## Table 2. Identified psychosocial facilitators and barriers to research participation, mapped to the Theoretical Domains Framework (TDF) and tested recruitment interventions

[Key: (-) Negative effect on recruitment; (?) Uncertain effect on recruitment.]

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| **Identified theme** | **Systematic Reviews reporting the theme** | **Domain (components) of the TDF. (from Cane et al, 2012)** | **Interventions which probably affect recruitment to research. (from Treweek et al, 2018)** | **Interventions shown not to affect recruitment to research, or with uncertain effects. (from Treweek et al, 2018)** |
| ***Facilitators*** |  |  |  |  |
| Personal benefit (including therapeutic benefits; closer monitoring; access to new treatments; gaining knowledge of own health)  | Reported in 20 SRs.Dhalla, 2014; Fayter, 2007; Fisher, 2011; Forcina, 2018; Grand, 2012; Gregersen, 2019; Hughes-Morley, 2015; Liljas, 2017; Limkakeng, 2013a; Limkakeng, 2013b; McCann, 2007; McCann, 2013; Martinsen, 2016; Nalubega, 2015; Nielsen, 2019; Nievaard, 2004; Nobile, 2013; Quay, 2017; Tromp, 2016; Van der Zande, 2018. | Optimism (Reflective Motivation) | Mentioning scarcity of trial places. Positive framing of potential treatment benefits.  | Patient preference trial design.  |
| Altruism (including benefits to science; helping others) | Reported in 18 SRs.Dhalla, 2014; Fayter 2007; Fisher 2011; Forcina, 2018; Gregersen, 2019; Hughes-Morley 2015; Limkakeng, 2013a; Limkakeng, 2013b; Martinsen, 2016; McCann, 2007; McCann, 2013; Nalubega, 2015; Nobile, 2013; Nielsen, 2019; Nievaard, 2004; Quay, 2017; Tromp, 2016; Van der Zande, 2018. | Beliefs about consequences (Reflective Motivation) |  |  |
| Confidence or trust in the physician or the research | Reported in 13 SRs.Crane, 2017; Grand, 2012; Gregersen, 2019; Hughes-Morley, 2015; Liljas, 2017; Limkakeng, 2013a; Limkakeng, 2013b; Martinsen, 2016; McCann, 2007; McCann, 2013; Nielsen, 2019; Nievaard, 2004; Nobile, 2013. | Reinforcement (Automatic Motivation) | Endorsements of previous participants. |  |
| Low burden or convenient research | Reported in 4 SRs.Limkakeng, 2013a; Nobile, 2013; Tromp, 2016; Van der Zande, 2018. | Belief about consequences (Reflective Motivation)Social or Professional Role & Identity (Reflective or Automatic Motivation) | Opt-out consent method.  | Two stage randomisation method. (may increase perceived inconvenience to the participant) |
| Financial benefit or incentives | Reported in 3 SRs.Limkakeng, 2013a; Nalubega, 2015; Tromp, 2016. | Goals (Reflective Motivation) | Financial incentives |  |
| ***Barriers*** |  |  |  |  |
| Fear and perceived risk (to health, of experimental treatment or adverse effects; to personal consequences) | Reported in 14 SRs.Dhalla 2013; Forcina, 2018; Fisher 2011; Grand, 2012; Hughes-Morley, 2015; Martinsen, 2016; McCann, 2013; Nalubega, 2015; Nielsen, 2019; Nievaard, 2004; Quay, 2017; Tromp, 2016; Van der Zande, 2018; Woodall, 2010. | Belief about consequences (Reflective Motivation).  | Emphasising pain in information (-). | Emphasising risk in information. |
| Practical difficulties (including additional procedures or appointments; transport; costs; work or caring responsibilities) | Reported in 13 SRs.Fayter, 2007; Forcina, 2018; Glover, 2015; Grand, 2012; Hughes-Morley, 2015; Liljas, 2017; Martinsen, 2016; McCann, 2007; Prescott, 1999; Quay, 2017; Tromp, 2016; Van Der Zande, 2018; Woodall, 2010. |  | Financial incentives. Internet-based data collection (-).  | Two stage randomisation method (may increase practical demand).Email (not postal) invitations.  |
| Distrust of research or researchers (particularly among ethnic minorities)  | Reported in 10 SRs.Glover, 2015; Hughes-Morley, 2015; Limkakeng, 2013a; Limkakeng, 2013b; McCann, 2007; Nalubega, 2015; Quay, 2017; Tromp, 2016; Van der Zande, 2018; Woodall, 2010. |  |  |  |
| Aversion to randomisation | Reported in 7 SRs.Forcina, 2018; Hughes-Morley, 2015; McCann, 2007; McCann, 2013; Nievaard, 2004; Tromp, 2016; Van der Zande, 2018. | Environmental context and resources (Physical Opportunity) | Open trial design.  | Cluster trial design.  |
| Treatment preferences (for specific therapy; against placebo) | Reported in 5 SRs.Fayter, 2007; Grand, 2012; McCann, 2007; Prescott, 1999; Tromp, 2016. | Reinforcement (Automatic Motivation) | Open trial design. | Patient preference trial design.  |
| Stigma associated with health condition | Reported in 5 SRs.Dhalla, 2013; Hughes-Morley, 2015; Nalubega, 2015; Woodall, 2010; Quay, 2017. | Social influences (Social Opportunity) |  |  |
| Uncertainty (particularly in relation to trials; its links to randomisation) | Reported in 4 SRs.Fayter, 2007; Fisher 2011; Nievaard, 2004; Prescott, 1999. | Belief about consequences (Reflective Motivation). |  | Patient preference trial design. |
| Personal health  | Reported in 4 SRs.Hughes-Morley, 2015; Liljas, 2017; Limkakeng, 2013b; Woodall, 2010. | Emotion (Automatic Motivation). |  |  |
| Desire for choice | Reported in 3 SRs.Grand 2012; Fisher 2011; Tromp 2016. | Goals (Reflective Motivation).  |  | Patient preference trial design. |
| ***Factors reported as Facilitators and Barriers*** |  | Belief about consequences (Reflective Motivation). |  |  |
| Influence of physician, family or friends | Reported in 11 SRs.Fayter 2007; Forcina, 2018; Hughes-Morley, 2015; Gad 2018; Gregersen, 2019; Liljas, 2017; Limkakeng, 2013a; Nielsen, 2019; Prescott 1999; Tromp, 2016; Van der Zande, 2018. | Belief about consequences (Reflective Motivation). | Endorsements of previous participants. |  |
| Information quality and participant’s knowledge of the research  | Reported in 5 SRs.Crane, 2017; Fayter 2007; Forcina, 2018; Glover, 2015. Gregerson 2019. | Social influences (Social Opportunity) | Enclosing questionnaire on study method.  | Researcher reading out information (?).Easy to read consent form. Optimising information through user testing or user feedback.Brief patient information leaflet.Providing information by phone. Providing information by video (?).Providing audio record of recruitment discussion (?). Providing booklet on trial methods (?).Total or discretionary information disclosure (?). Educational package on study. |