

## KNOWLEDGE AND OPINION ABOUT THE SUS (UNIFIED HEALTH SYSTEM) - UNDERGRADUATE STUDENTS OF A PHARMACY COURSE

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**Abstract: Introduction:** There is still the stigma attached to their use of the Unified Health System by the higher classes of society, which may reflect the lack of knowledge about their social function. In addition, there is still a low occurrence of studies in Brazil that assess the association between opinion and knowledge, and social class; especially university students of the Pharmacy course.

**Goal:** To map the knowledge and opinion about the Unified Health System (SUS) and its association with social class among undergraduate students at the Faculty of Pharmaceutical Sciences of the University of São Paulo.

**Research Strategy:** A cross-sectional study was conducted, through the application of an online form, with students from the Faculty of Pharmaceutical Sciences of the University of São Paulo (FCF-USP) from May to August 2021. A descriptive analysis of the data was performed and then a multiple linear regression was conducted to assess the association of independent variables with higher scores on the SUS.

**Results:** 106 responses considered valid were analyzed, which were segmented into “About what is a Health System”; “What is the Brazilian Unified Health System about”; “On SUS concepts and theories”; “On the experience in the SUS” and “On the migration of the population from Supplementary Health to the SUS (Unified Health System) during the pandemic”.

**Conclusion:** The results obtained reinforce the low theoretical and historical knowledge about the SUS among undergraduate students; making clear the need for changes in education, aiming at the interests of the population and training competent professionals able to be inserted in the pharmaceutical scope of the Unified Health System.

**Keywords:** Unified Health System, Pharmacy, students, knowledge, opinion.

## INTRODUCTION

In 1990, with the publication of Law no. 8,080 of September 19, there was the regularization and operation of public health care <sup>1</sup>.

Brazil is considered the only country with more than 200 million inhabitants to have a universal public health system. <sup>2</sup> with comprehensive care for all citizens, covering health care, health surveillance, supply of medicines, development of research, free vaccination, among others. However, compared to other countries that also have a public and universal health system, it is worth mentioning that Brazil is also the one that invests the least in the area. This lack of investment creates bottlenecks with regard to the provision of services such as financing; the deficient organization between Primary Care and calls of medium and high complexity, which generates overload in the other levels of the system; the issue with human resources in which there is little progress in the management of work with restricted infrastructure, with delay in service (problem recognized by 35.4% of citizens) and delay in scheduling appointments (with an evaluation of 33.8%) <sup>3</sup>.

The health and insurance plans sector is called Supplementary Health, which is also contemplated in several aspects in the management of the Unified Health System (SUS), a decision enacted by Law No. Single Health <sup>4</sup>.

According to a survey carried out in 2019, by the IBGE's National Health Survey (PNS) - “Information on households, access and use of health services”, 28.5% of the population residing in the country had some health, medical or dental <sup>5</sup>.

In 2020; year of pandemic, social isolation and loss of BRL 247 billion in middle-class consumption, according to a survey by Instituto Locomotiva <sup>6</sup>. This is a reflection of

the high rate of unemployment that devastated the population in this health crisis that the world is facing. In three months, more than 250,000 health plan beneficiaries were lost, which is equivalent to a drop of 0.5% <sup>7</sup>.

This whole scenario contributes to the worsening of the use of the SUS, which had to expand overnight to accommodate all the required services. Many future actions of promotion, surveillance and health care of the SUS (Unified Health System) may exist, aiming at the generation of future professionals committed to improvement and active agents of change.

## GOAL

To map the knowledge and opinion about the Unified Health System (SUS) of undergraduate students at the Faculty of Pharmaceutical Sciences of the University of São Paulo.

## RESEARCH STRATEGY

The cross-sectional study was carried out with an undergraduate student from the Faculty of Pharmaceutical Sciences of the University of São Paulo (FCF-USP), from May to August 2021 after electronically signing the Free and Informed Consent Form (CNS 466/12) <sup>8</sup>. The study was previously approved by the FCF-USP Human Research Ethics Committee (CAAE: 44463321.30000.0067).

