

## KNOWLEDGE, ATTITUDE AND PRACTICES OF LOCAL POPULATIONS OF UNION COUNCIL KOAZ BAHRAM DEHRI PAKISTAN TOWARDS GREEN TEA (*CAMELLIA SINENSIS*)

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### ABSTRACT

After water the tea is the biggest beverage use worldwide. This study is aimed to find out the knowledge, attitude and practices of local population of Union Council Koaz Bahram Dehri District Charsada, Khyber Pakhtunkhwa Pakistan towards green tea. A descriptive observational study was design. Data were collected from 150 subjects through a self design questionnaire. The majority of participants were males belonging to different age groups. The ratio of education was reported low. The local populations have sufficient knowledge about green and also used it for different purposes.

**Key words:** Green tea, Knowledge, Attitude, Practices, Descriptive observational study, Questionnaire.

### INTRODUCTION

Tea is one of the biggest beverages after water use worldwide (Cheng, 2004; Vinson, 2000). Tea is well ahead of coffee, beer, wine and carbonated soft drinks (Rietveld and Wiseman, 2003). It consist of three forms, depending on the level of fermentation, i.e. green (unfermented), oolong (partially fermented) and black (fermented) tea.

Fermentation is mostly used incorrectly in tea processing. The more Correct term should be oxidation, which means exposure to air while drying without any additives during the process. Another form of tea is white tea which is made from new growth buds and young leaves that have been steamed to inactivate polyphenol oxidation and then dried. The buds may be shielded from sun-

light to prevent formation of chlorophyll. Of the, 2.5 million metric tons of dried tea manufactured, only 20% is green tea and less than 2% is oolong tea (Pastore and Fratellone, 2006). Green tea is consumed as a popular beverage worldwide, particularly in Asian countries like China, Korea and Japan. There is hardly any other food or drink reported to have as many health benefits as green tea. The Ancient Chinese Proverb 'Better to be deprived of food for three days, than tea for one' indicates the importance of tea in the day-to-day life of Chinese. The Chinese have known about the medicinal benefits of green tea since ancient times, using it to treat everything from headaches to depression. In her book 'Green Tea: The Natural Secret for a Healthier Life', Taylor stated that green tea has been used as a medicine in China for at least 4000 years (<http://chinesefood.about.com/library/weekly/aa011400a.htm>).

Chemical composition of green tea depends on season, climate and position of the leaf on the harvested shoot and horticulture practices. Polyphenols is the major component while in green tea flavonoids are major polyphenols including catechins, epicatechin (EC), epigallocatechin gallate (EGCG), epicatechin gallate (ECG) and epigallocatechin (EGC). The most significant active components were epigallocatechin gallate (EGCG). In dried green tea leaves the usual concentration of total polyphenols are 8-12% (Katiyar and Elmets, 2001; Graham, 1992). The dried green tea

leaves have caffeic acid, chlorogenic acid, kaempferol, myricetin, quercetin and gallic acid (Graham, 1992; USDA, 2003). The component EGCG have strong antioxidant activity inhibit the growth of cancer cells, inhibit the abnormal formation of blood clots, lipid regulation and inhibition of proliferation, effective in lowering LDL cholesterol levels and reduction of platelet aggregation (Katiyar and Elmets, 2001).

## **MATERIALS AND METHODS**

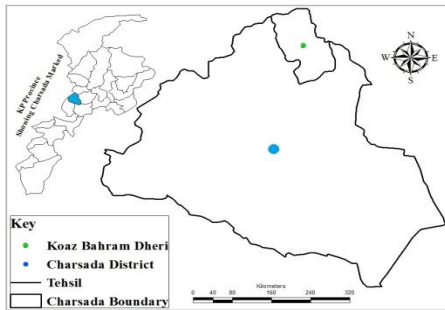
The present study was conducted to evaluate the knowledge, attitude and practices of the local populations of Koaz Bahram Dheri towards the Green Tea. This study also aimed to collect the indigenous knowledge about green tea.

**Study area:** The present study was conducted in Union Council Koaz Bahram Dheri District Charsada Khyber Pakhtunkhwa, Pakistan. The five villages of the Union Council Koaz Bahram Dheri were selected includes Landi Shah, Main Jan Kally, Sargund Kally, Soor Kamar and Sewan Kally.

**Study design:** A descriptive observational study was design. The local population was interviewed during day time from 9:00 AM to 4:00 PM.

**Data collection:** The data were collected through a self design questionnaire (English) include the demographic information, uses of green tea. The questionnaire was discussed with the participant in local language (Pashto) during the time of interview. The questionnaire was filled randomly.

