. Of the most 137 respondents, at the age of 19th, 40 respondents (29.2%). The lowest number of age groups is 28, 32, and 51 years each of 1 respondent (0.7%).

Table 2. Frequency of answers

Alternative answer	Frequency	Percent
Disagree	156	5.69
Less concur	207	7.55
Simply agree	900	32.85
Agree	1157	42.23
Totally agree	320	11.68

Based on the data in the table above, it is known that the most answers given by respondents are the "agree" answer with a percentage of 42.23%. The lowest answer is "disagreeing" as much as 156 with a percentage of 5.69%. Based on the data it can be seen that from the total of 137 respondents who gave an answer, they answered agree with the question item listed in this research variable that is.

The Level of Acceptance of Herbal Beverages from Toga as an Alternative to Maintain Body Immunity Against Covid. Consuming nutridrink based on family medicinal plants as an alternative treatment in addition to modern medicine in society is part of local wisdom. The role of parents in educating the family about the benefits of the family medicinal plants nutridrink is done in generations with the intention of preserving the nation's culture. Research conducted by [16] Concluded that the people of Yogyakarta special region especially women in maintaining their health often consume Javanese herbs that are cheap, and parents who have been elderly apply a living pattern of their lives in a way of exercise, and drink the herb herbal Java and to keep their psyche red life "Sumeleh" is a form of the actualization of taste in the heart that can be resigned, receiving facts, without burden, and life as it is.

Based on the research results of factors affecting the community in consuming the family medicinal plants nutridrink is a personal factor, marketing mix factor and social factors, culture and psychology [17]. Did [18] Cultural, social, personal and psychological characteristics can adversely affect consumer purchases. Personal factors are the main factor of the likes of consuming family medicinal plants nutridrink based on personal desires. It is supported by the research results explaining that the level of individual interests generally in consuming beverage products influenced by aroma, color, and flavor[19]. One of the choices of human life is the pleasure of drinking family medicinal plants nutridrink. Researchers interpret that each individual is making an effort to maintain health and cure pain through pharmaceutical treatments and medications. However, there are still many people who prefer herbal products one of them nutridrink family medicinal plants in maintaining the immunity of the body so as not easily infected with the virus Covid. Family medicinal plants nutridrink with an additional variant of fruit flavor is a product of traditional heritage that has been widely known hundreds of years ago as the legacy of the product of the ancestors of Indonesian people in maintaining health. Changes in civilization and culture lead to changes in technology, products, lifestyle and consumption, including the development of the world of medicine and pharmacy. [20] Demonstrated the development of the sales of herbal products that increased dramatically in the United States in recent years. The World Health Organization through a resolution of 1977 States that public health services cannot be evenly distributed until the year 2000 excluding the traditional medical system Demonstrated the development of the sales of herbal products that increased

dramatically in the United States in recent years. The World Health Organization through a resolution of 1977 States that public health services cannot be evenly distributed until the year 2000 excluding the traditional medical system [21]. Based on information from the randomly selected informant of the University of Surabaya students most say that the reason for consuming nutrients family medicinal plants is the role of mother in the family in introducing nutridrink to increase the appetite and maintain the health of the family, besides trying to preserve the local wisdom in each area of residence. This is in line with the above statement where the family medicinal plants nutridrink is a traditional heritage product that has been known hundreds of years ago. It means drinking nutridrink is part of culture and become a personal choice. Forms of nutridrink include tablets, powder and liquid. Some of family medicinal plants liquid nutridrinks in order to not taste bitter plus fruit flavor and packaged in attractive bottles. It can be interpretation that family medicinal plants nutridrink in packaging products adjust to individual preference tau market demand with packaging and flavor. The goal is not to increase the consumption of family medicinal plants nutridrink in the community due to attractive design and packaging of all ages.

The core family, relatives, friends, and neighbors around their environment are social factors affecting individuals consuming the family medicinal plants nutridrink through the recommendations they provide. It can be interpreted that social factors are part of the dissemination of the family medicinal plants Nutridrink in the community. Family medicinal plants nutridrink is part of the culture, because apart from the family role ads introduce, socialize, advise the people nearby to drink family medicinal plants nutridrink. A group of two or more persons who have the relationship of blood, marriage or adoption and living together is a family [22]. While according to [23] Explains that the smallest community unit whose behavior is highly influenced and determined in taking a decision is a family. So, it can be concluded that most informant know, buy family medicinal plants nutridrink from family education or socialization of their neighbors to drink family medicinal plants nutridrink. Based on such information, social factors also influence the decision of someone consuming family medicinal plants nutridrink. And individuals sharing values, interests and behaviors are social classes in society. While according to [24] Other forms of community grouping into different classes or groups are called social classes. The social class affects the type of product, type of service, and brand consumed by

consumers. Social status groups can be seen from lifestyle and community expectations among each class as well as positive or negative social estimation of honor given to each class [25].

