Developing virtual public health networks: aspiration and reality

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Abstract

Background

This paper presents the results of an exercise to scope the potential of a virtual network to support dissemination, collaboration and innovation amongst the UK research community on the topic of 'work and health and wellbeing'.

Methods

Through a search of the literature and internet searches, a database of 333 individuals and 10 organisations (stakeholders) was developed to whom an online questionnaire was sent. The questionnaire scoped the potential of a virtual network on work and health and wellbeing. We compared respondents' aspirations for a network with the critical management literature examining the core conditions under which networks work best.

Results

We identified 1435 papers, published since 2008. In the UK 333 individuals and 10 organisations were identified as working within the broad topic of Work & Health & Wellbeing. Of the 110 (a 34% response) responses to our online questionnaire the majority (80%, n=88) stated they would be interested in joining a virtual network.

Conclusions

Respondents indicated a willingness to engage with the network. They had a range of ideas regarding how a network could operate, which broadly match the conditions that support network effectiveness. A virtual–enabled network would be best supplemented by opportunities for face-to-face interaction.

Background

Work is a cornerstone of modern society; with about a third of our time spent working, work dominates adult life (1). Dame Carol Black's 2008 review of the health of the working age population in the UK played a key role in initiating a wide debate upon work and public health (2). It led to the replacement of the "sick note" with a "fit note" and the implementation of a series of "Fit for Work" pilots. It was more recently supplemented by the Black and Frost (3) review of sickness absence arrangements. In the same time period (2009), the National Institute for Health and Clinical Excellence (NICE) published evidence based guidelines on the management of incapacity, sickness absence and return to work for use by the NHS and related 'return to work' professional services (4, 5). The 2011 Public Health Responsibility Deal: Health at Work Pledges introduced by Public Health England (PHE) underpins the Department of Health's core commitment to support the workforce to lead healthier lives (6). One of the seven key priorities is the improvement of health in the workplace, and the health of those moving into and out of the workforce (7). In June 2013 NICE launched a scoping consultation on 'Workplace policy and management practices to improve the health of employees' (8). This topic falls across all four domains of the Public Health Outcomes Framework (9).

How employees are treated in the workplace and the terms and conditions under which they work are major determinants of their health and quality of life (10). Workplace interventions have the potential to target a large proportion of the adult population additionally, the workplace has been identified as an ideal setting for health interventions (2, 11), particularly those tackling diet and lifestyle behaviours which may modify energy balance (12). However, few UK based workplace intervention studies have been published. Fewer still focus on the practicalities and implications of running an intervention within a workplace setting (13).

The very topic 'work and health and wellbeing' suggests a domain of interest that ranges over organisational and sector boundaries (e.g. health, work, education, etc.). Stakeholders with an interest in this area are likely to include: policy-makers, managers; practitioners; voluntary and community sector groups; professional

bodies; trade unions, academics, as well as members of the public themselves. Each group is likely to be geographically distant and have its own particular interests, focus, ways of working, and views on what might work and how.

A wish to support this diversity of interested stakeholders is laudable. Drawing upon the critical management literature on networks, it is reasonable to assume that some virtual-enabled way of 'linking' disparate stakeholders might facilitate the sharing and integration of knowledge (16, 17); reduce unhelpful duplication and wasted effort (17); allow knowledge to be used more efficiently (18) and accelerate the collective learning across the piece resulting in synergy, innovation and the creation of new knowledge (17, 19, 20). These are often the cited aspirations behind various methods of knowledge management, with knowledge management defined as incorporating processes and practices concerned with the creation, acquisition, capture, sharing and use of knowledge, skills and expertise (21). Arguably, given the proliferation of information, and the need to work across traditional boundaries on complex cross-cutting tasks where no one-group has all the information, efforts to share knowledge in effective ways is, and will remain, a key issue for most organisations (22, 23).

