

Relationship between Personality of an Individual and their Self Medication Behavior: Study based in Gurgaon

By

Adil Refai

*Dissertation submitted for the partial fulfillment of the
MBA Pharmaceutical Management*

Academic year, 2015-2017



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TO WHOMSOEVER MAY CONCERN

This is to certify that **ADIL REFAI** student of **MBA Pharmaceutical Management** from The IIHMR University, Jaipur has undergone internship training at **ZS Associates India Private Ltd.** from **6th February, 2017** to **6th May, 2017**.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

This dissertation work is submitted to the IIHMR University for the partial fulfillment of MBA



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INTERNSHIP CERTIFICATE

This is to certify that Adil Refai (15389) has served in our organization from February 06 ,2017 to May 05, 2017. He was working as Knowledge Management- Intern on contractual role and based at New Delhi office.

This is to confirm that all information\ projects shared\ worked in your Internship period is confidential and are not liable to be shared with anyone outside ZS network.

At last, wish you all success in future endeavors

For ZS Associates India Pvt. Ltd.

Sumeet Madaan
May 5, 2017

Sumeet Madaan
Human Resources Specialist



Original Literary Work Declaration

THE IIHMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled "*Relationship between personality of an individual and their Self Medication behavior: Study based in Gurgaon*" and submitted by **ADIL REFAI**, Enrollment No: **IIHMR-U/02/2015-17/0028**, under the supervision of **Dr Saurabh Kumar Banarjee** for award of **(MBA in Pharmaceutical Management)** Postgraduate Diploma in Pharmaceutical of the University carried out during the period from **6th February, 2017** to **5th May, 2017** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.



ADIL REFAI
The IIHMR University

Certificate of Ethical Clearance

THE IIMMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that all ethical issues have been considered while collecting data for my dissertation titled **“Relationship between personality of an individual and their Self Medication behavior: Study based in Gurgaon”**.



ADIL REFAI

Signature of student

ABSTRACT:

Objectives:

Personality factors of an individual are shown to be associated with the medication adherence, compliance, drug and substance abuse and overall conduct of health related behavior of an individual. Studies have been established revealing multiple factors associated with self medication, but personality is a neglected aspect among all. The study aims to find out the relationship between personality (Considering **Raymond Cattell's 16 personality factors**) of an individual and their self medication behavior.

Research design:

Data was collected from an employee cohort of corporate consulting firm through survey send via mail (Google Form). Study was conducted in Gurgaon with final sample of respondents incorporated is **102** respondents. Consecutive sampling was used to collectively obtain the data from the accessible cohort of employees till required sample of ≥ 100 was achieved. Patients were asked if they self medicated “**within past one year**” to avoid recall bias.

Methods:

Pearson's Chi square test was performed to assess the relationship or association of a personality (Raymond Cattell's 16 Personality factors:) with Self medication behavior of an individual. Even relationship or impact of socio demographic variables and use of Self medication were assessed using chi square significance test. Analysis was performed using **MS Excel and IBM SPSS 23** as analytical tool.

Results:

Self medication was found to be practiced by **69%** of the respondents. **75%** of female respondents have indulged in self medication in past one year compared to **63.2%** of male respondents. **73%** of respondents under age group of **21-25 years** self medicated in past one year. **75%** of respondents with professional degree have self medicated as compare to **62%** of respondents with Bachelor's degree. Among all the socio demographic variables, none of the variable shows significant association or relationship with use of self medication based on p-values. Out of all the 16 personality factors, **Liveliness (p-value:**

0.048), Social Boldness (p-value: 0.046) and Patience (termed as Tension) (p-value: 0.1) are shown to have a significant relationship or impact on the use of self medication as per chi square significance value at **90% confidence interval**.

Conclusion:

Personality of an individual plays an important role in the overall conduct of health related behavior. Present study thus concludes that liveliness, social boldness and patience are shown to have relation or association with the use of self medication. Still further research at a larger level is needed to better understand in-depth the impact of personality of an individual with their self medication behavior.

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I am very thankful to Prof. Dr. Saurabh Banarjee, my guide at IIHMR University, for his constant support, guidance and patience throughout the internship and thesis presentations. He has expertly molded and crafted my crude work into a finished thesis that can withstand scrutiny. Thank you so much sir.

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Thank you.

ADIL REFAI

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1. INTRODUCTION

1.1 BACKGROUND OF THE DISSERTATION STUDY

Self-medication is the management of general health troubles with tablets especially intended and marked for application without medical command and accepted as secure and efficient for such use¹.

Solutions for self-drug are every now and again called "nonprescription" or 'over the counter' (OTC) accessible without a specialist's medicine through drug stores. In a few nations OTC items be likewise offered in stores and different means. Medications that require a specialist's solution are called remedy items (Rx items)¹.

Self-prescription is a worldwide marvel and potential supporter of human pathogen imperviousness to anti-microbials. The unfriendly outcomes of such practices ought to dependably be underlined to the group and ventures to control it. Uncontrolled nonsensical utilization of antimicrobials without therapeutic direction may bring about more prominent likelihood of unseemly, inaccurate, or excessive treatment, missed finding. This audit concentrated on the self-solution of allopathic medications, their utilization, its wellbeing and purpose behind utilizing it. It would be confined, but the general population who are utilizing it, have enough knowledge about its dosage, time of admission, symptom on over measurements².

India has an incredibly familiar to observe self-medication carry out and which is mounting confront to health care provider². Self-medication is very common among educated population^{3, 4,5,6,7}. Punjab has the occurrence of self-medication of 73%. In India Self drug practice is 52% ([TOI](#)).

Considering Self medication there are lot of factors established through research which affects self medication. List of factors which affects self medication behavior are Demographic factors such as Sex, Age, Education, Income level⁸ and other reasons include Experience with medication, Nature of Sickness, Waiting in hospital, Addiction to self medication⁹ etc. When throwing a light to self medication various studies demonstrate the significance of psychological reason such as personality distinctiveness in medication conformity of patients¹⁰. Also few studies demonstrate multiple behavior traits are of major value for adherence behavior in persons with chronic ailment. The result proposes that more than a few personality traits might relate in power adherence behavior. Personality traits

could be used to draw attention to efforts to educate and hold up patients with high risk of low medical adherence¹¹. There are various personality traits developed by many researchers, but the study involves the application of **Sixteen Personality Factor Questionnaire**. The sixteen character factor or 16PF psychometric examination review various chief personality characters in order to offer feedback about an individual's character, usually used by psychologists in scientific or research settings. It is a self-report character test urban over a number of decades of empirical research.

