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# KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS MEDICINAL USE DIFFERENT TYPES OF TEAS

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**ABSTRACT:**
Tea is an aromatic beverage commonly prepared by pouring hot or boiling water over cured leaves of the Camellia sinensis, an evergreen shrub (bush) native to East Asia. After water, it is the most widely consumed drink in the world.The aim of study is to analyse the knowledge and practice towards the awareness of different kinds of tea and its medicinal uses. Self administered design questionnaire was prepared based on knowledge, attitude and practice towards medicinal uses of different types of teas. The questionnaire was distributed through an online survey monkey link and the study population included people belonging to different age groups. The overall participants were 100. About 78% of the study population were aware about tea and its benefits and about 52.57% of participants consume tea in the evenings, the majority of participants drink tea and it was calculated about 54.55% . Tea has many benefits scientifically, it has many benefits like antibiotics, anti diabetic and many actions. From the survey, it is evident that the majority of people are aware of the medicinal uses of different kinds of tea.

**INTRODUCTION**

Tea plant Camellia sinensis has been cultivated for hundreds of years and its leaves have been used for medicinal purposes.In addition, anti-aging, anti diabetic and many other health beneficial effects (Grasser, Schunko and Vogl, 2012). After water, it is the most widely consumed drink in the world.There are different types of tea; some, like Darjeeling and Chinese greens have a cooling, slightly bitter, and as astringent flavour, while others have vastly different profiles that include sweet, nutty, floral or grassy notes (Cooper, Morré and Morré, 2005). Tea, in the form of green or black tea, is one of the most widely consumed beverages in the world. However, with the increasing interest in the health properties of tea and a significant rise in scientific investigation, it covers recent findings on the medicinal properties and non cancer health benefits of both green and black tea (Dulloo *et al.*, 1999). Caffeine from coffee and tea , ephedrine from ephedra and capsaicin from pungent spices, largely of their potential to modulate catecholamine and release them (Steinmann *et al.*, 2013). Tea can be categorised into three major types, depending on the level of fermentation, i.e., green and white (unfermented), oolong (partially fermented) and black (fermented) tea (Thitimuta *et al.*, 2017). Tea has so many uses that tea has inhibitory effects against cancer cells, which have the scientific activities of polyphenol fractions in tea (Lin, 2002). Drinking tea has also shown useful for preventing many deadly human diseases including the maintenance of cardiovascular and metabolic health (Khan and Mukhtar, 2013). Consuming tea ,that too green tea has an overall healthy diet with association of whole grains, fish, fruits and vegetables and less red and processed meat (Hara, 2001). Many experiments have been demonstrated in animal and human experiments. The two most widely investigated diseases are cancer and heart disease, which can be protected by tea (Yang and Landau, 2000). Herbal teas have a lot of medicinal uses; they are a mixture made up of leaves, seeds and roots of various plants (*Website*, no date). The tropical Hera always has teas in different types and is the more in AOP values than temperate values. Hera also teas have lower antioxidants compared to C.sinensis ('Antioxidant properties of tropical and temperate herbal teas', 2010, *Website*, no date). Herbal teas are regarded as the excellent remedy to cure infections, ailments and diseases (*[No title]*, no date). Oolong tea has so many benefits properties which include photochemical, chemical characterisation of oxidation products (Weerawatanakorn *et al.*, 2015). Tea has antioxidants effects of flavonoid rich foods which may reduce cardiovascular disease risk (Kris-Etherton and Keen, 2002). The flavonoids in tea have antioxidants and vasodilator effects in vitro (Hodgson *et al.*, 1999). Tea leaves are rich in catechins and have lots of health benefits (Xiang *et al.*, 2016). Tea helps in the reducing risk of stroke, diabetes and depression and also improves the level of glucose, cholesterol, abdominal obesity and blood pressure (Bhatti, O'Keefe and Lavie, 2013). Sage tea has effects on erythrocytes activities on Hsp70 it has LDL cholesterol and HDL cholesterol (Sá *et al.*, 2009).

The aim of the study is to assess the knowledge, attitude and practice on different types of medicinal uses of teas.

## MATERIALS AND METHODOLOGY
Self administered design was designed based on knowledge, attitude and practice towards medicinal uses of different types of teas. The questionnaire was distributed through an online survey monkey link and the study population included people belonging to different age groups. The participants were explained about the purpose of study in detail. The questions were carefully studied and the corresponding answers were marked by the participants . The data was collected and statistically analysed.


