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Effects of Noise and Public Setting on Blood Pressure Readings

A Randomized Crossover Trial

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Background: Guidelines emphasize quiet settings for blood pressure (BP) measurement.

Objective: To determine the effect of noise and public environment on BP readings.

Design: Randomized crossover trial of adults in Baltimore, Maryland. (ClinicalTrials.gov: NCT05394376)

Setting: Study measures were obtained in a clinical research office and a public food market near Johns Hopkins University School of Medicine in Baltimore, Maryland.

Participants: 108 community-dwelling adults from the Baltimore, Maryland, area recruited through measurement-screening campaigns, mailings to previous study participants, and referrals from hypertension clinics.

Intervention: Participants were randomly assigned to the order in which they had triplicate BP measurements in each of 3 settings: 1) private quiet office (private quiet [reference]); 2) noisy public space (public loud); and 3) noisy public space plus earplugs (public quiet).

Measurements: Differences in mean BP readings obtained in public loud and public quiet versus private quiet, overall and stratified by baseline systolic BP (SBP), age, and recent health care utilization.

Results: Of the 108 randomly assigned participants, mean age was 56 years (SD, 17), 84% were self-reported Black, 41% were female, and 45% had an SBP of 130 mm Hg or more. The average noise level in public loud was 74 dB and in private quiet was 37 dB. Mean SBPs were: 128.9 mm Hg (SD, 22.3) in private quiet, 128.3 mm Hg (SD, 21.7) in public loud, and 129.0 mm Hg (SD, 22.2) in public quiet. Corresponding diastolic BPs (DBPs) were 74.2 mm Hg (SD, 11.4), 75.9 mm Hg (SD, 11.6), and 75.7 mm Hg (SD, 12.0), respectively. Public-loud and public-quiet BPs had minimal, non–clinically important differences from private quiet BPs: public loud: ΔSBP, −0.66 mm Hg (95% CI, −2.25 to 0.93 mm Hg) and ΔDBP, 1.65 mm Hg (CI, 0.77 to 2.54 mm Hg); public quiet: ΔSBP, 0.09 mm Hg (−1.53 to 1.72 mm Hg) and ΔDBP, 1.45 mm Hg (0.64 to 2.27 mm Hg). The patterns were generally consistent across subgroups.

Limitations: Single-center trial. Imbalance in the numbers and characteristics across the randomly assigned groups.

Conclusion: The BP readings obtained in public spaces were minimally different from BPs obtained in a private office, suggesting that public spaces are reasonable settings to screen for hypertension.

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Clinical practice guidelines for hypertension highlight the importance of proper patient preparation and positioning for accurate blood pressure (BP) measurement (1, 2). These guidelines also emphasize the importance of measuring BP in a quiet, private setting free of distractions. Despite this guidance, BP measurement and hypertension screening are often done in public, frequently loud, spaces (3). Two examples are clinic intake areas with high patient throughput (public and quiet) and public areas for large-scale screening programs (public and noisy).

Interestingly, the effect of these conditions on BP readings has not been studied (4). Available studies have primarily focused on the difference between BP measurements obtained in a home or a community pharmacy compared with those obtained in a physician's office (5–7). These studies reported a wide range of BP differences (that is, no difference to 13 mm Hg higher systolic BP [SBP] in a physician's office). However, these studies did not quantify the level of noise nor isolate the impact of ambient noise or being in a public space on BP measurements. If the difference in BP obtained in a private quiet office compared with that obtained in a loud and/or public space is small, such a finding could simplify hypertension-screening efforts.

We therefore sought to determine the effects of 1) ambient noise (loud vs. quiet) and 2) setting (public

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vs. private) on screening BP. We hypothesized that BPs measured in a loud public space would be higher than BPs measured in a quiet private space and that using earplugs in a noisy public space (to simulate a public quiet environment) would alleviate this discrepancy. We further aimed to determine whether this effect was different in those with hypertensive SBP, older age, and recent health care utilization.

METHODS

Design Overview

We conducted a randomized crossover trial of community-dwelling adults to examine the effects of a loud public setting and a quiet public setting on BP readings (NCT05394376). Participants were recruited between August 2022 and June 2023. The Study Protocol is available at Annals.org. The study was approved by an institutional review board at Johns Hopkins University School of Medicine. All participants provided written informed consent. This study was reported according to the CONSORT (Consolidated Standards of Reporting Trials) reporting guidelines.

