**Potential Pathways between Loneliness, Social Isolation & Mental Health Problems**

We have put together the following list of potential pathways to start exploring the factors that underlie and link loneliness, social isolation and mental health, based on factors raised during our workshop in July 2019. Once potential pathways are identified, this will help us search the research literature to look for evidence that a particular proposed pathway exists, and to highlight gaps in in the evidence base in order to prioritise future research directions. We have also started creating a diagram to summarise the interplay between different factors and potential pathways, and this is also available on our website.

This list is a work in progress, so **please get in touch** with ideas for additions/modifications: [ellie.pearce@ucl.ac.uk](mailto:ellie.pearce@ucl.ac.uk). The aim is to identify whether there is evidence for these potential pathways, so if you know of any work in this area, **please add the references** and let us know. **Many thanks** to the Network members who have already given their very helpful feedback on the first version this list.

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|  | **Risk factors for loneliness/isolation (potentially also common factors for MH problems)** | **Pathways** | |
| **Loneliness/Social Isolation 🡪 Mental Health problems** | **MH probs 🡪 L/SI**   * Social consequences of MH probs * Interface illness & social * Direct consequence MH probs |
| Biol. | * Stress response to deprivation (cortisol) * Genetic load/vulnerability * Brain structure/function * Sleep * Physical health, sensory disabilities * Physical disabilities * Poor physical heath | * L/SI🡪stress response (cortisol)🡪MHprobs * L/SI🡪poor sleep🡪MHprobs * SI🡪low neurochemicals🡪low mood🡪MHprobs |  |
| Psych/Cognition | * Loss/change in identity * Lack of purpose/role/hope/ feeling trapped or that one lacks choice (mediates effect of e.g. poverty?) * Low trust (what causes this?) * Low self-esteem (cause?) * Low self-efficacy * Personality e.g. Neuroticism, Extroversion * Comparisons with others (extremes on social media posts)/expectations * Self-management of emotions, stress * Previous episodes * Trauma, social trauma e.g. humiliation etc * Early experiences * Poor social skills * Hopelessness * Low self-determination * Loss of family/social structure * Life stage – consider children, young people and adults separately? | * L🡪anxiety associated with FOMO &/or expectations/ social ’performance’ (especially in relation to social media)🡪MHprobs * L🡪not wanting to be a burden/shame or internal stigma/decrease in trust/feel different🡪 withdraw & don’t seek help/support🡪MHprobs * SI🡪self-pre-occupation 🡪MHprobs * L/MHprobs 🡪low self-esteem/self-disgust 🡪 withdraw 🡪 SI/MH probs get worse * Failure to address L/SI 🡪depression * L/MHprobs 🡪perceived threat🡪 defensive shield (anger/aggression/don’t accept help/fear of sharing)🡪SI🡪 L/MH probs worsen * Social isolation 🡪 impaired cognitive function/dementia 🡪difficulty interacting with environment & others/increased vulnerability to external stressors🡪 MH symptoms e.g. anxiety, agitation, low mood, apathy, psychosis * Loneliness🡪negative self-conscious affective states🡪depression/anxiety * Loneliness 🡪 lower positive affect 🡪 MH problems | * MH symptoms 🡪 cognitive difficulties e.g cognitive symptoms of schizophrenia🡪difficulty maintaining social relationships 🡪 isolation/loneliness * MH probs 🡪 not wanting to be a burden 🡪 SI * MH probs 🡪feel different/ stigma (perceived) 🡪 perceived threat🡪SI/L🡪exacerbate perceived threat * MH probs🡪’miss milestones’🡪feel different🡪L * MH probs 🡪 fixed identity with MH prob 🡪 cognitive biases, changed behavior 🡪 withdrawal from others, others withdraw from ego 🡪 SI 🡪 L * MH probs 🡪 decrease in motivation to engage/apathy🡪SI🡪L * MH probs🡪anxiety/paranoia 🡪withdrawal🡪 isolation * PTSD 🡪 lack trust/fear others 🡪 self-isolation * PTSD/trauma 🡪 lack skills to build relationships 🡪 loneliness/isolation * PTSD/trauma 🡪 self-loathing/unworthiness🡪 loneliness/isolation * MHprobs🡪on waiting list for treatment🡪feel unsupported/feel alone🡪lonely * MHprobs 🡪need space/time to recover/lack social environment for recovery🡪isolation * Depression/anvxiety🡪negative self-conscious affective states🡪loneliness |