## RESULTS AND DISCUSSION:
In the present study, around 78% responded that they drink tea and 22% responded that they dont drink tea (fig 1). 43% responded to drinking tea in the morning, 53% responded to drinking  at evening and 4% responded to drinking at night (fig 2). 8%  responded that they like to drink black tea, 19% responded to green tea, 55% responded to tea and 18% responded none (fig 3). 28% responded that they knew about fermentation property in black tea and 72% did not know about it ( fig 4). 25% responded that it had high caffeine content, 67%  responded that it causes weight loss and 8% responded that it increases skin tone (fig 5) The study of(Cooper, Morré and Morré, 2005) discussed the medicinal uses of green tea . 22% responded that it causes weight loss, 69% that it reduces the risk of heart attack and 9% that it keeps the smile brighter for the benefits of black gea (fig 6) The study of (Weerawatanakorn *et al.*, 2015) discussed about black tea's health beneficial effects and chemistry. 45% told that it reduces the risk of heart attack, 32% that it protects teeth from bacteria and 23%  that it fights against cancer for the benefits of white tea (fig 7) the study of  (Thitimuta *et al.*, 2017) described the beneficial health effects of white tea  . 35%  answered it to be black tea,10% that it to be green tea, 55% that it was tea for having the high caffeine content (fig 8) The study of (Dulloo *et al.*, 1999) describe that green tea have less caffeine content.10%  advised black tea, 72% advised green tea and 4% advised white tea and 13% advised tea.(fig 9). A previous study (Steinmann *et al.*, 2013) discussed the anti-infective properties of tea. Another study  (Hara, 2001) discussed the health benefits of drinking tea. The study of (Xiang *et al.*, 2016) discussed the suppressive effects of tea in breast cancer. Adding to the above study, (Sá *et al.*, 2009) discussed tea improving lipid profile and antioxidant defence in humans. The above mentioned previous studies were supporting the result of current study.
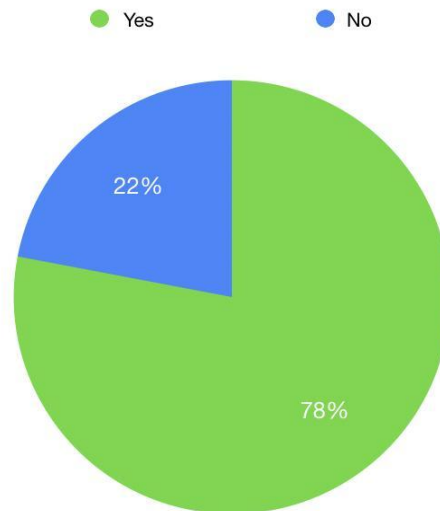
Fig 1: Bar graph representing the percentage distribution of participants based on their opinions about whether the participants drink tea. Green colour represents yes and blue colour represents no. Among 100 participants, almost 78% responded yes and 22% responded no.
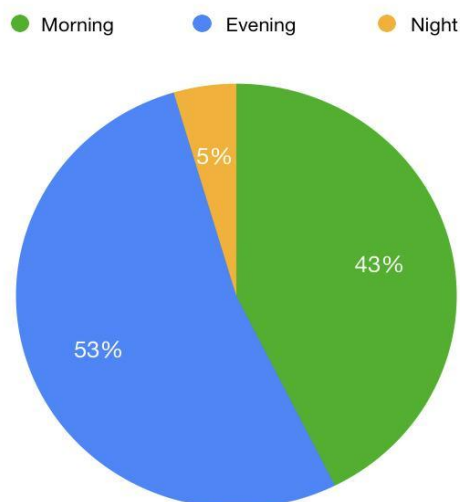


