CREATING SPACE FOR MENTAL WELLBEING: IDENTIFYING AND APPLYING SALUTOGENIC CONCEPTS FROM A BODY OF WORK REPRESENTING TWO HEALTH INTERVENTIONS

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This thesis is submitted in partial fulfilment of the requirements of the School of Health, Sport and Bioscience, University of East London, for the degree of Doctor of Philosophy, by publications.

September 2020

Abstract

There is increasing recognition that clinical approaches to health which focus on symptoms and treatment are often ineffective when applied to those experiencing mental health challenges. The Recovery Movement in psychiatry, along with a proliferation of asset-based approaches to health promotion, illustrate a growing appetite for health and other public services to recognise and tackle the social determinants of poor mental health. These interventions have their roots in salutogenesis, a philosophy of health which moves away from treating deficits and gives primacy to the strengths and resources available to individuals and their communities.

This thesis revisits the empirical findings from five studies focussed on two different community health interventions with the aim of identifying how salutogenic concepts may be operating within the interventions to promote mental wellbeing. Using a meta-ethnographic approach, I construct a line-of-argument synthesis which reveals how salutogenic concepts such as identity and connectedness; empowerment; hope and meaning, are already present within the interventions, and are promoted by the creation of healthy spaces and positive relationships. I then explore how this knowledge, along with the future collaboration of health professionals, local councils and community organisations, could be used to inform the more explicit salutogenic development of public services in order to more effectively facilitate the promotion of mental wellbeing.

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List of abbreviations

DHSC Department of Health and Social Care (UK)

GP General practitioner (UK)

GRR General Resistance Resource

NHS National Health Service (UK)

SOC Sense of coherence

SPN Social prescribing network (UK)

Acknowledgements

I would like to thank my supervisors Professor Angela Harden and Professor John Turner without whom this thesis would not have been possible. Their expert support and guidance have been invaluable throughout.

This PhD by publications is dedicated to the memory of Jamie Prendergast.

1 Introduction

This thesis will begin by outlining the significant challenges globally of treating and preventing poor mental health, before detailing a salutogenic focus to recovery-orientated mental health services and the development and implementation of community public health interventions. First described by Aaron Antonovsky in 1979, salutogenesis refers to a model of health on a continuum of ease/disease where previous experience directly impacts an individual's ability to cope with the inevitable stresses and tensions of life. In its most broad definition, salutogenesis is an orientation and approach which focusses on health origins and the assets which promote health, as opposed to risk factors and pathology (Mittelmark et al, 2017). Salutogenesis often makes an appearance within isolated areas of community health interventions (e.g. aiming to empower individuals in behaviour change). By applying a salutogenic perspective to the synthesis of my submitted body of work, I intend to facilitate understanding of how a more explicit and over-arching salutogenic approach could benefit the promotion of mental wellbeing within health and other public services in the future.

The challenge of defining and promoting mental wellbeing

The World Health Organisation (WHO) defines mental wellbeing as:

> *"a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community"* (WHO, 2004 p.12).

However, this definition has been challenged for ignoring contextual components like culture and circumstance, and for suggesting that mental wellbeing is a static rather than fluctuating state where anger, sadness and feeling unwell are all "*part of a fully lived life for a human being"* (Galderisi et al, 2015:231). The UK mental health charity MIND offers a more fluid definition which goes some way to recognising the above, making it more compatible with the salutogenic approach of this thesis:

> *"Mental wellbeing describes your mental state - how you are feeling and how well you can cope with day-to-day life. Our mental wellbeing is dynamic. It can change from moment to moment, day to day, month to month or year to year"* (MIND, 2011).

MIND goes on to list a number of factors which promote mental wellbeing; like feeling confident, the ability to feel and express a full range of emotion, positive relationships and a sense of engagement with the world.

According to reports from the World Health Organisation depression is now the leading cause of illness and disability worldwide with an estimated 300 million people affected (WHO, 2017). In the UK, around one in four people will experience a mental health problem each year (McManus et al, 2009) and by 2030, it is predicted that mental disorders will account for almost a third of the $47 trillion estimated cost of non-communicable diseases to the global economy (Hock et al, 2012). In England the National Health Service (NHS) total spend on mental health for 2019/20 was £13,325 million (NHS England, 2020) taken from £123.4 billion of England's total health budget allocation (DHSC, 2019). The economic cost in the UK for treating physical conditions related to poor mental health is in the region of £8 billion a year (Naylor et al, 2012), with an estimated £3 billion of this accounting for medically unexplained symptoms (Bermingham et al, 2010). Tackling poor mental health both in terms of treatment and the promotion of mental wellbeing is now a global priority (WHO, 2013). This is evidenced in the UK by the recent NHS Long Term Plan which promises to improve access to mental health care for all age groups (NHS England, 2019) as well as promoting mental wellbeing through initiatives such as *Make Every Contact Count* (MECC), where health professionals are encouraged to use every interaction with patients as an opportunity to support them in positive behaviour change (Public Health England, 2020).

A survey by the World Health Organisation (WHO) of member states found 80% of mental health funding in middle-income countries was focussed on inpatient care. Only 63% of member states had at least "*two functioning national, multisectoral mental health promotion and prevention programmes"*; addressing issues such as stigma and mental health literacy (WHO, 2017:2). The health system in the UK has also had a tendency to be reactive to poor health (both mental and physical) rather than proactively using preventative measures, a focus reflected in the significantly lower funding allocated to primary as opposed to secondary care (NHS England, 2019). With primary care services in the UK at risk of becoming overwhelmed (Baird et al, 2016) there has been a move to a more preventative approach to health in order to reduce pressure on the NHS and potentially lead to long term economic savings (Polley & Pilkington, 2017; Friedli & Parsonage, 2009). At the same time there has been increased recognition that social inequalities can impact significantly on individual wellbeing, both mental and physical (Marmot, 2005). This has led to a call for improved outcomes

in terms of quality of life for those experiencing mental health challenges, including a focus on prevention and the promotion of public mental wellbeing (Boardman & Friedli, 2012).

Following the Recovery Movement within psychiatry which began in the US in the late 1980s, patients themselves have campaigned to have a voice in their own care and this has influenced a move away from symptom-driven treatment of mental illness to a more person-centred approach, which recognises the abilities as well as the needs of those with mental health challenges (Gask & Coventry, 2012). In the UK, the recent NHS Long Term plan (2019) has made a commitment to developing community-focussed health interventions like social prescribing, which seek to harness expertise and resources in the local environment, recognising that the underlying causes of poor mental health often originate from the social context of an individual's life. However, despite this progression in understanding, mental health services in the UK are still very much informed by the bio-medical model of medicine which has tended to ignore the perspective of individuals in the treatment of their own mental health challenges (Davidson et al, 2006).

With this in mind, researchers have been keen to identify the elusive components that promote mental wellbeing and a number of models have been developed and validated. These include Ryff and Singer's (1996) six-dimensional model and Martin Seligman's (2011) PERMA model from the discipline of positive psychology, as well as Leamy et al's (2011) CHIME framework representing key concepts identified in mental health recovery. While the terminology within the models may differ, all move away from a deficit model of health by identifying underlying concepts such as hope, meaning, connectedness and a sense of autonomy as being key to the promotion of mental wellbeing. These concepts, which can be considered salutogenic in nature (Erikson & Lindstrom, 2010) are examined in more detail below.

Salutogenesis, generalised resistance resources and sense of coherence

Salutogenesis is an approach to health which focuses on the strengths and resources that can positively impact on an individual or a community's resilience to stress events.

"If indeed each of us, by virtue of being a living system, is in the river, and none are on the shore, it follows that a dichotomous classification—well/diseased or health/illness, as some would have it to take account of 'subjective' self-assessment—is inappropriate. A continuum model, which sees each of us, at a given point in time,

somewhere along a healthy/dis-ease continuum is, I believe, a more powerful and more accurate conception of reality." (Antonovsky,1996 p.14)

According to Antonovsky the move from one end of the health continuum to the other can be understood by the individual's ability to access what he termed *generalised resistance resources* (GRRs). GRRs may include aspects of an individual's life such as material resources (e.g. money), strong sense of self, coping strategies, knowledge, skills and social support. Unlike curative medicine (where the focus is on people who are drowning) and preventive medicine (with a focus on trying to stop individuals falling into the river in the first place) the salutogenic approach assumes everyone is already in the river and concentrates on enabling people to swim. The ability to swim and survive the stresses inevitably encountered in life can be related to each individual's unique set of GRRs (Antonovsky,1996).

Generalised resistance resources in turn impact on the individual's overall *sense of coherence* (SOC) which describes a person's ability to deal with stress and adversity (Antonovsky,1996). SOC is broken down into three components: *comprehensibility* (belief that the cause of the stress is understood), *manageability* (belief that resources to cope are available) and *meaningfulness* (the motivation to cope). Life experiences which lead to a strong sense of coherence (for example, experiencing caring and responsive parenting) equip the individual with the ability to apply resources appropriate to a given stressful situation. A large proportion of Antonovsky's work was devoted to the development of the SOC and its subsequent evaluation scale, which is a 24-item tool designed to measure an individual's ability to make sense, ascribe meaning and feel in control of their lives. Antonovsky proposed that SOC, as well as the principle of GRRs, could also be applied to communities as well as individuals. Salutogenic theory can be seen to underpin the development of asset-based approaches to health where the skills and resources within communities are recognised and activated in order to enhance the health of those that live there. These commonly include the practical skills and expertise of individuals, as well as those of statutory and third sector organisations (Hopkins & Rippon, 2015). To date, salutogenic approaches to health have been most obviously visible in medicine and psychology where the SOC scale is utilised as a diagnostic tool. Less attention has been given to the challenge and potential benefits of applying the SOC in ways which might support the promotion of public mental wellbeing (Eriksson & Lindström, 2006).

Salutogenic concepts

Salutogenic concepts can be found at the heart of asset-based health interventions where communities with a strong SOC are more able to activate their combined resources. Asset-based interventions often emphasise co-production partnerships with local people in the identification of need, as well as the development and delivery of health initiatives (Foot & Hopkins, 2010). The salutogenic process of empowerment (of individuals and communities) is a common aim of asset-based health interventions and was a core aim of the two community health interventions under investigation (described below) from which the publications submitted for this critical appraisal originate.

Empowerment, described as "*the process of gaining freedom and power to do what you want or to control what happens to you"* (Cambridge English Dictionary, 2020) is related to feelings of competence, control and self-esteem and the ability to tolerate change, all of which contribute to the dimension of manageability within a person's SOC. In an extension of Nussbaum's theory of human functioning (1990), Markham and Aveyard (2003) propose that an individual can only achieve the sense of autonomy that comes from feeling empowered after their basic needs (food, water etc) have been met, as well as realising a series of *human capacities* including the ability to think and reason and have concern for others. Empowerment has been recognised as a key process in the promotion of mental wellbeing, featuring in both public health literature and asset-based approaches to community health intervention (Hopkins & Rippon, 2015); as well as more individualistic psychological perspectives where a sense of internal locus of control can empower an individual to recover from poor mental health (Benassi, 1988).

Hope and meaning have also been found to be important concepts in the promotion of mental health recovery (Frankl, 1985; Ryff & Singer, 1996; Seligman, 2011) and are often recognisable as low or absent in individuals suffering from depression. Spandler and Stickley (2011) point to a *compassion deficit* in mental health care in the UK, concluding that this needs to be addressed in order to engender a sense of hope of recovery in patients. Meaning is a very personal concept and may take many different forms including finding meaning in helping others, bringing up children or work. From a salutogenic perspective these could be seen as contributing to the meaningfulness

dimension of an individual's SOC. A positive sense of identity may also contribute to SOC by integrating individual perception of all three dimensions of comprehensibility, manageability and meaningfulness. In their systematic review of mental health recovery processes, positive sense of identity was identified by researchers as a key factor in recovery (Leamy et al, 2011). Leamy et al describe this in terms of the ability to incorporate all aspects of the experience of self in a way that does not pathologise or ascribe any ongoing mental health challenges as the entire sense of identity. When a medical professional declares that a patient is depressed, this can reduce the sense of internal control for that person encouraging depression to become a major part of their identity (Benassi, 1988).