Data were collected from an online questionnaire designed and hosted on the “Google Forms®” platform; which was sent to the students of the course through the official graduation email.

Descriptive statistics were performed to characterize the frequencies of variables related to students’ theoretical knowledge about the SUS. Then, multiple linear regression was conducted to assess the association of independent variables with higher scores on the SUS (Unified Health System) with

confidence intervals of 95% (95%CI), with  $p < 0$  being considered statistically significant. Analyses were conducted using Stata® 14.2 software.

## RESULTS AND DISCUSSION

A total of 106 responses were obtained and all were considered valid and analyzed, which corresponds to a low sample of students theoretically enrolled in the course, of all years and shifts, considering a confidence level of 95%.

As general characteristics of the students, it can be observed that most of them are between 20 and 25 years old (68.8%  $n = 73$ ). Students enrolled in 2017 were the ones who most adhered to the form, representing 20.8% ( $n = 22$ ) of the responses. There are similar amounts between periods, with 50% full-time ( $n = 53$ ), and 48.1% nighttime ( $n = 51$ ); the missing 1.9% identified themselves as from both periods ( $n = 2$ ); curriculum 9012 had the majority of responses (72.7%  $n = 77$ ) and, regarding monthly family income, 43 participants in the range between 4 and 10 minimum wages represented the majority of the sample (40.6%).

Regarding the questions about the SUS (Unified Health System) regarding the theory of the Brazilian Unified Health System, for the first multiple-choice question, entitled “What are the doctrinal principles of the SUS?”, we had 83.0% of correct answers ( $n = 88$ ). In the second question, “What are the SUS guidelines?”, there were 35.9% of correct answers ( $n = 38$ ), a much lower value compared to the previous question, and also representing the highest number of errors. In the third question, the most chosen alternative was the correct one, “The 1988 Constitution guaranteed health as a right for all and a duty of the State, guaranteed through social and economic policies” with 68.9% of correct answers ( $n = 73$ ). In the fourth question,

77.4% believe that there is a relationship between the SUS (Unified Health System) and supplementary health (n = 82) and in the fifth, 89.6% got it right (n = 95) saying that the responsibilities of the managing bodies of SUS, in relation to medicines, are defined as basic, strategic and specialized. As for the sixth question, a positive surprise, 94.3% of the participants (n = 100) chose the alternative “the objectives of health care systems are: achieving an optimal level of health distributed equitably, guaranteeing a adequate protection of risks for the entire population, welcoming citizens, effectiveness and efficiency”, which is the correct one for the case; in the seventh question, 77.4% (n = 82) believe that “chronic diseases can result from both healthy and unhealthy lifestyles” and, in the last question of this topic, only 60.4% (n = 64) of the people knew that dipyrone, dapsone, and abatacept are examples, respectively, of drugs of the basic, strategic and specialized components.

Furthermore, only the variable “curriculum grade” was significantly associated with more or less correct answers; there is a clear and justified difference between curricula 9012 (reference) and 9013 [(95%CI -1.01 ± 0.38); p = 0.010].

This study demonstrates, at first glance, a good theoretical knowledge of the representation of the Brazilian Unified Health System by undergraduate students, considering that, of eight multiple-choice questions prepared, seven of them were answered with more than 60% of correct answers; This data is consistent with a similar study by Pinheiro et al. (2009) 9, conducted with students of the Physiotherapy course. This can be related to the presence of a theoretical discipline on Clinical Pharmacy and Pharmaceutical Care, and a mandatory supervised internship in Pharmaceutical Practices, both in the fourth period of the 9012 curriculum; the combination of these

factors increases the student’s contact with the theory presented during the course, allowing the union between this and the action. Furthermore, new steps were taken, with the introduction of a new curriculum (9013) in force since 2020. In it, in addition to the subjects mentioned above, we find more alternatives aimed at training a professional who serves the SUS, such as “Semiology Pharmaceuticals” in which, among other things, embracement, pharmacist-patient communication and health team are addressed; and also “Health Policy and Pharmaceutical Assistance Management” which focuses on the national health policy and SUS.

It is important to highlight that, despite the theoretical mastery of quantitative data having proved to be “good”, 60% remains a shallow cut-off margin for what is expected of future pharmacists at this institution.