Fig 2: Bar graph representing the percentage distribution of participants based on their opinions of when they drink tea. Green colour represents morning, blue colour represents evening and yellow colour represents night. 88 participants responded and about 43% responded in the morning, 53% responded in the evening and 4% responded at night.
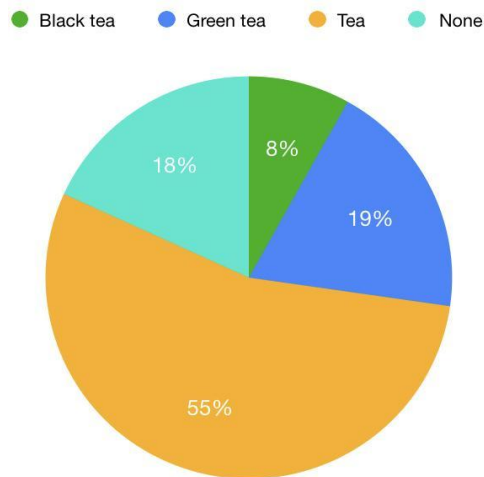
Fig 3: Bar graph representing the percentage distribution of participants based on their opinions of what kind of tea do they drink everyday. Green colour represents black tea, blue colour represents green tea, yellow colour represents tea and aqua colour represents none of them mentioned above. About 99 participants responded and 8% responded to black tea, 19% responded to green tea, 55% responded to tea and 18% responded none.
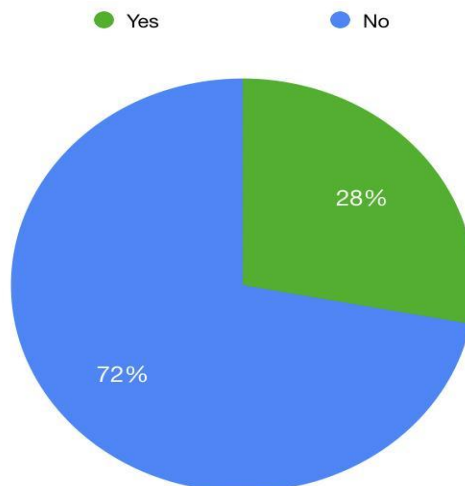


Fig 4: Bar graph representing the percentage distribution of participants based on their opinions of awareness of fermentation property of black tea. Green colour represents yes and blue colour represents no. 100 participants responded and 28% responded yes and 72% responded no.

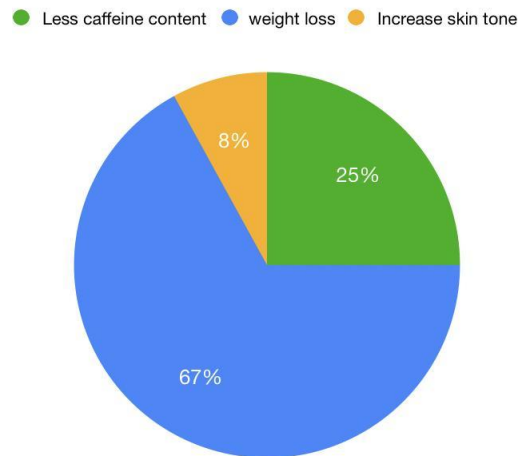● Less caffeine content   ● weight loss   ● Increase skin tone



Fig 5: Bar graph representing the percentage distribution of participants based on their opinions of awareness reason about doctors advising green tea. 100 participants responded. Green colour represents for having less caffeine content, blue colour represents for weight loss and yellow colour represents for increased skin tone. 25% responded to less caffeine content, 67% responded to weight loss, 8% responded to increase skin tone.

● Weight loss          ● Reduce risk of heart attack
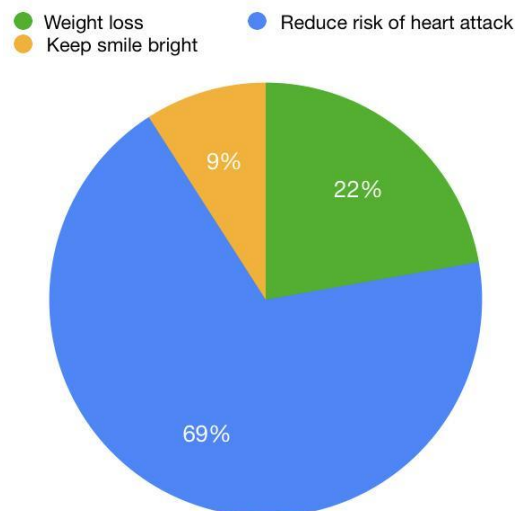● Keep smile bright