''The self-fulfilling nature of being told by an expert that you'll never be able to work or live independently or have children or be treatment free is profoundly damaging…and often wrong." (Slade, 2009 p.41)

Another salutogenic concept found to be important for mental wellbeing and the promotion of mental health recovery is a sense of connectedness (Erikson & Lindstrom, 2010; Leamy et al, 2011). From the perspective of mental wellbeing this is usually conceptualised as social connectedness to others. However, equally important is a sense of connectedness to oneself. This ability to connect with oneself and form relationships with others has been described by Antonovsky as an important GRR arising from positive relationships in childhood. Experiencing *self-alienation* as the result of childhood trauma or emotional neglect (Fisher, 2017), can compromise an individual's ability to form new relationships and access support through social networks (Bowlby, 1977). At the other end of the scale, a sense of connection to something greater than oneself helps us find our place in the world. Common ways to experience this are through faith or religious belief (Gallet, 2016) and feeling connected to the natural environment (Jennings & Bamkole, 2019). This is often discussed within the context of communities, where even the adverse impacts of financial disadvantage can be offset by the strength of social connections within the community (Magis, 2010).

Community interventions and salutogenesis

"The challenge for public mental health is to translate the principles of recovery, and what is known about recovery-oriented practices, into action at the community level." (Boardman & Friedli, 2012:9)

Boardman and Friedli (2012) describe the key role of local government in *place shaping*. This is evidenced by the recent creation of Health and Wellbeing Boards in the

UK which are tasked with the responsibility of co-ordinating local health, social care and other services in order to promote public wellbeing within neighbourhoods.

Asset-based approaches to health often target community spaces as a way of improving the local environment and there is a wealth of literature examining the positive impact of green and blue spaces on mental wellbeing (Depledge et al, 2011; Bjork et al, 2008). As part of the *Well London* intervention (described in more detail below) one project *Healthy spaces* had the remit of transforming community gardens. Ulrich et al (1991) developed a psychophysiological theory of stress recovery by examining the effects of an individual's perception of their environment on health. Architecture has also been shown to positively influence health outcomes, particularly when urban design incorporates the natural environment (Ulrich, 1984; Van den Bosch & Sang, 2017). Barton and Grant's (2006) *Health map for the local human habitat* encourages collaboration between town planners and health policy makers by recognising the myriad of interactions between people and the environment that impact on wellbeing.

Space as a GRR can be understood on a number of different levels from our natural environment and the buildings we inhabit, to the provision of time within the tasks of a working day where it is possible to take a step back and reflect (Smith et al, 2014). Space to reflect within primary care services is a key part of social prescribing interventions where patients are afforded time to discuss their experiences in detail with their Link Worker, in a way that would not normally be possible. Outdoor spaces often make an appearance at the endpoint of social prescribing pathways where patients are referred via primary care services onto local support activities like gardening or walking groups.

Schools have always had a role to play in health promotion, however it is only relatively recently that research has shown that interventions which target the school environment can be effective (Bonell et al, 2013; Bonell et al, 2018). The WHO's *Health Promoting Schools* (Langford et al, 2015) represent a commitment to combining health education with teaching and promoting personal growth through developing relationships between the school and the wider community, moving away from a sole focus on academic achievement to a more salutogenic orientation. Markham and Aveyard (2003) argue that Health Promoting Schools should focus on core human capacities including practical reasoning, affiliation with other humans and the ability to plan and organise. These can

be seen as closely linked to the concept of SOC, particularly in relation to the dimensions of comprehensibility and manageability. The SOC scale has already been used within schools to investigate connections between stress, aggression and other health indicators (Kristensson & Öhlund, 2005) and researchers have suggested developing this further into a more salutogenic approach to the school curriculum (Nilsson & Lindström, 1998).

Two community health interventions: 'Well London' and social prescribing

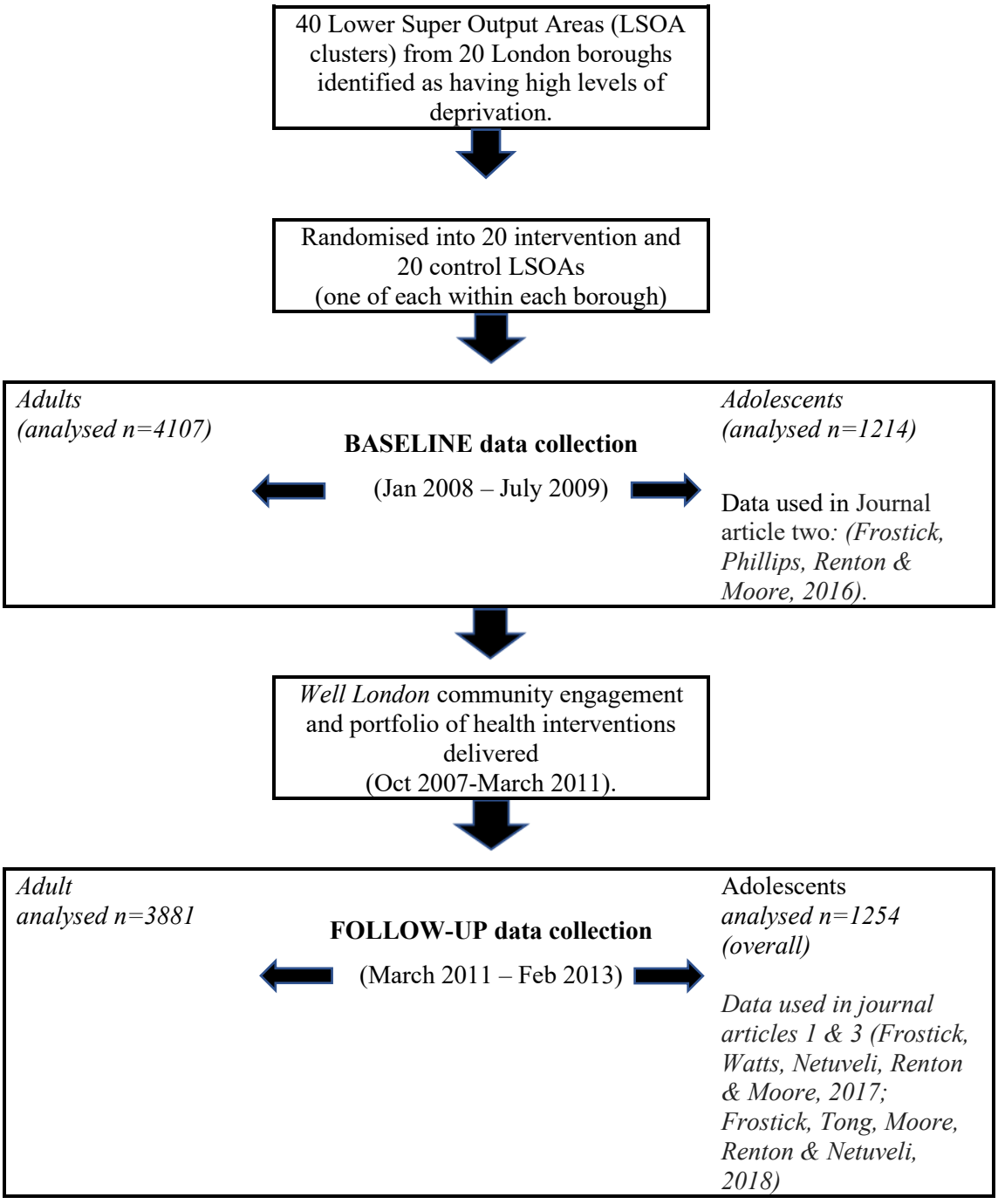
The five journal articles selected for inclusion in this PhD by publication originated from research conducted into two different asset-based community health interventions targeting populations of adults and adolescents from deprived neighbourhoods in London.

The *Well London* programme aimed to improve the mental and physical wellbeing of residents in areas of high deprivation in London by delivering a portfolio of community health interventions based on an extensive community consultation process. These initiatives included projects such as *Buywell* which worked with local outlets to improve access to healthy food; and *DIY happiness* which used creative workshops to increase psychological resilience. The initial delivery of fixed-term health interventions has now evolved into a framework which can be embedded within communities, taking a co-production approach to promoting wellbeing and reducing inequalities. Seeking to empower local communities, *Well London* sought to intervene at:

> "*multiple levels - individual, community, wider determinants of health and service delivery – to remove the barriers that constrain individual and community health, wellbeing and resilience*." (Tobi et al, 2015).

The programme was evaluated using a cluster randomised controlled trial (cRCT) representing one of the most ambitious and rigorous evaluations of its kind. Three of the publications selected for inclusion in this body of work report on analyses of baseline and/or follow-up data (see Figure 1 below) collected from the *Well London Adolescent Survey.* This survey was conducted in parallel to an adult baseline and follow-up survey and nested qualitative components (Phillips et al, 2012). Full details of the design of the evaluation of the *Well London* programme can be found in Wall et al (2009).

Figure 1: Evaluation design for the *Well London Programme* Cluster Randomised Control Trial (cRCT)



The second of these interventions *social prescribing*, targets adults over the age of 18 and while aims and referral criteria vary, improving poor mental health is usually a primary outcome for all social prescribing schemes. Many social prescribing interventions begin with (and are often located within) a primary care setting with the pathway for patients ending at the community level. Patients experiencing poor mental

health, social and practical difficulties are referred by their General Practitioner (GP) to a social prescribing Link Worker with whom they can build a collaborative and supportive relationship before being referred onto further support or activities within their community. Social prescribing offers a unique opportunity for patients within primary care to explore their experiences in a holistic rather than purely medical way. It has recently been formally recognised by the UK National Health Service (NHS) as a health intervention that has the potential to support individuals experiencing psycho-social challenges (e.g. social isolation, homelessness and debt) that are beyond the normal remit of primary care services to treat (NHS England, 2019). Social prescribing also provides a much-needed bridge between the clinical expertise of health professionals and the valuable experience of third sector organisations located within an individual's community.

Aim of the appraisal and list of submitted publications

The five journal articles included in this critical appraisal originated from my work researching externally-funded community health interventions at the Institute for Health and Human Development (University of East London). The promotion of mental wellbeing is a common thread across the interventions, as well as within the research reported in each journal article, and the aim of this thesis is to explore the research question: '*How can an explicit salutogenic approach be applied systematically to the promotion of public mental wellbeing?'* The publications (listed below) dated within the last six years are part of a wider body of work spanning more than a decade, and are a reflection of my academic journey in terms of the development of my skills and expertise as a researcher in the area of mental health promotion and recovery.

1. **Frostick, C.**, Watts, P., Netuveli, G., Renton, A. and Moore, D. (2017). Well London: results of a community engagement approach to improving health among adolescents from areas of deprivation in London. *Journal of Community Practice*, *25*(2):235-252.
2. **Frostick, C.**, Phillips, G., Renton, A. and Moore, D. (2016). The educational and employment aspirations of adolescents from areas of high deprivation in London. *Journal of Youth and Adolescence*, *45*(6):1126-1140.
3. **Frostick, C**., Tong, J., Moore, D., Renton, A. and Netuveli, G. (2018). The impact of academies on school connectedness, future aspirations and mental health in

adolescents from areas of deprivation in London. *Pastoral Care in Education*, *36*(4):325-342.

4. Bertotti, M., **Frostick, C**., Hutt, P., Sohanpal, R. and Carnes, D. (2018). A realist evaluation of social prescribing: an exploration into the context and mechanisms underpinning a pathway linking primary care with the voluntary sector. *Primary Health Care Research & Development*, *19*(3):232-245.
5. **Frostick, C**. and Bertotti, M. (2019). The frontline of social prescribing–how do we ensure Link Workers can work safely and effectively within primary care? *Chronic Illness*, p.1742395319882068

My development as a researcher

I began work on the first two *Well London* journal articles at roughly the same time and it was a steep learning curve to interpret the results and write-up the main outcomes and findings of such a large, complex and multi-component cRCT. I persevered, motivated by the desire not to let years of work engaging schools and adolescents go to waste. I also felt strongly that it was important that the data from the adolescents was heard and acknowledged. Social mobility was a hot topic politically at the time (Milburn, 2009) and our findings showed that adolescents from areas of deprivation could and did have high aspirations for their future.

The null findings for the main outcomes from the *Well London* intervention as a whole meant that it was potentially of little interest to editors. I worked hard to expand on the contextual factors, particularly for adolescents, that may have contributed to the findings beyond lack of actual effect. Again, I felt that it was important that the work was published and that lessons could be learnt for future interventions of this kind. In the cover letter to the editors, I successfully argued the case for combatting the bias towards positive results in the literature and the main outcomes for adolescents from the *Well London* programme was published.

Major changes had taken place within the UK education system between the baseline and follow-up data collections on the *Well London Adolescent Survey*. In the four years between the visits, many of the schools had been either partially or wholly rebuilt during the process of turning failing schools into new academies. The students' behaviour was also often unrecognisable from their previous cohort and I wanted to see if the adolescent survey's wellbeing measures (mental health, aspirations and school

connectedness) had captured any differences in wellbeing for academy adolescents from their non-academy counterparts. Academy schools in the UK have been a contentious subject in the academic literature (Gorard, 2009) and again, it was a particular challenge to find a home for a journal article with a more positive message about academies.

