



**Original Article**

# **Perception of Politics and Voting Behaviour among Healthcare Students in Chennai: A Cross – Sectional Study**

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*How to cite:* Vinita Mary A et al. Perception of Politics and Voting Behaviour among Healthcare Students in Chennai: A Cross – Sectional Study. *Int J Comm Dent* 2022; 10(2): 91-102.

DOI: <https://doi.org/10.56501/intjcommunitydent.v10i2.715>

Received: 20/11/2022

Accepted: 04/12/2022

Web Published: 12/12/2022

## **Abstract**

**Background :** For the progress of a nation, active participation of healthcare professionals in decision making is important.

**Aim :** To evaluate the political awareness and voting behavior among the students belonging to various streams of healthcare profession.

**Materials and Method :** This cross-sectional survey was conducted among 381 students aged between 17-28 years from various Healthcare Educational Institutes in Chennai by means of a self-administered questionnaire comprising 20 questions.

**Results :** On analysis, the mean knowledge score was found to be  $4.189 \pm 1.45$ . The participants from the lower socio-economic class had a higher mean knowledge score of  $4.38 \pm 1.72$ . The psychology of participants towards political participation revealed a disparaging opinion regarding the veracity and transparency of Indian political system.

**Conclusion :** The true spirit of patriotism had been dampened over years with the false political propaganda due to widespread political illiteracy. Active socio-political participation from healthcare professionals can aid in the progress of the nation.

**Keywords :** Healthcare Leadership, Human Experience, Healthcare professional, Political Awareness, Political Factors, Voting Behavior, Young adults

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## INTRODUCTION

On August 15th 1947, as the Indian Independence heralded the end of the British colonization freeing itself from the Imperial rule, the Indian leaders were faced with a responsibility to build a nation out of chaos and rumble that remained. This challenged India's integrity which happened to be a mammoth task that could only be made possible by forming a set of rules and regulations to pave a path towards progress. Hence, the Indian Constitution drafted by the Constitutional Assembly of India, was adopted on November 26, 1949 which came into force on January 26, 1950. This framework demarcates the political code, structure, powers and duties of the government and sets out fundamental rights, directive principles, and the duties of citizens. There was a necessity for holding General elections to form a government that represented the people that aimed at raising a stronghold. India deployed the Single- member plurality Election system well before its independence in 1945, as mentioned by Dr.B.R.Ambedkar in his masterpiece *What Congress and Gandhi have done to the untouchables*. [1]

As India celebrates its diamond jubilee of freedom from colonization that extended for nearly two centuries, the basic rights that dictate liberty have not yet reached out to every citizen of the nation yet. According to Achen et al., a sovereign state is one that acknowledges “the people as a free-standing body with its own indomitable collective opinion”. [2] Political skepticisms among the people apparently appear to be a tip of a huge iceberg often making the society gullible to autocratization. Schatz, Staub, and Lavine defined constructive patriotism as “an attachment to a country characterized by critical loyalty” and “questioning and criticism” driven by “a desire for positive change”. [3] Political awareness among the public, especially the younger generation, is obligatory in constructing a better nation. The self-realization of national identity i.e., the feeling of belonging to a nation by means of its culture, ethnicity and language is an integral part of democracy. Zaller defined political awareness as ‘the extent to which an individual pays attention to politics and understands what he or she has encountered’. [4]

With the unexpected catastrophe caused by the outbreak of COVID-19, people from various walks of life had been inadvertently affected. Apart from its disastrous effect on the health of the Indian population, though with lower levels of comorbidities in spite of increased positive cases and deaths, unemployment has been substantially increased following the vast migration of people from their places of work on account of the nationwide lockdown that had been imposed during most of the year 2020 due to the pandemic. Financial crises often result in a compromised provision of healthcare services. The role of healthcare professionals to implement the policies of the government has been magnanimous during this pandemic which made a huge difference in the outcomes. It is necessary that healthcare professionals must also have a say in political functioning for betterment of the overall health status of the population. This study aimed at assessing the political awareness and national identity among the students belonging to the noble profession of healthcare and related fields, who would be serving the nation in the near future not just as professionals but also by fulfilling their duty through social and political participation as a responsible citizen.