Fig 6: Bar graph representing the percentage distribution of participants based on their opinions of awareness of drinking black tea. Green colour represents weight loss, blue colour represents for reducing the risk of heart attack, yellow colour represents for keeping the smile bright. 99 participants responded and 22% responded to weight loss, 69% responded to reduce risk of heart attack, 9% responded to keeping the smile brighter.
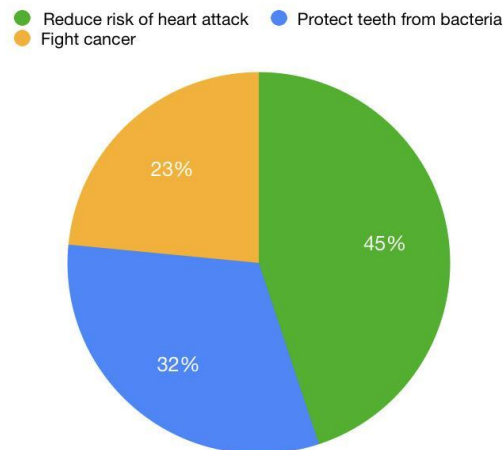
Fig 7: Bar graph representing the percentage distribution of participants based on their opinions of awareness of why most of the people drink white tea. Green colour represents reducing risk of heart attack, blue colour represents protecting teeth from bacteria, yellow colour represents to help fight cancer. 98 participants responded and 45% responded to reducing risk of heart attack, 32% responded to protecting teeth from bacteria, 23% responded to help fight cancer.
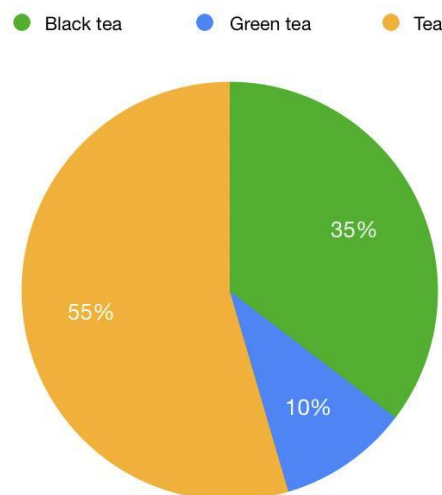


Fig 8: Bar graph representing the percentage distribution of participants based on their opinions of awareness of which kind of tea has more caffeine content. Green colour represents black tea, blue colour represents green tea, yellow green represents tea. 99 participants responded and 35% responded to black tea, 10% responded to green tea and 55% responded to tea.
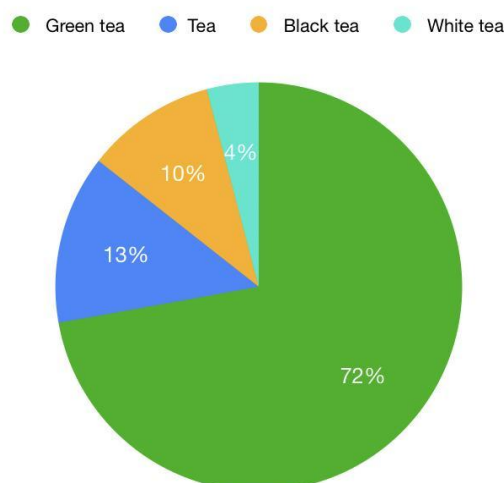
Fig 9: Bar graph representing the percentage distribution of participants based on their opinions of suggestion of tea to teenagers. Green colour represents green tea, blue colour represents tea, yellow colour represents black tea and aqua colour represents white tea. 97 participants responded and the majority of 72% responded to green tea, 13% responded to tea, 10% responded to black tea and 4% responded to white tea.

**CONCLUSION**:

Tea has many benefits scientifically, it has many benefits like antibiotics, anti diabetic and many actions. Tea has the ability to reduce stress and related disorders and it may also make the person feel fresh and show as in age. From the survey, it is evident that the majority of people are aware of the medicinal uses of different kinds of tea.

**ACKNOWLEDGEMENT:**

**CONFLICT OF INTEREST:**
The authors declare no conflict of interest

**REFERENCE**:
'Antioxidant properties of tropical and temperate herbal teas' (2010) Journal of food composition and analysis: an official publication of the United Nations University, International Network of Food Data Systems. Academic Press, 23(2), pp. 185–189.

Bhatti, S. K., O'Keefe, J. H. and Lavie, C. J. (2013) 'Coffee and tea: perks for health and longevity?', Current opinion in clinical nutrition and metabolic care, 16(6), pp. 688–697.