Primary Factors and Descriptors in Cattell's 16 Personality Factor Model (Adapted From Conn & Rieke, 1994)¹².

Descriptors of Low Range	Primary Factor	Descriptors of High Range
Save, generic, far off, cool, held, indifferent, segregated, formal, detached (Sizothymia)	Warmth	Warm, cordial, mindful to others, merciful, accommodating, taking an interest, likes individuals (Affectothymia)
Solid considering, bring down general mental limit, less insightful, not able to deal with unique issues	Reasoning	Abstract-considering, more shrewd, splendid, higher general mental limit, quick
Receptive inwardly, alterable, influenced by sentiments, sincerely less steady, effortlessly annoyed (Lower Ego Strength)	Emotional Stability	Emotionally steady, versatile, develop, confronts reality quiet (Higher Ego Strength)
Respectful, helpful, stays away from strife, tame, unassuming, loyal, effortlessly drove, mild, obliging (Submissiveness)	Dominance	Dominant, powerful, self-assured, forceful, aggressive, resolute, bossy (Dominance)
Genuine, limited, judicious, moody, contemplative, quiet (Desurgency)	Liveliness	Lively, energized, unconstrained, energetic, ecstatic, happy, expressive, imprudent (Surgency)
Practical, nonconforming, ignores rules, liberal (Low Super Ego Strength)	Rule-Consciousness	Rule-cognizant, obedient, scrupulous, adjusting, moralistic, staid, lead bound (High Super Ego Strength)
Bashful, danger touchy, tentative, reluctant, threatened	Social Boldness	Socially intense, bold, tough, uninhibited (Parmia)

Utilitarian, objective, unsentimental, extreme disapproved, independent, simple, unpleasant (Harria)	Sensitivity	Sensitive, tasteful, wistful, delicate disapproved, instinctive, refined (Premsia)
Putting stock in, clueless, tolerating, unlimited, simple (Alaxia)	Vigilance	igilant, suspicious, incredulous, wary, oppositional (Protension)
Grounded, down to earth, mundane, arrangement orientated, enduring, traditional (Praxernia)	Abstractedness	Abstract, creative, inattentive, unrealistic, ingested in thoughts (Autia)
Candid, certifiable, unsophisticated, open, honest, innocent, unassuming, included (Artlessness)	Privateness	Private, careful, nondisclosing, insightful, cleaned, common, adroit, discretionary (Shrewdness)
Confident, unworried, self-satisfied, secure, free of blame, sure, smug (Untroubled)	Apprehension	Apprehensive, self questioning, stressed, blame inclined, shaky, stressing, self pointing the finger at (Guilt Proneness)
Customary, connected to natural, moderate, regarding conventional thoughts	Openness to Change	exploratory, liberal, explanatory, basic, free considering, adaptability
Assemble situated, a joiner and adherent ward (Group Adherence)	Self-Reliance	Self-dependent, single, creative, individualistic, independent (Self-Sufficiency)
Endured scatter, unexact, adaptable, undisciplined, remiss, self-clash, incautious, thoughtless of social regrets, uncontrolled (Low Integration)	Perfectionism	sorted out, impulsive, self-restrained, socially exact, demanding resolve, control, self wistful (High Self-Concept Control)
Casual, peaceful, quiet, slow, understanding, created low	Tension	Tense, high vitality, anxious, driven, disappointed, over fashioned, time driven.

2. LITERATURE REVIEW

Self-medication leads to expenditure of possessions, augments confrontation of pathogens and by and large causes severe health vulnerability like adverse drug reactions, extended pain and drug belief. One of the studies was commenced to establish the reasons for self-medication along with prototype of self-medication between medical student¹³. There are ample numbers of studies conducted for self medication with number of factors explored and indications in which self medication is prevalent has been found out in Indian context. A cross-sectional expressive study was carried out among Mangalore students which reveals results as the most widely recognized afflictions for which self solution were utilized were: standard frosty (62%), vehemence (61%) and cerebral pain (60%). The understudies consult with their course books (39%) and elder or partners (38%) for the pharmaceuticals. Antipyretics (71.9%), painkiller (65%), antihistamines (36.9%) and anti-toxins (34%) had simply the most commonplace cured medications. Of the respondents, 33% were oblivious of the antagonistic impacts of the drug and 5% had event of unfavorable responses. The larger part (64%) of understudies prescribed prescriptions to others, all the more as often as possible to family and friends¹³.

A cross sectional study in India for OTC drug shows that, the overall frequency of OTC medication use was 18.72% (95% CI: 15.34–47.16%). Younger age, male gender, lower income, and poor standard of living were the predictors of OTC medication. Perception of poor ease of use to health care, the presence of chronic diseases and having a indication count of more than two significantly augmented the probability of OTC drug ($P < 0.05$). Sociodemographic profile, drug history, and attitude headed for health-care availability in the locality can estimate OTC medication behavior¹⁴.

A study in northern India of housewives reveals that the majority of the housewives were in the practice of observance the drugs though only 72.9% of them were in the custom of using it without any prescription¹⁵.

Also a study on perception and perform of Self-Medication among Students in South India, results demonstrates that the prevalence of self-medication was 79%. A better quantity of females was self-medicating (81.6%) than males (74.9%). The bulk of the undergraduate self-medicated because of the sickness being too insignificant for discussion (70.5%). Fever reducing drugs were most usually self-medicated by the members (74.8%)¹⁶.

Hence multiple factors in multiple studies have been identified for self medication, but from psychological perspective it is important to understand what is the character or personalities of individual's indulging into self medication behavior.