| Social | * Life events/experiences e.g. early life experiences in the family, bullying/ victimization,violence, bereavement, imprisonment, physical abuse, emotional abuse, alcoholism, domestic abuse * Cultural e.g. communality, whether loneliness is recognized, acceptance of MH conditions, societal stigma, whether have spiritual/religious beliefs/activities * How L/SI/MH probs framed in media/public discourse/ by government * Cultural identity * Family culture * Marginalised/ discrimination e.g. sexuality, refugee/asylum seeker, ethnicity, sexuality * Comparison e.g. extremes on social media * Urban – unclear how to connect with strangers, anonymity * Lack of employment 🡪 (i) lack of purpose/role, (ii) lack of economic capability for transport, activities * Ethnic minority – some evidence gets harder over the generations as protective factors diminish * Living arrangements – whether feel connected to community and whether have access to confidants (e.g. does living in a large group of strangers as in the case of new students and migrants increase risk of loneliness and mental health problems?) * Demographic factors e.g. Age, gender, sexuality * Cultural orientation (Col Vs Ind) | * Life events🡪SI🡪don’t have confidants 🡪 don’t get help/support🡪MHprobs * L/SI🡪 reduced interpersonal competence 🡪 sensually-orientated activities e.g. drinking, taking drugs 🡪 MH probs * L → difficult to recognise neighbourhood social capital → less help or support → MH probs get worse | * MHproblems🡪don’t’ fit into dominant culture🡪loneliness * Time needed to cope with MH probs 🡪 Less time to socialize 🡪 SI/loneliness * MH probs 🡪 get out of practice socializing with other outside of therapeutic setting/decline in social skills 🡪 SI/L * MHprobs 🡪 don’t want superficial interactions 🡪SI * MH probs 🡪 stigma (actual e.g. police reactions) 🡪 SI * MHprobs🡪unemployed🡪SI & L * MH probs🡪instability/cycling through inpatient units🡪L * MHprobs🡪few family/friends🡪L * MH🡪 lack of close ties 🡪 isolation 🡪 loneliness * MH probs 🡪 difficulties in function in daily life/problems with social skills direct consequence of MH condition 🡪 isolation 🡪 L * MH probs 🡪 hospital admission/being sectioned 🡪social network reduced🡪social isolation 🡪 loneliness * MH probs 🡪 disruption of (social) skill development due to onset in teenage years🡪hard to makes friends🡪social isolation🡪 loneliness |
| Environ. | * Limited transport in rural areas * Models of employment – whether creates shared identity & takes into account social/health (now expected to fulfill these elsewhere) * Transient society, moving for work * Lack of community assets * Lack of access to safe social spaces, lack of social spaces for people with mental health problems * Lack of access to green spaces * Machines/tech replacing humans * Deprivation e.g. lack of suitable housing and safe communal spaces, victims of crime * Poverty – reduced access to social activities * Societal stigmatization/discrimination * Modern way of life e.g. high expectations, being successful * Spatial segregation (lack of access to busy parts of a neighbourhood) and/or community severance (physical barriers for people to interact within and across communities) * Social capital |  | * MH probs 🡪 poor community integration (assimilation, support, occupation & independent living)🡪L/SI * MH probs → poor neighbourhood social capital → L |
| Behavioural |  | * L/SI → unhealthy behaviours and lifestyles (e.g. inadequate sleep, smoking and excessive drinking) → MH probs * L/SI → less likely to utilise health services and to comply with medical care → MH probs | * MH probs → unhealthy behaviours and lifestyles → SI → L * MH probs → aggressive behaviours → SI → L |