Setting and Participants

We recruited 108 participants from the Baltimore, Maryland, area through 1) a BP screening campaign at a public food market near Johns Hopkins University School of Medicine, 2) direct personalized mailings to previous study participants recruited at the Johns Hopkins ProHealth Clinical Research Unit, 3) placement of informational brochures in hypertension clinics at Johns Hopkins University, and 4) referrals from physicians who provide hypertension care to patients (Figure 1).

Inclusion criteria were adults aged 18 years and older. Exclusion criteria were the presence of rashes, gauze dressings, casts, edema, paralysis, tubes, open sores or wounds, or arteriovenous shunts in both arms; pregnancy; mental impairment precluding participation in the study protocol; arm circumference exceeding 55 cm; hearing loss requiring the use of hearing aids; and inability to walk across a busy urban street.

Randomized Procedure

Using the Microsoft Excel function RANDBETWEEN, we randomly assigned participants to the order of measuring BP in 3 conditions (Supplement Figure, available at Annals.org): 1) a private, quiet office setting ("private quiet," the reference measurement), 2) a loud, public space with regular foot traffic and conversation ("public loud"), and 3) the same loud, public space but with participants wearing earplugs during the BP measurement ("public quiet"). Thus, there were 6 possible combinations for the order of condition for BP measurement. In addition, after participants completed the 3 sets of triplicate BP measurements, they had a fourth set of triplicate BP measurements in a private, quiet space ("private quiet$_2$"); these BPs were obtained to account for inherent within-individual BP variability. Thus, every participant had a total of 4 sets of triplicate BP measurements, with the first 3 sets in random order, followed by the fourth set always in a private, quiet office. Due to the nature of this study design, neither participants nor investigators were blinded to the randomized order of measurements.

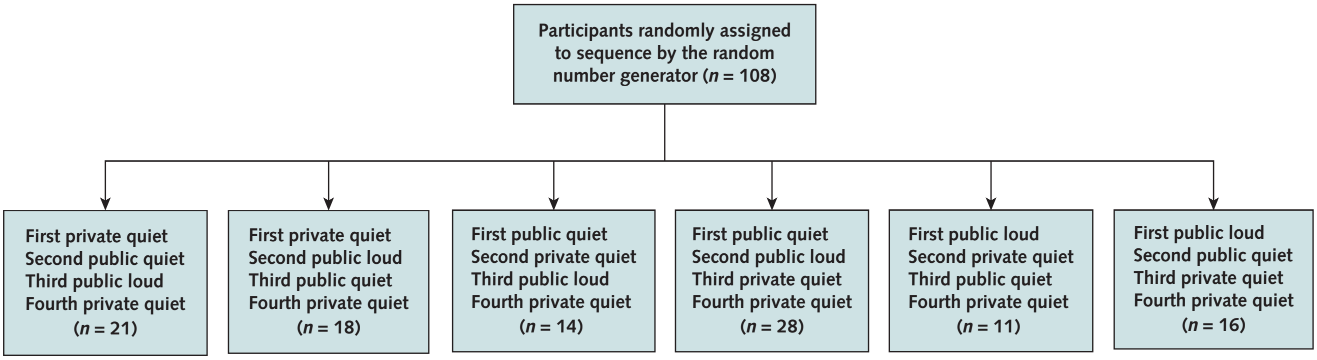
BP Measurements

The public BP measurements (both public loud and public quiet) were obtained indoors in the Northeast Market, one of Baltimore's historic public markets. During the public-quiet BP measurements, participants wore a set of new, disposable foam earplugs (24 mm × 13 mm), certified by the American National Standards Institute, with a noise reduction rating of 32 dB to block sound. For the private-quiet BP measurements, participants were taken to a nonclinical office facility of Johns Hopkins University, located 180 feet across the street from the Market. In each setting, the ambient noise was recorded in decibels by a RISEPRO Decibel Meter, an audio noise-measuring device with a detection range of 30 to 130 dB. For reference, normal conversation is typically 60 to 70 dB and city traffic is typically 80 to 90 dB (8). A staff member accompanied the participants during the transition between the 2 locations.