## MATERIALS & METHODS

A descriptive cross-sectional study was conducted among the students belonging to various streams of healthcare enrolled in multiple educational institutes in the region of Chennai. A structured self-administered questionnaire was framed and aimed at evaluating the knowledge and awareness about the Indian Political Constitution and State Legislative Election Systems of Tamil Nadu. The questionnaire was divided into three sections as follows:

- i) Section A: Socio-demographic details
- ii) Section B: Voter's awareness of Indian Political and Election Systems

### iii) Section C: Attitude on socio-political participation

The respondents were grouped based on their socio-economic status as Group A-Upper Class, Group B-Middle Class and Group C-Lower class, using the Modified Kuppaswamy Scale,[5] which is a composite scoring system of the educational qualification and occupation of head of the family along with the total monthly income of the family. These were obtained to evaluate the influence of socio-economic status on the awareness and perception about Indian politics. Section B consisted of twelve questions evaluating the political awareness and election systems of the individual assigning a score of one for each right answer. Section C consisted of eight questions that assessed the interests and hindrances towards an active political participation by the individual.

A preliminary survey was conducted among 30 subjects to validate the questionnaire to standardized forms. The questionnaire showed adequate internal consistency with a Cronbach's alpha value of 0.7. The estimated sample size was 372 with margin of error at 5% and 95% confidence level.

#### Inclusion Criteria

- Undergraduate Students enrolled in various streams of healthcare profession.
- Students belonging to educational institutes in the region of Chennai.
- Students belonging to the state of Tamil Nadu.
- Students who are able to read, write and understand English language.

#### Exclusion Criteria

- Students who do not belong to the state of Tamil Nadu.
- Students who did not have English as their first language.
- Students who were not interested to participate in the study.

Non-probability, convenience sampling technique was employed yielding responses from 381 participants (119 men and 282 women), aged between 17 to 28 years out of the 500 questionnaires mailed as Google Forms among students belonging to various streams of healthcare facilities in Chennai. All the participants were informed about the study and made sure that their participation was voluntary. An informed consent for the study was obtained from each participant explaining the purpose of the study and in maintaining the confidentiality of the personal details of each participant that was obtained.

#### Statistical Analysis

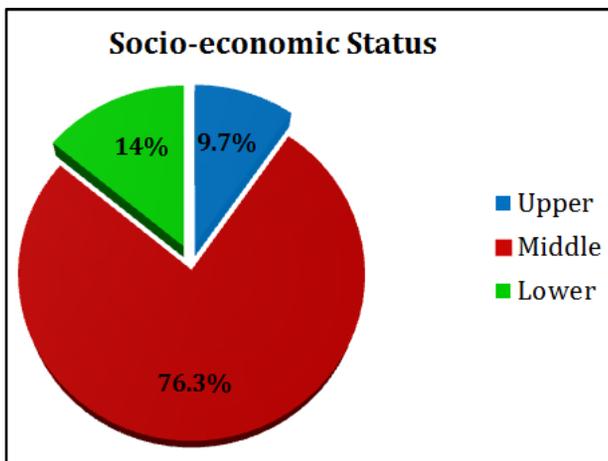
Statistical analysis of the data was done using IBM SPSS Statistics, version 26 software package. Descriptive statistics including frequency, percentage, mean and standard deviations were calculated for the various parameters. Independent samples t-test and one way ANOVA was used to assess the statistical significant difference across various groups. Post-hoc multiple comparisons were made using Tukey's HSD test. Significance value was kept at  $p < 0.05$ .

## RESULTS

The present observational study was conducted among 381 subjects between the age of 17 to 28 years with a mean age of  $20.882 \pm 2.1446$  years of which 262 were females (68.8%) and 119 were males (31.2%). Table 1 presents the frequency distribution of socio-demographic details of the study participants. Among the students who had participated, 69.6% belonged to Medical and Dental Sciences while the remaining 30.4% belonged to Paramedical streams such as Physiotherapy, Nursing, Allied Health Sciences and Pharmaceutical Sciences. Most of the students (76.3%) belonged to the middle class while 14% from the lower class and 9.7% from the upper class, scored on the basis of Modified Kuppaswamy Scale for Socio-economic Status. (Figure 1)