I began work on my first social prescribing evaluation in 2014. This was not an area I knew much about at the time, but when I started qualitative interviews with participants, I realised immediately the potential of this pathway as a mental health intervention. My interviewees would speak movingly about the life-changing impact social prescribing had had for them, however more often than not the quantitative data did not support their experiences (Bertotti et al, 2015). I felt it was important that these stories were heard in a more impactful way than just a couple of quotes within a journal article or report. After being successfully awarded dissemination funding from The Health Foundation, I produced a video of patients and health professionals reflecting on their experiences of setting up and participating in a social prescribing pilot within primary care. This is now used by the Open University and NHS England as a training tool for health professionals.

I became a founding steering group member of the national Social Prescribing Network (SPN), an organisation set up to bring health professionals, researchers and community organisations together for the first time to create a platform of shared learning and future initiatives. It was an exciting time and following a sold-out King's Fund conference in 2018, the steering group presented a vision of social prescribing for the future to an all-parliamentary committee at the House of Commons in January 2019. Our work came to fruition as the NHS announced their commitment to rolling out social prescribing nationally (NHS England, 2019) and we were invited to a dedicated event held at Clarence House, where we were thanked by HRH Prince of Wales for our contribution to the development of social prescribing as a mainstream health intervention.

As a practicing counselling psychotherapist my particular interest has always been in the role of the social prescribing Link Worker. I was aware from early on of the challenges associated with this role and the potential dangers of not training and supporting Link Workers adequately in their work. I felt it was important to hear from the Link Workers themselves to allow them to voice their concerns at this crucial time

as social prescribing was being upscaled within the NHS. The expertise I have developed as a researcher at the forefront of this exciting journey means that I am regularly consulted by academics, policy makers and health professionals to advise on the development, implementation and evaluation of social prescribing schemes across the UK. Most notably this led to a commission to write an editorial on implementing social prescribing in primary care for the British Journal of General Practice (Frostick & Bertotti, 2019a). I also received funding from NHS England to collaborate on the development and delivery of training for social prescribing Link Workers and have been asked to advise on the new national framework for Link Worker training in England.

2. Critical appraisal and synthesis of published work

Epistemological stance

Critical realism is a philosophical approach concerned with structure, agency and causation which offers an alternative paradigm to both positivist and interpretivist theoretical perspectives (Bhaskar, 1998). It sits between the epistemological extremes of idealistic interpretivism, where it is argued that we have no shared reality outside of our own constructions or collective understanding, and more positivist approaches which assert that our knowledge of the world is representative of external reality. Critical realism presents a knowledge of a shared reality that is filtered by the beliefs and perceptions of individuals (Barnett-Page & Thomas, 2009) and offers a framework for understanding human interactions at the individual, systemic and societal level. This is particularly appropriate when dealing with individual psychological experience where *"the central challenge is to accommodate knowledge from both observation and subjective experience"* (Slade, 2009 p.46). As such, it offers a potential middle-ground for exploring subject matter that has often been polarised into either a primary focus on the psychology of the individual or the study of community level processes. Edwards et al (2014) observe that:

> *"Critical Realism research can and should usually incorporate data of different sorts, quantitative and qualitative, historical and current - anything that the researcher (or their research subjects) have good reason to think makes a difference"* (p.15)

As my publications represent qualitative, quantitative and mixed method approaches, including a realist evaluation, the critical realist stance is particularly appropriate for this appraisal.

Summary of submitted publications

Journal article one

Frostick, C., Watts, P., Netuveli, G., Renton, A. and Moore, D. (2017). Well London: results of a community engagement approach to improving health among adolescents from areas of deprivation in London. *Journal of Community Practice*, *25*(2):235-252.

In the first article submitted as part of this PhD by publication, I report the main outcomes for adolescents of the *Well London* intervention, a community-based health intervention delivered by multiple agencies to areas of deprivation in London; co-produced with local people with the aim of improving their physical and mental wellbeing (Phillips et al, 2012). Adolescence offers an opportunity to intervene and positively impact on health before adult patterns of behaviour set in. Data was collected from 1254 11-16 year olds across the 20 control and 20 intervention areas as part of the cluster randomised controlled trial (cRCT) to test the effectiveness of the intervention. The data collection took the form of a paper questionnaire administered within schools between 2007 (baseline) and 2011 (follow-up). The questionnaire included a number of validated and bespoke tools to measure both physical and mental wellbeing, including questions on aspiration levels and feelings of connectedness to school (see Appendix 2 for full survey items). The regression analysis showed no effect of the intervention on mental wellbeing, physical activity and healthy eating. In the discussion I explore why this might be (beyond lack of actual effect), proposing that local neighbourhoods may not reflect the natural community of the participants. The adolescents often travelled outside of their local area to school and to socialise and I argue that it is their school communities, not targeted as part of the interventions, which are likely to be the most influential environments on their health behaviour.

I project-managed the evaluation of the *Well London Adolescent Survey*, wrote this journal article and interpreted the findings. This article represents an important contribution to the literature by informing the development of future large-scale community health interventions and combatting positive publication bias.

Journal article two

Frostick, C., Phillips, G., Renton, A. and Moore, D. (2016). The educational and employment aspirations of adolescents from areas of high deprivation in London. *Journal of Youth and Adolescence*, *45*(6):1126-1140.

In the second article submitted I examined the aspirations and mental wellbeing of adolescents in more detail through further analysis of data collected from the *Well London Adolescent Survey* at baseline. There had been a recent push by the previous Labour government in the UK to try to increase the educational and occupational aspirations of adolescents from areas of deprivation, assuming these to be low (Milburn, 2009). We conducted a multiple regression analysis on the data provided by 1214 *Well London* adolescents and found evidence to the contrary, that they actually reported high aspirations across each of the three dimensions measured (*school educational aspirations, higher educational aspirations* and *occupational aspirations*), and that high aspirations overall were positively associated with mental wellbeing.

An unexpected finding from the analysis was that the more connected the adolescent felt to their school, the lower their aspirations were. This was in direct contrast to findings from the US where studies have found the opposite to be true (Anderman, 2002; Goodenow, 1993). School connectedness measures variables relating to a sense of safety, belonging and closeness of relationships to others within the school community (Resnick et al, 1997). I go on to discuss these findings in terms of school ethos, particularly in failing schools, and the relative influences of peer, teacher and parent relationships on this age group. Previous research highlights the strong influence of peers on engagement with education (Strand & Winston, 2008; McNealy & Falci, 2004) and I suggest that this may be responsible for our findings. As expected, mental wellbeing was significantly positively associated with aspirations, and an understanding of the importance of a good education alongside positive social connections was also found to be key to the promotion of high aspirations among this population of adolescents.

I conceived and wrote this article which was accepted for publication in 2016. The aspirations of adolescents from areas of deprivation stimulates ongoing interest from researchers, educationalists and policy makers alike and this study has made an impact

having been cited 24 times in a diverse range of publications primarily focussed on student aspirations and disadvantage.

Journal article three

Frostick, C., Tong, J., Moore, D., Renton, A., & Netuveli, G. (2018). The impact of academies on school connectedness, future aspirations and mental health in adolescents from areas of deprivation in London. *Pastoral Care in Education*, *36*(4):325-342**.**

I conceived this third article to build on the findings from article two by investigating further the construct of school connectedness and its impact on mental health. Using only follow-up data from 639 of the 11-16 year olds who completed the *Well London Adolescent Survey,* two groups within the sample were compared comprising of those participants who attended an academy school and those who attended a non-academy (community or faith) school. Academy schools in the UK are similar to Charter schools in the US and are granted more autonomy than other state schools in areas such as spending and curriculum development. Follow-up rather than baseline data was used for this study because the intervening four-year period coincided with the initial phase of roll out of academies to replace failing schools, often found in areas of deprivation.

Findings from the regression analysis revealed that adolescents who attended one of the new academies in these areas showed higher levels of school connectedness, which was found to be a significant mediating factor positively impacting on mental wellbeing. I interpret these findings within the context of what these academy schools may have been doing differently to promote a sense of connectedness among students, and how this knowledge may be applied to the benefit of all schools.

I conceived, wrote and interpreted the findings for this article, which was the first of its kind to look at the influence of academy schools on wellbeing as opposed to academic outcomes. This original slant captured the interest of Pastoral Care in Education where it was accepted for publication in 2018.

Journal article four

Bertotti, M., **Frostick, C.,** Hutt, P., Sohanpal, R. and Carnes, D. (2018). A realist evaluation of social prescribing: an exploration into the context and mechanisms underpinning a pathway linking primary care with the voluntary sector. *Primary Health Care Research & Development*, *19*(3):232-245.

Social prescribing is a health intervention often based within primary care which allows patients with psycho-social challenges to be referred on to a social prescribing coordinator or Link Worker. The Link Worker may then work with them over a number of sessions to identify further support within the community and help them to access this. Journal article four was developed from the findings of an evaluation into a London-based, social prescribing intervention from the realist perspective of "*what works, for whom and in what circumstances"* (Pawson & Tilley, 1993). The original evaluation used a range of clinical and bespoke measurement tools to capture physical and mental health outcomes for patients who had been referred onto the social prescribing pathway (Bertotti et al, 2015). Qualitative interviews were also carried out with patients and other stakeholders.

By breaking the intervention down into three stages, as opposed to trying to evaluate the pathway as a whole, this article highlights important aspects of each stage from GP referral, through interaction with the social prescribing coordinator (Link Worker) to the final stage of referral onto further support and/or activities within the community. The social prescribing Link Worker stage was found to be key to patient engagement in the pathway, and for those experiencing poor mental health in particular, this relationship had the potential to empower individuals to transform their health behaviour. Referral onto the final community stage of the social prescribing pathway in most cases offered the opportunity to improve social connectedness and increase social capital.

I collected the data and conducted interviews with participants for evaluation as well as contributing substantially to the conception and structuring of this journal article. This contribution was most evident in the separation and interpretation of the social prescribing intervention as three distinct stages. I also wrote the section describing the sessions between the patient and their social prescribing coordinator (Link Worker) which highlights the crucial role of the social prescribing Link Worker in supporting positive behaviour change. This journal article was the first to approach the complex health intervention of social prescribing from a realist perspective and has contributed significantly to the research base on social prescribing having been cited 32 times.

Journal article five

Frostick, C. and Bertotti, M., 2019. The frontline of social prescribing–How do we ensure Link Workers can work safely and effectively within primary care? *Chronic Illness*, p.1742395319882068

In the fifth journal article included for submission, I look at the role of the social prescribing Link Worker in more detail. It was clear from journal article four that the Link Worker is central to the success of the social prescribing pathway and in the light of NHS plans to roll out social prescribing as a mainstream health intervention (NHS England, 2019), I felt it was important to know more about how the Link Worker role could be upscaled safely and effectively. Three focus groups and three in-depth interviews were carried out with 13 Link Workers as part of the evaluations of three London-based social prescribing schemes in order to identify the skills, experience and training they felt were necessary to be able to carry out their work safely and effectively. I then conducted a thematic analysis (Braun & Clarke, 2006) of the data, identifying clear themes around the complexity of their role, skills and training and the need for support. Link Workers describe the challenges of defining their place within existing services whilst building relationships with patients, health professionals and community organisations alike.

Link Workers spoke of the importance of previous life and work experience, and personal qualities and skills such as empathic listening and the ability to build trust relationships with patients. A variety of training was valued, particularly some form of counselling training where Link Workers could learn to build collaborative trust relationships with their clients. Self-care, clinical and peer support were also felt to be essential in order to carry out the work safely.

I conceived and wrote this article, as well as conducting the primary data analysis. At a time when the NHS has pledged to invest in social prescribing as a mainstream health intervention this article makes an essential contribution in terms of often overlooked aspects of Link Worker training and support. I presented the preliminary findings of this study at the 2nd International Social Prescribing Conference in London (July 2019) where it was well-received by Link Workers and health professionals alike.

Synthesis of published work: a meta-ethnographical approach

As part of the critical appraisal of my work, I revisited the findings and conclusions from my five journal articles taking a salutogenic perspective and using a meta-ethnographical approach (Noblit & Hare, 1988). The seven stages of meta-ethnographic synthesis (see Table 1 below) describe a method of reviewing the findings of existing research to identify comparable, reciprocal or refutational themes (Britten et al, 2002). Using Schutz's (1962) description of first and second order constructs, Britten et al (2002) go on to describe how these constructs can be used to document the evolution of meaning as the synthesis progresses. First order constructs represent the *"everyday understandings of ordinary people"* (p.211); second order constructs are author interpretations of these; and finally, third order cross-cutting themes are developed representing the synthesis of the group of studies as a whole.