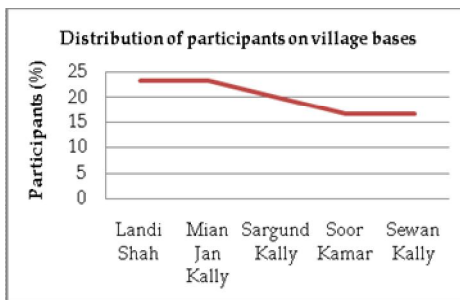
**Data analysis:** The data were analyzed using Microsoft Excel 2007 version.



**Figure 1:** Map of Union Council Koaz Bahram Dheri District Charsada Khyber Pakhtunkhwa Pakistan

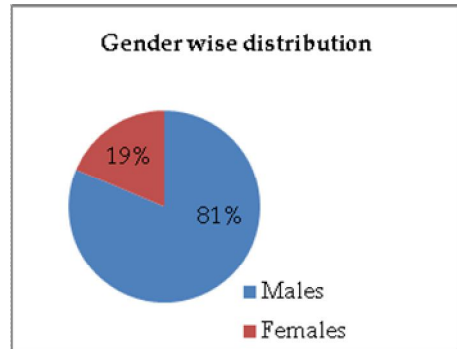
**RESULTS AND DISCUSSION**

This was the first study conducted in the Union Council Koaz Bahram Dheri. The data were collected from the five selected villages of the Union Council Koaz Bahram Dheri include Landi Shah, Main Jan Kally, Sargund Kally, Soor Kamar and Sewan Kally. A total of 150 respondents were interviewed from the said area. Figure 1 shows the distribution of participants in different localities, 23% from Landi Shah, 23% from Main Jan Kally, 20 from Sargund Kally, 17% from Soor Kamar and 17% participants were interviewed from the Sewan Kally (Figure 2).



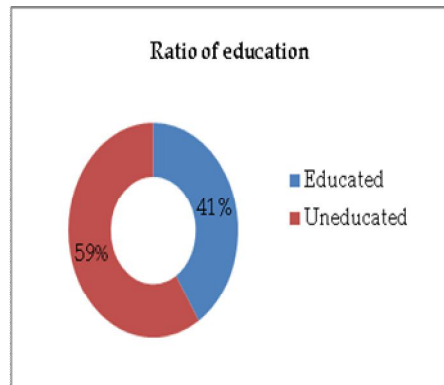
**Figure 2:** Distribution of the participants in different villages of Koaz Bahram Dheri

The gender wise distribution was shown in figure 3, out of the total interviewed participant the 81.33% were males and 18.67% were females.



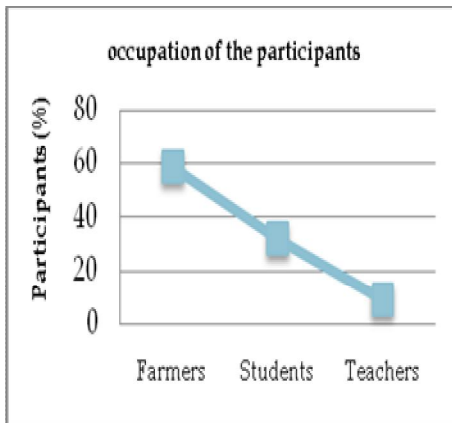
**Figure 3:** Distribution of gender in Koaz Bahram Dheri

The ratio of uneducated participants was found high. The 59% participants were uneducated while the 41% were educated as shown in figure 4.



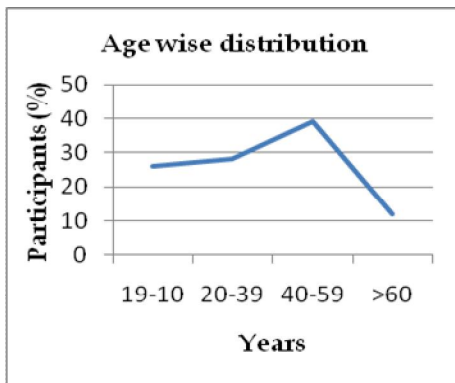
**Figure 4:** Ratio of education level of the participants

Majority of the participants were farmers 59% followed by students 32% and teachers 9% described in figure 5.



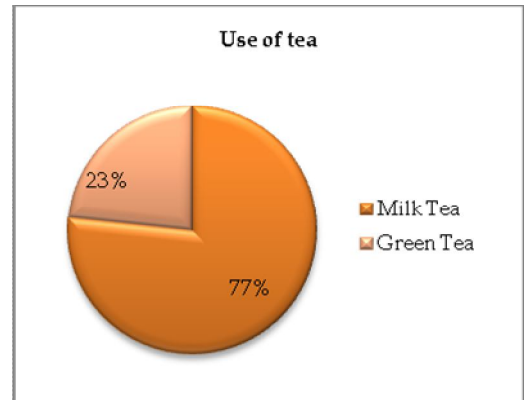
**Figure 5:** Occupation of the participants

For the age wise distribution the local population was divided in to four groups includes group 1, 5-19 years; group 2, 20-39 years; group 3, 40-59 years and group 4, >60 years. It was found that the majority participants were belong to group 3 followed by group 2, group 1 and group 4 as shown in figure 6.