Did [13] The most fundamental determinant of consumer desires and behaviors is the definition of culture. Sub-cultures consist of nationality, religion, racial group, and geographical area. Product design, marketing concepts and market segments and marketers often adapt to their needs. Based on information can be found that drinking family medicinal plants nutridrink has become a culture early in some families. The culture of consuming family medicinal plants nutridrink is part of the need, especially if one of the families suffer from pain. Family members, especially parents, are the main parties who cultivate the family medicinal plants nutridrink. The average new informant drink nutridrink after they have recovered from sick after being taken to the doctor. It is a reality that drinking the family medicinal plants nutridrink is to accompany pharmaceutical drugs to improve the body's immunity against disease. This means that the role of doctors is still dominant in health services in the community. In theory, the attitude towards nutridrink family medicinal plants, motivation to drink family medicinal plants nutridrink, knowledge and trust about the family medicinal plants nutridrink and lifestyle associated with healthy living from natural materials also become the main variable people choose to consume family medicinal plantsn utridrink.

The psychological factor in the consumption of family medicinal plants nutridrink toga is when one is experiencing depress because it is not healed immediately although it is from a doctor and taking pharmaceutical drugs but ta never heal then they take the initiative to consume family medicinal plants nutridrink. Among the factors mentioned above, cultural aspects play an important role in consuming the family medicinal plants nutridrink. Its nutridrink is one of the traditions of Indonesian society. Activities to consume processed from the family medicinal plants in addition to being influenced by cultural learning, also strongly influenced by other factors. Other factors include family, reference groups and psychological factors such as attitudes towards products [26]. The psychological factor closest to consumption decisions is the attitude in which individuals tend to behave closer to or farther away from the product. A positive attitude will direct the consumer's intention to the product and instead the negative attitude will undo the consumer's intention. Consumer attitudes are formed through an evaluation of product attributes and trust in the product or brand [27]. Products with disliked attributes

will result in negative attitudes. Most say the fit to drink the family medicinal plants nutridrink because it is faster cure. It can be interpreted that the positive attitude of the individual will direct the consumer's intention in the TOGA Nutridrink product. Positive attitudes will be reflected in the individual satisfaction in consuming family medicinal plants Nuridrink and psychology is considered to be better able to cure the disease. This includes a person's psychological variables that arise because the stimulus consumes family medicinal plants nutridrink.

4. CONCLUSION

The level of reception of nutridrink Toga as an alternative to maintain immunity to the covid percentage of respondents who expressed concur of 42.23, while the answer disagrees of 5.69. The activity of consuming TOGA nutridrink drink besides influenced by cultural learning, also strongly influenced by family, reference group and psychological factor that is the attitude of individual to the product family medicinal plants nutridrink. Positive attitude will appear on the desire to buy a family medicinal plants Nutridrink product with the aim to improve immunity. Negative attitude will be the form of consumer dislikes with family medicinal plants nutridrink because of the taste, aroma and packaging appearance that is not attractive so as to make the individual reluctant to buy the products let alone drink.

Research is conducted to measure the acceptance of toga nutridrinks by looking at the level of personal preference because consumer preferences can affect their choice of purchasing a brand. Then with the view of the cultural aspects or perception, attitude towards the product, the motivation to the product, product knowledge, confidence in the product, lifestyle because the measurement of appropriate attitudes should be based on the action of the purchase or use or consume the product will ultimately determine the level of satisfaction. And the last one based on psychological factors of family environment, reference group, attitude towards family medicinal plants nutridrink products. Subsequent studies can add other variables that affect the level of consumer acceptance of family medicinal plants nutridrink products in enhancing the body's immunity to prevent Covid, so that manufacturers can determine which products to produce and commercialize so that they can increase income generating for small and medium enterprises.