There are many studies determining relationship between personality characteristics and drug abuse, long term chronic therapy, non adherence of treatment etc.

A study on character and medicine non-adherence in elder adults register in a trial illustrates that Neuroticism is related with medication non-adherence over six years of take notes in a huge sample of elder RCT participant. Behavior dimension in clinical and research surroundings might help to identify and guide interference for elder adults at hazard for drug non-adherence¹⁷.

Some studies show the effect of personality on health linked quality of life¹⁸, adherence to asthmatic drugs by asthma patient and relative to personality¹⁹. A study shows relation of adherence to medication regime with personality illustrates results indicated that Conscientiousness is a five-factor trait considerably associated with obedience to the drug regimen. No other NEO-FFI length was considerably associated with long-suffering adherence²⁰.

One of the studies on compliance to anti depressants concludes that associate of personality are central, although commonly ignored, predictors of observance with antidepressant medication²¹.

Need for study: Thus there are numerous studies conducted to find out impact or relationship between personality and substance abuse, adherence, compliance to medication, and this signifies the importance of personality of an individual and their overall health related conduct. Similar to all above conditions, self medication also is affected by multiple factors, but hardly there are study which demonstrates the relationship between self medication and personality of an individual. The following study is conducted to identify the impact or relationship between personality of an individual and their self medication behavior. For personality factors, already established Raymond Cattell's 16 Personality factors are used in this study.

3. METHODOLOGY

3.1 GOAL:

Examine the relationship between personality of an individual and their Self medication behavior

3.2 AIM:

To study the relationship between personality factors (Raymond Cattell's 16 PF) of an individual and their Self medication behavior: Study based in Gurgaon

3.3 OBJECTIVES:

3.3.1 Primary Objective:

- To find out the relationship between each personality factors (Raymond Cattell's 16 PF) of an individual and use of Self medication

3.3.2 Secondary Objectives:

- To find out the relationship between Socio-demographic variables of an individual with their use of Self medication
- To find out proportion of sample with different levels of Self medication usage
- To find out the proportion of sample using Self medication in different type of indications

3.4 HYPOTHESES

Hypotheses of Primary objective:

- **Null Hypothesis** (H_0) states that there is no relationship among the each personality factors (Raymond Cattell's PF) of an individual and use of Self medication
- **Alternative Hypothesis** (H_1) states that there is a relationship among the each personality factors (Raymond Cattell's PF) of an individual and use of Self medication

Hypotheses of Secondary objective:

- **Null Hypothesis** (H_0) states that there is no relationship among the each personality factors (Raymond Cattell's PF) of an individual and each of the socio-demographic factors

- **Alternative Hypothesis** (H_1) states that there is a relationship among the each personality factors (Raymond Cattell's PF) of an individual and each of the socio-demographic factors

3.5 RESEARCH DESIGN:

- Sample area: Gurgaon, India
- Study design: Cross sectional study
- Study type: Analytical study
- Sampling: Consecutive Sampling
- Sample size: 102 employees of a corporate company in Gurgaon, India

3.6 MATERIALS AND METHODS

Data type: Primary data

Tool used for data collection: Structured Questionnaire

Medium of data collection: Email (Google forms)

Data was collected through Structured Questionnaire send through mail to around 230 employees. Out of which 110 responded, concluding the response rate of the survey to be 48%. Socio demographic factors were assessed on choice based questions and 16 personality factors were assessed on a five point Likert scale (Rate 1 defines the lowest degree of personality possessed by an individual and Rate 5 defines the highest degree of a particular personality possessed by an individual. Use of self medication responded in terms of Yes/ No is a Dependent variable and personality factors (All 16) are Independent variables. Out of 110 responses received 8 were rejected due to false responses, hence the study includes a final of 102 respondents.

Data collection Tool: Data will be collected using Google form survey in an excel format which will be exported in SPSS (IBM SPSS statistics 23) for further statistical analysis.

3.7 STUDY DEFINATIONS:

Self medication: It is characterized as the treatment of regular medical issues with prescriptions particularly outlined and marked for use without restorative supervision and affirmed as protected and successful for such utilize **within past one year**.

- Types of indications worn for self drug in the study derived from the literature review of articles entailing the indications for which self medication is utilized in India and different other countries

3.8 DATA ANALYSIS PLAN:

The first step of data analysis will bring out the descriptive stats of the socio demographic variables, Use of self medication (Yes/No), proportion of individual involving in self medication in different indications along with the intensity of self medication.

For Primary objective:

For evaluating the relationship between use of self medication and all 16 personality factors, cross tab analysis is performed considering χ^2 value and its significance in SPSS by measuring its P values. If P values for Pearson' chi square test are found to be significant than Residual value of that level (Lowest level to highest level) of respective personality factor is checked to explore the level of personality and its relation to use of self medication (Yes/No).

:

The socio demographics descriptive stats is calculated using SPSS and its relation with the 16 personality factors is also explored to find out significant level between any Socio demographic variables and personality factor through Pearson's Chi square test and measuring its significance through P value determination. Proportion of sample indulging into self medication is determined using normal percentages and expressed in graphs. Percentage of individuals indulging into self medication in different types of indications is found through normal descriptive stats and represented into graphical form in MS Excel.

Inclusion Criteria: Employees working in corporate office of ZS Associates (Business Consulting group and Business Technology group) making around 230 employees in total and survey was sent to them through mail.

Exclusion criteria: Other departments were not considered in survey as they were not accessible to investigator.

Ethical considerations: The proposed formal consent/agreement was taken before the survey of all the samples included in study and the proposed informal agreement is provided by head of the departments after thorough quality check of questionnaire and study motives/objectives and also informal consent was provided by IIHMR University for conducting study project as a part of academia of MBA Pharmaceutical Management programme.