The entire Health System can be thought of as the articulation of some components, highlighting: financing (economic component), infrastructure, organization (care), service provision and (political) management, in addition to accessibility, coverage and regulation 10.

There are several classifications for a Health System, namely: Universalist, characterized by public funding and workers’ dependence on the State; Social Security, in which the financing is made by contributions and contributions from workers, as in Germany; Private Insurance, which is characterized by fragmentation of the organization, decentralization and little public regulation and is more similar to that existing in the United States; Welfare, in which the State would only provide assistance to people incapable of assuming individual responsibility for health care 11.

The students, when presented with this question, brought different views of what they believe to be a Health System in a country, and it is seen that the younger ones are not so

well informed, as shown in the cases below, of students currently attending grade 9013:

*"[São] Institutions that provide health services." (A16)*

*"Health system is the relationship that different clinical institutions maintain with each other." (A25)*

*"A set of institutions that provide medical care." (A28)*

Many of the answers brought by the participants were incomplete, copied from websites, superficial or otherwise deviating from what the question really wanted to bring. Below are some of the words of the most experienced 9012 students in the course:

*"[Health System is] A set of services and resources of public or private origin that aim to protect and restore health." (A56)*

*"Health system is an institutional organization that can be in the public or private sphere that regulates health. From outpatient to hospital level." (A58)*

*"It is a system designed to organize resources related to health." (A60)*

*"A health system is the entire set of health care networks (RAS) existing in a country and whose objective is the prevention, promotion and treatment of various diseases and health problems, as well as the social well-being of individuals." (A73)*

As exemplified above, the Brazilian SUS (Unified Health System) fits into the classification of a universalist Health System, in which health is a right for all and must be ensured by the State. To understand more closely what the SUS (Unified Health System) represents, it is necessary to analyze some basic definitions, such as health-law, its objectives, its functions and its technical-assistance and managerial principles and guidelines.

Below are some of the answers given by the volunteers, when asked about what the

Brazilian SUS (Unified Health System) is. Starting with grade 9013 students:

*"It is a state health system that aims, through tax collection, to provide all Brazilians with the right to health." (A102)*

*"It is a system that universalizes health care for any Brazilian within the country." (A101)*

*"It is the Brazilian public health system, which is universal and free." (A76)*

*"It is a system in which, regardless of where the patient is treated, he will receive the same care and will have the same structure for it." (A84)*

Below, reports of what grade 9012 students believe to be the SUS:

*"A public health system for the Brazilian population." (A100)*

*"It is the Brazilian public health system." (A95)*

*"A means of ensuring that everyone gets service." (A91)*

*"It is a government program to offer health services to each and every individual in Brazil, free of charge and in an integrated manner." (A86)*

*"It is a free and universal health system, it is a citizen's right and is aimed at preventing and maintaining the health of people who are on Brazilian soil." (A97)*

The only factor with a statistically significant value is the difference in correct answers/errors in the answers between the curricula; with grid 9012 responding more correctly, while grid 9013 had the highest number of incorrect answers. This is most likely due to the time of presence in the course and also, possibly, to the age of the respondents. It is important to note that within the 9012 grid we have students starting before 2015, even students who are in their third year of college; also noting the

possibility of differences in their answers, but it is not a rule.

In a study conducted by Saturnino *et al.* (2011)<sup>12</sup> about the rural internship in the training of the pharmaceutical professional to work in the SUS, it was found that the students were unaware of the principles and concepts of the System; and, therefore, it is important to highlight that in the present research, most university students answered correctly about the principles and theories of the SUS.

## ABOUT THE STUDENT'S EXPERIENCE WITH SUS

It is observed that the students, from the knowledge of their history, have a predominantly positive discourse, in which the SUS (Unified Health System) is, mainly, a public health care resource of which they are part, and insist on to be actively integral figures. However, it must be noted that reservations were always made.

