



A STUDY ON COFFEE DEPENDENCE AMONG ADULTS

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Abstract

Drinking coffee has become a significant part of adult in the society.

The present study provides and over view of coffee consumption and its physical and psychological effects on human beings. Coffee dependency scale is a self-report scale that is designed through review of literature and from the theme of Huntley's caffeine expectancy questionnaire research on caffeine dependency.

This work reflects on construct of coffee consumption concept among adults. The main objective of the study is to study coffee dependency in adult between this age of 20-40 years in Bangalore south region.

The study constructed the scale on coffee dependency through item pooling, item analysis and pilot study on 15 students. The scale was prepared to administer on a sample of 400 adults. Random sample of 400 adult were administered the coffee dependency scale. The range and skewness were obtained using Pearson correlation. The concurrent validity data was obtained using Pearson correlation. The construct validity was computed using lawshe's formula the test-retest method was used and computed using Cronbach's alpha test. The result was compared with Huntley's standardized test.

Key ward-coffee, dependency, adults.

INTRODUCTION

“Caffeine is the most commonly used as the mood-altering drug in the world.” Caffeine is a central nervous system stimulant of the methylxanthine (1,3,7 - trimethyl xanthine) class (Griffith R&Nehlig A 2005,1992). It is found naturally in more than 60 species of plants (coffee, tea, cocoa) Caffeine can be present in a wide range of products, namely, coffee, tea, soft drinks, hot chocolates, and confectionery such as chocolates and over-the-counter medications including cold remedies and analgesics (Juliano, Anderson, & Griffiths, 2011). The concentration of caffeine differs between each product, and furthermore, the caffeine content with each product can also vary due to combination of factors. It is important to recognize that caffeine content is extremely variable within manufacturing and brewing techniques. (Brice CF 2002).

Global consumption of caffeine has been estimated at 120,000 tons/year, making it the world's most popular psychoactive substance. This amounts to one serving of a caffeinated beverage for every person every day. (Burchfield 1997).

According to DSM IV the essential feature of Substance Dependence is a cluster of cognitive, behavioural and physiological symptoms indicating that the individuals continue to use the substance despite of significant related problems. There is a pattern of repeated self-administration that usually results in tolerance, withdrawal, and compulsive drug taking behaviour.

Dependence is defined as a cluster of three or more symptoms occurring at any time in the same 12 -month period. (DSM IV)

According to social learning theory, Influence individual's decision to take a particular course of action (e.g., deciding whether to consume a drug; Bandura, 1977, 1986).

caffeine is more likely to produce negative subjective effects such as anxiety, jitteriness, and gastrointestinal disturbances, and at very high doses, it can produce restlessness, tremors, tachycardia, and psychomotor agitation (cf. caffeine intoxication as described in the Diagnostic and Statistical Manual of Mental Disorders, 4th ed., text rev. [DSM-IV-TR]; American Psychiatric Association, 2000).

Caffeine also has negative effects on planned sleep, including delaying sleep onset and decreasing the reported quality of sleep (Alford, Bhatti).

Although caffeine is generally safe at typical dietary doses (i.e., 400 mg per day), some behavioural features of caffeine use closely mirror behaviours associated with commonly recognized drugs of dependence. For example, chronic use of caffeine produces tolerance, as well as a characteristic withdrawal syndrome (e.g., headache, fatigue) among individuals who use as little as 100mg per day (Juliano& Griffiths, 2004).

Many habitual caffeine consumers report an inability to modify caffeine use despite a desire to do so (Hughes & Oliveto, 1997). Caffeine can also cause discrete psychopathology (e.g., caffeine-induced anxiety disorder as described in the DSM-IV-TR; American Psychiatric Association, 2000) and can exacerbate existing psychological (e.g., anxiety, insomnia) or medical disorders (James, 2004).

Approximately 87% of children and adults in the United States report regular use of caffeinated products (Frary, Johnson, & Wang, 2005) with an average daily intake among adult consumers of approximately 280 mg, or the equivalent of about two cups of coffee (Barone & Roberts, 1996).

