

Table 1. Quality assessments of newly identified quantitative studies

| Obj | Author, date | Study addressed a clearly focused issue | Use of an appropriate method / Randomisation (for RCTs) | Recruitment / comparability of study groups at baseline | Blinding (for RCTs) | Exposure measurement | Outcome measurement | Comparability of study groups during study (for RCTs) | Follow up (for longitudinal studies) | Confounding factors (for non-RCTs) | Applicability to England | Overall |
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| 6 | Alageel and Wright, 2017 | High | Medium – cohort study | Medium – case and control groups were matched, but matching criteria weren't reported | NA | High | Medium – I assume that smoking prevalence was self-reported | NA | High | Medium/ can't tell | High | Medium |
| 6 | Chang et al. 2017 | High | Low - survey | Medium – lack of information re characteristics of comparison groups (e.g. the male sample could have been older and more prone to each health condition compared to the female group) | NA | High | Medium – lack of information re diagnosis of each condition of interest | NA | NA – this was a survey | Medium / can't tell – see 'recruitment/ comparability of study groups' As gender and level of deprivation groups and were compared, these factors were controlled, however there was lack of control for multiple confounding factors in each analysis | High | Low |

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| 2 | Coghill et al. 2016 | High | Medium – quasi experimental study | Low – I can't see any comparison between characteristics in relation to the mode of invite Medium – characteristics of comparison groups are presented, however there are no statistical comparisons to assess if the groups differ significantly on any characteristics | NA | High- standard approaches appear to have been used, with training provided to community workers who provided the telephone invites | High – attendance versus non-attendance and demographic characteristics, which I assume were accurately measured | NA | NA | Low Medium – age, gender, IMD but smoking and ethnicity were not controlled for | Low -data from Bristol | Low |
| 6 | Coghill et al. 2018 | High | Low- cross sectional | NA | NA | High- I would have thought it unlikely that demographic data were inaccurate | High - attendance or non-attendance at NHS Health Check | NA | NA – this was a survey | Medium – age, gender and IMD, but not ethnicity controlled for in adjusted models | Low – data from 38 GP practices, in Bristol. | Medium |
| 6 | Collins 2019 | Medium - not explicit | High | NA | NA | High | High | NA | NA | NA | Low – data from Liverpool | High |
| 6 | Collins 2017 | Medium - not explicit | High | NA | NA | High | High | NA | NA | NA | Low – data from Liverpool | High |
| 2 | Cornelius 2018 | Medium | High - RCT | Medium | Low – as unable to | High – appears to | High (NHS health check | Medium (see 'Recruitment | NA | NA | Low- data from 12 GP | Low |

| | | | | | blind the format of the letter from participants | have been standardised within groups | uptake) | / comparability of study groups at baseline') | | | practices | |
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| 2 | Gidlow 2019 | High | High – RCT | Medium - | Low – as unable to blind the format of the letter from participants | High | High | Medium (see 'Recruitment / comparability of study groups at baseline') | NA | NA | Low- practices from Stoke- on-Trent and Staffordshire | Low |
| 2 & 6 | Gulliford 2017 | High | Medium– cohort study | Medium | NA | High | High | NA | NA | High – ORs were adjusted for gender, age-group, ethnicity and IMD quintile | Low – study was conducted using data from two London Boroughs | Medium |
| 6 | Hinde 2017 | High | High | NA | NA | High | High | NA | NA | NA | High | High |
| 1 | Chattopadhyay 2019 | High | Low- survey | NA | NA | High | High | NA | NA – this was a survey study | High- Multiple confounders were adjusted for in the multiple logistic regression models | Low-data from Leceister dataset | Medium |
| 6 | Kennedy 2019 | High | Medium- quasi RCT | Medium- variation in relation to age of attendees versus non- attendees, with attendees being older | NA | High | High | NA | NA | Medium as age and gender were controlled for in the analyses | Low – data from south England | Low |