*"In addition to always vaccinating me, which goes well, I used the SUS (Unified Health System) once for an accident with a cut on the head in the coastal region and at the health post, it was missing stitch line, to sew in full (...) I ended up with a glitch shaped like a triangle forever, but they were very attentive and helpful, so it was a good experience, they just had to invest more to buy more essential materials"* (A4)

*"I had 2 experiences: one in São Paulo (SP), which was efficient, even with little structure and the other in a city in the interior of Minas Gerais and it was not efficient at all: the hospital in the city was closed for lunch and we had to travel to the nearest other city in an emergency situation. However, upon arriving at the hospital, we had to wait for the team to call the person responsible for performing X-ray, who wasn't in the hospital. Even after waiting for the arrival and examination, when it was found that a fracture had occurred, there was no plaster cast in the hospital to be applied."* (A7)

*"My experience in primary health, mainly related to vaccination, was excellent, however for those who depended on specialists, the delay was great."* (A10)

*... despite everything, I recognize that it was thanks to the SUS (Unified Health System) that I did not have a much worse situation, because even with all the difficulties I received a diagnosis through care and exams (which would have cost me dearly in a private place)." (A9)*

Despite the writings, mostly with positive endings and recognitions, there was also speech among students about the inefficiency of the SUS, mainly linked to the delay in service, which is in accordance with a survey carried out in 2018 by the National Council of Medicine. and Datafolha, which reports that waiting lines are the biggest reason for dissatisfaction among SUS (Unified Health System) users.)<sup>13,14</sup>.

*"Kind of bad actually (the experience). (...) to schedule appointments and exams takes forever."* (A11)

*"Overall, the hospital was not very good. The relative in question was hospitalized in the hallway and almost had to be taken to the private to perform basic gallbladder surgery."* (A12)

*"My experience was not very good, due to the waiting time and always crowded."* (A16)

*"Long wait times and poor infrastructure."* (A63)

Also noteworthy is a response found by a student who was not aware if he had ever used the SUS (Unified Health System) at any time in his life.

*"Actually, I'm not sure, I may have used some SUS (Unified Health System) resource when I was a child and not be aware of it"* (A70)

In the public sector, less than 5% of specialist physicians work at the secondary level of care (services of greater complexity);

most are at the tertiary level (hospitals), which is not in line with the demand of the population, which means that patients have fewer options for care in their regions <sup>15</sup>.

Although the SUS (Unified Health System) has universality as one of its principles, that is, assistance to the entire population, regardless of socioeconomic status; to date, there is an expectation of being a public policy aimed at the part of society that is not covered by the private system; vision that is only exacerbated by the great social inequality in the country.

*“Considering only the use of classic health services (UBS and hospitals), my family never used it, because we have conditions to pay for private services and health insurances, which end up being faster for the service and in my family there is a belief that the private service is better than the public service” (A8)*

Among the students who participated in the research, 25, because they had a household income between 2 and 4 minimum wages, were classified as low to middle class (from C3 to C1), according to a survey carried out by the Locomotiva Institute and released on April 17, 2019. 2021 13. Ten people answered up to two minimum wages, lower class (C3) and another ten, at the extreme of this relationship, answered having more than 20 minimum wages, representing the upper class (A). However, the vast majority of the population indicated having between 4 and 10 minimum wages, being, therefore, from the middle class (from C1 to B).

When asked if, with the Covid-19 pandemic started in 2020, part of the population migrated from supplementary to public health, 86.8% (n = 92) of the volunteers answered yes, and among the main reasons for this belief were two: the increase in unemployment and consequent lack of access to the agreement, often business, and the rapid occupation of private beds generating insufficiency in the care by the supplementary health. In addition, the appreciation of the SUS (Unified Health

System) for the vaccination movement against the Corona virus was also mentioned.