According to (Manoj Kumar) have found that caffeine usages have increased up to 70% in the past 30 years. 23.8% teenagers (16-18) had caffeine dependence. The dependent teenager experienced withdrawal symptoms such as feeling drowsy/tired, fatigued, or sluggish/slowed down (83.3%), and headaches (75%).

Caffeine is classified by the Food and Drug Administration as “generally recognized as safe.” Toxic doses, over 10 g/day for an adult, are much higher than typical dose of under 500 mg/day. However, pure powdered caffeine, which is available as a dietary supplement, can be lethal in tablespoon-sized amounts.

COFFEE

Coffee (*Coffea L.*) is the world’s beloved drink that is the most regularly consumed caffeine-containing beverage and the second most traded commodity next to edible oil. It contains a complex mixture of chemicals that provide important amounts of chlorogenic acid and caffeine (HigdonJV2006).

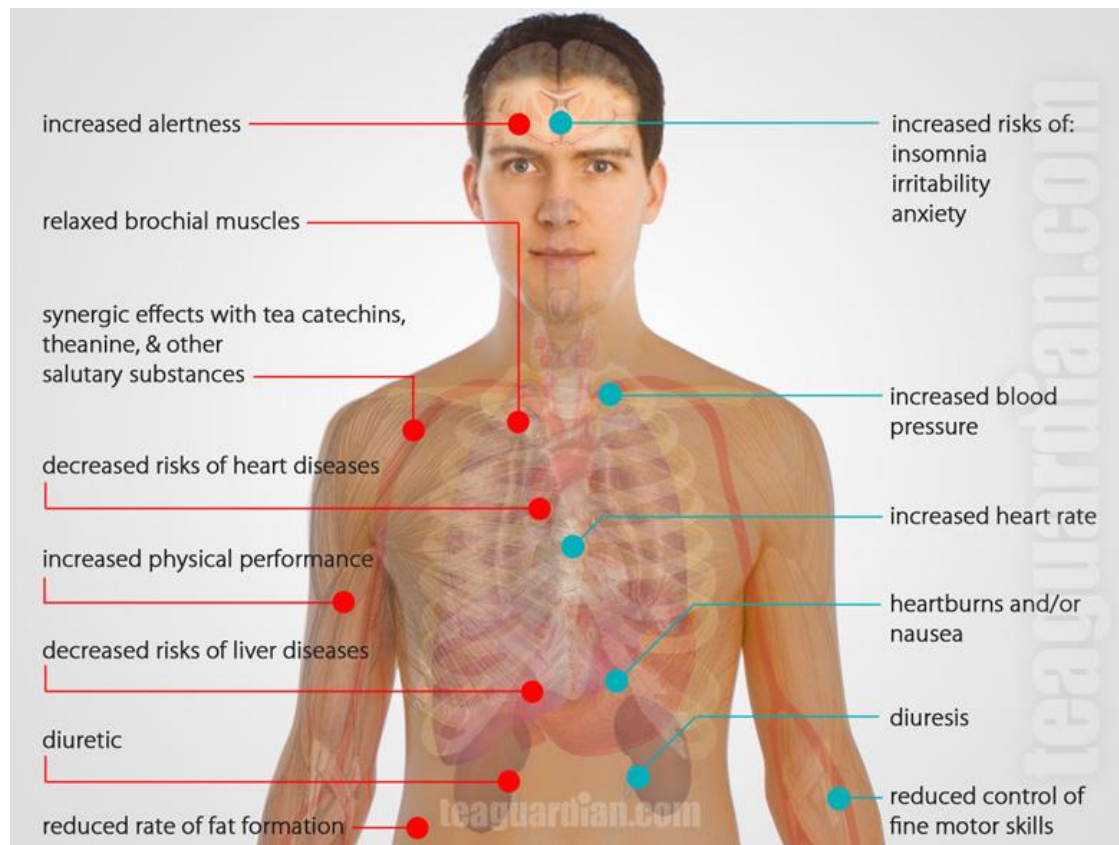
Coffee, an infusion of ground, roasted coffee beans, is reported to be among the most widely consumed beverages in the world. Although coffee is lauded for its aroma and flavour, its caffeine content likely plays a role in its popularity. The study has been undertaken to analyse the dependency of coffee consumption among male and female adults and its behavioural affects deals with the pattern of everyday consumption.