All BP measurements were conducted by 2 research staff, who were trained and certified in standardized BP measurement by an author (J.C.). For consistency, we used the right arm for BP measurements unless there was a specific reason, such as the presence of open sore, that prevented measurement in the right arm. All BP measurements were performed using a validated oscillometric BP device (ProBP 2000 Digital Blood Pressure Device; Welch Allyn).

For all participants, once written informed consent was obtained in the private office used for the private-quiet BP measurements, the participant's arm circumference was measured using Gulick tape to determine the appropriately sized BP cuff for measurements. Participants were then asked to empty their bladder. The rest of the protocol was designed to reflect typical scenarios in clinical or public BP-screening settings, where people walk for some distance before BP measurements. Participants randomly assigned to have their first set of triplicate BP measurements in the private quiet office walked for 2 minutes inside and then returned to the BP station. All other participants walked across the street to the market for their public-quiet or public-loud measurements. After 5 minutes of rest in a seated position with their back, feet, and arm supported, an automated BP device recorded triplicate BP readings, with each BP taken 30 seconds apart. When the next set of BP measurements was in the same location, participants walked for 2 minutes inside before resting again for 5 minutes. When sequential measurements were in different locations, they instead walked

Figure 1. Cohort diagram.



Blood pressure was measured in the following order. Group 1: private quiet, public quiet, public loud, private quiet; Group 2: private quiet, public loud, public quiet, private quiet; Group 3: public quiet, private quiet, public loud, private quiet; Group 4: public quiet, public loud, private quiet, private quiet; Group 5: public loud, private quiet, public quiet, private quiet; Group 6: public loud, public quiet, private quiet, private quiet.

from one location to another, followed by 5 minutes of rest. Participants were asked not to talk or use a smartphone during BP measurements. Triplicate BP measurements were performed in each condition, with the average of the triplicate BP readings used for analysis.

Outcomes and Follow-up

The primary outcomes of interest were the differences between the mean BPs obtained in each public setting (public loud and public quiet) with those obtained in the private setting (private $quiet_1$). In the subgroup analyses, these BP measurements were compared in relation to clinically relevant subtypes (hypertensive [SBP ≥ or <130 mm Hg], older age [≥ or <60 years], recent health care utilization [≥ vs. <365 days since last health care encounter]). All participants completed the study, which consisted of 1 visit that lasted about 2 hours. There was no dropout after the participant enrollment (**Figure 1**).

Demographics, Clinical History, and Anthropometry

Data on demographics (age, sex, racial and ethnic background), clinical history (hypertension, diabetes, myocardial infarction, use of antihypertensive medication, health care utilization in the last 365 days), and anthropometry (height, weight) were all self-reported and collected by research staff. Body mass index was calculated as weight in kilograms divided by height in meters squared.

Statistical Analysis

Assuming 80% power and a type I error probability of 0.05 (2-sided), an overall sample size of 100 was sufficient to detect a clinically meaningful difference of 2.5 mm Hg, based on observed SD of BP differences in our previous studies of 8 to 10 mm Hg (9, 10). Thus, our study goal was to enroll 100 participants, with the secondary goal to enroll 50% with SBPs of 130 mm Hg or more and at least 30% of each sex (male/female).

For the primary analysis, we separately compared mean BP in public loud versus private $quiet_1$ and public quiet versus private $quiet_1$ using paired *t* tests. Then, we repeated the same analysis in the subgroups defined earlier, with mean SBP based on measurements obtained in the reference condition (private $quiet_1$).

Although we used a random number generator to randomly assign participants to the order of BP measurement conditions (that is, public loud, public quiet, private quiet), we discovered during analyses that the randomization procedure, RANDBETWEEN, resulted in an unexpected imbalance in the number of participants across randomization groups. To explore the impact of this unequal distribution on our primary outcomes, we performed a sensitivity analysis using multivariable linear mixed-effects models. In this analysis, we primarily considered 2 fixed effects: effect of measurement setting ("treatment effect"; 0 = private $quiet_1$ [reference], 1 = public quiet, 2 = public loud) and measurement time period ("treatment order"; first, second, third indicated as $t = 1, 2, 3$). In addition, we considered other important covariates, such as age, body weight, antihypertensive medication, upper arm length, and mid-arm circumference. To account for the correlation of repeated measurements from the same persons, we included participant identification as a random effect in the models. There were no missing values for BP records; however, 1 participant did not self-report race and another participant did not self-report whether they were prescribed an antihypertensive medication. As a result, only complete cases were used for the subgroup and sensitivity analyses. Statistical significance was determined based on a 2-sided *P* value less than 0.05. All analyses were performed using R version 4.2.3.