4. RESULTS

Socio demographic characteristics:

Age:

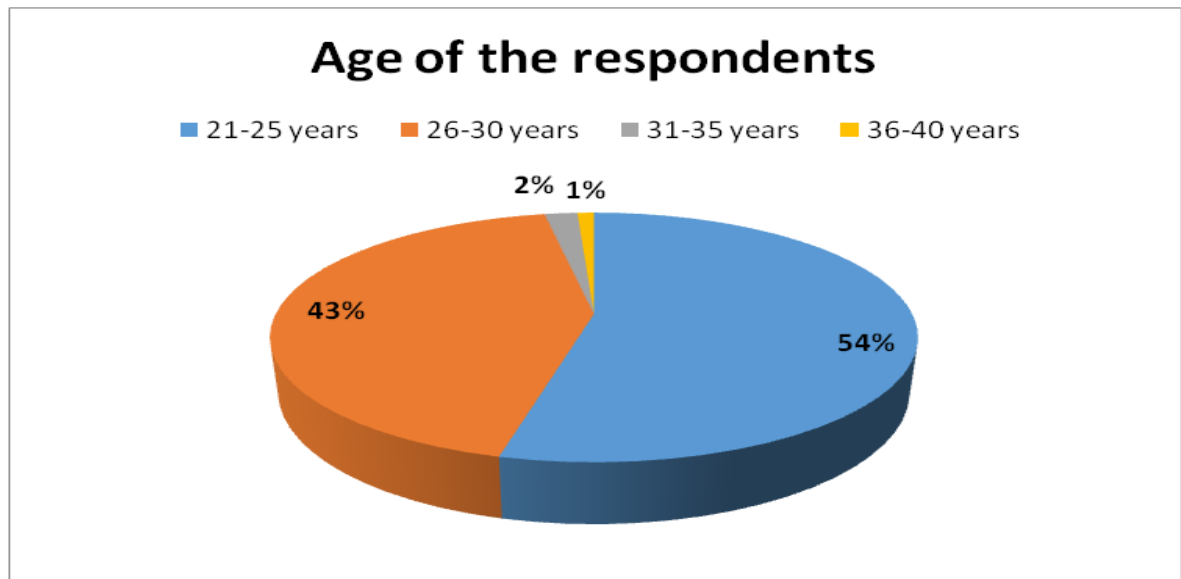


Table.1

Total no of respondents: 102 (100%)

Age group of respondents	Number of respondents	Percentage of respondents
21-25 years	55	54%
26-30 years	44	43%
31-35 years	2	2%
36-40 years	1	1%

Interpretation:

- Half of the respondents of study are among the age group of 21-25 years
- It is followed by 43% of respondents lying under the age group of 26-30 years
- Least amount of respondents 2% and 1% comes under the age group of 31-35 years and 36-40 ears respectively.

Gender:

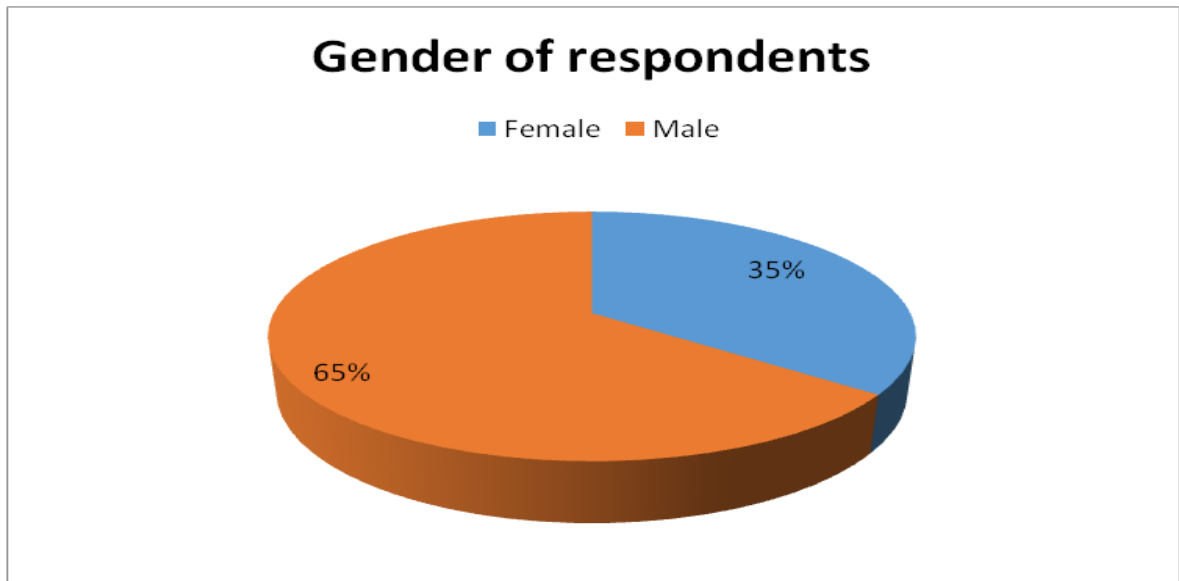


Table.2

Total no of respondents: 102 (100%)

Gender	Number of respondents	Percentage of respondents
Female	36	35%
Male	66	65%

Interpretation:

- One third of the study respondents are male contributing 65% of the total sample
- Females adds to rest 35% of the study sample

Marital Status:

