

Dissertation Study

STUDY ON THE RELATIONSHIP BETWEEN PERSONALITY OF AN INDIVIDUALS WITH THEIR SELF MEDICATION BEHAVIOR

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Dissertation
mentor and guide:

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Management(2015-17)

ASSIGNMENTS UNDERTAKEN IN ZS ASSOCIATES AS AN INTERN



On boarding deck (Company Overview)



Research on potential ZS clients in Southern states of USA



Product profiling, Product fact book etc



Live Client project: Competitor Information

OUTLINE

- Background
- Rationale of Study
- Research Questions
- Objective
- Hypotheses
- Methodology
- Results and Discussion
- Conclusion
- Limitations
- Recommendation

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BACKGROUND



- **Self-medication** is a human behavior in which an individual uses a substance or any exogenous influence to **self-administer** treatment for physical or psychological ailments
- In India it is very familiar to see self-medication practice and which is rising challenge to health care provider
- 52% of Indian Self medicate¹
- In Punjab, the prevalence of self-medication was 73%²
- Factors and reasons: Sex, Age, Education, Income level and other reasons include Experience with medication, Nature of Sickness, Waiting in hospital, Addiction to self medication etc
- One of the neglected factor being personality in context of psychology is less explored.

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RATIONALE OF STUDY



- There are abundant studies conducted to display out the 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
- There is hardly any study which demonstrates the relationship between self medication and personality of an individual
- This study is designed and conducted to comprehend the relationship between personality and self medication of an individual

Raymond Cattell's 16 personality factors

- **Warmth**
- **Reasoning**
- **Emotional Stability**
- **Dominance**
- **Liveliness**
- **Rule-Consciousness**
- **Social Boldness**
- **Sensitivity**
- **Vigilance**
- **Abstractedness**
- **Privateness**
- **Apprehension**
- **Openness to Change**
- **Self-Reliance**
- **Perfectionism**
- **Tension**

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RESEARCH QUESTIONS



- Is there any relationship between the personality (**Each of all 16 personality factors**) of an individuals with their Self medication behaviour?
- Is there any relation or impact of socio demographic variables (**Gender, Age, Education and Marital status**) on the use of Self medication behaviour?
- What is the **prevalence, frequency and class of drugs** used for Self medication among the sample?

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OBJECTIVE



Primary Objective:

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

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

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HYPOTHESES



Hypotheses of Primary objective:

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

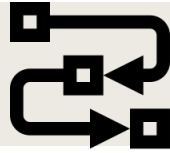
Hypotheses of Secondary objective:

- **Null Hypothesis** (H_0): There is no relationship between the each personality factors (Raymond Cattell's PF) of an individual and each of the socio-demographic factors (Gender, Age, Education, Marital status)
- **Alternative Hypothesis** (H_1): There is a relationship between the each personality factors (Raymond Cattell's PF) of an individual and each of the socio-demographic factors (Gender, Age, Education, Marital status)

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METHODOLOGY



❶ Research Design

❷ Data Management & Analysis

Data Collection

Data Entry

Data Analysis

METHODOLOGY | Research Design

Sr no	Parameter	Description
1	Research type	Analytical research
2	Data Collection setting	Gurgaon, India
3	Study design	Retrospective cross sectional
4	Sampling technique	Convenience sampling
5	Sample	Employees of corporate consulting firm
6	Sample size	102
7	Data type	Primary data
8	Data collection tool	Google form (Structured questionnaire)
9	Data Analysis tool	MS Excel and IBM SPSS 23
10	Study period	3 months

METHODOLOGY | Data Management & Analysis

Data Collection

Phase	Department	Email send to number of employees	Sample size achieved
Phase I	Knowledge Management department	~150	44
Phase II	Business Technology department	~240	37
Phase III	Business Analytical department	~200	29
			Total - 110