Previous work has described the development of virtual networks (15), or how virtual networks might support public health (24), however the authors are not aware of the existence of any previous work on this scale or covering this topic. Knowledge management achieved through the formation of IT-supported virtual networks was once dubbed 'the new organisational form' for health-related organisations (25). The creation of such virtual networks was believed to be a 'good thing', with no capacity to do harm (25). It was assumed that knowledge would be shared in a straightforward and automatic way, be easy to understand, and quickly taken-up for use in new contexts (26). In practice these assumptions were optimistic. Often the knowledge vital to bring about new insight (tacit and situational expertise) was not captured on virtual systems. There seem to be various reasons for this: it may be too difficult to put this into words; overlooked as insignificant and not helpful to others; or too politically sensitive to make public; or too valuable to be

shared with others (18). Even if such insights were shared it remains unclear precisely how new activity was to follow automatically from shared electronic communications. In some cases there is evidence that such networks can result in negative outcomes: information overload, increased mistrust and the spread of misinformation, and exacerbate turf wars (25, 27).

What this suggests, is that virtual networks work best if they *support* existing relational networks, (or communities of practice (28)) already linked by common interests, language and values, rather than being used to *drive* this development. This in turn suggests that if the virtual network links very disparate groups they may struggle to understand each other's language and perspective if an electronic medium provides their only point of contact. This may be especially true if there are entrenched, historical divisions between the groups. Swan et al argue that if IT-enabled networks are to move beyond being merely 'exploitative' (where existing knowledge is harvested, stored and transferred to be mobilised in other contexts) to 'exploration' (where knowledge is shared, synthesised and new knowledge is created) (18, 29), they must be supplemented by considerable interactive face-to-face meetings (18, 26). It is perhaps not the information-passing that is the active ingredient in sharing knowledge but the trust, increasingly shared language (30), and learning about different perspectives, not achievable electronically, that make the difference (35-36). This insight is shared in later research on knowledge exchange and mobilisation research that suggest that knowledge sharing is essentially a relational activity (31). We return in the discussion to consider the extent to which the views shared by stakeholders align with the identified conditions under which networks are effective.

This research was commissioned by PHE in 2014 as a scoping exercise to identify active organisations, individuals and communities (academic and non-academic) researching and publishing in the UK on work and health and wellbeing, (Objective 1). The second objective was to scope the potential of a virtual network to support dissemination, collaboration and innovation amongst this research community (Objective 2). This paper describes the methods used to identify the researcher

active community and scope the potential of a virtual network as well as the results from the scoping exercise.

Methods

Objective 1: Identification of individuals/ organisations in UK researching work and health and wellbeing

In order to identify the active research community on work and health and wellbeing in the UK we conducted a rapid search of academic work since 2008 in addition to obtaining a previous scoping exercise (32). The Medline Ovid database was systematically searched using key search terms such as; work, health, wellbeing, workplace, welfare reform, pathways to work, work programme, incapacity benefit, employment. Titles and abstracts were screened for inclusion; namely UK location, topic suitability. In addition to academic databases, we used innovative search methods to identify the broader UK stakeholders. Google searches on the topic identified key stakeholders and relevant events. Organisations and individuals were contacted with requests to identify key stakeholders (individuals and organisations). The Policy Team at the Department for Work and Pensions within the Health and Well-Being Directorate were contacted by email for their suggestions of key stakeholders. On advice from PHE (commissioners of this work), research which covered topics such as respiratory health (including asthma), backache, workplace safety, latex, dermatitis were excluded. The authors and institutions of relevant publications were logged within an Access database to be included within Objective 2.

Objective 2: Scope the potential of a virtual network to support dissemination, collaboration and innovation amongst the research community

Concurrent to Objective 1 we developed a brief electronic, self-completion questionnaire (using the Bristol Online Surveys[1] tool) which was emailed to the key stakeholders. This questionnaire received ethical approval from The Durham University School of Medicine, Pharmacy and Health ethics board in January 2014. This questionnaire scoped the potential of a virtual network on work and health and wellbeing. As well as direct emails, a range of methods was used to administer the questionnaire (Twitter and LinkedIn). The questionnaire was emailed directly to the 333 individuals and 10 organisations including: the Royal Society of Occupational

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[1] http://www.survey.bris.ac.uk/support/about

Medicine, The Joseph Rowntree Foundation, Department for Work and Pensions within the Health and Well-Being Directorate, the Charted Institute of Environmental Health; The Work Foundation. We asked the CHAIN[2] network to distribute a link to the questionnaire and the questionnaire was emailed through two jiscmail accounts; The Health Equity network and The Social Policy network. If emails were rejected or email addresses had changed the database was subsequently updated. Twenty-two email addresses were subsequently removed and others changed (n=321). Where email addresses were not available, we asked organisation to distribute the questionnaire their staff) identified from Objective 1.