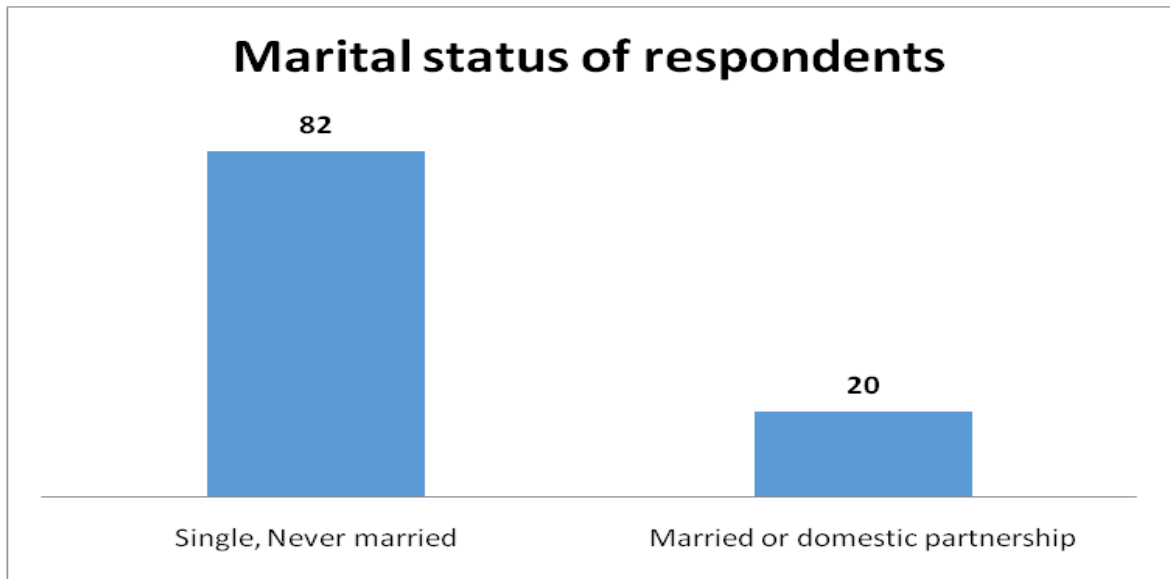


Table.3

Total no of respondents: 102 (100%)

Gender	Number of respondents	Percentage of respondents
Single, Never married	82	~80%
Married or domestic partnership	20	~20%

Interpretation:

- Majority of the respondents were Single, Never married contributing 80% of the sample
- While one fifth of the respondents were Married or has some domestic partnership

Highest level of Education:

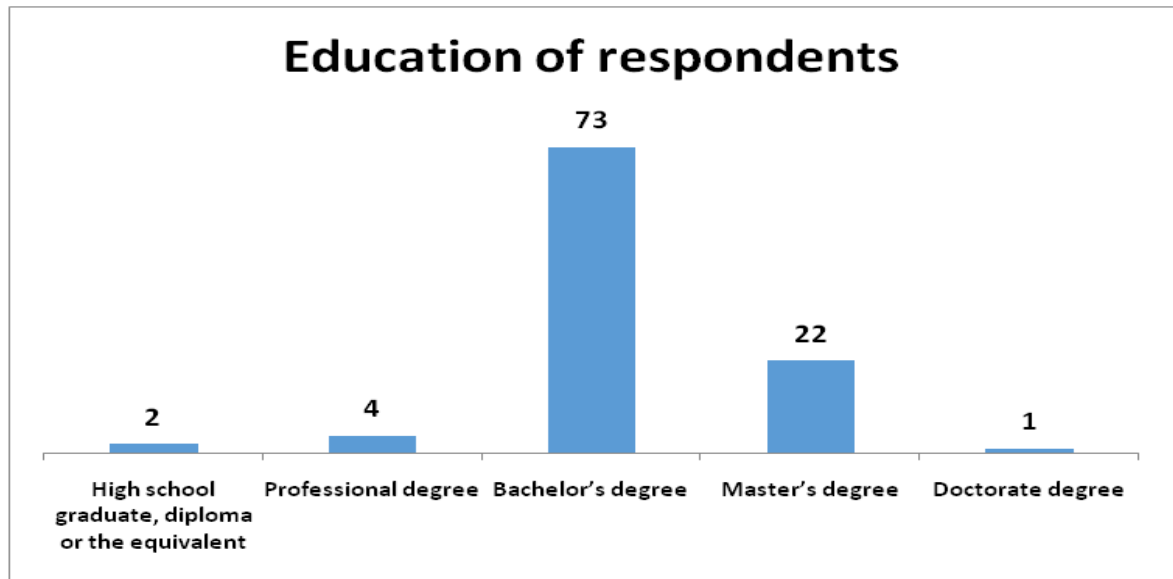


Table.4

Total no of respondents: 102 (100%)

Education	Number of respondents	Percentage of respondents
High school graduate, diploma or the equivalent	2	2%
Professional degree	4	4%
Bachelor's degree	73	72%
Master's degree	22	21%
Doctorate degree	1	1%

Interpretation:

- Majority of the respondents possesses the highest education of Bachelor's degree (73%), followed by Master's degree (22%)
- Least contribution was of respondents having highest education level of Doctorate degree (1%).

Use of Self medication by respondents:

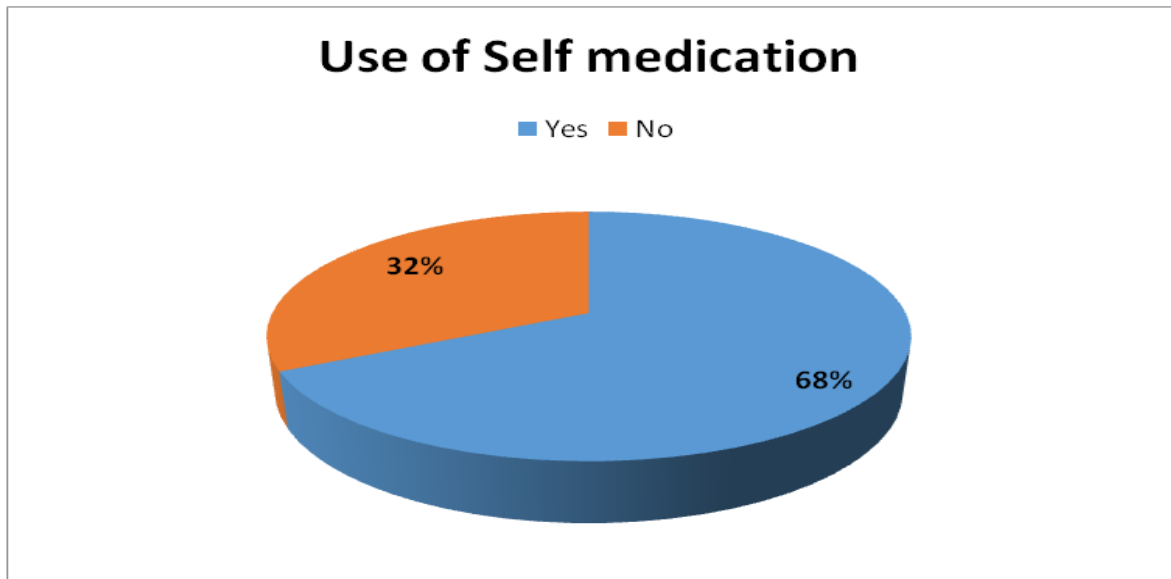


Table.5

Total no of respondents: 102 (100%)