Table 2 depicts a detailed frequency distribution of each response for the questionnaire among the 381 participants. On analysis of the knowledge score attained by the participants, the mean score was calculated to be  $4.189 \pm 1.45$  with the least score being 'one' and the highest being 'nine' out of a total score of twelve. T-test revealed no significant difference in the level of political awareness between the two genders on analysis of the knowledge scores. The overall differences were found to be statistically highly significant when the knowledge scores were compared between groups of different socio-economic status with  $p=0.001$  using One-way ANOVA test as shown in Table 3, the participants from the lower socio-economic class had a higher mean knowledge score of  $4.38 \pm 1.72$  followed by that of middle class with  $4.20 \pm 1.35$  and the least mean score of  $3.64 \pm 1.64$  among the upper class. The post hoc analyses with Tukey's HSD revealed statistically significant differences between and within all the three groups as depicted in Table 4. Further questions to elicit the attitude and voting behavior of the participants revealed the expression of various hurdles and probable solutions to the socio-political problems faced by the youths at the current age as presented in Table 5.

**FIGURE 1. Socio-economic details of the study participants**



**Table 1: Socio-demographic details of the study participants**

Detail	Category	Frequency (n)	Percentage (%)
<b>Gender</b>	Male	119	32.2
	Female	262	68.8
<b>Year of Study</b>	First year	46	12.1
	Second year	94	24.7
	Third year	75	19.7
	Fourth year	78	20.5
	Internship	88	23.1
<b>Socio-economic Status</b>	Upper	37	9.7
	Middle	291	76.3
	Lower	53	14

**Table 2: Distribution of study participants according to the knowledge and Awareness about Voting and politics**

Assessment of Political Awareness	Options	Frequency (n)	Percentage (%)
<b>Minimum legal age for voting in legislative and parliamentary elections</b>	18 years	356	93.4
	21 years	20	5.2
	Don't know	5	1.3
<b>Minimum age for contesting in legislative and parliamentary elections</b>	21 years	115	30.2
	25 years	242	63.5
	Don't know	24	6.3
<b>Periodicity of conducting elections</b>	Once in 4 years	32	8.4
	Once in 5 years	334	87.7
	Don't know	15	3.9
<b>Number of democratically elected constituencies in the state of Tamil Nadu</b>	234	232	60.9
	235	62	16.3
	Don't know	87	22.8
<b>Hour of cessation of campaign before the day of election</b>	36 hours	108	28.3
	48 hours	273	71.7

<b>National Voters' Day</b>	15th August	86	22.6
	25th January	295	77.4
<b>Are NRIs eligible for polling?</b>	Yes	270	70.9
	No	111	29.1
<b>The central body that is responsible for conducting Legislative elections</b>	Election Commission of India	213	55.9
	State Election Commission	168	44.1
<b>How many member bodies does the Election Commission of India constitute?</b>	Two-member body	9	2.4
	Three-member body	372	97.6
<b>Number of Cabinet Ministers in Tamil Nadu Legislative assembly as of May 2021</b>	28	145	38.1
	34	133	34.9
	Don't know	103	27.0
<b>First constituency to have Electronic Voting Machines installed for elections</b>	Parur constituency – Kerala	176	46.2
	Ponneri constituency – Tamilnadu	85	22.3
	Don't know	120	31.5

**Table 3: Comparison of mean knowledge score between different socioeconomic classes using One-way ANOVA test.**

Socioeconomic status	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		P value
				Lower Bound	Upper Bound	
Lower class	4.83	1.72	.28	4.26	5.41	0.001*
Middle class	4.20	1.35	.07	4.05	4.36	
Upper class	3.64	1.64	.22	3.18	4.09	
Total	4.18	1.45	.07	4.04	4.33	

**Table 4: Multiple Comparisons of mean knowledge scores between and within the socioeconomic classes using Post-hoc analysis with Tukey's HSD.**

Socioeconomic status		Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Lower class	Middle	.63	.25021	.032*	.04	1.22
	Upper	1.19	.30712	.000*	.47	1.91
Middle class	Lower	-.63	.25021	.032*	-1.22	-.04
	Upper	.56	.21410	.024*	.06	1.06
Upper class	Lower	-1.19	.30712	.000*	-1.91	-.47
	Middle	-.56	.21410	.024*	-1.0684	-.0609