The questionnaire format included both open and closed questions. Closed questions were analysed using quantitative analysis methods and open ended questions using qualitative methods.   The open ended questionnaire data was imported into the qualitative software package NVivo 9 (QSR International Pty Ltd. Australia). The analysis programme was used to manage the data, to log emergent themes, to develop a coding framework using grounded theory research (33) and to subject the data to content analysis (34). The questionnaire responses were read through repeatedly by two independent researchers (AL and JW) and cross-compared to establish the emergent and recurrent themes in the data. The themes were refined into a coding framework. The questionnaire was available for online completion from early February 2014 until 3rd March 2014.

Results

Objective 1 provided an up-to-date database of published research in the UK and an up-to-date list of centres, institutions and key stakeholders involved in work and health and wellbeing research. The literature search identified 1435 papers on the broad topic of Work & Health & Wellbeing published since 2008. The identification of literature in this area helped us to develop the categories for 'research' within the questionnaire.

The search identified 333 individuals and 10 organisations identified to be active UK researchers in this broad field. Google searches identified a number of research centres and policy centres working in this area, as well as conference programmes and trade unions. Relevant stakeholders were added to our database.

Objective 2 provided key stakeholders thoughts regarding the potential of a virtual network. Objective 2 also explored, using a themed synthesis, the views and aspirations of key stakeholders regarding a virtual network.

One-hundred and ten individuals completed the questionnaire, a response rate of 34%. Of 110 respondents, Over half of all respondents worked/ studied within universities (n=57 staff (52%), n=6 students (6%)), 13 (12%) worked for the NHS. 'Other' organisations included Government (n=2), Local Authorities (n=3) and independent research institute (n=3). Common themes emerged from responses to open-ended questions and there were no major variation between employment sectors. The results section sub-titles follow the format of questions that respondents were asked.

Research area

The literature search (Objective 1) identified six areas of research around this topic (Figure 1). 'Health in the workplace' and 'Social & public policy relating to health, work & worklessness' were identified by half of the respondents as their area of research (both n=59, 54%) followed by 'Developing/evaluating initiatives/ interventions in this area' (n=52, 47%). Twenty-three respondents suggested twelve further areas ('other') where they conduct research, including mental health, return

to work, disability and work, and workplace safety. As expected, out of all the employment sectors, the university staff and students covered a large breadth of research areas.

FIGURE 1 HERE

Barriers to undertaking research in work and health and wellbeing

Respondents were invited to give their thoughts on barriers to undertaking research in these areas. There were 109 responses; half of the responses (47, 43%) suggested funding was a barrier. Barriers included difficulty identifying funding streams and the lack of interest from funders:

> "Low priority for health funders such as NIHR and MRC, worklessness not seen as a major issue (judging by the calls that come out)" [University Staff]
>
> "It isn't a clinical intervention so current health research pots aren't receptive, and employment and health hasn't (up till now) been a big research agenda. It can get mixed up with benefits reduction debate" [Local Authority]

There was the suggestion that some funders have a closed list of preferred suppliers and that issues of research governance were mentioned, such as NHS ethics. Methodological issues were raised, particularly around the use of RCTs in the workplace and the acceptance of qualitative methods:

> "Difficulty in using methods that are traditionally viewed as gold standard for high quality (e.g. RCTs) - and having to rely on a fairly pragmatic approach in the field" [NHS]
>
> "… getting away from the clinical trial paradigm, and getting acceptance for the value of qualitative evidence as evidence" [NHS]

Access to employers as well as access to data (held by employers) was seen as a barrier, as was the recruitment of participants, or them taking time to partake in a study:

> "Lack of access to administrative data on sickness absence, work records, fit notes and unemployment benefits." [University staff]
>
> "People being willing to take time out of work to participate, reluctance of employees to identify or permit contact with employers, understanding of managers within NHS of the need to address ability to work as a health outcome." [NHS]