Table 1: Applying Noblit & Hare's seven step process to the synthesis of my body of work

1. Getting started.	Clarifying the focus of the synthesis as a mechanism to identify the presence of salutogenic processes within the body of work and gain understanding from the empirical research as to how these might then promote mental wellbeing.
2. Deciding what is relevant to the initial interest.	In this case, the studies of interest are the findings from the five publications submitted for this critical appraisal, exploring the impact of two community health interventions designed to promote mental wellbeing.
3. Reading the studies.	Taking a salutogenic focus, the studies were re-read in order to identify the main concepts relating to the identified area of interest. Careful note was taken of contextual information such as the setting for each study, to enable further development of interpretations.
4. Determining how the studies are related.	Recurring salutogenic themes began to emerge across the five journal articles. These themes of: *space; hope and meaning; empowerment; identity and connectedness;* and *relationships* were identified across the five studies and are examined in more detail in the section below.
5. Translating the studies into one another.	In Table 2, these themes are cross-checked and evidenced with the interpretations of empirical findings from each of the five journal articles in order to preserve the original meanings from each study.
6. Synthesising translations.	At this stage of the synthesis it became clear that the salutogenic themes arising from each study are expressed in a similar, rather than oppositional manner. This enabled a line-of-argument to be developed as an interpretation of the body of work as a whole.
7. Expressing the synthesis.	This thesis is an expression of the line-of-argument synthesis developed in the form of interpretations and explanations of the empirical findings from my submitted publications.

In recognition of the diversity of methodology utilised throughout the individual studies, I have adapted Schutz's (1962) conception of first order constructs to represent the empirical findings (whether qualitative or quantitative) from each journal article rather than as lay meanings. Second order constructs are then represented as author interpretations within each individual study until finally third order cross-cutting themes develop from the body of work as a whole.

Although the settings (schools and health services) and methodologies (quantitative, qualitative and mixed methods) of the publications differ, commonalities can be seen to develop into recurring themes (Britten et al, 2002), and during the comparison of the studies it became clear that the themes were comparable and could be developed into a line-of-argument explanation of the whole body of work. Table 2 below illustrates the emergence of these recurring salutogenic themes, evidenced by the interpretations of empirical findings within each individual study.

Table 2: Second order constructs arising from the publications (as author interpretations of first order findings within the context of the wider literature)

Context and salutogenic themes	***1. Frostick, Watts, Netuveli et al. (2017). Well London: Results of a Community Engagement Approach to Improving Health Among Adolescents from Areas of Deprivation in London.***	***2. Frostick, Phillips, Renton et al. (2016). The educational and employment aspirations of adolescents from areas of high deprivation in London.***	***3. Frostick, Tong, Moore et al. (2018). The impact of academies on school connectedness, future aspirations and mental health in adolescents from areas of deprivation in London.***	***4. Bertotti, Frostick, Hutt et al. (2018). A realist evaluation of social prescribing: an exploration into the context and mechanisms underpinning a pathway linking primary care with the voluntary sector.***	***5. Frostick & Bertotti (2019). The frontline of social prescribing–How do we ensure Link Workers can work safely and effectively within primary care?***
Population	1254 low-SES adolescents	1214 low-SES adolescents	639 low-SES adolescents	99 adult patients; 52 GPs	13 social prescribing Link Workers
Study methodology	cRCT (quantitative survey)	cRCT (quantitative survey)	cRCT (quantitative survey)	Realist Evaluation (qualitative interviews; quantitative Survey Monkey data).	Qualitative (focus groups and interviews.)
Analysis	Linear regression analysis	Multiple regression analysis	Linear regression analysis	Thematic Analysis	Thematic Analysis
Setting of data collection	Secondary school environment	Secondary school environment	Secondary school environment	Primary care services	Primary care services
Space (both physical space and time to reflect)	School-based intervention may have had greater impact on mental wellbeing in adolescence than local community.		New school building may have had a positive impact on mental health by improving school connectedness.	Organisational structures provide space to explore needs and build relationships. Time pressure can be a barrier to appropriate referral into service.	Space (time) within primary care services to take a holistic and patient-centred approach. Space (time) for self-care and reflection in supervision.
Hope and meaning		Socio-economic deprivation alone does not lead to lower aspirations. Aspiration for personal success in the future is not always aligned with academic success.		Level of interaction between patient and Social Prescribing Coordinator can be calibrated to the individual needs and aspiration of patient.	

Empowerment			Schools with strong leadership and increased levels of autonomy can be more responsive in allocating resources to the needs of their students.	Social Prescribing Coordinators *activate* patients to make positive changes to their lives.	Empowering patients to make their own choices. Link Worker training and the need to feel competent.
Identity and connectedness	Membership of school and peer groups may have more impact on adolescent identity than local area.	The ethnicity present in area of deprivation the longest (White British) had the lowest aspirations for the future.	Academy schools may be more successful than non-academies at promoting a sense of safety and belonging, potentially through strong identities and well-defined disciplinary structures.	Clinician identification with bio-medical training can be a barrier to appropriate referral into social prescribing service.	Developing and promoting a professional identity.
Relationships	School-based relationships have been shown to be influential on mental wellbeing in adolescence.	Aspirations for the future are promoted by supportive family relationships	Relationships to peers and teachers (school connectedness) are positively associated with mental wellbeing.	Importance of social prescribing co-ordinator's ability to build collaborative trust relationships with patients, GPs, 3rd sector. Community organisations promote social networks.	Building (trust) relationships with patients, health professionals and 3rd sector. Importance of personally supportive relationships.

Explanation of salutogenic themes

Space refers to both physical space in the form of buildings and the wider environment, and also space in the form of time to explore and reflect on one's own challenges or professional practice. Examples of this can be seen in the influence of the school environment for adolescent mental wellbeing (journal article one) the potential benefits of academy schools and their new buildings (journal article three) as well as the space provided for patients to explore their needs and challenges with their Link Worker (journal articles four and five).

Hope and meaning, both important personal concepts in individual mental health recovery (Leamy et al, 2011; Seligman, 2011), are represented in the adolescent's aspirations (hope) for the future (journal articles two and three) and the meaning placed on their academic education in order to further these aspirations (journal article two).

Empowerment, which can also be understood as a sense of agency or control over one's life, was a core focus of both the *Well London* programme and most social prescribing interventions. In journal articles four and five it emerges in the intent to *activate* or empower patients towards positive behaviour change, and is also illustrated in the increased autonomy afforded to academy schools enabling them to potentially direct their resources in a more nuanced way (journal article three).

Identity and connectedness refer to an alignment of individual values and norms and sense of membership (connection) to groups. This becomes a theme in the interpretation of the lack of effect of the *Well London* intervention for adolescents who are likely to identify more closely with their school rather than their home environment (journal article one). It is also represented by the unexpected finding from journal article two was that higher aspirations were associated with lower school connectedness scores. In journal article four, GPs who identify with a bio-medical approach in treating their patients may miss the opportunity to explore the potential causes of poor mental wellbeing offered by referral onto a social prescribing pathway. In journal article five, Link Workers work hard to establish their professional identity in a new role within the health service.

Relationships are a central theme for all five journal articles. In journal article one, the findings from the Well London intervention are discussed within the context of the important relationships during adolescence, and there is clear evidence of the positive

impact of supportive parental relationships on levels of adolescent aspiration in journal article two. In journal article three positive relationships with peers, teachers and school itself (as measured by higher levels of school connectedness in adolescents in the academy sample) are associated with higher pro-social mental health scores. In journal articles four and five, the trust relationship built between Link Workers and their patients is found to be key to the success of the intervention as a whole. Link Workers' ability to form effective professional relationships with health professionals and community organisations is another important skill for the success of the pathway, as are their own needs for supportive relationships in such a demanding role.

These five salutogenic themes are developed as a line-of-argument synthesis into cross-cutting third order interpretations (Table 3) where the pathway from the empirical (first order) findings from each journal article, through author interpretations of these findings (second order) and finally to the development of (third order) constructs, is documented. A line-of-argument synthesis is concerned with *inference* and can be used to clarify important themes across the whole body of work which may not be initially obvious. The meta-ethnographic synthesis begins by repeatedly comparing the individual studies before *clinically inferring* meaning to the whole body of work (Noblit and Hare, 1988 p.62-64).

Table 3: Pathways illustrating the line-of-argument translation of empirical findings through author interpretations to third order constructs

JOURNAL ARTICLE	**FIRST ORDER** (Empirical findings from publications)	**SECOND ORDER** (interpretation of findings within context of wider literature)	**THIRD ORDER**
Frostick, Watts, Netuveli et al. (2017). Well London: Results of a Community Engagement Approach to Improving Health Among Adolescents from Areas of Deprivation in London.	No significant intervention effect on mental wellbeing, healthy eating or physical activity: a) Defined communities may not be an accurate reflection of adolescent's natural community. b) Interactions within the school environment could have led to a dilution effect. c) Population churn. d) Sample bias/tool imprecision	School environment and school-based relationships may have a greater impact on mental wellbeing in adolescence than home/local environments. Membership of school and peer groups may have more impact on adolescent identity than local area.	Space, both environmental and in the form of time to reflect, can impact on the mental wellbeing of adolescents within schools and patients in primary care organisations.
Frostick, Phillips, Renton et al. (2016). The educational and employment aspirations of adolescents from areas of high deprivation in London.	High group level of aspiration despite socio-economic deprivation.	Financial deprivation alone does not lead to lower aspirations.	
	Mental wellbeing positively associated with aspirations.	Hope (aspirations) and mental wellbeing are positively related.	
	White British reported lowest aspirations (both educational and occupational).	The ethnicity present in area of deprivation the longest (White British) will have the lowest aspirations for the future.	Mental wellbeing is positively related to a sense of hope and meaningful purpose.
	Perceived parental support for education largest positive association.	Aspirations for the future are promoted by supportive family relationships.	
	Girls had higher educational aspirations than boys.		
	School connectedness negatively associated with aspiration (unexpected finding).	Aspiration for personal success in the future is not always aligned with academic success.	
Frostick, Tong, Moore et al. (2018). The impact of academies on school connectedness, future aspirations and mental health in adolescents from areas of deprivation in London.	Academies significantly improved levels of school connectedness.	Schools with strong leadership and increased levels of autonomy can be more responsive in allocating resources to the needs of their students. New school buildings may have had a positive impact on mental wellbeing by improving school connectedness.	Increased autonomy leads to a sense of empowerment and the potential to change.
	No direct effect of academies on mental health or aspirations.		A strong sense of identity may influence feelings of connectedness, safety and belonging.
	Academies have a mediating effect on pro-social mental health scores through school connectedness	Academy schools may be more successful than non-academies at promoting a sense of safety and belonging, potentially through	

		strong identities and well-defined disciplinary structures.	
Bertotti, Frostick, Hutt et al. (2018). A realist evaluation of social prescribing: an exploration into the context and mechanisms underpinning a pathway linking primary care with the voluntary sector.	The explanatory power of realist evaluation is stronger when the intervention is sub-divided into different Context Mechanism Outcome configurations as this enables us to unpack different contextual factors and mechanisms operating at different stages. a) Referral: Challenge of overcoming time pressure at consultation as well as clinical training bias so that GPs feel SP is an appropriate referral pathway. b) Social Prescribing Co-ordinator provides unique space to explore needs/build trust relationship and offer knowledge of local support orgs. c) Community organisations offer further support and provide opportunities to increase social networks.	Clinician identification with bio-medical training can be a barrier to appropriate referral into social prescribing service. Space to build trust relationships. Community activities promote social connectedness. Importance of social prescribing co-ordinator's ability to build collaborative trust relationships with patients, GPs and the third sector.	Relationships with trusted others can promote a sense of positive identity and empowerment, as well as hope and meaning.
	'What works… Social Prescribing Co-ordinators (SPC) are pivotal to the effective functioning of the service, responsible for the activation and initial beneficial impact on users.	Social prescribing co-ordinator's build collaborative and person-centred trust relationship. Level of interaction can be calibrated to the individual needs and aspiration of patient.	
	…for whom… SP seems to work for all those patients who need support and motivation to act upon improving their own health and well-being, particularly if their needs are non-clinical or have a non-clinical component.	Social prescribing coordinators *activate* patients to make positive changes to their lives.	
	…under what circumstances.' a) Interpersonal relationships (GP, SPC, Support orgs).	Clinician identification with bio-medical training can be a barrier to appropriate referral into social prescribing service. Resources needed to provide time with SPC for person-centred approach.	

	b) Economic conditions (availability of services, resources to fund SPC stage). Presence of dynamic third sector. c) Institutional arrangements (where SPC based, location of support services).	Organisational structures provide space for holistic intervention.	
Frostick & Bertotti (2019). The frontline of social prescribing–How do we ensure Link Workers can work safely and effectively within primary care?	Theme 1: Defining a new and evolving role a) complexity of the work b) need to build effective relationships c) boundaries of service.	Developing and promoting a professional identity. Empowering patients to make their own choices. Building (trust) relationships with patients, health professionals and community organisations. Time and space *embedded into the fabric of the primary care system* to take a holistic and patient-centred approach.	
	Theme 2: Skills and training a) feeling competent b) training c) life and work experience	Link Worker training and the need to feel competent at work.	
	Theme 3: Support a) impact of work on self b) supervision c) self-care	Importance of personally supportive relationships. Space (time) for self-care and reflection in supervision.	