Role of the Funding Source

This study was funded by Resolve to Save Lives. The funder did not play any role in study design, conduct, analysis, data interpretation, manuscript preparation, or the decision to submit for publication.

Table 1. Characteristics of Study Participants

Characteristics	Overall	By Randomly Assigned Group					
		Group 1*	Group 2*	Group 3*	Group 4*	Group 5*	Group 6*
Sample size, *n*	108	21	18	14	28	11	16
Mean age (SD), *y*	56.0 (16.5)	49.8 (20.4)	54.8 (14.5)	55.9 (15.7)	57.6 (13.3)	54.3 (20.3)	63.9 (15.0)
Age >60 y (%)	59 (54.6)	9 (42.9)	7 (38.9)	6 (42.9)	18 (64.3)	6 (54.5)	13 (81.3)
Female, *n* (%)	44 (40.7)	8 (38.1)	6 (33.3)	5 (35.7)	13 (46.4)	7 (63.6)	5 (31.3)
Black race†, *n* (%)	91 (84.3)	17 (81.0)	15 (83.3)	12 (85.7)	24 (85.7)	10 (90.9)	13 (81.3)
Non-Hispanic ethnicity, *n (%)*	107 (99.1)	21 (100)	18 (100)	14 (100)	28 (100)	10 (90.9)	16 (100)
Mean weight (SD), *kg*	88.2 (22.2)	90.9 (27)	90 (24.5)	88.2 (23.2)	88.2 (20)	85 (18.6)	85.5 (21.3)
Mean BMI (SD), *kg/m²*	30.25 (7.5)	30.5 (8.47)	30.4 (8.61)	30.7 (7.79)	31.0 (7.77)	29.9 (4.92)	28.2 (6.54)
BMI >30 kg/m², *n* (%)	46 (42.6)	9 (42.9)	9 (50.0)	6 (42.9)	13 (46.4)	5 (45.5)	4 (25.0)
Mean arm length (SD), *cm*	38.4 (3.0)	39.1 (2.6)	38.9 (3.2)	37.8 (3.5)	37.5 (3.1)	38.2 (2.5)	39.0 (3.1)
Mean SBP (SD), *mm hg*	128.9 (22.3)	127.0 (22.3)	125.0 (21.5)	132.2 (20.5)	130.0 (24.3)	136.3 (16.1)	126.1 (26.0)
SBP >130 mm hg, *n* (%)	49 (45.4)	9 (42.9)	6 (33.3)	7 (50.0)	12 (42.9)	8 (72.7)	7 (43.8)
Mean DBP (SD), *mm hg*	74.2 (11.4)	75.1 (9.9)	72.7 (14.6)	72.1 (10.8)	75.8 (12.6)	77.7 (10.0)	71.3 (8.20)
On antihypertensive medications†, *n (%)*	74 (68.5)	13 (61.9)	11 (61.1)	11 (78.6)	20 (71.4)	7 (63.6)	12 (75.0)
Took antihypertensive medications on study day, *n (%)*	57 (52.8)	10 (47.6)	8 (44.4)	8 (57.1)	15 (53.6)	7 (63.6)	9 (56.3)
History of hypertension or heart attack, *n (%)*	21 (19.4)	6 (28.6)	6 (33.3)	1 (7.1)	5 (17.9)	0 (0)	3 (18.8)
Attended acute care visit in last year, *n (%)*	54 (50.0)	12 (57.1)	9 (50.0)	6 (42.9)	14 (50.0)	7 (63.6)	6 (37.5)
Attended chronic care visit in last year, *n (%)*	105 (97.2)	20 (95.2)	18 (100)	14 (100)	26 (92.9)	11 (100)	16 (100)

BP = blood pressure; DBP = diastolic blood pressure; SBP = systolic blood pressure.
* BPs were measured in the following order. Group 1: private quiet, public quiet, public loud, private quiet; Group 2: private quiet, public loud, public quiet, private quiet; Group 3: public quiet, private quiet, public loud, private quiet; Group 4: public quiet, public loud, private quiet, private quiet; Group 5: public loud, private quiet, public quiet, private quiet; Group 6: public loud, public quiet, private quiet, private quiet. Data were shown in mean (SD) or number (%).
† One participant did not self-report on this characteristic.