**Table 5: Distribution of study participants according to the Attitude towards Voting and politics**

Assessment of Attitude towards politics	Options	Frequency (n)	Percentage (%)
Which voting method do you prefer?	Electronic Voting Machine	254	66.6
	Ballot vote	131	34.4
Do you pay attention to Election Campaigns?	Yes	206	54
	No	175	46
Do election campaigns have an impact on your voting behavior?	Yes	196	51.4
	No	185	48.6
Do you recommend a separate polling method for physically challenged people?	Yes	330	86.6
	No	51	13.4
Do you feel that the youth of the present age show interest in participating in politics?	Yes	284	74.5
	No	97	25.5
Difficulties faced while casting a vote on day of election	Travel from the place of work to the native place	119	31.2
	Lack of relief from duty on the day of election	180	47.2
	Will be called at any time in case of emergency	71	18.6
	All the above	11	3.0
Reasons to refrain from political participation	Lack of faith in the functioning of Indian Political System	73	19.2
	Lack of reliable and standard source of income	77	20.2
	Lack of transparency in election modalities	113	29.7

	Politics is considered as a field of corruption and violence	111	29.1
	Others e.g. Lack of influence and money, Lack of time apart from health service	7	1.8
<b>Changes you wish to bring in health-care field if given political power</b>	Improve the Environmental sanitation	99	26
	Bringing about a "Standard Treatment charges" among all Hospitals in India	158	41.5
	Computerization of health records of people obtaining public and private health services	70	18.5
	Others: Ban NEET-UG and use 12 <sup>th</sup> Board Exam Marks for counselling	54	14
<b>How can we bring the spirit of political awareness among the youths belonging to the health-care profession?</b>	Conducting Elections for Student Council Members	223	58.5
	Inculcating Political science as a part of curriculum	83	21.8
	Conducting Contests provoking political participation	75	19.7

## DISCUSSION:

The youths defined under the age category of 18-23 years constitute approximately 10.9% of the entire Indian population according to the World Population Prospects –The 2012 Revision, UN 2013.[6]. “The youth of today are the Leaders of tomorrow”, as once said by Nelson Mandela, every nation needs young minds to personify diligence, morality and enthusiasm in socio-political activism. The Election Commission of India has a novel Systematic Voters' Education and Electoral Participation (SVEEP) initiative to educate a vast section of citizens and registered voters about India's electoral process to enhance their awareness and participation in elections. Despite bringing about various innovative propaganda about the importance of voting among the public, gullible sections of voters falling for bribery and on the other extreme non-voters who have either failed to register as a voter or not willing to cast one do exist. This survey sought to bring to light the attitude and knowledge among the youths serving in the noble profession of healthcare towards socio-political participation.

When questioned about the minimum age eligibility for casting vote over 93% of the individuals responded rightly as 18 years as of January 1st of the year of election, similar to the study carried out in Kerala.[7] While only 63% knew the minimum age for contesting in legislative and parliamentary elections which is 25 years, signifying the lack of adequate knowledge about the rights to adult suffrage. Article 326 of the Indian Constitution lays down the right to adult suffrage constituting the right to vote and the right to contest elections.[8]

Only 60.9% were aware that there are a total of 234 democratically elected constituencies in the state of Tamil Nadu, while 34.9% of the participants were aware of the total number of cabinet ministers which is 34 as of May 2021. There is a need for frequent updates of current affairs among the public as well as healthcare students in order to have a better knowledge on the functioning of the Government. Majority of the

participants (77.4%) were aware of the National Voters' Day that is celebrated on the 25th of January, in contrast to the research carried out in Kerala.[7] The National Voters' Day has been celebrated across the country on January 25th since 2011 to commemorate the establishment of the Election Commission of India that was founded back in 1950.