Line of argument interpretation arising from the synthesis of published work

In answering the question '*How can an explicit salutogenic approach be applied systematically to the promotion of public mental wellbeing?'* the meta-ethnographic synthesis demonstrates that salutogenic concepts are present within the two interventions represented by this thesis; *Well London* and social prescribing. Three of the five third-order concepts extrapolated from the synthesis refer directly to the salutogenic concepts of hope, empowerment and positive identity. The fourth and fifth, space and positive relationships, can be seen as GRRs which have the capacity to promote these principles within the school and health service environments. Developing these GRRs or assets may then have the potential to positively influence individual resilience to stress or overall sense of coherence by improving levels of comprehensibility, manageability and meaning (Antonovsky, 1996). However, as Noblit and Hare (1988) make clear:

"The meaning of meta-ethnography is always subjective...each study is translatable into our own experience and the reflective reader will be able to see their own beliefs and experiences from a new perspective." (p.80).

3. Third order constructs in more detail

Space, both environmental and in the form of time to reflect, can impact on the mental wellbeing of adolescents within schools and patients in primary care organisations.

The importance of environmental space in promoting mental wellbeing is a theme in journal article one where *Well London's Healthy spaces* intervention aimed to improve local community spaces to promote mental wellbeing. Previous research has demonstrated that there is an association between attachment to place and mental wellbeing in children (Jack, 2010). However, the interpretation of the null findings reported in this paper suggested that *Well London* may not have had an impact on adolescents, because the interventions did not target the school environment. School building and classroom design have also been shown to impact positively on student

learning (Barrett et al, 2013) and in journal article three, I acknowledge the potential impact that new buildings may have had on the finding that adolescents attending academy schools reported higher levels of school connectedness than their counterparts at non-academy schools. A large number of schools, many in the process of converting to academies, were rebuilt or refurbished across the UK during the period following baseline data collection of the *Well London Adolescent Survey*.

Bhaskar (2009) describes space as a necessity in order for movement and change to take place. These important spaces are not necessarily delineated by physical boundaries and can be found at many different levels but often go unnoticed. Bhasker (2009) also refers to the concept of *absence* and the potential to use this as a diagnostic tool to identify what is missing in an organisation or social context, as this can indicate what needs to change. Limited resources and overwhelming workloads mean that both physical space, as well as space in the form of time to reflect, is often absent from our health services and school environments.

The Link Worker stage of the social prescribing pathway is unique in terms of primary care interventions in providing a truly person-centred space where patients are given time to explore the challenges they are facing. In journal article four I explore this theme in more detail by unpacking the intervention and identifying stage two of the pathway (where patients meet their social prescribing coordinator or Link Worker) as key to supporting patients in positive behaviour change. In journal article five, Link Workers discuss the challenge of carving out a professional space that they can inhabit within an already well-established structure of roles. Supportive spaces were also found to be of paramount importance to Link Workers in the form of supervision.

Mental wellbeing is positively related to a sense of hope and meaningful purpose

Hope in the form of aspirations for the future, comes through most strongly in journal article two which looks at the aspirations of adolescents from areas of deprivation in London. The main finding from this study was that a sense of hope for the future was not primarily determined by levels of deprivation in terms of financial wealth. Journal article two discusses some of the other factors that may impact on aspirations for this group of adolescents including supporting them to find value and meaning in education.

When breaking down the social prescribing intervention into three component stages in journal article four, it became clear that there are opportunities to promote hope and meaning at every stage of the pathway. At the point of referral, the GP may transmit a sense of hope of an intervention that can help, which is then strengthened through the patient's relationship with their Link Worker. In the final stage of the social prescribing intervention, individuals may find meaning within the activities they undertake, particularly when these involve helping others (e.g. volunteering).

Increased autonomy leads to a sense of empowerment and the potential to change.

The underlying theory of change for *Well London* was based on the empowerment of individuals and transformation of communities by harnessing skills and assets for the benefit of local people. In journal article one, the importance of the school community in promoting mental wellbeing was addressed, particularly for those adolescents who already experience challenges in their lives as a result of social inequalities such as financial poverty and inadequate social support. Self-Determination Theory (Ryan & Deci, 2000) describes three basic needs for mental wellbeing: *autonomy, competence* and *relatedness* and is one of several suggested underpinning theories for how school and other environments may facilitate the promotion of mental wellbeing.

In journal article three, wellbeing outcomes were compared for adolescents attending academy schools with those attending local community schools. Adolescents attending academy schools reported significantly higher levels of school connectedness than their local community counterparts and this in turn had a positive mediating impact on mental wellbeing. The theme of empowerment continues in the interpretation of these results where I suggest that the increased autonomy afforded to the headteachers of academy schools may allow them to allocate resources in a more targeted way in order to improve outcomes for their students. However, one of the reasons the academisation of schools in the UK has been so controversial is that this empowerment comes with the concern that corporatising school leadership may not be in alignment with the best interests of pupils (Courtney, 2015).

Empowerment is at the heart of social prescribing as a health intervention where a key aim is usually to support patients to take responsibility for their health by making

positive behaviour changes. In journal article four, sessions between patients and their Link Worker were identified as the point at which this sense of empowerment can be activated and the patient is supported to make positive changes to their life. A strong theme for Link Workers in journal article five was the need to feel competent to do their job and meet the challenges brought by their clients. This sense of empowerment could be achieved through training as well as by more explicit acknowledgement of the skills and experience they already possess.

Journal article four was born out of learning from the evaluation of social prescribing schemes as complex health interventions. It became clear that many of the traditional clinical measurement tools for mental health were not capturing the changes that patients were describing when asked about their experiences of the pathway, and this was potentially denying them a voice in their future care. Addressing this area of empowerment for patients while at the same time providing the medical profession and health policy makers with the evidence required for future investment in such schemes, takes careful thought. Mixed methods are now seen as standard practice in the evaluation of complex health interventions, as are newer measurement tools like the Health and Wellbeing Star (Lloyd et al, 2016) which captures some of the context of the individual's life. The *My Concerns and Wellbeing* (MYCaW) tool also gives primacy to patient experience by asking them to define their own challenges rather than relying on clinical labels they may have been assigned by health professionals (Patterson et al, 2007).

A strong sense of identity may influence feelings of connectedness, safety and belonging.

Identity formation is seen as the key task of adolescence by Eriksson (1968) in his work on the life course stages. The findings of journal article three have strong themes of connectedness and identity which have been shown to be important aspects of mental health recovery (Leamy et al, 2011). Adolescents attending academy schools within this sample reported higher levels of school connectedness in their students than those reported by adolescents attending non-academy schools. School connectedness measures feelings of belonging and safety among students and in the discussion I

suggest the original academy schools in the UK, which were replacing failing schools in areas of deprivation, often used strong branding and well-structured disciplinary measures to separate themselves from their predecessors. This is a strategy commonly used by higher education institutions (Belaji, 2016) and may contribute to a positive sense of identity (as well as feelings of safety) for students.

Journal articles one and two highlight the importance of the school environment and its role in supporting adolescents to achieve their full potential by developing a school ethos that cultivates a sense of community and belonging. Markham & Aylward (2003) in their Theory of Human Functioning in schools, discuss possible responses of individual pupils to the "*instructional and regulatory orders of the school"* (p.1213). They propose that these responses will vary depending not only on the ethos of the school but are also influenced by the sociocultural norms and values of the student. This theoretical standpoint may lend support to the surprising finding from journal article two that, in contrast to previous research in this area (Crespo et al, 2013), a sense of school connectedness for these adolescents was inversely related to reported levels of aspiration. Previous research demonstrates that alienated groups can feel a greater sense of connection and autonomy when school control boundaries or values are weakened to allow external social norms and values to penetrate (Bernstein, 1996; McNeely & Falci, 2004).

Relationships with trusted others can promote a sense of positive identity and empowerment, as well as hope and meaning.

The theme of relationships is present in every journal article and is arguably the most influential of all the third order concepts. In his Four Planar of social being, Bhasker recognises the importance of relationships at the level of the wider environment, organisations, relationships with others and also at the level of subjective individual experience: a) *material transactions with nature;* b) *inter-personal intra- or interaction;* c) *social relations;* and d) *intra-subjectivity* (Bhaskar, 2011).

In journal article one, which reports on the main findings of the Well London intervention for adolescents the lack of intervention effect was discussed in relation to the targeted geographical area of the adolescent's home, which was not necessarily the

most influential community for them. Adolescents may travel a long way from home to attend school where they spend the majority of their time and it is these relationships, with peers, teachers and the school community as a whole which are likely to exert the most influence over their mental wellbeing (Resnick,1997; Biddle et al, 1980). This is reflected in the findings of journal article three, where good relationships between adolescents, their teachers and peers (and the school organisation as a whole) are again found to increase levels of school connectedness which then positively impact on pro-social mental health scores. However, in journal article two when it comes to the development of aspirations for the future, parental relationships are found to be the most influential.

In journal article four, relationships become a major theme, most obviously in the end point of the social prescribing pathway which is primarily concerned with developing social connectedness, particularly for those who are socially isolated or experiencing poor mental health. In both journal article four and five, I go on to unpick stage two of the social prescribing intervention and the role of the social prescribing co-ordinator (or Link Worker). The importance of the Link Worker's ability to support their patient by developing a trust relationship comes to the fore in both of these journal articles and highlights the potential for social prescribing to be far more than just a signposting service. There is a wealth of research in the field of counselling and psychotherapy identifying the relationship built between client and therapist as the key motivating factor for change (Hubble et al, 1999). Patient accounts of their experience with their Link Workers re-enforce the importance of skills like empathy, congruence and unconditional positive regard, identified as the core conditions needed to successfully build a trust relationship (Rogers,1962). In journal article five, Link Workers describe how they help the patient to feel heard and understood, paving the way for positive behaviour change.

Unlike the community intervention approach of *Well London* there is recognition within social prescribing, in the inclusion of the Link Worker stage of the intervention, that not everyone is equal in their ability to develop new social connections and relationships. For some, the relationship with their social prescribing Link Worker may be the first experience of a positive relationship they have ever known and therefore a crucial

template for developing further relationships. It is here that the relationship with oneself, often missed in purely community-based interventions, becomes critical. If the individual has not experienced the sense of safety and self-worth that comes from having their needs met in early childhood (Bowlby,1977), they are likely to find it challenging to develop new relationships built on trust and realistic expectations of having their needs fulfilled by others.

4. Conclusion

In this thesis I have revisited a body of my work representing two health interventions, both of which were developed with the intention of promoting mental wellbeing through interactions between individuals and their communities. The journal articles which make up this critical appraisal have all contributed original empirical findings to the research base of adolescent wellbeing or to the development of social prescribing as a mainstream health intervention. By taking the unusual approach of applying a retrospective salutogenic focus to the synthesis of this work it has been possible to not only identify the presence of salutogenic concepts inherent within the interventions, but also to gain a broader perspective on the processes that may facilitate the promotion of mental wellbeing.

Salutogenic concepts in the form of empowerment, hope and meaning, as well as positive sense of identity, are already present within the two health interventions of *Well London* and social prescribing and these concepts are known to be key components mental health recovery (Leamy et al, 2011). The line-of-argument meta-ethnographic synthesis reveals that salutogenic concepts are being promoted within the health interventions through generalised resistance resources (GRRs) such as space and positive relationships, with the potential to promote increased resilience in individuals and their communities. Previous research into the application of salutogenic approaches to health promotion has highlighted the importance of both "*temporal and spatial dynamics"* as well as relationships with others in the activation of other GRRs and individual sense of coherence (SOC) (Bauer, 2017). By incorporating health-promoting spaces and relationships into the development and implementation of future

interventions, the findings from this synthesis could be used to inform a more explicit and effective salutogenic approach to the promotion of public mental wellbeing.

