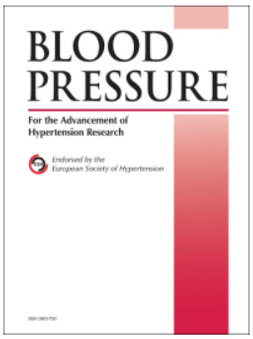

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NEWS

'Pela Saúde de Portugal' – data from a screening on blood pressure

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ABSTRACT

Purpose: The Portuguese Society of Hypertension is responsible for the Mission 70/26 Project, a movement that aims to achieve 70% control of hypertensive patients aged 18–65 years old, under Primary Healthcare by 2026. To reach the general population, different activities were done, in this article we will describe one in particular, the campaign called 'Pela Saúde de Portugal'.

Materials and methods: From December 2023 to July 2024, there were nine screenings for hypertension done in eight cities in Portugal. Volunteers were asked about medical history, their weight and blood pressure were assessed and they were informed about Hypertension (HTN) and target organ damage.

Results: 479 screenings were performed. Of the participants, 243 (51%) were female. History of hypertension was reported in 34,7% of them and 32,4% of these were taking medication. There was a significant blood pressure (BP) reduction from the first to the third measurement and both systolic and diastolic BP (mean of the second and third measurements) were higher in hypertensive patients. There were significant BP differences between the cities.

Conclusion: 'Pela Saúde de Portugal' was not a study of the prevalence of hypertension but merely an awareness campaign with HTN screening done all around the country. This type of campaign is important to draw attention to HTN and other risk factors, improving health literacy in this field. The analysis of the volunteer's characteristics is important to design future interventions.

PLAIN LANGUAGE SUMMARY

- Mission 70/26 project was designed by the Portuguese Society of Hypertension with the purpose of achieving 70% control of hypertensive patients aged 18–65 years old under Primary Healthcare by 2026.
- 'Pela Saúde de Portugal' was a campaign aimed at the general population;
- Nine screenings in eight cities were performed during eight months;
- People were asked about their medical history and weight and blood pressure were assessed.
- Each contact was an opportunity to enhance literacy in the field.

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Hypertension; screening; health care professionals; Missão 70/26; health literacy

Introduction

Hypertension (HTN) is the most prevalent cardiovascular risk factor worldwide [1,2], affecting 42,6% of adult Portuguese population [3]. Based on data of the hypertensive patients (18–65 years old) registered in the Primary Care health unit platform, in February 2023, only 52,8% had their HTN controlled [4,5]. Mission 70/26 project was designed by the Portuguese Society of Hypertension (PSH) with the purpose of achieving 70% control of hypertensive patients aged 18–65 years old under Primary Healthcare by 2026 [6]. The strategies used to improve blood pressure control are aimed at healthcare professionals and general population, which included the initiative 'Pela Saúde de Portugal'. The aim of this campaign was to

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draw attention to HTN and Mission 70/26, to measure blood pressure among volunteers and to increase literacy in this field.

Methodology

'Pela Saúde de Portugal' consisted in nine screenings in eight cities (Porto, Vila Real, Guarda, Coimbra, Santarém, Lisboa, Évora and Faro) along eight months, from December 2023 to July 2024. The participants took part voluntarily and anonymously. The initiative was scientifically supported by the PSH and financially supported by Servier. In each city one or two people were nominated to implement the screening coordinating actions of the PSH, Servier and local responsible entities. A personalised truck with two medical offices was parked from 9 am to 5 pm on a pre-announced Saturday in a strategic place of each city. Screenings were performed by doctor, nurses and health care students.

Collected information

To evaluate medical history, volunteers were asked about history of hypertension, ongoing medication, daily number of pills, adherence, other cardiovascular risk factors and previous cardiovascular events. Anthropometric measurements were taken (weight, height) and body mass index was calculated. Regarding blood pressure measurement, after at least 5 min of resting seated, three measurements of BP (with 1 min apart) were taken. Participants were informed about global cardiovascular risk, HTN diagnosis, BP measurement, relevance of having the disease controlled and therapeutic adherence and had the opportunity to see their questions answered.