Coffee drinking is not commonly considered a habit associated with a healthy lifestyle because caffeine is a stimulant. One of the key reasons many people around the world consume coffee is because of the stimulatory effect that coffee has on the body. The stimulatory effect is due to the photochemical found in the caffeine.

This research focuses on the coffee dependence scale for adults in Bengaluru district of Karnataka, India.



HEALTH RISKS OF COFFEE CONSUMPTION



Health risks of coffee consumption	Mode of action	Sources
Caffeine had a negative impact on the appetite levels and it reduces appetite for food	inducing satiety and smoking augments	Kale LB 2017
Coffee can cause insomnia and restlessness.	Above the recommended maximum amount of caffeine is 400 milligrams, which obtained from 4 cups of coffee. Through making chronic inability to fall asleep or to enjoy uninterrupted sleep.	Bhojraj, Tyagi 2017
Coffee consumption associated with risk of gout attacks	Drinking four servings of caffeinated beverages in the previous 24 hours was associated with an 80% increased risk of recurrent gout	Efferth T 2007
Coffee drinking associated with digestive disorders	Upset stomach or indigestion occurs when we drink caffeine	(Camilleri M, Shirlow M 2007,1985)
Coffee drinking can cause headaches	Over drinking of coffee cause symptom of a headache due to its caffeine chemical compound.	(Bigal ME 2002)
Caffeine consumption can lead to increased anxiety, depression and the need for	Caffeine during coffee drink can produce feelings of anxiety and even be a	(Chadwick AE , Schmidt NB 2016,2017)

anxiety medication	catalyst for a full-blown panic attack. It also causes anxiety and panic in panic disorder patients and which may exaggerate the symptoms of premenstrual condition	
Coffee drinking due to its caffeine does not help with extended sleep deprivation:	a recent study reported that coffee consumption due to its caffeine chemical constituents it causes following restricting sleep up to 5 hours per night, use no longer improved alertness or performance after three nights. results show that relative to placebo, caffeine significantly improved psychomotor vigilance task performance during the first two days, but not the last three days of sleep restriction.	(Clark I, Chase JD 2016, 2017)
Affect pregnant women if they drink more than a cup of the day.	Drinking coffee when pregnant, caffeine will also reach the fetus, and child is highly sensitive to caffeine. Therefore, heavyweight coffee drinker while pregnant, at least reduce coffee intake not more than one cup per day.	(Little R E, Ricketts 1976, 2017)

NEED FOR THE STUDY

In today's stressful life people are finding their own ways to cope with daily hassle.

In general people are drinking coffee to get over their stress. though there are people who are not labelled as addicts but they are dependent on coffee with same symptoms so we tried to construct a scale to measure the addictive and withdrawn symptoms present in general population.

Operational definition

Caffeine: Caffeine (1,3,7- trimethyl xanthine) is the most widely consumed behaviourally active drug in the world (Bastia & Schwarz-schild, 2003; James, 1997). It is found naturally in more than 60 species of plants (e.g., coffee, tea, cocoa) and is added to a variety of food products (e.g., carbonated beverages) and medications (e.g., analgesics; Juliano, Anderson, & Griffiths, 2011).

Dependence: Dependence is defined as a cluster of three or more symptoms occurring at any time in the same 12 -month period. (DSM IV)

Coffee: (*Coffea L.*) is the world's beloved drink that is the most regularly consumed caffeine-containing beverage and the second most traded commodity next to edible oil. It contains a complex mixture of chemicals that provide important amounts of chlorogenic acid and caffeine (Higdon JV 2006).

HISTORY

The word "caffeine" is derived literally from the German word for coffee, "Kaffee," and was coined in 1819 upon its chemical identification by Friedrich Ferdinand Runge at the encouragement of his contemporary, Johann Wolfgang von Goethe, who supplied him with the coffee beans for the experiments. Coffee is defined as a brewed beverage prepared from the roasted seeds of several species of evergreen shrub of genus coffee. The earliest credible evidence of either coffee drinking or knowledge of the coffee tree appears in the middle of the 15th century, in the Sufi monasteries of the Yemen in southern Arabia.