METHODOLOGY | Data Management & Analysis

Data Entry

1. Survey was floated among the department via mail
2. Google form was used to draft the survey questionnaire
3. Structured questionnaire was prepared
4. Personality factors were measured using Likert scale of five point
 - E.g. Warmth was measured on five point likert scale (1-Lowest level, 2-Low level, 3-Average, 4-High level, 5-Highest level)
5. Responses obtained were 110, out of which 8 were removed due to false data
6. The survey responses were accessed in MS Excel and IBM SPSS 23

METHODOLOGY | Data Management & Analysis

Data Analysis

1. Descriptive stats were obtained for the socio demographic factors
2. Frequency and percentage calculation were conducted for self medication frequency and type of drug class used for self medication
3. Cross-tab was used to under stand the relation between variables (2*5)
4. Relation between use of self medication and personality was obtained using Pearson's chi square test (χ^2 value) and its value of significance
5. Relation or impact of socio demographic variables were also calculated using Pearson's chi square test (χ^2 value).

OUTLINE

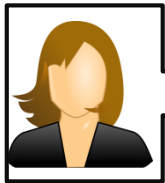
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RESULTS AND DISCUSSION

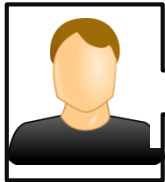


Socio demographic variables

Gender



35%

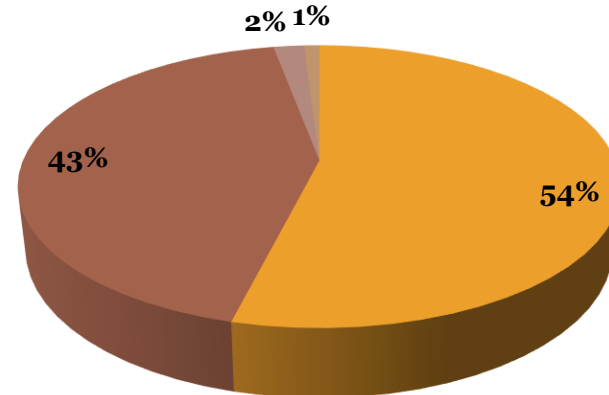


65%

Total respondents: 102

Age of the respondents

21-25 years 26-30 years 31-35 years 36-40 years

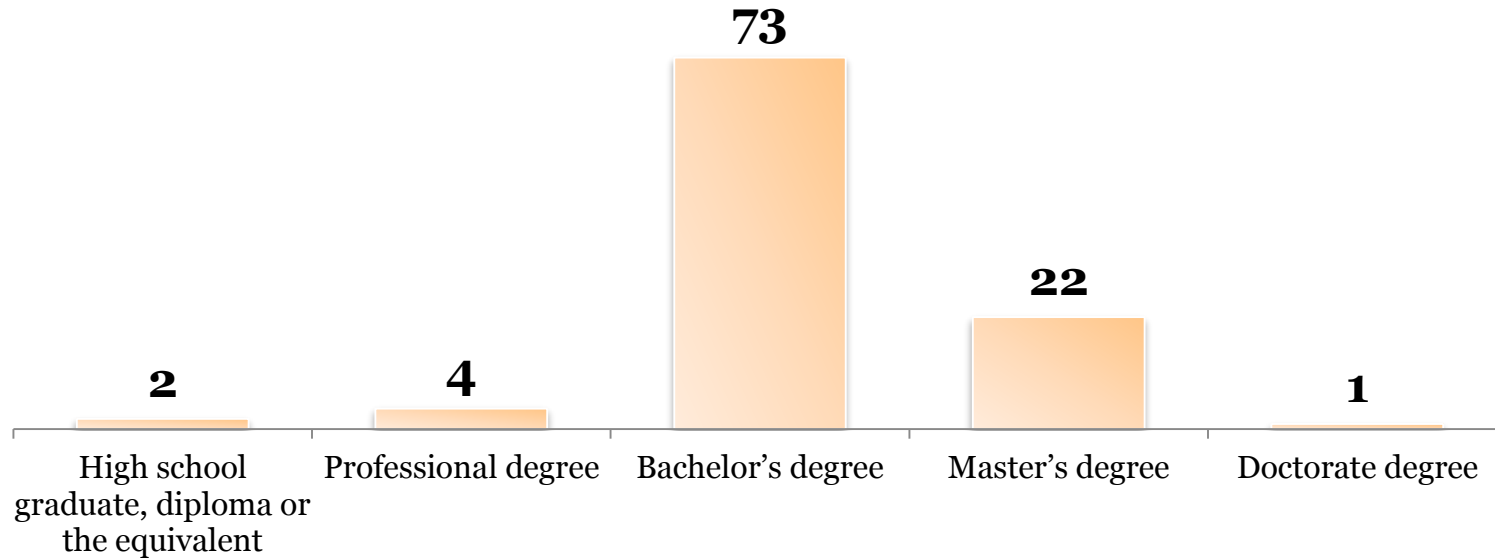


RESULTS AND DISCUSSION



Socio demographic variables

Education of respondents



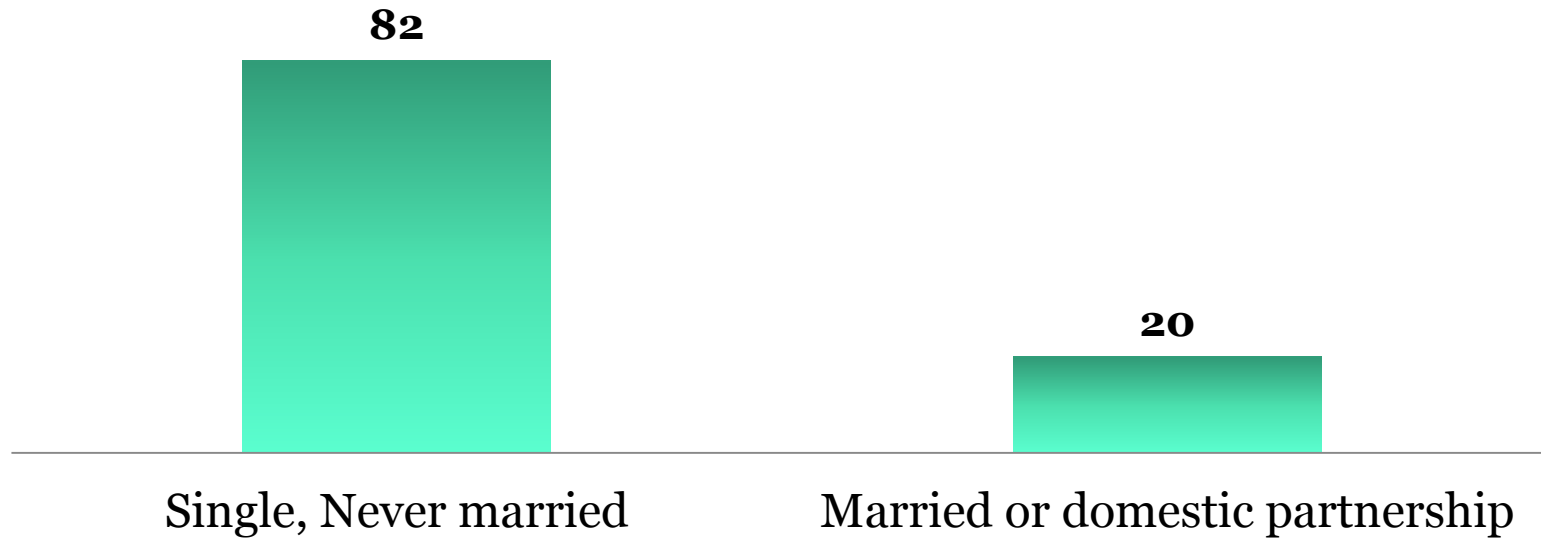
Total respondents: 102

RESULTS AND DISCUSSION