Our health and public services often use potentially stigmatising language, protocols and measurement tools that are at best ineffective and at worst damaging to mental wellbeing. The empirical findings from my journal articles interpreted alongside the wider evidence base, demonstrate that by prioritising relationships between teachers, students and their caregivers a sense of hope and meaning can be promoted (Frostick et al, 2016). Trust relationships within health services are key to encouraging mental wellbeing through the promotion of a positive identity and sense of empowerment for patients (Bertotti & Frostick, 2018; Frostick & Bertotti, 2019). My findings also demonstrate that financial poverty alone does not in itself necessarily lead to poor mental health suggesting that poverty of relationships is likely to be the single biggest influencing factor on individual mental wellbeing (Frostick et al, 2016; Sen,1992). However, it is the underlying ability to connect to others which enables the formation of these positive relationships (Bowlby, 1977; Fisher, 2017) and it is important to bear this in mind when designing and implementing interventions that seek to expand the social networks of individuals. In light of the impact of the current Coronavirus pandemic, it feels particularly important to investigate further the ways in which people can be supported to experience a sense of connection to themselves, others and the wider environment.

My research suggests that identity, in the form of strong branding and fit-for-purpose school buildings, could increase a sense of school connectedness which in turn has a positive mediating effect on mental wellbeing (Frostick et al, 2018). Within health services, space to explore challenges and feel that your needs are being heard, has been shown to be a vehicle for promoting mental wellbeing and this may take the form of Link Worker sessions for patients (Bertotti & Frostick, 2018) as well as the provision of supervision for Link Workers and other health professionals (Frostick & Bertotti, 2019). In the wider community, mental wellbeing could be promoted by developing community spaces which offer the opportunity for reflection (Frostick et al, 2017).

While both individualistic and community approaches to mental wellbeing could benefit from a more explicit and over-arching salutogenic approach, they also have much to learn from each other. Communities can be conceptualised as having both individual and collective identities (Vaandrager & Kennedy, 2017) and as such could adapt salutogenic tools like the sense of coherence scale (more commonly used as an evaluation tool in psychology) to identify need within communities. Health services on the other hand, could learn from community asset-based interventions by moving away from a reliance on symptom diagnosis and treatment, to recognising the influences that place and relationships exert on mental wellbeing.

Individuals do not exist in isolation. They are connected in one way or another to the people and places around them, even when their primary experience is one of disconnection. Recognising not only the social circumstances of a person's life which may impact negatively on their health (Marmot, 2005) but also the assets that exist in all communities to support individuals, is central to improving and maintaining mental wellbeing (Boardman & Friedli, 2012). These assets could be as diverse as local walking groups, cooking classes or organisations which support with job seeking and finances. Almost all have the potential to promote positive mental wellbeing by empowering individuals and expanding their social networks. As Hopkins and Rippon (2015) make clear, health inequalities can be tackled by understanding and addressing *"the structural, material, social and relational barriers to individuals and communities achieving their full potential"* (p.5).

Salutogenic approaches to health have in the past tended to be primarily the domain of quantitative research (Vaandrager & Kennedy, 2017). In my own work I have begun to address this by adapting the salutogenic concepts found to be important in mental health recovery, which have already been developed into a quantitative measurement tool (Williams et al, 2015), into a topic guide for qualitative interviewing. If salutogenic theory is incorporated explicitly into the development of public services, schools and health interventions from the very start, desirable outcomes (such as the empowerment of individuals and their communities) can be promoted at every stage and through every interaction from inception and design through to implementation, in order to create an environment where the mental wellbeing of all is prioritised.

In the UK, this change is beginning to occur as health interventions like social prescribing are becoming incorporated into the NHS and medical students are beginning to be trained in alternative approaches to health promotion. In my work as a researcher, and through my role as steering committee member for the SPN, I have made a significant contribution to the development of social prescribing as a mainstream, preventative health intervention. I believe that health interventions of this kind which can facilitate collaboration between health professionals and local third-sector organisations have the potential to be an effective vehicle for encouraging a more salutogenic (and therefore effective) approach to the future promotion of public mental wellbeing.

My practice as a psychotherapist has undoubtedly influenced every area of this thesis beyond the obvious focus of mental wellbeing. The articles chosen for inclusion were either written by me (as first author) or I contributed significantly to them. This means that my voice is very present throughout in the interpretations of the findings as well as the design of some of the studies. When I am working with my clients, I am aware of their own experiences of relationships, identity, hope and meaning, and often one or more of these areas will become the focus of our work together.

The meta-ethnographic approach can be seen as both a strength and weakness of the critical appraisal. It enabled me to synthesise the work in a systematic and rigorous manner, clearly showing each step of the development from my original empirical findings to the line of argument rather than just presenting a collection of thoughts. The framework of critical realism compliments the approach of meta-ethnography as both offer an inclusivity in terms of the content and the varied methodological approaches presented by each individual study. However, meta-ethnography is an inherently subjective approach and another researcher may well have come to alternative conclusions based on the same data. Despite this, I feel I was able to evidence each step of the development of the line-of-argument and that my critical synthesis of the body of work as a whole offers a valid and rigorous approach.

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Appendix 1: Journal articles included in the critical appraisal

Note: Journal articles originally included in thesis submission pp 45-116. Replaced by linked citations for repository deposit.

1. Frostick, C., Watts, P., Netuveli, G., Renton, A. and Moore, D. 2017. Well London: Results of a community engagement approach to improving health among adolescents from areas of deprivation in London. Journal of Community Practice. 25 (2), pp. 235-252.

https://doi.org/10.1080/10705422.2017.1309611

https://repository.uel.ac.uk/item/84vw1

2. Frostick, C., Phillips, G., Renton, A. and Moore, D. 2015. The Educational and Employment Aspirations of Adolescents from Areas of High Deprivation in London. Journal of Youth and Adolescence. 45 (6), pp. 1126-1140.

https://doi.org/10.1007/s10964-015-0347-4

https://repository.uel.ac.uk/item/854w8

3. Frostick, C., Tong, Jin, Moore, D., Renton, A. and Netuveli, G. 2018. The Impact of Academies on School Connectedness, Future Aspirations and Mental Health in Adolescents from Areas of Deprivation in London. Pastoral Care in Education. 36 (4), pp. 325-342.

https://doi.org/10.1080/02643944.2018.1528626

https://repository.uel.ac.uk/item/8464w

4. Bertotti, M., Frostick, C., Hutt, Patrick, Sohanpal, Ratna and Carnes, Dawn 2018. A realist evaluation of social prescribing: an exploration into the context and mechanisms underpinning a pathway linking primary care with the voluntary sector. Primary Health Care Research & Development. 19 (3), pp. 232-245.

https://doi.org/10.1017/S1463423617000706

https://repository.uel.ac.uk/item/84846

5. Frostick, C. and Bertotti, M. 2019. The frontline of social prescribing – how do we ensure Link Workers can work safely and effectively within primary care? Chronic Illness.

https://doi.org/10.1177/1742395319882068

https://repository.uel.ac.uk/item/86z84

Appendix 2: Well London Adolescent Survey questionnaire

	Office use
ID number	
School code	
I/C	
LSOA	

Adolescent Survey

Thank you for agreeing to take part in the Well London Adolescent Survey.

There are six main sections to the survey: Activities; Wellbeing; Where you live; Food and drink; Creative activities and General health.

Please complete all the questions in the six sections.

All answers you give are given in confidence. This means that no one will see your answers except the Well London researchers and when the results are talked about no one will be able to tell who gave the answers.

Please read the instructions on each page carefully as the way in which you answer questions changes. Instructions are written in boxes like this one.

For most questions you will only need to tick or write in one box, but some questions require you to tick more than one box.

Before we start the main sections we first need to ask a few questions about you and your family.

Today's date	Day	Month	Year

Your gender (tick box) Male ☐ Female ☐

Year you are currently in at school

Your place of birth

To which of the ethnic groups listed below do you consider you belong?

White British	☐	Chinese	☐
White Irish	☐	Other Asian background	☐
Other White background	☐	Mixed White and Black Caribbean	☐
Black (or Black British) Caribbean	☐	Mixed White and Black African	☐
Black (or Black British) African	☐	Mixed White and Asian	☐
Other Black background	☐	Other mixed background	☐
Asian (or Asian-British) Indian	☐	Other ethnic background	☐
Asian (or Asian-British) Pakistani	☐	Other	☐
Asian (or Asian-British) Bangladeshi	☐	If other please write here	

What is your religion:

How long you have lived in the UK.

(tick the box or write the number of years)

All my life ☐

How many people in total including yourself live in your home?

Which relatives also live in the place you live most of the time?

(Tick to show who lives with you, and for others who live with you write down how many)

Mother	☐		
Stepmother	☐		
Father	☐		
Stepfather	☐		
Sister(s)	☐	How many?	
Brother(s)	☐	How many?	
Grandparent(s)	☐	How many?	
Other relatives	☐	How many?	

What language do you and your family speak when at home?

	Not at all	Once	Twice	More than twice
In the last 12 months how many times have you been away somewhere on holiday with your family?	☐	☐	☐	☐

	Own	Rent
Does your family rent or own your home	☐	☐

How many rooms are there in your home not including, kitchen, bathroom and hall?

What job does your father or stepfather or senior male in your home do?

Unemployed ☐

(Write it in the box or tick if they are unemployed)

What job does your mother or stepmother or senior female in your home do?

Unemployed ☐

(Write it in the box or tick if they are unemployed)

	Yes	No
Does your family or anyone you live with own a car or van?	☐	☐
Do you have your own bedroom at home?	☐	☐
Does your family own a computer with access to the internet?	☐	☐
Does your father or mother regularly read books?	☐	☐
Does your family regularly read a newspaper?	☐	☐

If yes write here the name of the paper

1. Activities

(a) This section is all about your activities in and out of school.

*Please think about how many times you have done some exercise over the **LAST 7 DAYS** and try and remember what you did.*

Look down the list below and find the activities you did. Then tick a box to say how many times you did it in the last week. If what you did is not on the list then write it in the box marked other at the bottom.

How many times did you do …?

	Not at all	1-2 times	3-4 times	5-6 times	7 or more times
1. Football	☐	☐	☐	☐	☐
2. Netball	☐	☐	☐	☐	☐
3. Basketball	☐	☐	☐	☐	☐
4. Jogging or running	☐	☐	☐	☐	☐
5. Skateboarding	☐	☐	☐	☐	☐
6. Swimming	☐	☐	☐	☐	☐
7. Skipping	☐	☐	☐	☐	☐
8. Dance	☐	☐	☐	☐	☐
9. Aerobics	☐	☐	☐	☐	☐
10. Tag or 'It'	☐	☐	☐	☐	☐
11. Bicycling	☐	☐	☐	☐	☐
12. Rollerblading	☐	☐	☐	☐	☐
13. Tennis	☐	☐	☐	☐	☐
14. Walking for exercise	☐	☐	☐	☐	☐

15. Rounders	☐	☐	☐	☐	☐
16. Badminton	☐	☐	☐	☐	☐
17. Hockey	☐	☐	☐	☐	☐
18. Rugby	☐	☐	☐	☐	☐
19. Rowing/canoeing	☐	☐	☐	☐	☐
20. Volleyball	☐	☐	☐	☐	☐
21. Ice skating	☐	☐	☐	☐	☐
22. Climbing	☐	☐	☐	☐	☐
23. Others (write below)					
	☐	☐	☐	☐	☐

*Now please think some more about the **LAST 7 DAYS** and answer the following questions by ticking only one of the boxes below each question.*

24. In the last 7 days during your physical education (PE) classes, how often were you very active (got out of breath or sweaty) and trying as hard as you could?

I don't do PE	hardly ever	sometimes	quite often	always
☐	☐	☐	☐	☐

25. In the last 7 days what did you normally do at lunch (besides eating lunch)?

I mostly sat around	I mostly stood around or walked around	I ran or played a little bit	I ran around and played quite a bit	I ran and played hard most of the time

☐ ☐ ☐ ☐ ☐

26. In the last 7 days how many times straight after school did you do some sport, or dance, or play games in which you were very active?

none	once	2-3 times	4-6 times	every day
☐	☐	☐	☐	☐

27. In the last 7 days on how many times outside of school hours (not just straight after school) did you do sports, dance, or play games in which you were very active?

none	once	2-3 times	4-6 times	every day
☐	☐	☐	☐	☐

*This next question is about **LAST WEEKEND***

28. Last weekend how many times did you do sports, dance, or play games in which you were very active (got out of breath)?

none	once	2-3 times	4-6 times	7 or more times
☐	☐	☐	☐	☐

*The next two questions are about the **WHOLE OF LAST WEEK***

29. Were you sick ***LAST WEEK***, or did anything prevent you from doing your normal physical activities? (tick just one box)

Yes	No
☐	☐

If Yes, what prevented you?