RESULTS

Study Population

A total of 108 participants were randomly assigned and included in the analysis. Mean age was 56.0 years (SD, 16.5), 91 (84.3%) were Black, 44 (40.7%) were female, 74 (68.5%) took antihypertensive medication, and 49 (45.4%) had an SBP of 130 mm Hg or more (**Table 1**). There were imbalances in the distribution of participants across randomly assigned groups, with sample sizes ranging from $n = 11$ (group 5) to $n = 28$ (group 4) (**Table 1**).

BP Differences Between BP Obtained in a Public Loud Space and a Private Quiet Office

The mean noise level in the private office setting was 37 dB, and the mean SBP and diastolic BP (DBP) were 128.9 and 74.2 mm Hg (SD, 22.3 and 11.4, respectively) (that is, private quiet$_1$). The mean noise level in the public loud space was 74 dB. In this setting, mean SBP and DBP were 128.3 and 75.9 mm Hg (SD, 21.7 and 11.6, respectively) (**Table 2**). There were some variations in the mean SBP and DBP across randomization groups (**Supplement Table**, available at Annals.org). In the paired *t* tests, mean SBP obtained in a public loud space was not statistically different from that obtained in a private quiet office (ΔSBP = −0.66 mm Hg [95% CI, −2.25 to 0.93 mm Hg]; $P = 0.41$) (**Figure 2** and **Table 3**). For DBP, the difference was also small (ΔDBP = 1.65 mm Hg [CI, 0.77 to 2.54 mm Hg]; $P = <0.001$). These findings were consistent in a priori–defined subgroups (**Figure 3**).

BP Differences Between BP Obtained in a Public Space While Wearing Earplugs and a Private Quiet Office

The mean SBP and DBP in a public quiet setting were 129.0 mm Hg (SD, 22.2) and 75.7 mm Hg (SD, 12.0), respectively (**Table 2**; **Supplement Table**). The mean BP differences between public quiet and private quiet were small (ΔSBP = 0.09 mm Hg [CI, −1.53 to 1.72 mm Hg], $P = 0.91$; and ΔDBP = 1.45 mm Hg [CI, 0.64 to 2.27 mm Hg], $P = <0.001$) (**Figure 2** and **Table 3**). These findings were consistent in the subgroup analyses (**Figure 3**).

BP Differences Between the First and Second Set of Measurements Obtained in a Private Quiet Office