*“Yes, during the pandemic, many health insurance companies were unable to maintain the demand for tests to identify the virus (PCR, rapid test...), because of this, some of their users chose to use SUS (Unified Health System) services to do the tests. In addition to that, in more serious periods of the pandemic, large private hospitals in São Paulo asked the public network for help to meet the demand for hospitalizations. In short, the population migrated, as the private network alone could not meet the needs of its users.” (A75)*

*“In my mind, people in general who do not have a shred of experience in the SUS (Unified Health System) end up overwhelming, thinking that everything is precarious and not effective, and they end up not remembering that the SUS ( Unified Health System) is in everything in our daily lives. In my thinking, those who only use insurance, for example, and have not had experience in the SUS (Unified Health System) would not migrate in the middle of a pandemic because they might think that in a more “precarious” place they would run certain risks.”(A73)*

*“I can't say for sure. On the one hand, many people became unemployed and lost the right to their health plans (or simply did not have any more income to pay). On the other hand, with the high demand for health services, I see the possibility of some people migrating to supplementary health, in a search for faster and supposedly higher quality medical care (mainly in terms of structure).” (A61)*

*“Yes, mainly due to the mass unemployment that occurred, affecting many people who used private insurance. In addition, the availability of free tests and vaccination was something that only occurs through the SUS” (A54)*

According to Bulletin Covid-19 - Supplementary Health of ANS, released in March 2021<sup>14</sup>; until February of this year, there was continuity in the growth of beneficiaries in all types of contracting medical-hospital plans, reaching the highest number since

December 2016; making clear the preference of Brazilians - especially the middle class - for private care during this pandemic. The increase in beneficiaries even focuses on the elderly over 59 years old, from the beginning of the pandemic in March 2020 until the present study.

The work performed within the college is complex and full of facets that bring challenges to all involved; however, the benefits that can be found from the information and triggering of critical thinking regarding the use of the SUS (Unified Health System) are essential for the empowerment of trained professionals.

It is seen as a limitation of this study the low adherence of the target audience, even when they are presented with equal and vast opportunities to respond to the survey; and this low sample value influences the finding of statistically significant factors, in addition to representing a sampling error, since it does not cover all the variability of the studied population. It was observed that, in a university like USP, the adhesion to a research that deals precisely with their opinion and experience, aiming at improving their growth environment, was quite low and obtaining information through self-report, which enables the existence of memory bias, since people who have had especially good or bad experiences tend to remember those occasions better.

## **CONCLUSION**

In general, the results presented in this study demonstrate a pattern among the students of the Pharmacy course at USP. There was a lack of knowledge about the history of the SUS, its principles and objectives. The efforts made by the undergraduate course allowed individuals to approach activities linked to the health system, which favored the removal of pre-established ideas of what the SUS (Unified Health System) is and for whom

it is made, but it is still noticeable conceptual shortcomings.

Furthermore, with regard to the relationship between family income (socioeconomic profile) and the percentage of correct answers or errors in the multiple-choice questions presented, there is no statistically significant value; that is, no matter the student's income, their level of knowledge about the SUS (Unified Health System) was standardized.

Despite the results of this study taking into account only students enrolled in the Pharmacy and Biochemistry undergraduate course at the University of São Paulo, the data agree with other findings of similar research in Brazil.