Data analysis

Data analysis was conducted using SPSS® – v27.0. At the significance level, $p < .05$ (95% confidence interval) was considered significant. Categorical variables were described as absolute frequency (%). The normality of continuous variables was assessed using the Kolmogorov–Smirnov test. Continuous variables with a non-normal distribution were described by median and Interquartile Range (IQR) and compared using the non-parametric Mann–Whitney test and Kruskal–Wallis when appropriate. The Wilcoxon signed-rank test was used to test differences between the first and third BP measurement.

Results

There were 479 volunteers screened, 243 (51%) were female and 236 (49%) males. The median age was 58 (26) years old. The number of people screened ranged from 35 in Évora to 106 in Lisbon (total evaluated in two different occasions) (Figure 1).

Medical history

History of hypertension was observed in 166 (34,7%) people screened and 155 of these (93,4%) were taking medication (Figure 2). Focusing on medication, 80 (51,6%) were taking only one anti-hypertensive drug, 52 (33,5%) two drugs and the remaining three or more drugs; 34 (21,9%) were taking anti-hypertensive drugs in single pill combination and 114 (73,5%) were treated with one pill/day. When asked about therapy adherence, 34 (21,2%) admitted forgetting to take their pills once a week.

Anthropometric and blood pressure measurements

The median body mass index was 26,1 (5,36) Kg/m^2, and there wasn't significant differences across the cities.

In relation to BP measurements, there was a significant decrease in Systolic BP (SBP) from the first to the third measurement (130 mmHg vs 126 mmHg; $p < 0,05$) and also in diastolic BP (DBP) (76 mmHg vs 73 mmHg, $p < 0,05$). Hypertensive patients had higher SBP (mean of the 2nd and 3rd measurement;133 mmHg vs 123,5 mmHg, $p < 0,05$) and higher DBP (76 vs 72,5 mmHg, $p < 0,05$) when compared to non hypertensive volunteers (Figure 3). Of the patients without a previous diagnosis of HTN, 56 (17.9%) had values >140/90 mmHg and of the HTN treated patients, 83 (53,55%) presented BP < 140/90 mmHg.

When comparing BP measurements between volunteers from the cities, it was noted that there were significant differences in SBP and DBP between the eight cities (Figure 4).

Discussion

Street screenings can increase the number of people who later confirm the diagnosis or seek medical attention. It also represents an opportunity to draw attention to the problem itself even though we acknowledge that many participants in this screening initiative were either motivated people who were more attracted to getting involved or people with less access

to healthcare. However the main aim was to improve health literacy, and that was achieved among volunteers and the participating cities.

In relation to body mass, the median body mass index was 26,1kg/m^2, which was not unexpected, seeing as that Portugal has a high percentage of overweight population [4].

In relation to the BP measurement, it is important to ensure adequate measurements, not inducing uncorrect values and to be able to better advise people. When comparing BP measurements between volunteers from the different cities, it was noted that there were significant differences, noting that the first three cities (Porto, Vila Real and Guarda) had higher values compared to the rest. When we perform a geographic analysis of the proportion of people 18–65 years old, followed under primary care [6], we can see that some of the areas like Porto and Vila Real presented the highest values. These differences can be explained by cultural facts relating to the type of cooking habits in these cities, the proximity of these types of initiatives to festive dates associated with abusive behaviour and the influence of seasonal variation, seeing as the three cities mentioned were screened during winter months. The last two cities (Evora and Faro) were screened in summer months and have slightly lower values of SBP and DBP.

