Appendix 2: Quality assessment and assessment of risk of bias at study-level of 23 eligible studies

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **n** | **First author, year** | **Population** | **1) Sampling strategy** | **2) Response rate, %** | **3) Outcome Measurement Procedures (i.e. blood pressure measurement)** | **4) HTN definition** | **5) Quality assurance methods** | **Total Score** |
| **Sampling strategy** | **Sample size** | **Project (if applicable)** | **Use of STEPwise approach** | **BP device** | **BP readings** | **Score (Use of STEPwise approach or method of measurement detailed)** |
| 1 | Hanh, 2001(1) | 60-69yr | Random selection from a name list | 217 | NR | NA | NR | Mercury sphygmomanometer | Average of 3 times | Y | BP ≥ 160/95 mm Hg | ? | 3 |
| 2 | Hanh, 2001 | 40-59yr | Random selection from a name list | 300 | NR | NA | NR | Mercury sphygmomanometer | Average of 3 times | Y | BP ≥ 140/90 mm Hg | Physician examination | 4 |
| 3 | Duc Son, 2005 | >20yr | Multistage clustered sampling, with PPS | 611 | 87.3 | NA | NR | NR | Average of 2 times | 0 | BP ≥ 130/85 mm Hg | Physician examination | 3 |
| 4 | Hoang, 2006 | 25-64yr | Random selection from database | 1,996 | 99.8 | FilaBavi HDSS | Yes | Standard digital sphygmomanometer (OMRON) | 3 times, average of last 2 | Y | BP ≥ 140/90 mm Hg | Training and supervision | 5 |
| 5 | Cuong, 2007 | 20-60yr | Multistage clustered sampling, with PPS | 1,488 | 99.2 | NA | NR | Matsuyoshi mercurial sphygmomanometers (MY 605 P) | 1 time | 0 | BP ≥ 140/90 mm Hg | Trained health worker | 4 |
| 6 | Hoang, 2007 | 25-64yr | Random selection from database | 1,984 | 99.2 | FilaBavi HDSS | Yes | Standard digital sphygmomanometer (OMRON) | 3 times, average of last 2 | Y | BP ≥ 140/90 mm Hg | Training | 5 |
| 7 | Tesfaye, 2007 | 25-64yr | Random selection from database | 2,016 | NR | FilaBavi HDSS | Yes | Digital automatic apparatus (OMRON M4) | 3 times, average of last 2 | Y | BP ≥ 140/90 mm Hg or self-reported current treatment | Training and supervision | 4 |
| 8 | Hoang, 2009 | 25-64yr | Random selection from database | 2,194 | NR | Chililab HDSS | Yes | Digital automatic sphygmomanometer (OMRON M3) | 3 times, average of last 2 | Y | BP ≥ 140/90 mm Hg | Training and supervision | 4 |
| 9 | Nguyen TT, 2009 | 18-65yr | Random sampling | 77,758 | NR (<80% based on other publications) | VNHS | NR | Aneroid manometers | Average of 3 times | Y | BP ≥ 140/90 mm Hg or self-reported HTN history | Trained health worker | 4 |
| 10 | Pham, 2009 | 25-64yr | Multistage stratified sampling | 1,978 | 73.7 | NA | Yes | Digital sphygmomanometer (OMRON T9P) | Average of all | Y | BP ≥ 140/90 mm Hg or self-reported current treatment | Training and supervision | 4 |
| 11 | Trinh, 2009 | 25-64yr | Stratified sampling | 1,965 | 99.7 | NA | Yes | NR | NR | Y | BP ≥ 140/90 mm Hg or self-reported current treatment | Trained health worker | 4 |
| 12 | Ta, 2010 | 30-70yr | Random sample, with PPS | 2,330 | 90 | NA | NR | Calibrated mercury sphygmomanometer, with 4 cuff sizes | 3 times | Y | BP ≥ 140/90 mm Hg | Trained health worker | 5 |