From Mocha, coffee spread to Egypt and North Africa, and by the 16th century, it had reached the rest of the Middle East, Persia and Turkey. From the Middle East, coffee drinking spread to Italy, then to the rest of Europe, and coffee plants were transported by the Dutch to the East Indies and the Americas. Baba Budan lived in the 17th century in India. On the way back from his pilgrimage, he encountered a strange drink that the Arabs living there made which was none other than coffee. This contributed to the spread of coffee in India. (Hannah M 2005).

Arrival in India (D Balasubramanian 2019)

Coffee, originally Ethiopian in origin, was quickly taken over and held tight by the Arabs as their own drink (since wine was prohibited) that alerts the imams and the believers. The "Insight" column of <http://madrascouriers.com> of June 19, 2017 states that the 16th century Sufi saint Baba Budan smuggled several seeds of it from the Arab monopoly, and planted them in Chikkamangalur of the Mysore kingdom in 1670. Although, it might have been brought to the Malabar Coast earlier by Arab traders. It is thus that coffee was planted and grown in Karnataka, Kerala and Tamil Nādu. Recently, it is also grown in the Araku Valley of Andhra Pradesh and more recently in some of the 'seven sisters' states of northeast India, and this also appears how coffee drinking seems to have become a popular daily drink in Peninsular India since centuries.

REVIEW OF LITERATURE

A literature review is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, journals, books, newspapers, magazines and other sources relevant to particular area of research. The review enumerates, describes, summarize objectively evaluates and clarifies the previous research. It gives a theoretical base for the research and help the author determine the nature of research. The literature review acknowledges the work of previous researchers, and in so doing, assures the reader that the work has been well conceived. It is assumed that by mentioning a previous work in the field of study, that the author has read, evaluated, and assimilated that work into the work at hand.

A literature review creates a “landscape” for the reader, giving her or him a full understanding of the developments in the field. This landscape informs the reader that the author has indeed assimilated all or the vast majority of previous, significant works in the field into her or his research.

In writing the literature review, the purpose is to convey to the reader what knowledge ideas have been established on a topic, and what their strengths and weaknesses are. The literature review must be defined by guiding concept.

(Lakshmi B 2016)Caffeine is a widely-consumed chemical having controversial effects. Caffeine may interact with the satiety and may be associated with stress levels. The frequency of caffeine consumption among call centre employees is known to be high. The aim of the study was to assess the caffeine intake and its association with appetite and stress levels among call centre employees aged between 25-35 years A cross sectional study with purposive sampling was done from a call centre at Mumbai, India. Anthropometric measurements and structured questionnaires were used for data collection. The average caffeine intake was 200mg/day through coffee and 150mg/day through tea among the habitual consumers. As per the scoring categories of adapted appetite questionnaire (CNAQ), 54.7% of the participants were at risk to abnormally low appetite. The stress questionnaire results showed that 84.6% of the participants were at high risk to stress. Significant negative association was found between appetite score and coffee consumption ($r = 0.55$, $p < 0.001$), coffee consumption plus smoking ($r = 0.476$, $p < 0.05$) and tea consumption ($r = 0.300$, $p < 0.05$) respectively. A significant difference ($p < 0.01$) was observed between the mean appetite score of habitual smokers and non-smokers; mean appetite score of non-smokers was greater. No significant association was observed between caffeine consumption and stress

(Ashnapatel 2021) The aim of our study was to estimate the prevalence of caffeine dependence in urban India using a cross sectional, self-reported survey design. On 19 December 2020, we conducted an online survey in order to analyse the caffeine intake and thereby the prevalence of caffeine dependence amongst the respondents of our study. Nineteen respondents (10.1%) were observed to be dependent on caffeine according to the DSM-IV criteria using proxy questions. While all of the caffeine dependent participants reported one or more issues with sleep, 43.04% of the others had no problems with sleep at all. From dependence to sleep disorders, caffeine consumption has a tremendous impact on our health, both physical and mental. It's perceived 'benign' nature makes its consumption more acceptable to society. Caffeinated drinks are not as harmless as recognised by most, and need to be consumed with caution. A list of caffeinated beverages was provided in the questionnaire. From the list, the respondents were asked to select the beverages that they consumed along with the approximate quantity consumed by them on a daily basis. This was then converted into caffeine consumption per day in grams using standard conversion tables. The