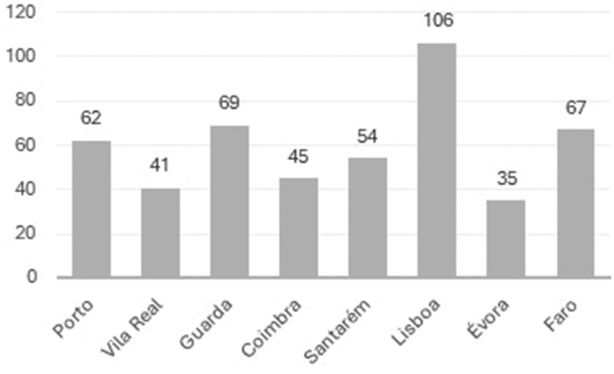

Figure 1. Number of people screened in eight cities.

Portugal is a small country, with disparities in access to healthcare, which will be reflected in disparities in healthcare and follow up of patients. In relation to HTN therapy, 54,2% of the HTN screened population were taking only one anti-hypertensive drug, which reflects probably some medical inertia, when comparing these values with recommendation of the recent ESH/ESC guidelines, which states that most patients will require more than one antihypertensive drug to lower BP to target values.

According to May Measurement Month (MMM) publications [7], when combining the results from 2017 to 2019, 70.8% of participants were found to be hypertensive, of which 27.8% were undiagnosed before the screening, numbers higher than those we presented, with differences probably attributed to geographical reasons and sample size.

It should be noted that the participants took part voluntarily and anonymously which may have influenced our observations.

Conclusion

'Pela Saúde de Portugal' was not a study of the prevalence of hypertension but merely an awareness campaign with HTN screening done all around the country. It was the practical expression of leaving the doctor's office and using the strength of social media, allowing the Portuguese Society of Hypertension to draw attention to HTN and other risk factors contributing to increased Cardiovascular Risk. The aim was

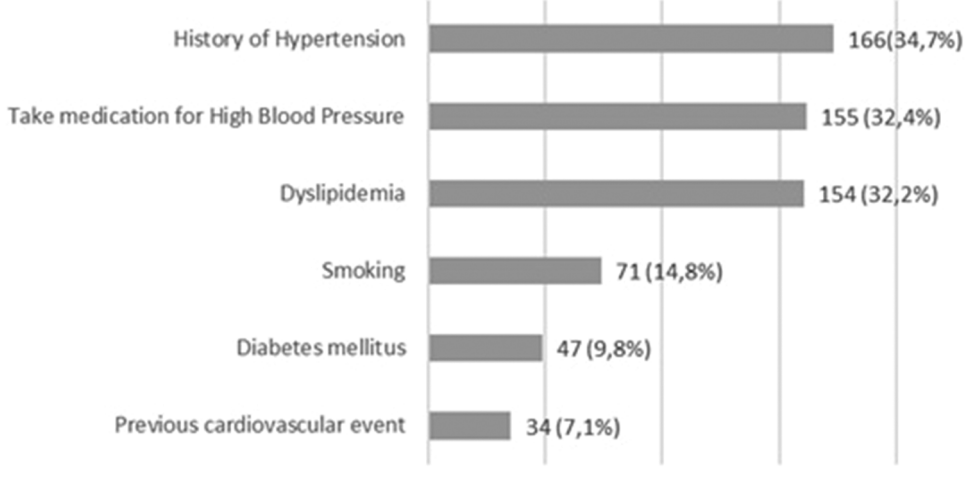

Figure 2. Volunteer's medical characteristics.