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| | | | | and therefore more likely to have the medical conditions of interest | | | | | | | | |
| 2 | McDermott 2018 | Medium | High - RCT | High – age, ethnicity, gender and IMD appeared to be well balanced across groups | High | High | High | High | NA | NA | Low – 18 GP practices in two London Boroughs | High |
| 6 | Mytton 2018 | High | High | NA | NA | High | High | NA | NA | NA | High | High |
| 6 | Palladino 2017 | High | Medium – quasi experimental study | Low -can't tell/ not reported | NA | High | High | NA | NA | Low – can't tell | High | Medium |
| 2 | Public Health England 2018 | High | High- RCT | Medium – age and sex were comparable across groups; lack of data were presented re the proportion of additional traits (e.g. ethnicity and deprivation level) across study groups | High | High | High | Medium | NA | NA | Low- practices from Lewisham and Lincolnshire | Medium |
| 6 | Robson 2017 | High | Medium – observational matched study | Medium – females were more likely than males to attend; there | NA | High | High | NA | NA | Medium – as females were more likely to attend, thus | Low – East London GP practices | Low |

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| | | | | was also variation in attendance according to ethnicity, however deprivation and age variations were approximately balanced between groups | | | | | | potentially reducing the perceived effectiveness of the programme for disease detection as males are more likely to have higher risk of CVD | | |
| 2 | Sallis 2019 | High | High - RCT | Medium-significant differences were found in relation to ethnicity in the SMS pre-notification comparison groups, and WRT sex between groups who received different letter types. Lack of significant difference re other key confounders. | High | High | High | Medium | NA | NA | Low – data from one London Borough | Medium |
| 1 | Woringer 2017 | Medium | Low- cross sectional | Medium- No significant differences were found in relation to | NA | High | High | Medium | NA | Medium | High | Low |

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| | | | | ethnicity between groups, however there were sig difference in age, sex and deprivation level between attendees and the general population | | | | | | | | |
| 4 and 6 | Alageel & Gulliford (2019) | High | Medium | High | NA | High | High | NA | High | Medium | High | High |
| 6 | Chang et al. (2016b) | High | High | High | NA | Medium | High | NA | Medium | High | High | Medium |
| 2 | Gold et al. (2019) | High | Medium | Medium | High | High | High | Medium | NA | NA | Low | High |
| 1 and 6 | Lang et al. (2016) | High | Low | HNA | NA | Medium | High | NA | NA | Medium | Medium | Medium |
| 2 | Whittaker (2019) | High | Low | Low | NA | Medium | Medium | NA | NA | Low | Low | Low |

Table 2. Quality assessments of newly identified qualitative studies

| Obj | Author, date | Was there a clear statement of the aims of the research? | Is a qualitative methodology appropriate? | Was the research design appropriate to address the aims of the research? | Was the recruitment strategy appropriate to the aims of the research? | Was the data collected in a way that addressed the research issue? | Has the relationship between researcher and participants been adequately considered? | Have ethical issues been taken into consideration ? | Was the data analysis sufficiently rigorous? | Is there a clear statement of findings? | How valuable is the research? |
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| 4 | Alageel et al. 2018 | Yes - "The study aimed to explore HCPs experiences of, and views on, delivery MHBC interventions at health checks in order to identify barriers and facilitators to implementing such interventions effectively in primary care." | Yes | Yes | Can't tell – "Purposive sample aiming to interview participants with a range of professional roles was recruited from 23 general practices in two socioeconomically deprived and ethnically diverse inner-city London borough, Lambeth and Lewisham." Not clear exactly how they were recruited though." | Yes - Interview - topic guide based on generic questions developed by TDF for each domain. Piloted with one participant then order of questions re-arranged. | Yes - "The interviewer was external to the practice and other related agencies, with no conflicting roles or affiliations, which is believed to help in accessing more private accounts and reducing socially desirable responses." No other reflexivity included in the article though | Can't tell - Study approved by KCL REC (LRS-15/16-2656) but no ethical issues further discussed in paper. | Yes - Used framework analysis, based on TDF, some limited contradictory findings were presented. | Yes - Haven't really discussed credibility of findings although there is clear discussion of the findings in relation to the original research question | May not be transferable outside of specific geographic location. Suggested new areas of research. |
| 4 | Alageel et al. 2020 | Yes- "The aim of the present study was to examine | Yes | Yes | Can't tell - "A convenience sample was employed, where potential | Yes - Digitally recorded and transcribed | Yes - "It is possible that data collection and | Can't tell – Not really discussed in the paper. | Yes - Sufficient data are presented to support (and | Yes – Findings are clearly presented. A random | Didn't really discuss the findings particularly, but focused |