rest of the questionnaire was designed keeping the 'Substance Dependence' criteria in mind from the fourth edition of the Diagnostic and Statistical manual of Mental disorders (DSM-IV), published by the American Psychiatric Association. To avoid bias, we utilised proxy questions to substitute those in the DSM-IV criteria. A respondent was considered dependent on caffeine if he/she fulfilled three of four criteria. There were a total of 188 respondents ranging from twelve to sixty-eight years of age, with a large proportion of females (64.1%), probably due to the dominance of females in the sample selected. Of the total participants, 11 were non-caffeine drinkers. Figure 1 demonstrates the number of respondents that consumed a given amount of caffeine on a daily basis ranging from 22mg to 600mg, with most consumers in the 100 to 200mg range. More than one-third of the respondents believed that the caffeinated beverages they consumed were beneficial to them, 42.2% were of the opinion that they were of no consequence and 12% claimed that these beverages had a harmful impact on their body. Nineteen respondents (10.1%) were observed to be dependent on caffeine according to the DSM-IV criteria through proxy questions. While all of the caffeine dependent participants reported one or more issues with sleep, 43.04% of the others had no problems with sleep at all. Regarding the criteria for Substance Dependence amongst the caffeine dependent respondents, all of them reported attempts at taking a break from consuming caffeine in the past, 42.1 % reported an increase in the total consumption of caffeine over time and 78.9 % experienced withdrawal like symptoms, such as uneasiness, headaches, lack of energy and irritability. The rapidly increasing casual caffeine culture deserves more serious consideration. From dependence to sleep disorders, caffeine consumption has a tremendous impact on our health, both physical and mental. It's perceived 'benign' nature makes its consumption more acceptable to society. Caffeinated drinks are not as harmless as recognised by most, and need to be consumed with caution.

(Priyadarshini T 2016) Caffeine consumption by adolescent population has increased dramatically over the last decade through increased coffee consumption and energy drinks. However, caffeine causes many adverse effects, which demands people's attention. The purpose of this study was to determine the most popular caffeinated product among adolescents and the knowledge and belief of adolescents about caffeine in their day-to-day life. An online survey was created and about 260 responses were obtained. Only 248 were counted as the remaining was removed by exclusion criteria. The most popular caffeine intake by adolescents was coffee. Students ingested caffeine at levels that could cause negative health effects and seemed unaware of the total amount of caffeine consumed. More information about caffeine should be incorporated into health education at all levels, so students can identify and avoid negative effects along with caffeine withdrawal and addiction.

(Dr.G. Rekha 2019) Caffeine is one of the most widely used psychoactive drugs in the world and occurs in many commonly consumed foods and beverages (coffee, tea, chocolate, cola drinks, energy drinks). Caffeine is regularly used by individuals to combat fatigue and to provide both physical and mental energy. There are number of factors influencing the caffeine content of caffeinated products. Coffee, an infusion of ground, roasted coffee beans, is reported to be among the most widely consumed beverages in the world. Although coffee is lauded for its aroma and flavor, its caffeine content likely plays a role in its popularity. The study has been undertaken to analyze the consumption of coffee among women and its impacts and it deals with the pattern of consumption of coffee, reasons and its awareness regarding the negative effects of coffee. The Indian scenario has been changing drastically due to globalization, high degree of competition and work culture. Today women in India are continuously challenged by the demands of full-time work and when the day is done, they need to carry more responsibilities and commitment to home. In day-to-day activities the intake of beverages may harm their health without knowing their impacts. This study was undertaken to analyze the consumption of coffee among women and their impacts regarding their health which helps to know about women about their health. Quota sampling technique is used to collect the data. Quota sampling technique concentrates towards population of segment, respondents are confined to the

group of women who consumes coffee. The data for the project includes both primary and secondary data has been collected. Primary data are collected from the respondents through questionnaire. The secondary data have been collected from books, internet, magazine and journals. We cannot deny that coffee does play an essential role in the daily lives. However over consuming of coffee is harmful. It has been found that moderation taking less than three cups a day or drinking more decaffeinated coffee and filter brewed coffee instead which has still many concerns from both sides. The effects of caffeine intake might have a negative effect clearly that one should limit their consumption. Although coffee is a common beverage that has been consumed by many individual and it is harmful to the human body. So, the consumption of it should be clearly monitored and limited.