The awareness regarding the NRI poll system was widely acknowledged by 70.9%. The overseas Indian citizens are an asset to the country financially as well as for a fair international alliance and trade. The Representation of People (Amendment) Bill was passed by the Indian Parliament in 2010 providing voting rights to the NRIs who have registered as a voter in the constituency as mentioned under residence in their passport.[9]

An overwhelming 97.2% of the respondents had answered rightly that the Election Commission of India constituted a three-member body. The History dates back to 1950, when the Article 324 of the Indian constitution, provided for the setting up of Election Commission as an independent constitutional authority and bestowed the supreme authority of direction, control and preparation of election rolls and maintaining the conduct during elections on the Chief Election Commissioner.[10] This was later amended under "The Election Commissioner Amendment Act, 1989" in the year 1990 which turned the commission into a 3-member body that conducts the elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies, State Legislative Councils and the offices of the President and Vice President of the country.

Over 66.6% of the participants prefer EVM over ballot vote similar to the survey of voters in Tamil Nadu,[11] which is in contrary to the study by Swaminath.R et al [12] on the voting behavior among first time voters in Tamil Nadu. This is probably due to the compliance and ease of casting a vote in an EVM compared to the ballot system that requires additional faculty and involves a tedious counting process.

Almost 54% of the respondents were keen observers of political campaigns of which 51.4% confirmed that they observed campaigns mainly via media and the thriving online platforms and their choice of vote similar to that reported by Kanagavel et al. [13] Hurdles while casting votes was attributed to the lack of relief from duties as a healthcare worker by 47.2%, followed by 31.2% who responded saying the difficulty in traveling from their place of work to their polling booth. This was more common among healthcare workers employed in the government sector due to their postings at distant places from their registered constituencies.

When asked about the most demanding change required in the field of healthcare for the welfare of the public, about 41.5% of the participants felt that standard and reasonable charges for health services among public and private sectors will be the most conducive decision, especially during the times of pandemic where the corporate services have taken an advantage of people's fear in charging enormously. India has had its "historic technical recession" as quoted by the Reserve Bank of India, with the GDP regressing to as low as -23.9% during the April-June quarter in the year 2020,[14] thereby forcing the people to sacrifice their health provisions for the sake of livelihood. Other responses included the need for improvising environmental sanitation (26%) followed by digitalization of health records in public and private sectors in order to maintain an unambiguous health profile of the population.

Over 58.5% of the participants were convinced that conducting student presidential elections in colleges will provoke the interest towards active political participation, while 21.8% feel that inculcating political sciences in the curriculum will enhance the knowledge and political awareness among the students. The field of medicine and health-care by itself is a noble profession of goodness that is often taken for granted. The society outside only sees the money made out of this service and overlooks their sacrifice and tireless efforts in building a healthier community. Vis-a-vis, health-care workers also narrow their field of service to a daily routine and seldom think of participating in socio-political activities.

The results portray the repercussions of socio-economic knowledge on the political awareness levels. This invariably reveals the influence of political reforms and governance on various strata of the society especially among the lower and middle class, who are most affected by the changing policies and rulers.

Questions concerning their attitude towards socio-political participation elicited a dismissive behavior with a majority feeling that Indian politics have lost their trust with constant allegations and corruption that prevail. Despite their dampened spirit towards an active socio-political participation, the participants expressed their concerns and prompt suggestions for reforming the current state of healthcare services towards progression.

For years, differences based on religion, caste, community, language, money, policy or ideology have been used as weapons during election propaganda that have had a great impact on voting behavior. Illiteracy makes a society gullible to the sentimental exploit by various political parties that may mislead the people leading to poor choice of vote. To overcome these frailties, the younger generation needs to partake in the struggle towards progress. Acts of civic participation form a crucial part of national identity in democratic countries and constitute what is seen as normative behavior for a “good” citizen.[15] Political participation forms a sound platform to make this possible. The results portray the repercussions of socio-economic knowledge on the political awareness levels. This invariably reveals the influence of political reforms and governance on various strata of the society especially among the lower and middle class, who are most affected by the changing policies and rulers. Questions concerning their attitude towards socio-political participation elicited a dismissive behavior with a majority feeling that Indian politics have lost their trust with constant allegations and corruption that prevail. Despite their dampened spirit towards an active socio-political participation, the participants expressed their concerns and prompt suggestions for reforming the current state of healthcare services towards progression.