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REFERENCES

- [1] Karo-karo, U. Family medicinal plant Utilization in Kelurahan Tanah 600, Medan, 195–202. 2009
- [2] Health R & D Agency. *Report on basic health research in 2010*. Jakarta: Medical R & D Agency
- [3] M. Farmasetika & J. Barat, “Terapi Herbal dan Alternatif pada Flu Ringan atau ISPA non-spesifik,” *I(2)*, 7–10, 2016.
- [4] N. Ellora, G. S. S. Djarkasi, & J. C. S. Moningka, *Rate of consumer acceptance of soursop tea leaves Herbal drink (Annona Muricata Linn.)*, 2016, pp. 1 – 5.
- [5] W. Sujarwo, I. B. K. Arinasa, F. Salomone, G. Caneva, and S. Fattorini, “Cultural erosion of Balinese indigenous knowledge of food and nutraceutical plants,” *Econ. Botany*, vol. 68, no. 4, pp. 426 – 437, 2014.
- [6] Li, Dong-lin et al. “Author ’ s Accepted Manuscript Ethnobotanical Survey of Herbal Tea Plants from the Traditional Markets in Chaoshan , China Reference :” *Journal of Ethnopharmacology*. 2017. Available: <http://dx.doi.org/10.1016/j.jep.2017.02.040>.
- [7] A. The Nasriati, "Family Medicinal plant cultivation (TOGA)," *Ministry of Agriculture Research and Development Agency. Great Hall of Research and development of agricultural technology Research Center of Agricultural Technology (BPTP) Lampung*. 2012.
- [8] Sujarwo, Wawan et al. “Ethnobotanical Study of Loloh : Traditional Herbal Drinks from Bali (Indonesia).” *Journal of Ethnopharmacology*, pp. 1-15, 2015. Available: <http://dx.doi.org/10.1016/j.jep.2015.03.079>.
- [9] R. Söukand, C. L. Quave, Pieroni, Andrea, M. Pardo-de-Santayana, J. Tardío, R. Kalle, L.

- Łuczaj, I. Svanberg, V. Kolosova, L. Aceituno-Mata, G. Menendez-Baceta, I. Kołodziejaska-Degórska, E. Pirożnikow, R. Petkevičius, A. Hajdari, and B. Mustafa, "Plants used for making recreational tea in Europe: a review based on specific research sites," *J. Ethnobiol. Ethnomedicine*, vol. 9, no. 58, 2013.
- [10] Komang. Education, U., & Singaraja, G. Diversify herbs into beverage products for local people and tourists, *07 (April)*, 2017. Pp. 105 – 120.
- [11] Bakti, Iriana et al. "Personal factors analysis on family medicine in West Java." *3 (2)*: 2015.133 – 39.
- [12] S. R. Wulandari, B. Suratman, and T. Pahlevi. "Offline and online media as a marketing strategy on increasing sales flour processed products eggplant". *icege iop conf. series: earth and environmental science*, 243, 2018.
- [13] P. Kotler, *Marketing Management. Vol. 1 and 2*. Jakarta: PT Indeks Kelompok Gramedia, 2005.
- [14] P. Kotler and G. Armstrong, *Marketing Principles, Vol. 1*. Jakarta: Erlangga, Jakarta, 2008.
- [15] H. Geertz, *Javanese family*. Jakarta: PT. Graffiti Press. 1961.
- [16] S. Tuin. "Social profile of elderly culture in family and community in province of special region of Yogyakarta," *Research Report*, Yogyakarta, IKIP Yogyakarta. 1999
- [17] Mulyani, "Factors affecting consumers buy herbal products." [Online]. Available: http://eprints.upnjatim.ac.id/1710/1/file_1.pdf [accessed 12 May 2020]
- [18] Sunarto. *2nd Edition marketing principles*. Yogyakarta: AMUS, UST Press and Mahenoko Total Design Yogyakarta. 2004.
- [19] K. H. Dewi, Helmiyetti, Nusril, Y. Rosalina, R. Armando Siahaan. *Journal of Indonesian Agricultural Technology and industry – 2014*. Vol. 06, No. 02 2014. DOI: <https://doi.org/10.17969/jtipi.v6i2.2067>
- [20] Harnack et al., "Effects of Calorie Labeling and Value SizePricing on Fast Food Meal Choices: Result from an Experimental Trial," *International Journal of Behaviour Nutrition Physical Action*, vol. 5, pp. 1-13, 2008.
- [21] S. Supardi and M. Notosiswoyo, "Self-medication headaches, cough, and colds in the community in Ciwalen Village," *Farmasian Science Magazine*, vol. 2, no. 3, pp. 134-144, 2005.
- [22] J. F. Engel, D. B. Roger, and P. W. Miniard. *Consumer behaviour, the language of Budiyanto*, Jakarta: Binarupa Aksara. 1994.
- [23] A. A. Anwar Prabu Mangkunegara, *Human resources Management*. Bandung: PT. Teen Rosdakarya. 2002.
- [24] Vincent. *Consumer behaviour: Theory and implementation in marketing*. Bogor: Ghalia Indonesia, 2002.
- [25] Adi. *Consumer behavior concepts and implications for marketing strategies and research*. Jakarta: Kencana Prenada Group. 2008.
- [26] Schiffman LG dan Kanuk LL. *Consume Behavior, 7 the edition*, Upper Saddle River. New Jersey: Prentice Hall. 2000.
- [27] Bilson, Simamora. *Consumer Behaviour Research Guide*. PT. 2002.