Socio demographic variables

Marital status of respondents



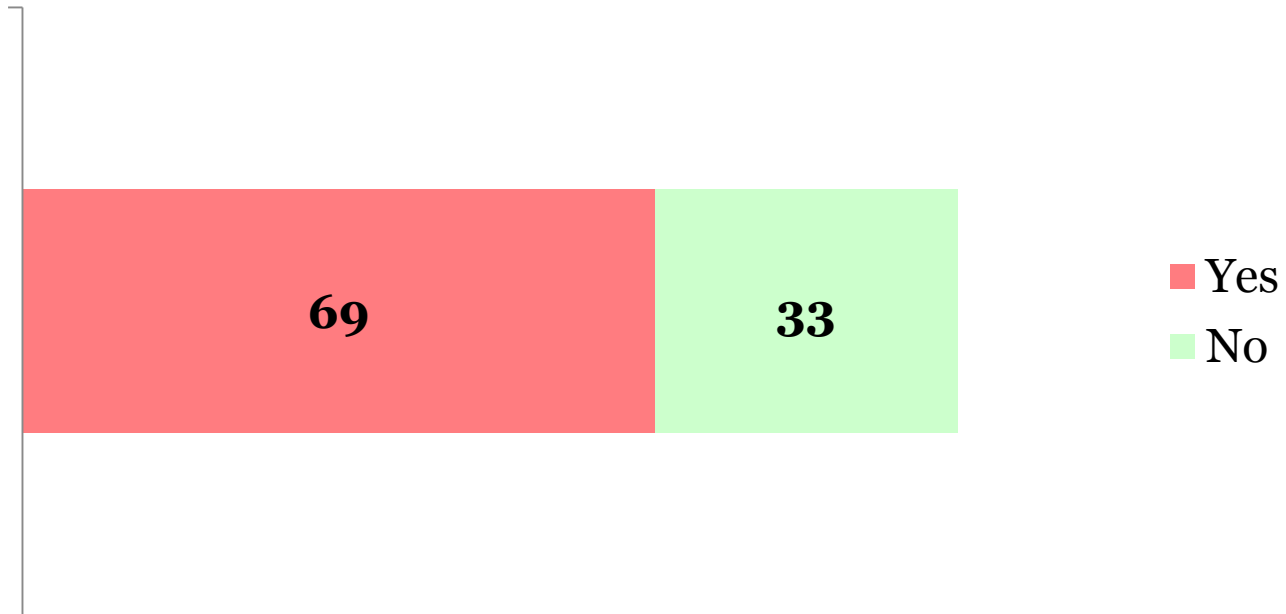
Total respondents: 102

RESULTS AND DISCUSSION



Self Medication

Self Medication



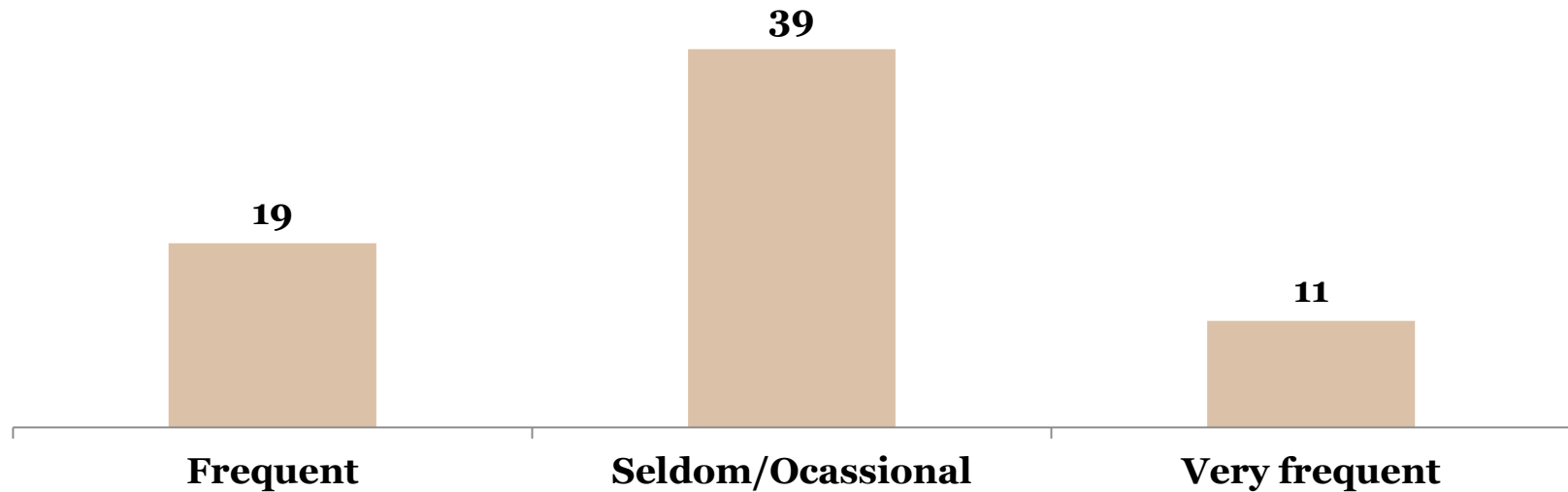
Total respondents: 102

RESULTS AND DISCUSSION



Self Medication

Frequency of self medication



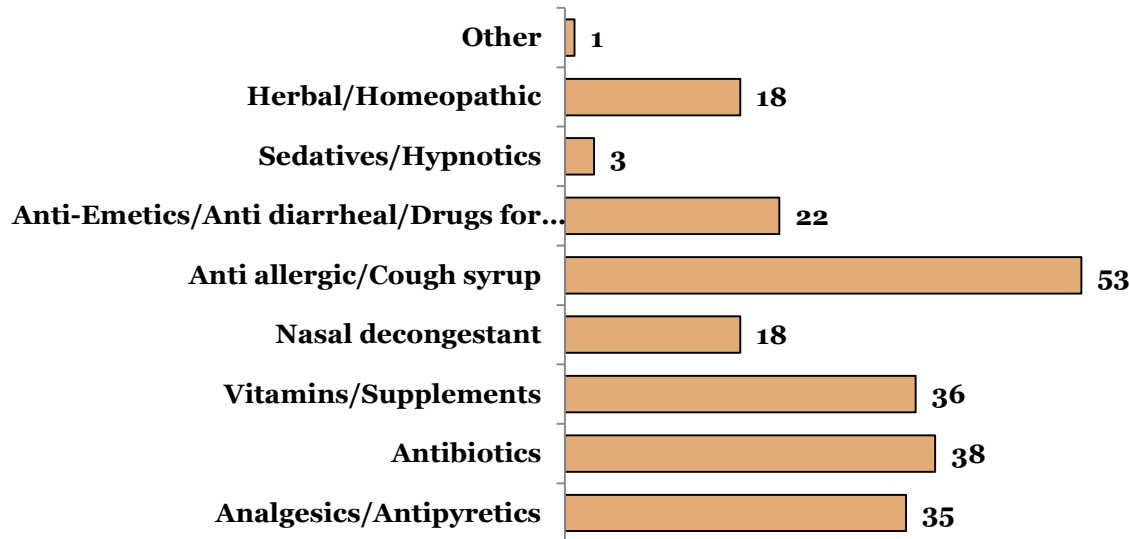
Total respondents: 69

RESULTS AND DISCUSSION



Self Medication

Indications for Self medication



Total respondents: 69

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

RESULTS AND DISCUSSION | Relation self medication and SD variables

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

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RESULTS AND DISCUSSION | Relation self medication and personality

			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

RESULTS AND DISCUSSION | Relation self medication and personality

		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	

RESULTS AND DISCUSSION | Relation self medication and personality

			Patience (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

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

LIMITATIONS



- 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**)
- **Recall bias** may happen because self medication related questions are asked for past year behavior
- 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

RECOMMENDATIONS



- More studies needed to be conducted to define the comprehensive relation between self medication and personality
- Studies should be conducted in different regions to understand the heterogeneity of responses if likely
- Studies ought to be conducted among larger number of samples