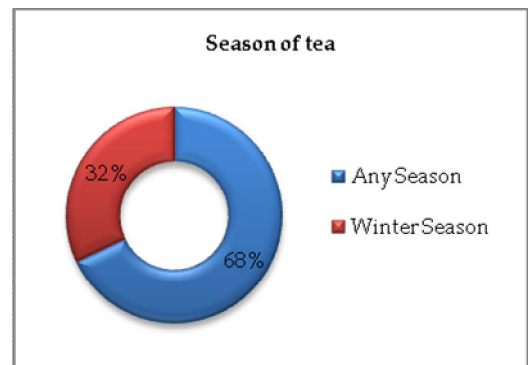
**Figure-6:** Age wise distribution of participants

The 77% participant was responded and says that they are used milk tea while the 23% use green tea (Figure 7).



**Figure-7:** Use of tea in Koaz Bahram Dheri

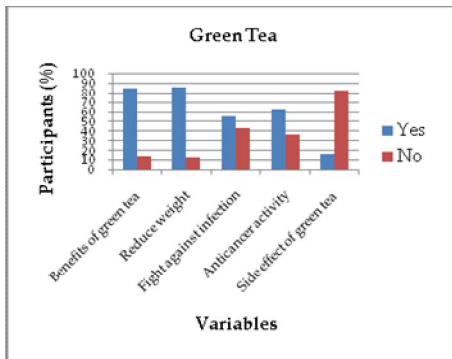
Out of total interviewed participant 68% were agreed that green tea was used in any season on the other hand the 32% says that green tea was use only in winter season as shown in figure 8.



**Figure 8:** Season of green tea

In figure 9 the different uses of green tea were described. According to our results the 85% population agreed that green tea is beneficial for health while 15% are not agreed. The results indicated that 87% peoples use green tea for weight reduction while the 13% are not agreed. The 57% participants stated that the green tea have

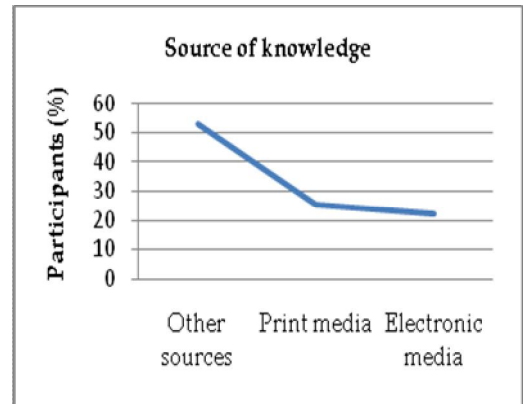
activity against infection while the 43% says that it have no activity against infection. It is clear from the results, that green tea have anticancer activity. The 63% participants were agreed that the green tea have anticancer activity while 37% are not agreed. 83% respondent thinking that green tea have no side effect while the 17% answer that it have side effect.



**Figure 9:** Knowledge about green tea and their uses

The source of knowledge about green tea was also analyzed, it was found that 53% participant hear from other sources, 25% from print media and 22% from electronic media (Figure 10).

Our results clearly indicated that the use of green tea is low as compare to milk tea. The majority of populations prefer milk tea. They used green tea for treatment of many infections and disease includes weight loss, anticancer and antioxidant activity is also reported. Several studies on green tea reported that the green tea have cancer protective activity. In Japan the cancer rate is low due to consumption of green tea on regularly basis.



**Figure 10:** Source of knowledge of the participants

The component present in green tea known as EGCG plays a key role in the prevention of cancer. EGCG and other tea catechins inhibit the release of tumour necrosis factor-alpha results suppress tumour growth (Fujiki *et al.*, 2003; Fujiki *et al.*, 2000). Others studies suggest that the oral consumption or topical treatment of green tea polyphenols inhibit ultraviolet radiation-induced skin tumourigenesis or chemical carcinogens in different animal models (Katiyar and Elmets, 2001). A study conducted a Kyushu University in Japan reported that due presence of EGCG green tea protect against a wide range of cancer include breast, prostate and lung cancer (Dulloo *et al.*, 1999). Regular consumption of green tea protects against heart disease and risk was 36% lower for green tea drinker (Hirano-Ohmori *et al.*, 2005). From the available literature it is clear that the green tea have active role in the treatment of many diseases. Further studies need to explore the fighting capability of green tea.

## CONCLUSION

It was concluded that the local population of the Koaz Bahram Dheri have sufficient knowledge about green tea. They use green tea for weight reduction and others diseases.

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