Use of Self medication	Number of respondents	Percentage of respondents
Yes	69	68%
No	33	32%

Interpretation:

- Almost 70% of the respondent admits that they use self medication in past year
- One third of the respondents hasn't indulge into use self medication in past year

Frequency of Self medication:

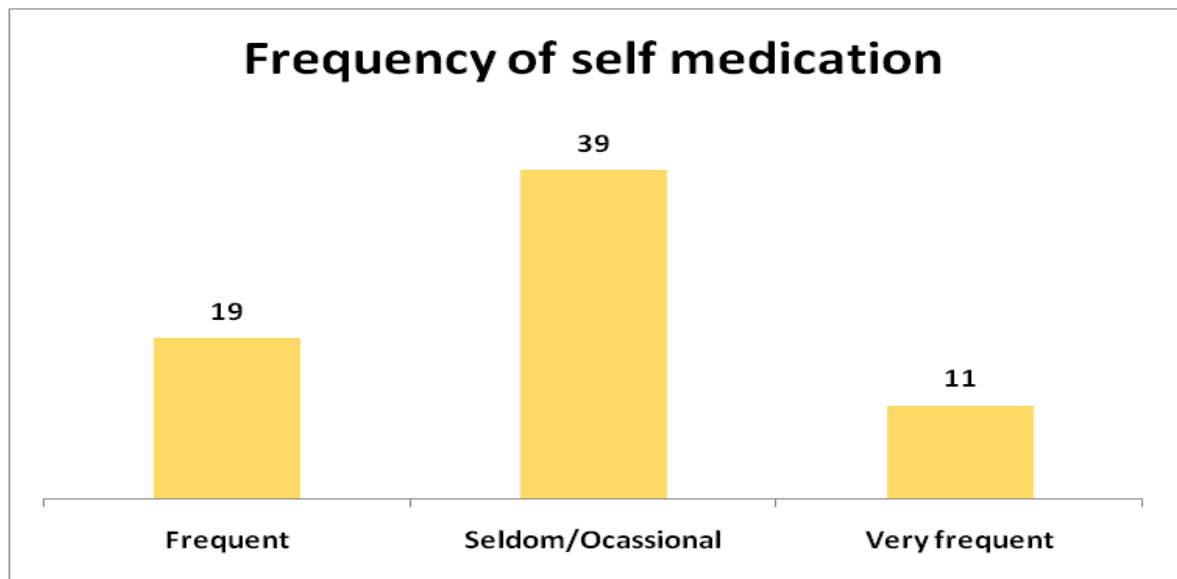


Table.6

Total no of respondents: 69 (100%)

Frequency of Self medication	Number of respondents	Percentage of respondents
Frequent	19	27%
Seldom/Occasional	39	57%
Very frequent	11	16%

Interpretation:

- Majority (57%) of respondents who self medicate does it Seldom/Occasional
- 27% of people who self medicate does it frequently, followed by 16% of respondents using self medication very frequently

Type of drug class/indications for Self medication:

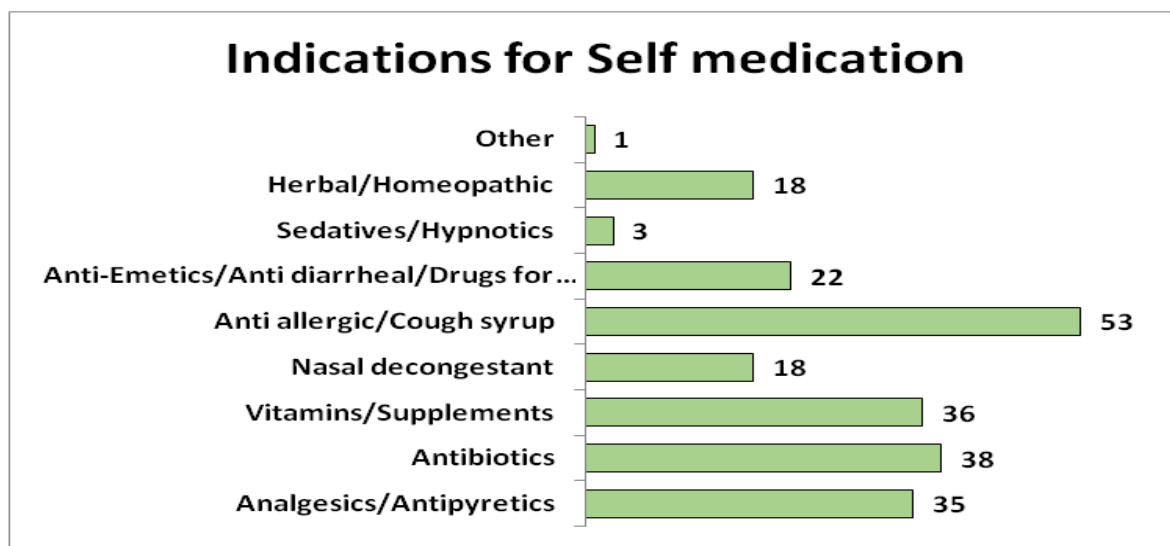


Table.7

Total no of respondents: 69 (100%)

Type of drug class for Self medication	Number of respondents	Percentage of respondents
Other	1	1%
Herbal/Homeopathic	18	26%
Sedative/Hypnotics	3	4%
Anti-Emetics/Anti diarrheal/Drugs for constipation	22	32%
Anti allergic/cough syrup	53	77%
Nasal decongestant	18	26%
Vitamins/Supplements	36	52%
Antibiotics	38	55%
Analgesics/Antipyretics	35	51%

Interpretation: Almost 80% of respondents who self medicates use it for Anti allergic/cough syrup indications, followed by half of the respondents using it for Vitamin/Supplements, Antibiotics and Analgesics