Limitations: This study was done on an online platform using self-administered structured questionnaires on account of the pandemic situation leading to the lack of accountability and veracity of the response due to absence of an interviewer. Further multistage sampling studies on large populations with trained interviewers are required in order to clearly define the political awareness levels and attitude towards participation in active decision making.

## **CONCLUSION:**

This study revealed the lack of political literacy and opinion towards politics among the youths despite their interest in socio-political participation. Healthcare professionals play a pivotal role in progression in terms of lowering the mortality rates and increasing the average life expectancy of the population, apart from which their say in healthcare policies have to be amplified. There is a general opinion about Indian politics as a field reserved for the rich and powerful, with a meager chance for the commoners to enter. It is necessary that this misconception be eradicated and the youths of the present must be encouraged to participate out of freewill and broad mindedness. This can be achieved by instilling a spirit of patriotism and enthusiasm seeded at a very young age by reforming the education system.

## **Financial support and sponsorship**

Nil

## **Conflicts of interest**

There are no conflicts of interest

**REFERENCES**

1. Ambedkar BS. What Congress & Gandhi Have done to the Untouchables. Gautam Book Center. 1946
2. Achen C, Bartels L, Achen CH and Bartels LM (2017) Democracy for realists. Princeton University Press. 2017
3. Schatz RT, Staub E and Lavine H. On the varieties of national attachment: Blind versus constructive patriotism. *Political psychology* 1999; 20:151-174.
4. Zaller JR. The nature and origins of mass opinion. Cambridge university press; 1992 Aug 28.
5. Saleem SM. Modified Kuppuswamy socioeconomic scale updated for the year 2020. *Indian J Forensic Community Med.* 2020;7(1)
6. United Nations Department of Economic and Social Affairs Population Division. World population prospects: The 2022 Revision. <https://population.un.org/wpp/Download/SpecialAggregates/EconomicTrading/> [Last accessed on 24 December 2022]
7. Chief Electoral Officer, Kerala. End-line survey of Knowledge, Attitude and Practices (KAP) LS2019 Kerala 1.0.0. Systematic Voters' Education and Electoral Participation (SVEEP), Election Commission of India.2020. Available at: <https://ecisveep.nic.in/files/file/1319-end-line-survey-of-knowledge-attitude-and-practiceskap-ls2019-kerala/> [Last accessed on 24 December 2022]
8. The Constitution of India. Article 326. [https://www.constitutionofindia.net/constitution\\_of\\_india/elections/articles/Article%20326](https://www.constitutionofindia.net/constitution_of_india/elections/articles/Article%20326) [Last accessed on 24 December 2022]
9. Representation of People (Amendment) Act, 2010 <https://pib.gov.in/newsite/PrintRelease.aspx?relid=69746> [Last accessed on 24 December 2022]
10. The Constitution of India. Article 324. [https://www.constitutionofindia.net/constitution\\_of\\_india/elections/articles/Article%20324](https://www.constitutionofindia.net/constitution_of_india/elections/articles/Article%20324) [Last accessed on 24 December 2022]
11. End line survey of Knowledge, Attitude, Behavior and Practice of Voters in Tamil Nadu, (2012). Evaluation and Applied Research Department, Government of Tamil Nadu. 51-57. Available at: [https://www.elections.tn.gov.in/Reports/GETNLS2014/KABP\\_2012.pdf](https://www.elections.tn.gov.in/Reports/GETNLS2014/KABP_2012.pdf) [Last accessed on 24 December 2022]
12. Swaminathan R, Adhiyaman MP, Nandhini MA, Juliet MNA, Bharathi MK and Sankar MMP. Political Mindmap of Tamil Nadu-First Time Voters and Others. *Global Journal of Political Science.* 2019; 7(1): 23-31.
13. Kanagavel R and Chandrasekaran V. 'Creating' Political Awareness through Social Networking—An Empirical Study with Special Reference to Tamil Nadu Elections. *Journal of Social Media Studies.* 2014; 1(1): 71-81.
14. Imran MS. Re-imagining government of India's policies for India's physical infrastructure development in post COVID-19 scenario. 2014

15. Huddy L and Khatib N. American patriotism, national identity, and political involvement. *American journal of political science*. 2007; 51(1): 63-77.



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