REFERENCES



1. <http://www.wsmi.org/about-self-care-and-self-medication/what-is-self-medication/>
2. Bennadi, D. (2013). Self-medication: A current challenge. *Journal of Basic and Clinical Pharmacy*, 5(1), 19–23
3. Verma RK, Mohan L, Pandey M. Evaluation of self-medication among professional students in North India: Proper statutory drug control must be implemented. *Asian J Pharm Clin Res*. 2010;3:60–4
4. Shveta S, Jagmohan S. A study of self-medication pattern in Punjab. *Indian J Pharm Pract*. 2011;4:43–8
5. Joshi MC, Shalini, Agarwal S. A questionnaire based study of self-medication practices among young population. *Res. J. Pharm., Biol. Chem. Sci*. 2011;2:761–6
6. Sharma R, Verma U, Sharma CL, Kapoor B. Self-medication among urban population of Jammu city. *Indian J Pharmacol*. 2005;37:37–45
7. Solomon W, Abede GM. Practice of self-medication in Jimma Town. *Ethiop J Health Dev*. 2003;17:111–6
8. Selvaraj K, GaneshK, Ramalingam A. Prevalence of self-medication practices and its associated factors in Urban Puducherry, India. *Perspect Clin Res* 2014;5:32-6
9. Oluyemi JA, Yinusa MA, Abdullateef R, Sunday A, Kehinde K (2015) Factors Influencing the Practice of Self-Medication among Bankers in Selected New Generation Banks in Ilorin Nigeria. *Int J Econ Manag Sci* 4:227
10. Li, X., Zhang, S., Xu, H., Tang, X., Zhou, H., Yuan, J., ... Zhang, W. (2016). Type D Personality Predicts Poor Medication Adherence in Chinese Patients with Type 2 Diabetes Mellitus: A Six-Month Follow-Up Study. *PLoS ONE*, 11(2), e0146892.
11. <https://doi.org/10.1371/journal.pone.0018241>
12. <http://www.personalityresearch.org/papers/fehringer.html>

REFERENCES



13. Badiger S, Kundapur R, Jain A, Kumar A, Patanashetty S, Thakolkaran N, Bhat, Ullal N. Self- medication patterns among medical students in South India. *AMJ* 2012, 5, 4, 217-220
14. Panda, A., Pradhan, S., Mohapatro, G., & Kshatri, J. S. (2017). Predictors of over-the-counter medication: A cross-sectional Indian study. *Perspectives in Clinical Research*, 8(2), 79–84.
15. Kaushal, J., Gupta, M. C., Jindal, P., & Verma, S. (2012). Self-Medication Patterns and Drug Use Behavior in Housewives Belonging to the Middle Income Group in a City in Northern India. *Indian Journal of Community Medicine : Official Publication of Indian Association of Preventive & Social Medicine*, 37(1), 16–19.
16. Kumar, N., Kanchan, T., Unnikrishnan, B., Rekha, T., Mithra, P., Kulkarni, V., ... Uppal, S. (2013). Perceptions and Practices of Self-Medication among Medical Students in Coastal South India. *PLoS ONE*, 8(8).
17. Jerant, A., Chapman, B., Duberstein, P., Robbins, J., & Franks, P. (2011). Personality and medication non-adherence among older adults enrolled in a six-year trial. *British Journal of Health Psychology*, 16(Pt 1), 151–169.
18. Chapman B, Duberstein P, Lyness JM. (2007). Personality traits, education, and health-related quality of life among older adult primary care patients. *The journal of Gerontology*, 62(6):P343-52.
19. Axelsson M, Emilsson M, Brink E, Lundgren J, Torén K, Lötval J. (2009). Personality, adherence, asthma control and health-related quality of life in young adult asthmatics. *Journal of respiratory medicine*, 103(7):1033-40
20. Christensen AJ, Smith TW. (1995). Personality and patient adherence: correlates of the five-factor model in renal dialysis. *Journal of behavioral medicine*, 18(3):305-13.
21. Cohen NL, Ross EC, Bagby RM, Farvolden P, Kennedy SH. (2004). The 5-factor model of personality and antidepressant medication compliance. *Canadian Journal of psychiatry*, 49(2):106-13



Questionnaire

ACKNOWLEDGEMENT



**Thank you all of you for
the wonderful experience !!**