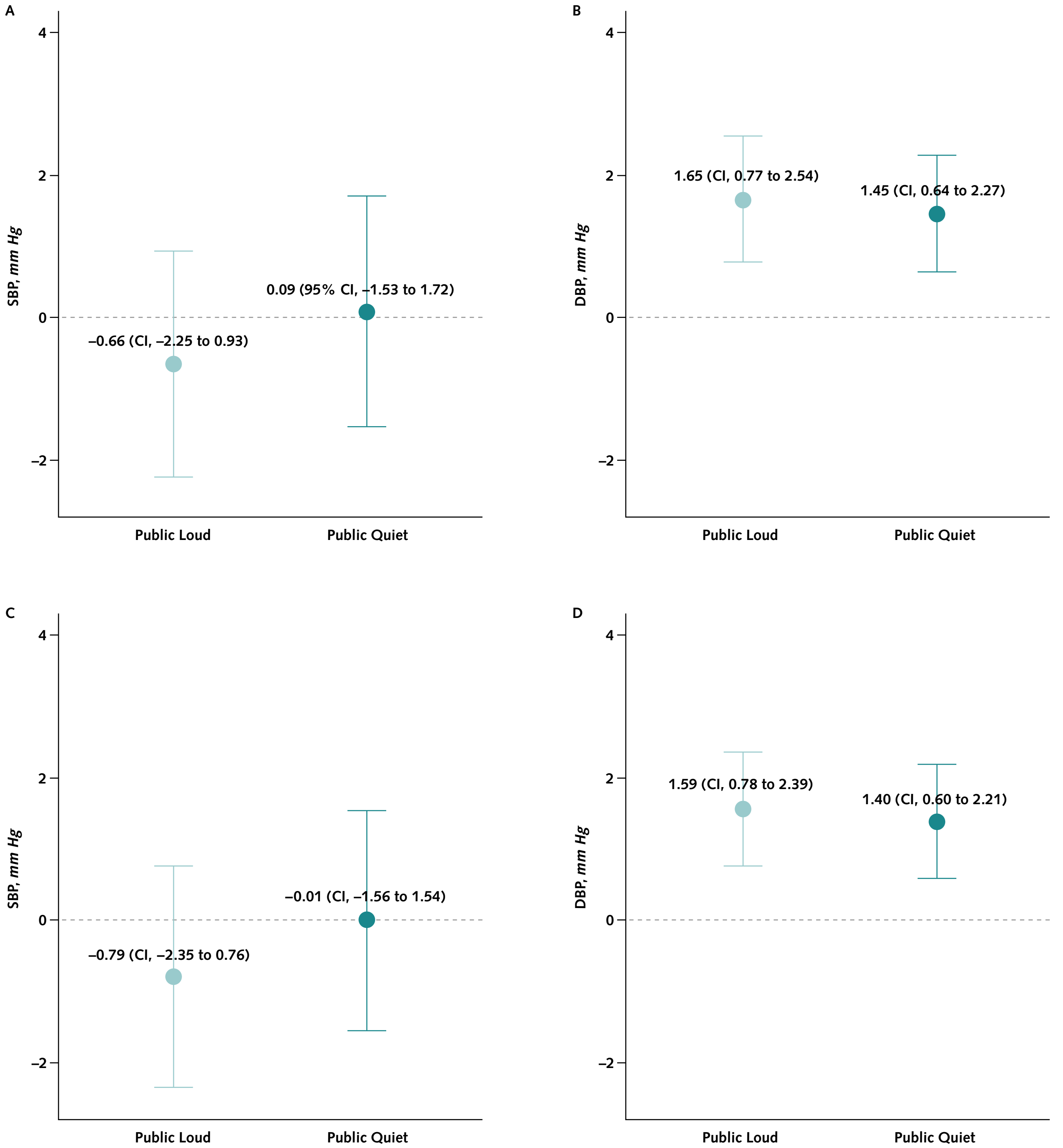
The mean SBP and DBP for the repeat set of measurements in a private quiet office (that is, private quiet$_2$)

Table 2. The Mean SBP and DBP Measured in Public Loud, Public Quiet, and Private Quiet Places

BP	Public Loud	Public Quiet	Private Quiet$_1$	Private Quiet$_2$
Mean SBP (SD), *mm Hg*	128.3 (21.7)	129.0 (22.2)	128.9 (22.3)	127.3 (20.9)
Mean DBP (SD), *mm Hg*	75.9 (11.6)	75.7 (12.0)	74.2 (11.4)	74.0 (12.0)

BP = blood pressure; DBP = diastolic blood pressure; SBP = systolic blood pressure.

Figure 2. Mean SBP and DBP, and net difference in BPs obtained in a public loud space and a public quiet space, compared with those obtained in a private quiet office.



BP = blood pressure; DBP = diastolic blood pressure; SBP = systolic blood pressure. **A** and **B.** The difference in BPs obtained in a public loud space and a public quiet space, compared with those obtained in a private quiet office. **C** and **D.** The same result but using a multivariable linear mixed-effects model, adjusted for age, body mass index, use of antihypertensive medication, upper arm length, arm circumference, SBP, and the order of BP measurement sets. Estimates were calculated as ΔBP = BP in public loud or public quiet – BP in private quiet$_1$.