30. Which one of the following best describes your activity for ***THE LAST WEEK***?

(Read all five statements before ticking the one that best describes you)

All or most of my free time was spent doing things that involve little physical effort	☐
I sometimes (1-2 times last week) did physical things in my free time (e.g. played sports, went running, swimming, bike riding etc)	☐
I often (3- 4 times last week) did physical things in my free time	☐
I quite often (5-6 times last week) did physical things in my free time	☐
I very often (7 or more times last week) did physical things in my free time	☐

*Now tick in the boxes below to show on average over **THE LAST MONTH** how often you normally do physical activity on each day of the week*

31. On average how often did you do hard physical activity on…?

	Never on this day	Hardly ever	Sometimes	Often	Very Often
Monday	☐	☐	☐	☐	☐
Tuesday	☐	☐	☐	☐	☐
Wednesday	☐	☐	☐	☐	☐
Thursday	☐	☐	☐	☐	☐
Friday	☐	☐	☐	☐	☐
Saturday	☐	☐	☐	☐	☐
Sunday	☐	☐	☐	☐	☐

From PAQ

(b) This section is on activities that don't involve exercise

Look down the list below and find the activities you normally do ***AFTER SCHOOL IN THE EVENINGS****.*

Then tick a box to say how much time on average you do it each evening.

On average, how much time **AFTER SCHOOL IN THE EVENINGS** do you…?

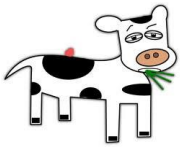
	Not at all	Up to an hour	1-2 hours	2-3 hours	4 or more hours
1. Play games on a computer	☐	☐	☐	☐	☐
2. Play other non-activity games	☐	☐	☐	☐	☐
3. Hang out with friends (either at your or their home)	☐	☐	☐	☐	☐
4. Hang out with friends on the streets	☐	☐	☐	☐	☐
5. Watch TV or DVDs	☐	☐	☐	☐	☐
6. Talk with your family	☐	☐	☐	☐	☐
7. Use chat rooms, look at blogs, facebook etc.	☐	☐	☐	☐	☐
8. Text or talk to friends on the phone	☐	☐	☐	☐	☐
9. Sit and listen to music	☐	☐	☐	☐	☐
10. Just sit around doing nothing in particular	☐	☐	☐	☐	☐
11. Just surf the web	☐	☐	☐	☐	☐
12. Hang out at a youth centre, café or some other similar place	☐	☐	☐	☐	☐

13. Read magazines, newspapers etc.	☐	☐	☐	☐	☐
14. Participate in an organised youth club or after school activity – scouts, guides etc.	☐	☐	☐	☐	☐
15. Do homework	☐	☐	☐	☐	☐

On average, how much time **AT THE WEEKEND** do you…?

	Not at all	Up to an hour	1-2 hours	2-3 hours	4 or more hours
16. Play games on a computer	☐	☐	☐	☐	☐
17. Play other non-activity games	☐	☐	☐	☐	☐
18. Hang out with friends (either at your or their home)	☐	☐	☐	☐	☐
19. Hang out with friends on the streets	☐	☐	☐	☐	☐
20. Watch TV or DVDs	☐	☐	☐	☐	☐
21. Talk with your family	☐	☐	☐	☐	☐
22. Use chat rooms, look at blogs, facebook etc.	☐	☐	☐	☐	☐
23. Text or talk to friends on the phone	☐	☐	☐	☐	☐
24. Sit and listen to music	☐	☐	☐	☐	☐
25. Just sit around doing nothing in particular	☐	☐	☐	☐	☐
26. Just surf the web	☐	☐	☐	☐	☐
27. Hang out at a youth centre, café or some other similar place	☐	☐	☐	☐	☐
28. Read magazines, newspapers etc.	☐	☐	☐	☐	☐
29. Participate in an organised youth club or after school activity – scouts, guides etc.	☐	☐	☐	☐	☐
30. Do homework	☐	☐	☐	☐	☐

2. Wellbeing



(a) In this section we ask about how you feel about yourself and your surroundings.

*Below are statements that you may agree or disagree with. Read each one and then tick a box next to the statement that **best describes how strongly you agree or disagree**.*

	Strongly agree	Agree	Neither	Disagree	Strongly disagree
1. On the whole, I am satisfied with myself.	☐	☐	☐	☐	☐
2. At times, I think I am no good at all.	☐	☐	☐	☐	☐
3. I feel that I have a number of good qualities.	☐	☐	☐	☐	☐
4. I am able to do things as well as most other people.	☐	☐	☐	☐	☐
5. I feel I do not have much to be proud of.	☐	☐	☐	☐	☐
6. I certainly feel useless at times.	☐	☐	☐	☐	☐
7. I feel that I'm a person of worth, at least on the same level as others.	☐	☐	☐	☐	☐
8. I wish I could have more respect for myself.	☐	☐	☐	☐	☐
9. All in all, I am inclined to feel that I am a failure.	☐	☐	☐	☐	☐
10. I take a positive attitude toward myself.	☐	☐	☐	☐	☐
11. In most ways, my life is close to my ideal.	☐	☐	☐	☐	☐
12. The conditions of my life are excellent.	☐	☐	☐	☐	☐

13. I am completely satisfied with my life.	☐	☐	☐	☐	☐
14. So far I have got the most important things I want in life.	☐	☐	☐	☐	☐
15. If I could live my life over, I would change nothing.	☐	☐	☐	☐	☐

SE & SWL

b) This section asks about your strengths and difficulties

*Below are statements that you may think are **not true, somewhat true or certainly true**.*

Please tick one box for each statement.

It would help us if you answered all items as best as you can even if you are not absolutely certain or the item seems daft!

*Please give your answer on the basis of how things have been **OVER THE LAST SIX MONTHS***

	Not true	Somewhat true	Certainly true
1. I try to be nice to other people. I care about their feelings	☐	☐	☐
2. I am restless. I cannot stay still for long	☐	☐	☐
3. I get a lot of headaches, stomach aches or sickness	☐	☐	☐
4. I usually share with others (food, games, pens, etc.)	☐	☐	☐
5. I get very angry and often lose my temper	☐	☐	☐
6. I am usually on my own. I generally play alone or keep to myself	☐	☐	☐
7. I usually do as I am told	☐	☐	☐
8. I worry a lot	☐	☐	☐
9. I am helpful if someone is hurt, upset or feeling ill	☐	☐	☐

10.	I am constantly fidgeting or squirming	☐	☐	☐
11.	I have one good friend or more	☐	☐	☐
12.	I fight a lot. I can make other people do what I want	☐	☐	☐
13.	I am often unhappy, down-hearted or tearful	☐	☐	☐
14.	Other people of my age generally like me	☐	☐	☐
15.	I am easily distracted. I find it difficult to concentrate	☐	☐	☐
16.	I am nervous in new situations. I easily lose confidence	☐	☐	☐
17.	I am kind to younger children	☐	☐	☐
18.	I am often accused of lying or cheating	☐	☐	☐

		Not true	Somewhat true	Certainly true
19.	Other children or young people pick on or bully me	☐	☐	☐
20.	I often volunteer to help others (parents, teachers, children)	☐	☐	☐
21.	I think before doing things	☐	☐	☐
22.	I take things that are not mine from home, school or elsewhere	☐	☐	☐
23.	I get on better with adults than with people of my own age	☐	☐	☐
24.	I have many fears, I am easily scared	☐	☐	☐
25.	I finish the work I'm doing. My attention is good	☐	☐	☐

SDQ

(c) This section asks about the support you get from people around you **MSPSS**

We are interested in how you feel about the following statements. Read each one carefully.

Neutral means you do not agree or disagree. Please tick just one box per line.

	Disagree very strongly	Disagree strongly	Disagree Mildly	Neutral	Agree mildly	Agree Strongly	Agree very strongly
1. There is a special person who is around when I am in need	☐	☐	☐	☐	☐	☐	☐
2. There is a special person with whom I can share joys and sorrows	☐	☐	☐	☐	☐	☐	☐
3. My family really tries to help me	☐	☐	☐	☐	☐	☐	☐
4. I get the emotional help and support I need from my family	☐	☐	☐	☐	☐	☐	☐
5. I have a special person who is a real source of comfort for me	☐	☐	☐	☐	☐	☐	☐
6. My friends really try to help me	☐	☐	☐	☐	☐	☐	☐
7. I can count on my friends when things go wrong	☐	☐	☐	☐	☐	☐	☐
8. I can talk about my problems with my family	☐	☐	☐	☐	☐	☐	☐
9. I have friends with whom I can share my joys and sorrows	☐	☐	☐	☐	☐	☐	☐
10. There is a special person in my life who cares about my feelings	☐	☐	☐	☐	☐	☐	☐
11. My family is willing to help me make decisions	☐	☐	☐	☐	☐	☐	☐
12. I can talk about my problems with my friends	☐	☐	☐	☐	☐	☐	☐

(d) This part asks about your everyday feelings and emotions.

Read each of the words and then tick a box to show how much you have felt these emotions

IN THE LAST 7 DAYS. Just tick one box for each word.

	Not at all	A little	Moderately	Quite a bit	Extremely	don't know this word
1. Interested	☐	☐	☐	☐	☐	☐
2. Distressed	☐	☐	☐	☐	☐	☐
3. Excited	☐	☐	☐	☐	☐	☐
4. Upset	☐	☐	☐	☐	☐	☐
5. Strong	☐	☐	☐	☐	☐	☐
6. Guilty	☐	☐	☐	☐	☐	☐
7. Scared	☐	☐	☐	☐	☐	☐
8. Hostile	☐	☐	☐	☐	☐	☐
9. Enthusiastic	☐	☐	☐	☐	☐	☐
10. Proud	☐	☐	☐	☐	☐	☐
11. Irritable	☐	☐	☐	☐	☐	☐
12. Alert	☐	☐	☐	☐	☐	☐
13. Ashamed	☐	☐	☐	☐	☐	☐
14. Inspired	☐	☐	☐	☐	☐	☐

15. Nervous	☐	☐	☐	☐	☐	☐
16. Determined	☐	☐	☐	☐	☐	☐
17. Attentive	☐	☐	☐	☐	☐	☐
18. On edge	☐	☐	☐	☐	☐	☐
19. Active	☐	☐	☐	☐	☐	☐
20. Afraid	☐	☐	☐	☐	☐	☐

3. Food and drink

(a) In this section we would like to know about your eating habits over an average week.

*The next few questions are about how often you do particular things relating to food **IN A TYPICAL WEEK.** First read the questions below and tick one box per line*

	Every day without exception	Almost every day	3-4 times a week	Once or twice a week	Hardly ever
Eat breakfast?	☐	☐	☐	☐	☐
Eat fruit?	☐	☐	☐	☐	☐
Drink a glass or small bottle of water?	☐	☐	☐	☐	☐
Have a meal with your parents or caregivers?	☐	☐	☐	☐	☐
Eat vegetables or salad with a meal	☐	☐	☐	☐	☐
Eat a vegetarian meal?	☐	☐	☐	☐	☐
Eat chips?	☐	☐	☐	☐	☐
Discuss your food with your parents?	☐	☐	☐	☐	☐
Buy yourself sweets or chocolate?	☐	☐	☐	☐	☐
Discuss your food with your friends?	☐	☐	☐	☐	☐
Buy coke or other soft drinks that contain sugar?	☐	☐	☐	☐	☐
Worry about your weight?	☐	☐	☐	☐	☐

Eat a meal that you know is high in fat?	☐	☐	☐	☐	☐
Go to bed feeling hungry?	☐	☐	☐	☐	☐
Plan what you are going to eat?	☐	☐	☐	☐	☐

	none	1-3	3-5	5-7	7 or more
IN A TYPICAL DAY how many portions of fruit and vegetables do you eat?	☐	☐	☐	☐	☐

4. General Health

In this last section we would like to ask about your general health and habits.

		ft	in		cm
1.	What is your height?			or	
		stones	pounds		kg
2.	What is your weight?			or	

		No I have never smoked	I used to smoke but not now	I smoke every now and then	Yes I am a daily smoker
3.	Do you smoke?	☐	☐	☐	☐

If you are a daily smoker write here how many cigarettes a day you normally smoke? ☐

	Yes	No
4. Do you drink alcohol?	☐	☐

If you do drink alcohol then put how much of each type of drink below you drink in one go.