Relationship between Socio-demographic variables and use of self medication:

Table:8

Socio demographic characters	Use of Self-medication		χ^2 Value	P Value
	Yes (%)	No (%)		
Gender				
Male	42 (63.2%)	24 (36.4%)	1.374	0.241
Female	27 (75.0%)	9 (25.0%)		
Age				
21-25 years	40 (72.7%)	15 (27.3%)	3.555	0.314
26-30 years	26 (59.1%)	18 (40.9%)		
31-35 years	2 (100%)	0 (0%)		
36-40 years	1 (100%)	0(0%)		
Education				
High school graduate, diploma or equivalent	1 (50%)	1 (50%)	5.585	0.232
Professional degree	3 (75%)	1 (25%)		
Bachelor's degree	45 (61.6%)	28 (38.4%)		
Master's degree	19 (86.4%)	3 (13.6%)		
Doctorate degree	1 (100%)	0(0%)		
Marital status				
Single, Never married	57 (69.5%)	25 (30.5%)	0.665	0.415
Married or domestic partnership	12 (60.0%)	8 (40.0%)		
P value implies Asymptotic significance				

P value implies Asymptotic significance

Interpretation:

- All the Socio-demographic characters has the calculated chi square value less than the table value , as well as for each socio-demographic variables there is no significance of relationship with “use of self medication”. All the p-values are greater than 0.05, hence statistically as per the calculations of this study there is no significant relationship between use of self medication and any of the socio-demographic factors.
- Gender and Education level (Highest qualification) has p value 0.241 and 0.232 respectively are not significantly related to use of self medication but are near to significant relation at around 80% CI.

Relationship between Raymond Cattell's 16 Personality factors and use of self medication:

Table: 9

Relationship between use of Self medication and 16 personality factors				
Independent Variable	Raymond Cattell's 16 Personality factors	x2 Value	P Value	Significance at 90% CI
Self Medication	Warmth	4.697	0.195	No
	Reasoning	0.919	0.812	No
	Emotional Stability	4.063	0.398	No
	Dominance	2.123	0.547	No
	Liveliness	7.891	0.048	Yes
	Rule-Consciousness	1.064	0.900	No
	Social Boldness	7.978	0.046	Yes
	Sensitivity	0.931	0.920	No
	Vigilance	3.660	0.454	No
	Abstractedness	4.698	0.320	No
	Privateness	4.454	0.348	No
	Apprehension	5.265	0.261	No
	Openness to Change	0.451	0.929	No
	Self-Reliance	2.056	0.561	No
	Perfectionism	6.836	0.145	No
	Tension	7.576	0.100	Yes

P value implies Asymptotic significance

Interpretation:

- Out of all the personality factors there are three personalities which are establish to be statistically significant with the use of self medication
- The three personalities which are originate to be statistically significant with the use of self medication are liveliness (p-value: 0.048), Social Boldness (p-value: 0.046) and Tension (p-value: 0.1). All are found to have a significant relationship with use of self medication at 90%confidence interval.
- Warmth (p-value: 0.195) and Perfectionism (p-value: 0.145) are near to significant values but not related.

Relation between level of personality and use of self medication among Liveliness, Social Boldness and Tension:

Liveliness (p-value: 0.048)

Table: 10

		Liveliness (Cheerful and Expressive nature)				Total	
		Low level	Average	High level	Highest level		
Self Medication	No	Count	6	6	16	5	33
		Standardized Residual	1.8	-1.2	.6	-.6	
	Yes	Count	3	24	27	15	69
		Standardized Residual	-1.3	.8	-.4	.4	
Total		Count	9	30	43	20	102

From the table:10 the standardized residual value of low level of liveliness is 1.8 at “No” response in self medication, which is near to 1.96 implies that low level liveliness in respondents is related to people who do not self medication or those who do not self medicate have low level of liveliness.

Social Boldness (p-value: 0.046)

Table: 11

		Social Boldness (Cool and Calm in outgoing company of people)				Total	
		Low level	Average	High level	Highest level		
Self Medication	No	Count	6	2	20	5	33
		Standardized Residual	1.1	-1.8	.9	-.3	
	Yes	Count	6	19	31	13	69
		Standardized Residual	-.7	1.3	-.6	.2	
Total		Count	12	21	51	18	102

Table: 11 depicts that respondents who indulged in self medication are average in terms of their Social Boldness, as the standardized residual value is -1.8 which is near to 1.96. Also respondents who self medicate are marked their Social Boldness level as an average.

Tension (p-value: 0.1):

Table:12

		Tension (Level of patience)					Total	
		Lowest level	Low level	Average	High level	Highest level		
Self Medication	No	Count	0	1	12	10	10	33
		Standardized Residual	-.8	-1.7	1.0	-.1	.7	
	Yes	Count	2	14	16	22	15	69
		Standardized Residual	.6	1.2	-.7	.1	-.5	
Total		Count	2	15	28	32	25	102

Table: 12 illustrates that those respondents who does not self medicate has chances of having lesser low level of patience in them, also we can observe that respondents who indulge in self medication are having higher chances of having low level of patience.

5. DISCUSSION:

The corporate company in Gurgaon is a consulting firm which is well-known to have young employees, thus has been reflected in the findings demonstrating that 54% of the respondents were among the age group of 21-25 years, followed by successively 26-30 years of age group with 43% of respondents lying under it. Significant larger numbers of males with 65% of respondents are shown to have been participated in survey. Female contribution to survey is one third of total respondents.

Maximum number of respondents in survey has marital status as Single; never married with 80% of them and 20% respondents are either married or have some sort of domestic partnership. Since the majority of respondents are of age group 21-25 years, it is liable to have a cohort having respondents who are single and never married.

73% of the respondents were found to have highest qualification of Bachelor's degree which is common to have since majority of sample are young generation (21-25 years of age). This is followed by 23% of respondents having master's degree. Hence the samples of respondents are generally educated and have well understanding of medicines to be taken without prescription (Self medication) or with prescription.

Out of 102 respondents 69 (68%) respondents admit that they self medicated in past one year while rest didn't. This value is quite high and resembles the value of other studies showing self medication to be around 50-80%¹³ [TOI](#).