Barriers to accessing data held centrally also appeared to be an issue for example access to data held by Jobcentre Plus and Work Programme Providers. Other issues such as collaboration and cooperation of organisations were identified as a barrier to research. A number of responses suggested employers were suspicious of research and researchers. One respondent described a series of complex issues, stating that issues around communication between sectors were barriers to research:

> "Contextual barriers include the boundary and gaps between health services and employment services, the ever changing nature of DWP services. The perception that work is not the remit of health. Communication between sectors - a failure in interagency working." ['Other' organisation]

Alongside the lack of funding, there was the issue that workplace health has been separated from more general public health:

> "Separation of occupational health from public health e.g. different journals and conferences" [University staff]

There were also suggestions that the research doesn't cross transdisciplinary boundaries:

> "… evidence seems to be silo-ed (and privileged) by discipline - health, economics, etc. - all telling similar stories but not pooled and I'm not aware/able to assess probity of health or other sources." [University staff]

There was a concern that there is a "lack of political interest in unemployment" as well as "political interference in evaluations" and "political interference in topics for funding". The issue of 'short term government agendas' was seen as a barrier [Quotes from University staff and 'other' organisation employees].

Existing network membership

The majority of respondents (79, 72%) were not a member of/ or not involved in any virtual network around the topics of 'Health & wellbeing & their relationship with work & worklessness'. When asked to provide the name of networks a number of responses were received which included the names of 37 networks/ groups/ email lists from professional bodies to LinkedIn and facebook groups. There was little overlap and no one network/ group appeared to be dominant.

Motivation to join a network

We suggested nine motivators to joining a virtual network (developed from searching the literature and discussions between the authors, see Table I). Ten individuals added additional thoughts, three of which suggested the need to improve translation of research to policy and to improve access to 'front line' services to aid with research. Additionally there was a perceived need for the new network to provide something different, of added value, to existing networks (both virtual and non- virtual) that would make them want to join and engage with the network.

TABLE I HERE

What would make a successful virtual network?

One hundred and six respondents provided responses to what they thought would make a successful network. Forty respondents (38%) mentioned funding, 29 (27%) discussed issues around research (funding, collaborating, sharing best practice), 25 (24%) the idea of sharing expertise, 18 (17%) mentioned collaborations. Seven (7%) mentioned the ability of a network to develop contacts. Responses suggested that signposting and alerting funding opportunities to network members would be useful (as would invitations to tender). Another strong theme was that of identifying what work has been conducted and opportunities for individuals to collaborate. For example databases of ongoing and completed projects and a method of finding partners for projects.

Collaboration across sectors was emphasised:

> "Collaboration within HE sector. Collaboration with Employers to innovate interventions (and evaluate them) i.e. K.T. activity. Collaboration with DWP to engage with worklessness (and test interventions and innovations). Collaboration with third sector providers who support worklessness and mental health issues in the workplace." [University Staff]

Collaboration and the sharing of ideas was a strong theme regarding what was thought to make a successful network. In addition to opportunities to collaborate, the need for active participation was emphasised. The need to encompass a range of professions and expertise was acknowledged. The need to involve policy makers as well as 'users' was emphasised:

> "Real end-user engagement, that is bring those at work, workless, as well as employers into the network with a voice to express what matters to them (as opposed to academics deciding what they want to research)" [NHS]

The view was expressed that there needed to be more of a balance, without one discipline (in this case, health) dominating:

> "Involving ALL relevant disciplines. Avoiding the tendency for the Medical School/Faculty of Health dominating. View it as potentially nothing to do with the NHS Focus on projects …" [University staff]

It was suggested there should be regular virtual meetings and regularly updated website, suggestions included the use of blogs, email, twitter, webinars as well as opportunities for face to face meetings.

One individual suggested that the network should:

> "Start with joining up all Government Departments/Agencies of and allied groups who are involved and then widening out to look at where they get their funding from." ['other' organisation]

It was felt that due to the broad nature of this work there would need to be careful division of themes and sub-themes e.g. mental health, vocational rehabilitation, occupational health, sickness absence. Others suggested that information would need to be targeted so as to avoid lots of emails.