Table 3. Mean Differences in BP Readings Obtained in a Public Loud and a Public Quiet Setting Compared With a Private Quiet Setting

Analytic Approach	Public Loud-Private Quiet$_1$	Public Quiet-Private Quiet$_1$
Paired *t* tests (for the primary analysis)		
ΔSBP (95% CI), *mm Hg*	−0.66 (−2.25 to 0.93)	0.09 (−1.53 to 1.72)
ΔDBP (95% CI), *mm Hg*	1.65 (0.77 to 2.54)	1.45 (0.64 to 2.27)
Multivariable mixed-effects models* (for the sensitivity analysis)		
ΔSBP (95% CI), *mm Hg*	−0.79 (−2.35 to 0.76)	−0.01 (−1.56 to 1.54)
ΔDBP (95% CI), *mm Hg*	1.59 (0.78 to 2.39)	1.40 (0.60 to 2.21)

BP = blood pressure; DBP = diastolic blood pressure; SBP = systolic blood pressure.
* Adjusting for age, body mass index, use of antihypertensive medication, upper arm length, arm circumference, and the order of BP measurement sets. In this multivariable linear mixed-effects model analysis, the outcome was defined as the average SBP/DBP of triplicate BP measurements, and the treatment effect was modeled as a dummy variable with the following values: 2 for participants in the public loud group, 1 for those in the public quiet group, and 0 for those in the quiet group (reference).

were 127.3 mm Hg and 74.0 mm Hg (SD, 20.9 and 12.0, respectively) (**Table 2**). The difference between these SBP and DBP measurements (private quiet$_2$ − private quiet$_1$) was small (ΔBP, −1.63 mm Hg [CI, −2.98 to −0.28 mm Hg] for SBP and −0.20 mm Hg [CI, −0.97 to 0.55 mm Hg] for DBP).

Sensitivity Analyses

Trial results were consistent and similar in a multivariable linear mixed-effects model adjusted for age, body mass index, use of antihypertensive medication, upper arm length, arm circumference, and the treatment order and time period (**Table 3**).

Discussion

In this randomized crossover trial of community-dwelling adults, differences in BP readings obtained in public spaces were minimally different from BPs obtained in a private quiet office, the setting recommended by clinical guidelines. Specifically, the difference in SBP in both public conditions compared with a private, quiet office was less than 1 mm Hg, with the 95% CI between −2.25 and 0.93 for the public loud setting and −1.53 and 1.72 for the public quiet setting. The point estimates for difference in DBP in both public conditions were less than 2 mm Hg, with similar degrees of imprecision (CI, 0.77 to 2.54 for public loud; CI, 0.64 to 2.27 for public quiet). These results were consistent in subgroup analyses exploring for differential effects by patient characteristics and in a sensitivity analysis to account for imbalances encountered with the randomization procedure.

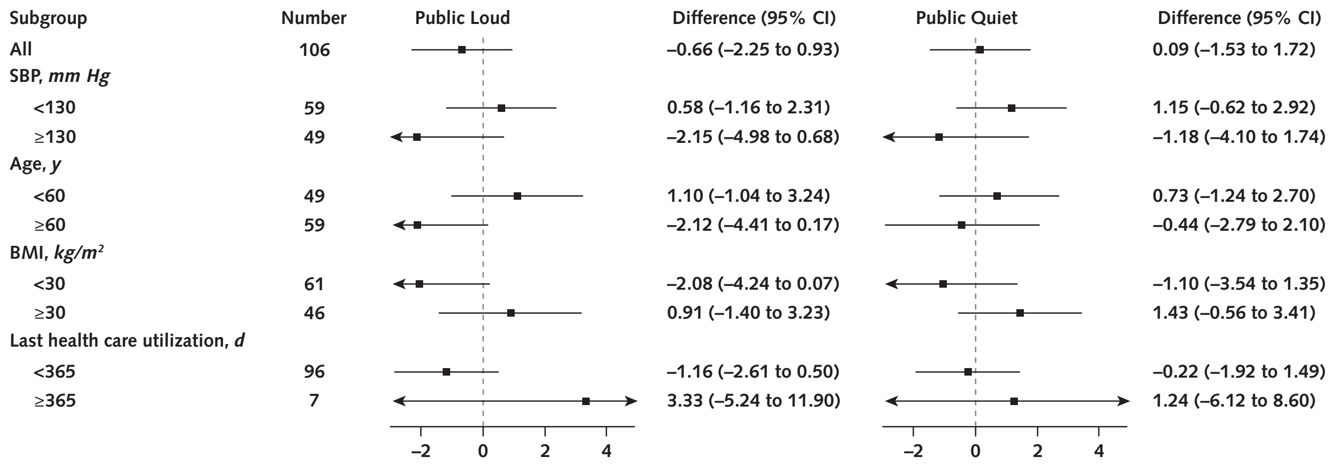
Negligible differences in BP readings when measured in a noisy public space are a novel finding with potentially broad impact. Several studies have described higher BP readings obtained in a community pharmacy (vs. home or physician office) (5–7) or in a working environment with ambient noise (vs. same environment but during off-duty hours) (11–13). Such findings lead to discouraging the use of these more practical and convenient locations for screening large numbers of people for hypertension (14). However, in these studies, other factors besides the public setting (for example, psychological stress during working time, rushed measurement while awaiting medication) might have influenced the BP levels. In our study, measurements were obtained in a setting where population-screening efforts are actually conducted. In contrast to prevailing beliefs, our finding suggests that the impact of a noisy public space on BP readings is small and not clinically relevant.