Also tick a box to show how often you drink them.

		How often?				
	How many at a time?	Every day	3 or 4 times a week	Once or twice a week	Once every couple of weeks	Only now and then
Cans of lager, beer or cider		☐	☐	☐	☐	☐
Alcopops (Bacardi breezers etc)		☐	☐	☐	☐	☐
Glasses of spirits – vodka, whisky etc.		☐	☐	☐	☐	☐
Pints of beer, cider etc in a pub		☐	☐	☐	☐	☐
Glasses of wine		☐	☐	☐	☐	☐
Other		☐	☐	☐	☐	☐

Write names of others here:

	Yes	No
5. Have you ever used drugs?	☐	☐

If you answered yes then please indicate below which drugs you used and the last time you used them. (Just tick one box in each line)

	In the last week	In the last month	In the last year	More than a year ago	Never
Cannabis	☐	☐	☐	☐	☐
Glues/solvents/gas	☐	☐	☐	☐	☐
Ecstasy	☐	☐	☐	☐	☐
Crack cocaine	☐	☐	☐	☐	☐
Amphetamines (speed)	☐	☐	☐	☐	☐
Powder cocaine	☐	☐	☐	☐	☐
Heroin	☐	☐	☐	☐	☐
Deccopan (DP)	☐	☐	☐	☐	☐
LSD	☐	☐	☐	☐	☐
Khat	☐	☐	☐	☐	☐
Any other drugs	☐	☐	☐	☐	☐

Write names of others here:

6.	Overall how good would you say your health is?	Bad ☐	Fairly Poor ☐	Average ☐	Fairly good ☐	Good ☐
7.	How many times have you seen a Doctor (GP) in the ***PAST YEAR***	Not at all ☐	once ☐	2 times ☐	3 times ☐	4 or more times ☐

8.	How many hours do you normally sleep at night?	Less than 6 hours ☐	6-8 hours ☐	8-10 hours ☐	10-12 hours ☐	More than 12 hours ☐
9.	How many times have you seen a Dentist in the ***PAST YEAR***	Not at all ☐	once ☐	2 times ☐	3 times ☐	4 or more times ☐

5. Where you live and go to school

(a) In this part we want to know a bit about how you get on in school and what you think about your environment.

*In the **LAST MONTH** how often have you…*	Not at all	Once or twice	3 or 4 times	Five or more times
1. Felt good about your home and the area you live in	☐	☐	☐	☐
2. Felt you have achieved something good at school	☐	☐	☐	☐
3. Been shouted at aggressively by someone in the street	☐	☐	☐	☐
4. Been scared that you were going to be attacked	☐	☐	☐	☐
5. Felt that your teachers care about you	☐	☐	☐	☐
6. Felt frightened when walking down the street	☐	☐	☐	☐
7. Had a nice chat with someone in the street	☐	☐	☐	☐
8. Been robbed, mugged or physically attacked	☐	☐	☐	☐

9.	Felt safe and happy	☐	☐	☐	☐
10.	Felt proud of where you live in London	☐	☐	☐	☐
11.	Been hit slapped or pushed by someone at school	☐	☐	☐	☐
12.	Felt good about being at school	☐	☐	☐	☐
13.	Been in a physical fight with someone	☐	☐	☐	☐

		Not at all	Once or twice	2 or 3 times	Once a week	Several times a week
1.	In the past couple of months how often have you been bullied?	☐	☐	☐	☐	☐
2.	In the past couple of months how often have you taken part in bullying yourself?	☐	☐	☐	☐	☐

Next are some statements about your neighbourhood. Please show how much you agree or disagree with each statement…

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. I like this area	☐	☐	☐	☐	☐
2. I feel safe in this area	☐	☐	☐	☐	☐
3. I want to leave this area	☐	☐	☐	☐	☐
4. Other people think this is a good area	☐	☐	☐	☐	☐
5. The area is tidy and clean	☐	☐	☐	☐	☐
6. I feel part of this area	☐	☐	☐	☐	☐
7. I have friends who live in this area	☐	☐	☐	☐	☐

Next are some statements about the students in your classes. Please show how much you agree or disagree with each statement…

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
1. The students in my classes enjoy being together	☐	☐	☐	☐	☐
2. Most of the students in my classes are kind and helpful	☐	☐	☐	☐	☐
3. Other students accept me as I am	☐	☐	☐	☐	☐
4. I feel close to people at school	☐	☐	☐	☐	☐
5. I am happy to be at this school	☐	☐	☐	☐	☐
6. I feel safe in my school	☐	☐	☐	☐	☐

7.	I feel like I am part of this school	☐	☐	☐	☐	☐

(b) How would you rate these things in the area where you live?

		Good	Average	Bad
1.	Places for young people to meet	☐	☐	☐
2.	Sports facilities	☐	☐	☐
3.	Public transport	☐	☐	☐
4.	Safety of the area	☐	☐	☐
5.	Tidiness of the area	☐	☐	☐
6.	Your school	☐	☐	☐
7.	Outdoor spaces to play, like your local park	☐	☐	☐

Well London
Communities working together for a healthier city

		yes	no	Not sure
1.	Do you remember seeing the Well London Logo (above) around the area where you live?	☐	☐	☐
2.	Have you taken part in any activities that you know were organised by Well London?	☐	☐	☐
3.	Have members of your family taken part in activities organised by Well London?	☐	☐	☐

(c) This section asks about you thoughts about your qualifications and your future beyond school

	Not true	Somewhat true	Certainly true
1. I want to be successful in my school work and achieve good qualifications	☐	☐	☐
2. I expect to take 5 GCSEs	☐	☐	☐
3. I expect to take 8-10 GCSEs	☐	☐	☐
4. I expect to get good grades in my GCSEs (all above C)	☐	☐	☐
5. I don't look forward to life beyond school	☐	☐	☐
6. I see myself staying on at school or college	☐	☐	☐
7. I see myself doing a particular vocational course	☐	☐	☐
8. I see myself studying to do A levels	☐	☐	☐
9. I see myself going to university	☐	☐	☐
10. I expect eventually to get a well paid job	☐	☐	☐
11. My parents are willing to come to the school and talk to teachers	☐	☐	☐
12. I don't want anything more to do with exams when I leave school.	☐	☐	☐
13. I think with my abilities I will find it easy to get a good job	☐	☐	☐
14. I don't always try my hardest at school	☐	☐	☐
15. My parents take an interest in my school work	☐	☐	☐
16. My parents talk to me often about the jobs I might get when I leave school	☐	☐	☐

6. Creative activities

(a) In this section we would like to ask you about activities that you might have participated in and cultural events that you might have attended.

Look down the list and find any activities you have done in the <u>LAST YEAR.</u>

Then tick the boxes to show where you did this activity.

You may tick more than one box if you have done the activity in more than one place.

	At school	At home	At a local arts centre	Somewhere else
1. Dancing as a performance.	☐	☐	☐	☐
2. Sang or played and instrument to an audience (not karaoke).	☐	☐	☐	☐
3. Rehearsed or performed a play.	☐	☐	☐	☐
4. Done painting, drawing, or made other things with paper.	☐	☐	☐	☐
5. Taken photographs or made films or videos as an artistic activity (not family or holiday 'snaps').	☐	☐	☐	☐
6. Used a computer to create original artworks or animations.	☐	☐	☐	☐
7. Made something with cloth/material – clothes, collages etc.	☐	☐	☐	☐
8. Made something with wood – carving, furniture etc.	☐	☐	☐	☐
9. Made something out of clay – pottery, sculpture.	☐	☐	☐	☐
10. Read a book for pleasure.	☐	☐	☐	☐
11. Written any stories, plays or poetry.	☐	☐	☐	☐

Now tick a box if have bought for yourself any of the following in the **LAST YEAR.**

1. Any handmade objects of art or craft such as pottery. ☐
2. Any books of stories, poetry or plays for yourself. ☐
3. Any posters, postcards or pictures of works of art that you like. ☐
4. Any CDs or downloads of 'classical' music for yourself. ☐
5. Any CDs or downloads of other music that is not pop music - such as folk music, world music, jazz or musical theatre. ☐
6. Any DVDs of plays or other theatre performances. ☐

Please tick below if how many times you been to any of these events in the **LAST YEAR.**

	Not at all	Once or twice	3 or 4 times	Five or more times
1. A film at a cinema (not at home).	☐	☐	☐	☐
2. An art exhibition – pictures, sculpture (not crafts market).	☐	☐	☐	☐
3. An event which included video or electronic art.	☐	☐	☐	☐
4. An event connected with books or writing.	☐	☐	☐	☐
5. Street arts. For example, art in everyday surroundings like parks, streets or shopping centres.	☐	☐	☐	☐
6. A culturally specific festival. For example Carnival, Mela, Baisakhi, Navratri.	☐	☐	☐	☐

7.	Any theatre performance, for example plays, musicals or pantomime.	☐	☐	☐	☐
8.	Any live music performance. Such as opera/operetta, classical music performance, jazz performance or other live music event.	☐	☐	☐	☐
9.	A live dance show. Such as ballet, contemporary dance, ethnic dances performance.	☐	☐	☐	☐

☺ Thank you ☺

Appendix 3: wider portfolio of published work

Frostick C. and Bertotti, M. (2019). Implementing social prescribing scheme within primary care services*, British Journal of General Practice.* pp.538-539.

Carnes, D., Sohanpal, R., **Frostick, C.,** Hull, S., Mathur, R., Netuveli, G., ... and Bertotti, M. (2017). The impact of a social prescribing service on patients in primary care: a mixed methods evaluation. *BMC health services research*, *17*(1), 835.

Phillips, G., Renton, A., Moore, D.G., Bottomley, C., Schmidt, E., Lais, S., Yu, G., Wall, M., Tobi, P., **Frostick, C**. and Clow, A., (2012). The Well London program—a cluster randomized trial of community engagement for improving health behaviors and mental wellbeing: baseline survey results. *Trials*, *13*(1):105.

Watts, P., Phillips, G., Petticrew, M., Hayes, R., Bottomley, C., Yu, G., Schmidt, E., Moore, D., **Frostick, C.,** Lock, K. and Renton, A., (2011). Determinants of physical activity in deprived communities in London: Examining the effects of individual and neighbourhood characteristics. *Journal of Epidemiology and Community Health*, *65*(Suppl 2):A37-A37.

Phillips, G., Watts, P., Petticrew, M., Lock, K., Hayes, R., Bottomley, C., Yu, G., Schmidt, E., Moore, D., **Frostick, C**. and Clow, A., (2011). Determinants of mental health and wellbeing in low income communities: A multilevel approach examining individual and neighbourhood characteristics. *Journal of Epidemiology and Community Health*, 65(Suppl 2):A6-A6.

Kushnerenko, E., Tomalski, P., Ballieux, H., Potton, A., Birtles, D., **Frostick, C.,** & Moore, D. G. (2013). Brain responses and looking behavior during audiovisual speech integration in infants predict auditory speech comprehension in the second year of life. *Frontiers in psychology*, *4*.

Moore, D.G., Turner, J.D., Parrott, A.C., Goodwin, J.E., Fulton, S.E., Min, M.O., Fox, H.C., Braddick, F.M., Axelsson, E.L., Lynch, S., Ribeiro, H. and **Frostick, C. J**. (2010). During pregnancy, recreational drug-using women stop taking ecstasy (3, 4-methylenedioxy-N-methylamphetamine) and reduce alcohol consumption, but continue to smoke tobacco and cannabis: initial findings from the Development and Infancy Study. *Journal of Psychopharmacology*, *24*(9):1403-1410.

Bertotti, M., Hutt, P., **Frostick, C.** Findlay, G. Netuveli, G., Tong, J., Harden, A., Renton, A., Carnes, D., Sohanpal, R. and Hull, S. (2015). Social Prescribing: integrating GP and Community Assets for Health

Findlay, G., Netuveli, G., Tobi, P., Sheridan, K., **Frostick, C**., Tong, J., Bertotti, M., Ikeme, M., Farr, R., Syed, A. and Harden, A. (2017). Mitigating the impact of dynamic populations ('churn') on health outcomes and primary care in Newham

Carnes, D., Sohanpal, R., Matthur, R., Homer, K., Hull, S., Bertotti, M., **Frostick, C.,** Netuveli, G., Tong, J., Findlay, G., Harden, A. and Renton*, A.* (2015). *City and Hackney Social Prescribing Service; Evaluation Report.*