How would you like a virtual network to operate?

When asked how they would like a virtual network to operate the 105 responses (5 non-responders) were varied. The question suggested a number of existing models (email discussion list, LinkedIn group, online discussion portal, face-to-face meetings and conferences, virtual only, or a mixture of virtual & actual meetings). Most responses suggested a combination of approaches.

While there were individuals who liked emails, there were concerns that emails would get 'lost', however the benefits of not needing to remember passwords were mentioned. The use of social media may be difficult for some organisaitons as such sites are 'blocked' at workplaces. There were 65 mentions of face-to-face meetings.

Respondents suggested these helped to build trust, but that these needed to be occasional and needed to be distributed across the UK; not just focused on London. Existing network models were suggested as a good examples:

> "The UK Healthy Universities Network is a good model; a website as a repository of information and virtual tools, and a network meeting/conference programme to facilitate face-to-face networking." [University staff]
>
> "Something similar to Healthy Cities Network, National Heart Forum, CHAIN - or could the network not link into one of these existing networks rather than in isolation? ..." ['Other' organisation]

The use of a mixed approach appeared most popular, although there was debate about the perceived acceptability and feasibility of using email/ social media/ LinkedIn.

> "... not social networking cos i can't be fugged [bothered] using these things as i don't even have enough time to read all my emails!!!! Mixture of email, face-to-face and webinars" [University staff]

Online Forums, webinars, email discussions, social media, LinkedIn in combination with actual face-to-face meetings – potentially an annual conference were the preferred options. There were suggestions that the annual meetings should include workshops rather than numerous presentations.

Who should run a virtual network?

Respondents were asked what organisation they thought should run and own a network in order to give it validity and credibility. This was an open-ended question; of the 110 responses, 25 individuals (23%) didn't know or weren't sure. Twenty-seven (25%) suggested a university/ academic institution would be best placed to run a network. Seventeen (15%) responses suggested partnership with another organisation, such as an academic institution; PHE or the Department for Work and Pensions (DWP). Responses suggested that the network should be run with strong links from universities, foundations, think tanks and named organisations such as Business in the Community[3], the Department for Work and Pensions, the Health and

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[3] http://www.bitc.org.uk/

Safety Executive[4] and with PHE. Examples given included the Work, Pensions and Labour Economics Study Group (WPEG), funded by the Department for Work and Pensions[5]. There was a suggestion that a mixture of academia and practice might improve credibility.

How would a virtual network add value to your work?

Respondents were asked how this virtual network could add value to their work on this topic. Key themes emerged such as a network providing access and enabling collaboration. The responses indicated that this network would enhance collaboration (mentioned by 23 individuals). Not only collaboration with academics but collaborating with industry partners:

> "It could enhance outputs including papers, collaborative grant writing/ submission of proposals. Help in identifying partners. Increase reach and impact of research findings, identify the right questions to address - across a range of conditions. Inform service developments in health. Useful for identifying industrial partners." [University staff]

The network was identified by 10 individuals as having the potential to keep them informed regarding funding. Thirty-three identified it as an information point to find out about existing research. The network was perceived to have a role in connecting researchers and letting people know what work was ongoing as well as improve accessibility to other people's work, ideas, expertise and experience:

> "Learn through other people's experience. Easy access to information" [Government organisation]

It was also seen as being about improving the dissemination of individual network member's work. The network was identified has having the potential to be a repository and store information about research (past, current, planned) and therefore seen as a resource of information:

> "We often get asked questions about whom is doing a piece of research on X, so it would be good to be able to direct people to a central place where all info is stored; we would be better informed when scoping out our own research projects" [Other]

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[4] http://www.hse.gov.uk/
[5] http://www.sheffield.ac.uk/economics/events/wpeg

It could enable individuals to ask questions relating to a field where they have less experience. The network could add value by promoting cross disciplinary working. Negative responses included issues with clogging up emails, information already being available and issues with time to keep up with another network.

Discussion

Main finding of this study

This work identified a willingness by a group of largely academics and some other professionals to develop a virtual network on the topic of health and work and wellbeing. Respondents suggested that there was a need to develop a network which was both active and vibrant, with virtual platforms as well as regular face-to-face events.