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| | | higher-risk patients' longer-term impressions of feedback given to them during the health check about their health, including risk factor levels, and to explore this and other factors associated with engagement in suggested risk-reducing interventions , including medication use". | | | participants were identified by GP staff from the results of their health check and invited to take part in the study by their general practitioner" (14 invited by letter, 7 opportunistic, 1 don't know/can't remember). "Out of 353 patients who were invited, 26 agreed to participate in the study. Four patients were not recruited for logistic reasons" - The sample is overwhelmingly UK White background which I don't think is representative of Lewisham and Lambeth, would including these 4 people have made it more or less representative? It would have been helpful if this had been addressed. | interviews, analysed using framework analysis | interpretation were influenced by the research team's background in health psychology and public health" | | contradict) the findings, and these were explained how the analysis framework was developed through team meetings. | sample was coded by two members of the team who met to compare coding for the first three transcripts and agree on codes to be applied to subsequent transcripts. | on design and setting of the study, for example unable to recruit young participants in their forties, as "people from this working age population might find it more difficult both to attend the health check and to find the time to be interviewed" . |
| 4 | Stone et | Yes - | Yes - | Yes - | No - TOW | Yes - | Can't tell - | Can't tell - | Yes - | Yes - The | There is |

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| | al. 2020 | Research aim clearly stated | Qualitative methodology appropriate to the aims of the research | Appropriate research design used (although no justification for using this approach given) | participants were recruited via an intervention training meeting. I assume they had to attend that so there is the potential for coercion to participate as it isn't clear the people running the training were separate to the researchers. Authors don't describe how they selected the purposive sample of PCP staff, so there is a potential for there too. | developing the topic guide was clearly described. The authors mention they modified the topic guide during the process, but not how they did this. | Not described in this paper, however other parts of the study have been published elsewhere so that information could be there. | Not described in this paper, however other parts of the study have been published elsewhere so that information could be there | Analysis clearly described alongside the normalization process theory (NPT) that was used to frame the findings. | findings are clearly stated and described through NPT with examples of responses both for and against each criteria in the theory. | some attempt to discuss how the telephone outreach worker intervention and the findings of this study could transfer to other communities with similar backgrounds |
| 5 | Hawking et al. 2019 | Yes - The paper reports on qualitative findings from a mixed methods feasibility trial of the risk report in general practice. | Yes - was seeking feedback on the use of a graphic health check "risk report" card. | Yes - Although the design wasn't justified in the main paper, they do report an online supplementary file which may have provided more information. | Can't tell - It's not really clear how participants were recruited. "People aged 40 - 64 years due to be invited for an NHS Health Check were identified from six general practices in Newham, East London and were invited to attend two checks, 3 - 6 | Yes - Data collection was justified and development and adaptation of the topic guide was explained. | Can't tell - Not described in paper | Can't tell - Not described in paper | Yes - it is not clear how themes were derived from the data however sufficient data are presented to support and contradict the key findings. | Yes -The findings are clearly stated and discussed in relation to the original aim however they did not particularly discuss credibility of | "Our findings may not be transferable to those who do not take up the offer of the NHS Health Check not to those who do not speak English". |

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| | | | | | months apart. | | | | | findings. | |
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