(Michelle 2005) To investigate the genetic and environmental influences on tea consumption and their commonalities with coffee consumption; and to further examine the genetic and environmental a etiology of preference for tea/coffee. A classical twin design was used in which the similarity of identical and non-identical twins is compared, enabling estimates of genetic, common environmental and unique environmental influence on the trait. Setting and participants An Australian population-based sample of 1796 identical (i.e., monozygotic) and 2013 non-identical (i.e. dizygotic) twin pairs aged 16–87 years was studied, roughly three-fifths of whom were female. The sample represented approximately 70% of those approached for study participation. As part of a Health and Lifestyle Questionnaire, respondents were asked how many cups of each tea and coffee they consumed per day. Additional measures of ‘total tea and coffee consumption’ and ‘preference for coffee’ were calculated. Findings Age was positively associated with tea consumption but negatively associated with coffee preference; women consumed more beverages than men, but showed a lower preference for coffee. An inverse relation between tea and coffee consumption—larger in females (-0.41) than males (-0.34)—was supported. This association was mediated entirely by the unique environment in males, and by both the unique environment (68.3%) and genes (31.7%) in females. Tea and coffee drinking were shown to have similar heritability’s (0.46) in males, but tea consumption was influenced by common environmental factors whereas coffee consumption was not. Coffee preference was shown to be influenced by genes (0.42) and the unique environment (0.58). As the patterns of genetic and environmental variation were shown to differ for tea and coffee consumption it may be more informative to retain them as separate measures of caffeine intake in future studies of stimulant use and taste perception. Caffeine, coffee consumption, genetic and environmental influences, tea consumption.

METHODOLOGY

Research in common parlance refers to a search for knowledge. Research can be defined as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. The Advanced Learner’s Dictionary of Current English lays down the meaning of research as “a careful investigation or inquiry specially through search for new facts in any branch of knowledge.” According to Kothari .C, Redman and Mory define research as a “systematized effort to gain new knowledge.”

According to Clifford Woody research comprises defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organising and evaluating data; making deductions and reaching conclusions; and at last, carefully testing the conclusions to determine whether they fit the formulating hypothesis.

Research is, thus, an original contribution to the existing stock of knowledge making for its advancement. It is the pursuit of truth with the help of study, observation, comparison and experiment.

Research methodology consists of the assumptions, postulates, rules and methods – the blue print or road maps- that researchers employ to render their work open to analysis, critique, reflection, repetition and adaptation and to choose research methods. This term is often used interchangeably with research methods, but in this entry, it will refer to research methods as the tools or techniques with which researchers collect their data, these tools or techniques are wisely chosen only when they are derived from the related to the larger set of assumption and procedures that constitute the overall research methodology the study utilizes. All empirical research, regardless of whether it is considered to be qualitative, quantitative, or both includes a discussion of research methodology. (LISA M 2008).

AIM- To construct a scale and to understand the coffee consumption is Male & Female. To construct Subscale to understand the addictive & withdrawn symptoms present is random population.

OBJECTIVE- To construct a scale to understand the number of times Male & Female consume coffee is a day.

To construct sub scale to understand the aspects of coffee dependency and withdrawn symptoms in sample population aged between 20-40 years.

Sample: A Random sample was adopted for standardization of this scale, where sample construct of 200 male & 200 female adult between the age group of 20-40 years.

INCLUSION CRITERIA

Participation team urban area & Bengaluru were considered. Male & Female between the age group of 20-40 years.

EXCLUSION

Participation team urban area & outside Bangalore participants of other ages.

4. PILOT STUDY: The scale was administered for representative sample of 15 students of MSc. The feedback was obtained from them on the following aspect

- Comprehension of instruction
- Comprehension of statement
- Length of scale
- Time taken for administration
- Ambiguous, Vague, or difficult words.