The respondents suggested that this network should be run by an academic institution in collaboration with other organisations (such as PHE, DWP) or professional organisations. This suggests that participants are looking for the network to be run by credible independent bodies, perhaps indicating that only this will foster the trust and engagement of all the diverse groups (27, 35).

Our aim was to scope the potential of a virtual network to support dissemination, collaboration and innovation amongst the research community. The research active community suggested many ways in which such a network would add value to their efforts it could act as a platform where there is information posted and a repository of existing research and evidence (exploitative function (29)), but also where they could also interact with each other (explorative function (29)). As well as a virtual platform the research active community wanted face-to-face events. This fits with existing literature, that networks, if they are to develop as anything beyond a simple repository of captured information, they need to enable interaction, to begin to build the relationships on which collaboration and the sharing of knowledge ultimately depends (36, 37).

What is already known on this topic

Whilst pockets of research and good practice may exist, it is often difficult to know who is doing what and where. Exchanging knowledge, collaborating and sharing learning across different professional bodies, organisations, networks and disciplines is challenging (38-40). Work, health and wellbeing have similar challenges in terms of sharing good practice and knowledge. Being able to harness this knowledge,

experience and expertise, and sharing it with people who are positioned to action it, is difficult. These challenges are unlikely to be solved by establishing a virtual network alone.   The challenges are multiple and interdependent. First, to get the most useful information shared, (and this is difficult where existing and historical relationships may be strained), but also then to get this information mobilised to where it is needed, when it is needed (with resources, dedicated support, in a timely way) by those who can action it. A virtual network may only be a first step in this challenging process (41, 42). The issue of working in silos was brought up by our respondents and has been acknowledged in earlier reports (43, 44).

What this study adds

While there is much academic literature on the topic of Work & Health & Wellbeing, few address the issue of what the barriers are to conducting this type of research, or what researchers in this field would like to further their work and collaborations. This study describes a scoping exercise to establish the need for a national network on the broad research topic of Work & Health & Wellbeing. It presents the views and perceptions of a largely academic community on the current difficulties in conducting research within the field of Work & Health & Wellbeing, with representation from the NHS, local authorities and other organisations. There was little difference in the views of the differing employment sectors responding to this questionnaire. Responses highlighted potential conflicts between 'research gold standards' such as the Randomised Controlled Trial (RCT) and what was feasible and practical to achieve within the workplace environment, as well as issues where outcome measures needed to be re-thought, for example 'ability to work'.

This work highlights what motivates individuals to join networks and what they think would make a successful network including who should run it and how it would add value to their work. These findings are commensurate with the existing literature on the core conditions under which networks (IT-enabled (virtual) and social capital) work well. While respondents were members of various groups and networks, no one group dominated and there was a clear need to develop a new network on this topic. The result of this scoping exercise was for PHE to commission the

development of this network in 2015 lead by a team at Manchester University with the authors (AL and CB) as co-applicants. The Health, Work and Wellbeing Network' (HWWN) has run two well attended workshops, developed a website and a jiscmail account (virtual network).

Limitations of this study

This was a commissioned piece of research and the time-scale for this entire project was three months. There is every possibility that key stakeholders were missed, particularly those from outside the academic community. With the time constraints there was little time to pilot questionnaire and the timescale for completion of the questionnaire was short, less than 4 weeks. In addition to academics and their partner organisations, we had proposed sending the questionnaire to some of the national bodies representing employers and trade unions as well as other interested parties. However the work was perceived to be 'academic' in nature and not of relevance to other parties. For example, when an email request to complete the questionnaire were sent to one Trade Union asking it to distribute it to relevant individuals the response was that this was an academic exercise and not of any relevance to them. Due to the limited time, the team reviewed this option and focused on other strategies.

Conclusions

In line with the comments received from respondents, this scoping exercise has resulted in the establishment of a new virtual network on the topic of 'work and health and wellbeing'. This network will serve as a a platform where there is information posted and a repository of existing research and evidence (exploitative function) as well as network where individuals and organisations can interact (explorative function).

Acknowledgments

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