# Depression and loneliness may signal chronic pain years before onset, UCL study finds



Researchers have recently unveiled a profound connection between chronic pain and mental health issues, revealing that depression and loneliness are not just consequences of enduring pain but may actually precede its onset. This significant finding stemmed from a comprehensive study conducted by researchers at University College London (UCL), analysing 21 years of data from over 7,300 adults aged 50 and older in England. Their research, published in *eClinicalMedicine*, suggests that these mental health challenges could serve as early indicators of subsequent physical pain, highlighting a critical need for an integrated approach to treatment.

The findings suggest that up to 40 per cent of adults in the UK and Europe experience chronic pain, making it a prevalent public health concern and a leading cause of disability. While a wealth of prior research has established a generalized connection between chronic pain and mental health disorders, the distinct timeline illuminated by this study paves the way for a deeper understanding of how these issues interplay. Notably, individuals who later developed chronic pain reported significantly higher levels of depression and loneliness in the years leading up to their diagnosis.

The insights from this research indicate that mental health challenges can manifest up to eight years before the onset of chronic pain, with depressive symptoms worsening in the immediate lead-up to the pain itself. This trend contrasts starkly with individuals who did not go on to develop chronic pain, as their levels of depression and loneliness remained relatively stable and low. The researchers assert that early intervention targeting mental health might play a pivotal role in preventing or alleviating chronic pain later. Dr Mikaela Bloomberg, the lead author, articulated, “Our study shows that depressive symptoms and loneliness worsen long before pain begins. This is important as it suggests the potential for early mental health and social support to reduce or delay later pain.”

Further evidence across various studies corroborates these findings. A global analysis led by Johns Hopkins Medicine, encompassing over 375 studies, found that 40 per cent of adults with chronic pain experienced clinically significant depression and anxiety, underscoring the necessity for integrated treatment approaches that address both physical and mental health concerns. This aligns with systematic reviews indicating that nearly 37 per cent of adults with chronic pain met the diagnostic criteria for major depressive disorder, significantly higher than general population norms.

Moreover, loneliness has been consistently linked to chronic pain. A UK Biobank study involving over 500,000 participants determined that loneliness significantly predicted both acute and chronic pain, suggesting that interventions aimed at alleviating social isolation could be instrumental in pain management strategies. Similarly, research from the Survey of Health, Ageing and Retirement in Europe indicated that higher baseline pain intensity correlated with a greater risk of developing depressive symptoms, highlighting the importance of addressing pain to prevent progressive mental health deterioration.

Among older adults, the relationship between emotional health and pain is especially pronounced, with findings revealing that pain contributes to increased risks of loneliness. Given that chronic loneliness itself is now recognised as a precursor for mental distress—nearly quadrupling the likelihood of such distress—tackling the dual issues of loneliness and mental health in older populations becomes ever more pertinent.

As healthcare systems look for innovative ways to manage chronic pain, these findings advocate for a holistic treatment approach. The convergence of physical and mental health care not only alleviates the burden of chronic pain but also addresses the underlying emotional factors that may play a crucial role in its development. Researchers from UCL have called for proactive mental health and social support interventions, particularly for those with limiting socioeconomic resources, to be integrated into long-term pain management strategies, recognising that the mind and body are inextricably linked.

In conclusion, as the implications of these findings continue to evolve, they underscore the importance of early mental health intervention as a potentially transformative step in mitigating chronic pain. By prioritising mental well-being alongside physical health treatment, healthcare providers may forge a path toward more effective outcomes for those wrestling with the dual spectres of chronic pain and mental health issues.

### Reference Map

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## Bibliography

1. <https://www.independent.co.uk/life-style/health-and-families/chronic-pain-mental-health-study-depression-loneliness-b2753837.html> - Please view link - unable to able to access data
2. <https://www.hopkinsmedicine.org/news/newsroom/news-releases/2025/03/worldwide-study-finds-high-rates-of-depression-and-anxiety-in-people-with-chronic-pain> - A global analysis of over 375 studies led by Johns Hopkins Medicine found that 40% of adults with chronic pain experienced clinically significant depression and anxiety. The study highlighted that women, younger adults, and individuals with fibromyalgia were particularly at risk. The findings underscore the need for integrated treatments addressing both chronic pain and mental health issues, as these conditions often co-occur and can exacerbate each other.
3. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2831134> - A systematic review and meta-analysis published in JAMA Network Open revealed that among adults with chronic pain, 36.7% met diagnostic criteria for major depressive disorder (MDD) and 16.7% for generalized anxiety disorder (GAD). These rates are significantly higher than population norms, emphasizing the prevalence of diagnosable conditions requiring targeted treatment. The study advocates for changes in chronic pain care to address the co-occurrence of depression and anxiety.
4. <https://pubmed.ncbi.nlm.nih.gov/32791383/> - A UK Biobank study involving 502,528 participants found that loneliness significantly predicted both acute and chronic pain. The study indicated that social exclusion factors, including loneliness, were associated with an increased prevalence of pain, suggesting that addressing loneliness could be a key component in pain management strategies.
5. <https://discovery.ucl.ac.uk/id/eprint/10173996/> - Research from the Survey of Health, Ageing and Retirement in Europe (SHARE) involving 28,515 adults aged 50 and over found that higher baseline pain intensity was associated with a greater risk of significant depressive symptoms at a two-year follow-up. The study highlights the importance of addressing pain to prevent the onset of depression in older adults.
6. <https://pubmed.ncbi.nlm.nih.gov/28728466/> - A study examining older adults found that pain was associated with an increased risk of developing loneliness. The research suggests that interventions targeting pain management could potentially prevent future loneliness, thereby mitigating associated health risks.
7. <https://www.gov.uk/government/news/new-government-research-identifies-clear-links-between-loneliness-and-mental-health-distress> - UK government research published in June 2022 identified a direct two-way link between chronic loneliness and mental health distress. The study found that individuals experiencing chronic loneliness were nearly four times more likely to be in mental distress compared to those without chronic loneliness, emphasizing the need for targeted support to address both issues.