Cooper, R., Morré, D. J. and Morré, D. M. (2005) 'Medicinal benefits of green tea: part II. review of anticancer properties', Journal of alternative and complementary medicine , 11(4), pp. 639–652.

Dulloo, A. G. et al. (1999) 'Efficacy of a green tea extract rich in catechin polyphenols and caffeine in increasing 24-h energy expenditure and fat oxidation in humans', The American Journal of Clinical Nutrition, pp. 1040–1045. doi: 10.1093/ajcn/70.6.1040.

Grasser, S., Schunko, C. and Vogl, C. R. (2012) 'Gathering "tea"--from necessity to connectedness with nature. Local knowledge about wild plant gathering in the Biosphere Reserve Grosses Walsertal (Austria)', Journal of ethnobiology and ethnomedicine, 8, p. 31.

Hara, Y. (2001) Green Tea: Health Benefits and Applications. CRC Press.

Hodgson, J. M. et al. (1999) 'Effects on blood pressure of drinking green and black tea', Journal of hypertension, 17(4), pp. 457–463.

Khan, N. and Mukhtar, H. (2013) 'Tea and health: studies in humans', Current pharmaceutical design, 19(34), pp. 6141–6147.

Kris-Etherton, P. M. and Keen, C. L. (2002) 'Evidence that the antioxidant flavonoids in tea and cocoa are beneficial for cardiovascular health', Current opinion in lipidology, 13(1), pp. 41–49.

Lin, J.-K. (2002) 'Cancer chemoprevention by tea polyphenols through modulating signal transduction pathways', Archives of pharmacal research, 25(5), pp. 561–571.

[No title] (no date). Available at: https://d1wqtxts1xzle7.cloudfront.net/32647487/18_iJASA_Herbal_Tea_2011.pdf?1388347379=&response-content-disposition=inline%3B+filename%3DAnalysis_and_Evaluation_of_Antioxidant_P.pdf&Expires=1593580539&Signature=Eb14Tjrg0r3g4LgyijW7JP1SKT~hkyu3x6rNFNOL~25LKXc3qmz1aXi~NgF-5fwKfZ7z38Fiu~mQjnEbKGVwom-L7FFILXQb95LwPPz2Y3s7VF0nA-vKtxGESU~PftK5aqMG2ahWfxgXI~htZgOdNi0qBu2I08UilqyYeWkOq-H1JLFC-xU6wFPnMT3KeDHYjdrnQp6DPQmSRGuWA07yFNU34ZLkrg9wl6SFlDBf7~sR-W3ItGwx4cr3VxZL6NKneU4tRBe5-wF1OLb5g3HSfSL5~4f6CEra4~witqY8wc~tQdqmlvRbJapnfyAx5CWg16C81AucM3gN5A6OJnSk2Q__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA (Accessed: 1 July 2020).

Sá, C. M. et al. (2009) 'Sage tea drinking improves lipid profile and antioxidant defences in humans',International journal of molecular sciences, 10(9), pp. 3937–3950.

Steinmann, J. et al. (2013) 'Anti-infective properties of epigallocatechin-3-gallate (EGCG), a component of green tea', British Journal of Pharmacology, pp. 1059–1073. doi: 10.1111/bph.12009.

Thitimuta, S. et al. (2017) 'Camellia sinensis L. Extract and Its Potential Beneficial Effects in Antioxidant, Anti-Inflammatory, Anti-Hepatotoxic, and Anti-Tyrosinase Activities', Molecules, p. 401. doi: 10.3390/molecules22030401.

Website (no date). Available at: https://www.researchgate.net/profile/Chandini_Ravikumar/publication/287478165_Review_on_herbal_teas/links/5ac4aeb9458515564eaf711b/Review-on-herbal-teas.pdf (Accessed: 1 July 2020).

Weerawatanakorn, M. et al. (2015) 'Chemistry and health beneficial effects of oolong tea and theasinensins', Food Science and Human Wellness, pp. 133–146. doi: 10.1016/j.fshw.2015.10.002.

Xiang, L.-P. et al. (2016) 'Suppressive Effects of Tea Catechins on Breast Cancer', Nutrients, 8(8). doi: 10.3390/nu8080458.

Yang, C. S. and Landau, J. M. (2000) 'Effects of tea consumption on nutrition and health', The Journal of nutrition, 130(10), pp. 2409–2412.