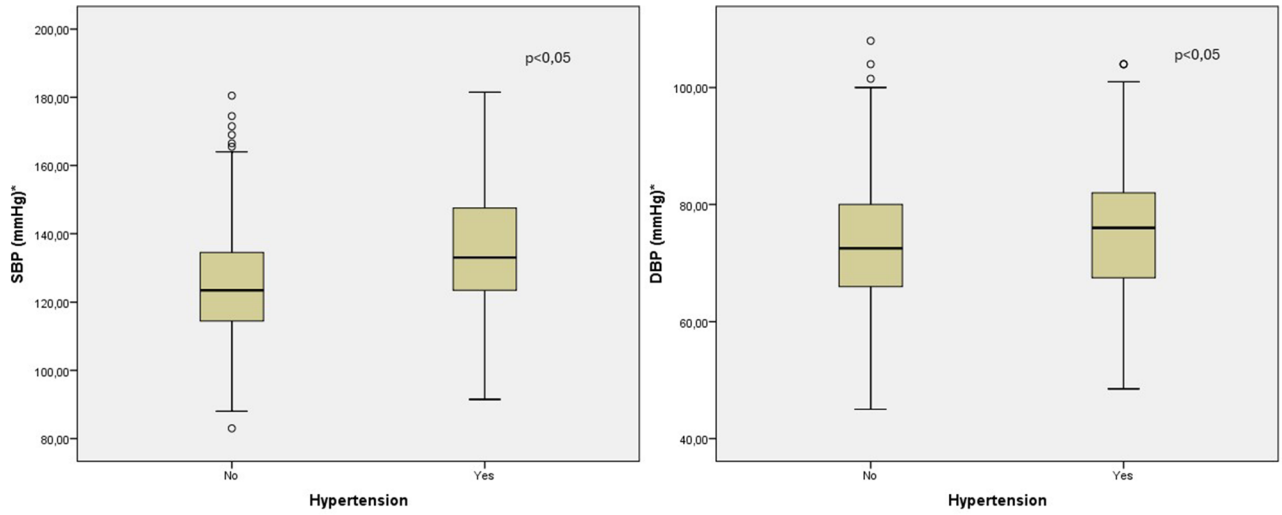

Figure 3. Differences of SBP and DBP of hypertensive and non-hypertensive volunteers (*mean of second and third measurements).

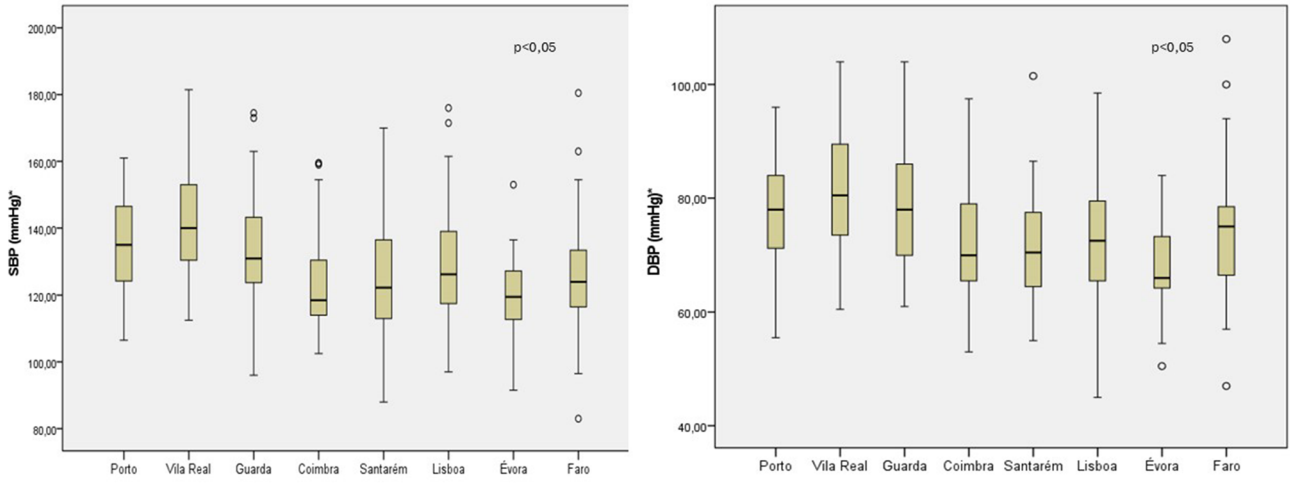

Figure 4. Differences on SBP and DBP across the eight cities (mean of second and third BP measurements).

to improve health literacy in this field, helping people to understand the risk of uncontrolled HTN and the impact this could have on individual and public health. This initiative allowed PSH to reflect on the possibilities for future interventions and the best timing for them to take place, to reach the greatest number of people and have the greatest impact on this health issue.

Disclosure statement

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