Measuring BP at the Market with participants wearing earplugs was meant to simulate a high-throughput quiet area such as one might find in a busy clinic or hospital setting. Interestingly, BP measurements with earplugs in the public setting resulted in slightly greater SBP compared with measurements of BP in the public space without earplugs. One potential explanation for this finding is stress induced by being in a busy, urban environment without the use of 1 of the senses (hearing) relied on for safety. Another possible reason is discomfort attributed to the insertable ear plugs (15). Unfortunately, we did not collect information from participants about tolerability of the earplugs or the conditions in general, nor did we test BP in a quiet office with earplugs. Hence, our results do not support the use of earplugs in loud, public settings.

Our study has limitations. First, the unexpected unequal distribution in randomization groups could have affected our results. Randomization of setting order was intended to account for the potential contribution of participants accommodating to the BP measurement procedure over time and having repeated measurements regress to the mean. However, although the number of persons in each group was imbalanced, participants were in fact randomly assigned into these groups and detailed sensitivity analyses designed to account for these imbalances produced nearly identical results to our main analyses. Second, our study was a single-center study with a relatively small sample size and a study population that consisted of predominantly Black adults. Future studies with greater demographic diversity and sample size will enhance the generalizability of our findings and increase precision.

Third, all BP measurements in our study were performed by trained research staff. Although BPs measured for research purposes often yield readings comparable to routine clinical practice (16), it remains uncertain whether the differences in BP we observed would be similar in a real-world practice. Fourth, although there was a large contrast in mean noise levels between public loud (74 dB) and private quiet (37 dB), the impact of a louder noise level (for example, heavy city traffic >80 to 90 dB) on BP measurements remains uncertain (8).

Figure 3. Subgroup analyses for differences* in SBP between a public loud space and a public quiet space when compared with a private quiet office.



BMI = body mass index; SBP = systolic blood pressure.
* Comparing the differences between SBP readings obtained in a public space (without earplugs [public loud] or with earplugs [public quiet]) and a private quiet office: SBP in public loud or public quiet – SBP in private quiet$_1$.

Our study has important clinical implications. Our findings suggest that public loud places are acceptable settings for BP measurement during large-scale hypertension-screening programs and that clinical spaces with busy throughput are likewise acceptable. Although routine BP screening in a quiet private setting, as advocated for in current hypertension guidelines (1, 2), may be feasible in high-resource settings (for example, through regular health service), preparation of such an environment is challenging particularly in resource-limited settings. In this context, our study supports policymakers and stakeholders in recommending mass hypertension-screening programs such as the May Measurement Month campaigns (17) in which screening BP is measured in various public settings, including supermarkets, places of worship, shopping malls, sport venues, schools, and clinics in primary and secondary care facilities. Then, persons with elevated BP obtained in public loud places at initial screening should ideally be referred to a clinical facility, where BP can be reevaluated to confirm a diagnosis of hypertension.

In conclusion, differences between BP readings in a loud public space and BP readings obtained in a quiet private office, as recommended, were small and not clinically relevant. These results suggest that public spaces are reasonable settings to conduct hypertension-screening programs.

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Reproducible Research Statement: *Study protocol:* See the Supplement Study Protocol, available at Annals.org. *Statistical code:* Available to interested readers by contacting Dr. Brady at tbrady8@jh.edu. *Data set:* Not available.

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Author contributions are available at Annals.org.

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