5. INITIAL ITEM ANALYSIS

- Statements were eliminated based on expert opinion, through concurrent validity ratio and pilot study.
- Appropriate changes were made in instruction and statements
- After appropriate changes finally 30 questions were selected.

6. PRESENT SCALE CONSTRUCTION-SAMPLE

The random sampling technique was adopted and 200 Males & 200 Female aged between 20-35 from Urban Bangalore in different courses of students & participants with different occupation were considered for the study.

TABLE 1 Shows the demographic details of the sample.

SAMPLE TYPE	STUDENT		ADULTS		TOTAL
GENDER	Male	Female	Male	Female	
TOTAL	40	60	160	140	
GRAND TOTAL	100		300		400

7. PROCEDURE OF DATA COLLECTION

Individual fulfilling inclusion criteria were sought consent to be part of the study, rapport was established & initial instruction were given. Individual were handed over the scale. The response sheet was collected and feedback was also collected. Participants were first asked as to how many times they drink coffee in a day 1-3, 4-6 or 7-9. Only after they marked one of these the administration of the scale was continued.

Instruction: In the following there are some statements regarding coffee consumption. Five possible responses are provided like Always, Often, Sometimes, Seldom and Never. Choose the one that is appropriate to the statement. Please do not leave any statements unanswered.

After 15 days same scale was administered.

ANALYSIS OF DATA

- Incomplete response sheet was eliminated.
- Item with inter item correlation of less than 0.30 & more than 0.80 for each of the coffee dependency was revised or removed.
- Test-retest reliability was computed by using Cronbach's alpha correlation.
- Concurrent validity was established through administration of another test along with present test for the sample 400. The concurrent validity was computed using Pearson correlation.
- Norms were computed using mean & SD
- Based on mean score each item was interpreted.

RESULTS & DISCUSSION

The objective of the present project was to construct a scale to understand the coffee dependency in Adults (Males & Females) between the age group 20-40 years. A random sampling was adopted for the study, the coffee consumption statements for the present study was finalized based on the review of literature, statement were generated, that were appropriate for the sample and components of operational definition of coffee dependency.

60 statements were constructed and validated by 5 experts of different streams that is 2 from Food and nutrition, Human development, Sociology and Psychology. The statement was sent to 5 experts along with the definition of each area of coffee dependency, based on the suggestions given by the expert changes were made, some statements were revised and some statement rejected, 50 questions were reduced to 40.

NORMS AND INTERPRETATION

Coffee dependency scale was developed & standardized on a sample of 391.

Mean &sd of the total sample. The obtained mean is 161.01 and Sd is 32.863 Mean +1Sd =193.64 & - 1sd = 128.38

SCORE	INTERPRETATION
Score above 194	High level
193-128	Medium level
Below 129	Low level

MANUAL

Administration-This scale can be administered individual or is group. The scale of statement that of 5 point scale always after sometimes seldom Never response. It can be used to tired the Level coffee dependency, Whether the subject has more of or withdrawn symptoms it can be administered to literates, aged between 20-40 years.

Scoring: The items are scored in two way direct Always, often, sometimes,seldom, never,54321 and revised score 12345. Higher score indicated high level of dependency.

Interpretation: The scale consists of 30 statements the score can be scored and revised at total score. The total score can be composed to norms and interpreted.

Reliability validity –The coffee dependency scale has adequate reliability and validity

Conclusion-The coffee dependency scale was constructed to adults for understanding there level coffee dependency. Based on the statistical data analysis obtained it can be concluded that the coffee dependency scale developed has adequate reliability, validityand norms that are needed for the standardization of the scale.

Limitation-

- The sample size was small 391. Which limits the generalization of this study on population.
- Random sampling was used that can lead to bias that can affect the accuracy of the result. The sample of the study did not study the actual distribution of adults in religion, caste. Particular SES. Employment etc .
- The study did not include all the areas of coffee dependency further research can include the other areas.
- Adults from Bangalore south were considered for the study and limits the generalization of the test.
- The sample was only between 20-40 other age groups were not considered.
- Considering all these limitationsthe results of present study should be interpreted cautiously.

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