## REFERENCES

1. Brasil. Presidência da República. Casa Civil. Subchefia para Assuntos Jurídicos. Lei n. 8.080, de 19 de setembro de 1990. Dispõe sobre as condições para a promoção, proteção e recuperação da saúde, a organização e o funcionamento dos serviços correspondentes e dá outras providências. Disponível em: [http://www.planalto.gov.br/ccivil\\_03/leis/l8080.htm](http://www.planalto.gov.br/ccivil_03/leis/l8080.htm)
2. Brasil é considerado o único país com mais de 200 milhões de habitantes que possui um sistema de saúde pública universal. *Terra*, 2020. Disponível em: <https://www.terra.com.br/noticias/dino/brasil-e-considerado-o-unico-pais-com-mais-de-200-milhoes-de-habitantes-que-possui-um-sistema-de-saude-publica-universal,3a03004e447e80cf480fdedc50a458be4gte62eq.html#:~:text=Ligue%20e%20compre-,Brasil%20C3%A9%20considerado%20o%20C3%BAnico%20pa%C3%ADs%20com%20mais%20de%20200,sistema%20de%20sa%C3%BAde%20p%C3%BAblica%20universal&text=O%20SUS%20garante%20acesso%20universal,atendimento%20C3%A9%20ampla%20e%20complexa> Publicado em 7 fev 2020- às 09h19. Atualizado em 8/2/2020 às 17h25. Acesso em: 17/01/2021.
3. CONASS Debate – Saúde: para onde vai a nova classe média / Conselho Nacional de Secretários de Saúde. – Brasília: CONASS, 2013.
4. Conselho Nacional de Secretários de Saúde. Saúde Suplementar. Brasília: CONASS, 2007.
5. Instituto Brasileiro de Geografia e Estatística (IBGE). Pesquisa nacional de saúde. 2019: informações sobre domicílios, acesso e utilização dos serviços de saúde. Brasil, grandes regiões e unidades da federação. Rio de Janeiro: IBGE, 2020.
6. de Castro F, Rodrigues E. Pandemia tira R\$247 bi do consumo da classe média no ano, mostra estudo. O Estado de São Paulo. São Paulo, 08 de novembro de 2020. Disponível em: <https://economia.estadao.com.br/noticias/geral,pandemia-tira-r-247-bi-do-consumo-da-classe-media-no-ano-mostra-estudo,70003505403> Acesso em 25.01.2021.
7. NAB | Nota de Acompanhamento de BENEFICIÁRIOS • Edição nº 53 • 2020 • Data base: novembro/2020. [Acesso em 25.01.2021]
8. Brasil. Conselho Nacional de Saúde. Resolução n. 466, de 12 de dezembro de 2012. Resolve aprovar diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Disponível em: <https://conselho.saude.gov.br/resolucoes/2012/Reso466.pdf>
9. Pinheiro LBD, Diógenes PN, Filgueiras MC, Abdon APV, Lopes EAB. Conhecimento de graduandos em Fisioterapia na Universidade de Fortaleza sobre o Sistema Único de Saúde. *Fisioter Pesq* [online] 2009; 16(3). Disponível em: <https://www.scielo.br/j/fp/a/tCTkGnNr4KmJMChKvyT3HCQ/?format=pdf&lang=pt>
10. Brasil. Conselho Nacional de Secretários de Saúde. Conass. SUS: Desafios e Perspectivas. Conass, 2019. Disponível em: [https://www.conass.org.br/consensus/wp-content/uploads/2019/04/Artigo\\_consensus\\_1.pdf](https://www.conass.org.br/consensus/wp-content/uploads/2019/04/Artigo_consensus_1.pdf) Acesso em 19 de outubro de 2021.
11. Nunes E. Principais Sistemas de Saúde no Mundo. *Audit Saúde*, 2020. Disponível em: <http://auditsaude.com.br/Sistemas%20de%20Sa%C3%BAde%20no%20Mundo%202.pdf> Acesso em 19 de outubro de 2021.
12. Saturnino LTM, Luz ZP, Perini E, Modena CM. O Internato Rural na formação do profissional farmacêutico para a atuação no Sistema Único de Saúde. *Ciência & Saúde Coletiva* [online] 2011; 16 (4). Disponível em: <http://www.scielosp.org/pdf/csc/v16n4/v16n4a30.pdf>
13. LOCOMOTIVA Pesquisa & Estratégia. Classe média, impacto econômico da pandemia. Disponível em: <https://static.poder360.com.br/2021/04/impacto-economico-na-classe-media-2021.pdf>
14. Brasil. Agência Nacional de Saúde Suplementar. Boletim Covid-19 Saúde Suplementar. Agência Nacional de Saúde Suplementar, 2021. Disponível em: [https://www.ans.gov.br/images/stories/noticias/pdf/Boletim\\_Covid\\_Mar%C3%A7o.pdf](https://www.ans.gov.br/images/stories/noticias/pdf/Boletim_Covid_Mar%C3%A7o.pdf) Acesso em 21 de outubro de 2021.
15. Thami H. In: NEXO Jornal LTDA. 5 pontos sobre as filas de atendimento no SUS. <https://pp.nexojornal.com.br/perguntas-que-a-ciencia-ja-respondeu/2021/5-pontos-sobre-as-filas-de-atendimento-no-SUS>. Publicado em 15 mar 2021 (atualizado 19 mai 2022 às 16h03).