Among the 69 respondents who admit to self medicated within past one year, 57% of them self medicated Seldom/Occasional, followed by 27% with frequent self medication.

The indications in which the majority of respondent self medicate are Anti allergic/cough syrup (77%), Analgesic/Antipyretics (51%), Antibiotics (55%), Vitamins /Supplements (52%), Anti emetics/Anti diarrheal/drugs for constipation (one third (33%)) and least proportion of respondents have done self medication from drug class of sedative/hypnotics (1%).

From the table: 8, it is clear that among all the socio demographic variables like Gender (p-value: 0.241), Age (p-value: 0.314), Education (p-value: 0.232) and marital status (p-value: 0.415) none of them is significantly related to use of self medication. Thus as p-value for all the variables are more than 0.05, we accept the null hypothesis, that there is no significant relationship between each of socio demographic factors and use of self medication. Education has p-value 0.232 and Gender with p-value 0.241 is not significantly related but

is near to significant value. So we can say that at 80% confidence interval level, Gender and Education has some impact on use of self medication but at standard value of 95% there is no impact of these variables on use of self medication among the respondents.

Of all the Raymond Cattell's 16 personality factors only three among them liveliness (p-value: 0.048), Social Boldness (p-value: 0.046) and Tension (p-value: 0.1) are found to be having a significant impact and relation with use of self medication at 90% confidence interval level, thus we reject the null hypothesis for the above three personalities stating that there is a significant impact or relationship between liveliness, Social Boldness and Tension with the use of self medication.

If we deep dive into the personality which has found to have relation with the use of self medication, liveliness is related as: Respondents with low level of liveliness are shown to have significant relation with respondents who do not self medicate. Also respondents who have low level of liveliness are more likely that they do not indulge in self medication and vice a versa (Since it has standardized residual value near to 1.96 at "No" of self medication status).

Social Boldness: Respondents with average level of Social boldness are shown to have significant relation with respondents who self medicate. That is respondents who have low level of social boldness are less likely that they do not self medicate (Since it has standardized residual value near to 1.96 at "No" of self medication status).

Tension: Since low level of tension has -1.7 standardized residual value with not use of self medication, hence we can say that there is significant relation between respondents who do not self medicate and those who have low level of tension **(Here as per questionnaire, patience was mentioned instead of Tension)**. Hence statement is altered as, there is significant relation between respondents who do not self medicate and those who have low level of patience.

6. CONCLUSION:

Study demonstrates near to similar proportion of respondents (69%) with past studies involving in self medication with majority of them being males and most of them were among the younger age group respondents 21-25 years of age, hence ending to majority of respondents with highest qualifications as Bachelor's degree. Majority of respondents self medicate Anti allergic, Antibiotics, and Analgesics class of drugs. Among the socio-demographic variables, there was no variable/s been found to have an impact on use of self medication. Among the 16 Raymond Cattell's personality factors there were three personalities liveliness, Social boldness and Tension (Patience) has shown to have some relation with use of self medication. Further studies are needed to be conducted to explore the in depth the relationship between personality of an individual and their self medication behavior.

7. LIMITATIONS OF STUDY:

- Since it is consecutive sampling and study performed in Gurgaon, the finding cannot be extended to Indian context as whole
- Responses collected from Individual self assessment of personality by respondents can cause bias (Response bias), as individual tends to put always on a safe and good side during responses in personality trait
- Recall bias may happen because self medication related questions are asked for past year behavior
- Likert scale responses and its analyses will give better results but has limitations in terms of finding mean responses among total response
- Study is first of its kind and has no relevant support of exact similar literature reviews, hence much more studies on this topic has to be done to explore the topic under consideration in-depth

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9. APPENDIX

Survey form (Google form):

Study on relationship between personality and self medication behavior: Study based in Gurgaon

Confidentiality Note: Any information you provide in this survey will not be disclosed to any third party without your willful consent, genuine answers will be highly appreciated

1) Name of participant (Write only initials of name e.g.If Karan Sharma is a name, write it as "KS". due to confidentiality concerns)

Your answer

2) Age of participant (If age is in continuous variable e.g. 25 years 6 months, round it off to 26 years)

- ≤ 20 years
- 21-25 years
- 26-30 years
- 31-35 years
- 36-40 years
- ≥ 41 years

3) Gender

- Male
- Female

4) Marital status

- Single, Never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated

5) Highest level of Education

- High school graduate, diploma or the equivalent some college credit, no degree Trade/technical/vocational training

- Associate degree
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate degree

Please choose the level of different behavioral or personality traits that you think you possess (question 6).

6) Tick the level of personality traits that you possess (1 = Lowest level, 2 = Low level, 3 = Average, 4 = High level, 5 = Highest level)

1,2,3,4,5 ☐

- Friendliness towards other and willingness to participate with them ☐
- Cognitive ability and reasoning (Intellect) ☐
- Ability to adapt under stressful situations ☐
- Level of cooperation with others ☐
- Cheerful and expressive nature ☐
- Level of your consciousness towards rules and regulations ☐
- Cool, calm and outgoing in company of people ☐
- Compassionate and sympathetic towards other ☐
- Easily trust others ☐
- Imaginative and Creative ☐
- Level of confrontation with others ☐
- Level of self assurance ☐
- Flexible and liberal attitude ☐
- Level of self sufficiency or self reliability ☐
- Level of Perfectionism ☐
- Level of patience ☐

7) Have you had a self medication in past one year?

- Yes
- No

8) If "Yes" to question 7, what is the frequency of self medication?

- Very frequent
- Frequent
- Seldom/Occasional

9) If "Yes" to question 7, which category or categories of drugs have you consumed in past one year?

- Analgesics/Antipyretics
- Antibiotics
- Vitamins/Supplements
- Nasal decongestant
- Anti allergic/Cough syrup
- Anti-Emetics/Anti diarrheal/Drugs for constipation
- Sedatives/Hypnotics
- Herbal/Homeopathic
- Other:

"Thank you so much for your valuable time"

SUBMIT