| 13 | Fitzpatrick, 2012 | ≥35yr | Multistage clustered sampling | 1,621 | 94.5 | Stroke Cohort | Yes | Digital sphygmomanometer (Microlife) | Average of 2 times | Y | BP ≥ 140/90 mm Hg | Training and supervision | 5 |
| 14 | Nguyen QN, 2012 | ≥25yr | Multistage clustered sampling | 2,130 | 87.3 | NHP | NR | Automatic digital sphygmomanometer (OMRON) | Average of 2 times, a 3rd time collected if the difference between first two was >10mmHg | Y | BP ≥ 140/90 mm Hg or self-reported current treatment | Training | 4 |
| 15 | Son, 2012 | ≥25yr | Multistage stratified sampling | 9,823 | 93 | NESH, WHO STEPS | Yes | Automatic sphygmomanometer (OMRON SEM-2) | Average of 2 times, a 3rd time collected if the difference between first two was >10mmHg | Y | BP ≥ 140/90 mm Hg | Training | 5 |
| 16 | Ha, 2013 | ≥25yr | Multistage stratified clustered, with PPS | 2,348 | 81.5 | NA | NR | Automatic sphygmomanometer (OMRON HEM-790IT) | Average of 2 times | Y | BP ≥ 140/90 mmHg or BP ≥ 130/80 mmHg with diabetes or chronic kidney disease | Training | 5 |
| 17 | Nguyen TPL, 2014 | 35-64yr | Random sample in 4 communes | 3,779 | 86.5 | NA | NR | Automatic sphygmomanometer (OMRON HEM-7200-C1) | Average of 2 times, a 3rd time collected if the difference between first two was >10mmHg | Y | BP ≥ 140/90 mm Hg | Training | 5 |
| 18 | Quang Binh, 2014 | 40-64yr | Multistage clustered sampling, with PPS | 2,443 | 90.2 | NA | NR | Digital sphygmomanometer (OMRON HBF–351) | Average of 2 times | Y | BP ≥ 130/85 mm Hg | Training | 4 |
| 19 | Do, 2015 | 25-64yr | Multistage stratified clustered, with PPS | 17,199 | 97 | NAOS | Yes | Standard mercury sphygmomanometer | Average of 2 times, a 3rd time collected if the difference between first two was >10mmHg | Y | BP ≥ 140/90 mm Hg | Training | 5 |
| 20 | Bui, 2016 | 25-64yr | Multistage stratified clustered, with PPS | 14,706 | 64.1 | NA | Yes | NR | NR | Y | BP ≥ 140/90 mm Hg | Training and supervision | 4 |
| 21 | Do, 2016 | 25-64yr | Random selection in a city | 509 | NR | COMBI-ELS intervention | NR | Digital automatic sphygmomanometer (OMRON HRM-711AC) | 3 times, average of last 2 | Y | BP ≥ 140/90 mm Hg or self-reported current treatment (last 2 weeks) | Supervision | 4 |
| 22 | MoH, 2016 | 18-69yr | Multistage stratified clustered, with PPS | 3,080 | 79.8 | WHO STEPS | Yes | Digital automatic sphygmomanometer (BOSO) | NR | Y | BP ≥ 140/90 mm Hg | Training and supervision | 5 |
| 23 | Miyakawa, 2017 | 20-70yr | Random sample, with PPS | 376 | 78.3 | NA | Yes | NR | NR | Y | BP ≥ 140/90 mm Hg | Training | 4 |
| 24 | Bui Van, 2018 | ≥18yr | Systematic random sampling | 675 | NR | NA | NR | Omron HBP-1300 BP Monitor | Average of 3 times | Y | BP ≥ 140/90 mm Hg if the medications used to treat HTN were used by the individual for 2 weeks | NR | 3 |
| 25 | Hien, 2018 | 40-64yr | Multistage clustered sampling, | 969 | 80.8 | NA | Yes | Automatic sphygmomanometers (OMRON HEM 7322, Omron Healthcare, Tokyo, Japan) with an appropriately sized cuff and a standard protocol | Average of 2 times, a 3rd time collected if the difference between first two was >10mmHg | Y | BP ≥ 140/90 mm Hg | Training | 5 |