COVID-19 Isolation and Risk of Death in Elderly People in Cyprus

Short Report

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Abstract

Social isolation is associated with a higher risk of death in older people. The quarantine and social distancing measures due to Covid-19 imposed in Cyprus from the beginning of the pandemic, aim to isolate individuals from direct contact with others. This has resulted in vulnerable older people being isolated at their places of residence for several weeks, while the recommendation by some experts is a potential minimum isolation period of three to four months. The risk of death from causes other than those related to Covid-19, increases in such individuals, and it is due to the effects of social isolation.

We estimate that in the next year, there will be an increase in the death numbers of such older people in Cyprus, reaching a minimum 200 **extra** deaths a year, for every three months of isolation. The health authorities must develop a program of support for these older individuals to include medical, social, cognitive, physical and psychological elements. Examples of such support are given here.

Introduction

Robust evidence suggests that older people who have limited social contacts have an increased risk of death (1). As the spread of Severe Acute Respiratory Syndrome COronaVirus 2 (SARS-CoV-2) continues to affect Cyprus, the elderly population is likely to remain in enforced isolation for a long time. The recommendation by United Kingdom Covid-19 Social Isolation Policies, is that people aged 70 and older should be isolated at home for three or four months (2).

It is well accepted however, that social isolation in such age groups is a serious public health concern. The isolation increases the risks of a variety of problems affecting older people, such as cardiovascular, cognitive, psychological, hormonal and other conditions (3, 4).

Considering that cardiovascular disease is the leading cause of death in Cyprus, it is particularly important to realize that social isolation and loneliness may cause significant morbidity and mortality in these individuals. When scientists examined 5,397 people aged 50 and above, over an average period of 5.4 years, it was found that there was an association between loneliness and increased risk of cardiovascular disease (3). The passage of time did not affect this risk. The conclusion was that:

> *"Loneliness is associated with an increased risk of developing coronary heart disease and stroke, independently of traditional cardiovascular disease risk factors. Our findings suggest that primary prevention strategies targeting loneliness could help to prevent cardiovascular disease"*.

Another study (5) of 479,054 people over 7 years confirmed the above findings concluding that:

> "*Isolated and lonely persons are at increased risk of acute myocardial infarction (AMI) and stroke, and, among those with a history of AMI or stroke, increased risk of death*".

Therefore, there is an urgent need to develop and implement preventative strategies which reduce death risk in such older populations, with regards to both physical and mental health (6).

Discussion

In a study (7), conducted by researchers from University College London, with 6,500 participants aged 52 and above, selected from The English Longitudinal Study of Ageing, it was found that social isolation (a state of complete or near-complete lack of contact between an individual and society), was associated with elevated risk of mortality. Social isolation carried a Hazzard Ratio of 1.26. Other studies found significant association between loneliness (a temporary and involuntary lack of contact with others) and increased mortality (8). A reduced contact with medical, nursing or care staff contributes to that risk. Therefore, any efforts to address this issue are likely to lead to positive health outcomes.

Apart from cardiovascular conditions, another issue that needs to be considered is that of increased psychotropic drug use. It is known that isolated older people are more likely to use medication such as antidepressants, anxiolytics, sedatives or hypnotics (9). From anecdotal evidence in Cyprus (Mikellides G. Personal communication 12 April 2020) we find that chronic overuse of hypnotics/anxiolytics could lead to confusional states, is linked to dementia, and is associated with falls which could lead to hip fractures, head injuries and even death.

During 2018 there were 5,768 deaths in Cyprus. Of these, 3,829 were people aged 75 years and older (10). The leading causes of death in Cyprus as presented by The Institute for Health Metrics and Evaluation (11) for the year 2017 are: Ischemic heart disease, stroke, Alzheimer's disease, lung cancer, diabetes and Chronic Obstructive Pulmonary Disease (COPD). All of these conditions have enormous significance for older people, and all are negatively affected by social isolation.

Although estimates of additional isolation-related mortality vary, with Hazzard Ratios of 1.26 to 3.7 (12), even if we apply the lowest HR we calculate that this translates to approximately an additional 800 yearly deaths in Cyprus for every year of isolation. For every three months of social isolation (as in the current pandemic) the number is approximately 200 additional deaths a year. This is even without taking into account any future periods of isolation likely to be imposed if the pandemic returns in the autumn/ winter of 2020.

<u>Mitigating the risk</u>

A series of interventions by the State in association with volunteers could provide initial support for vulnerable elderly. Some examples include:

* Harness online and other digital technologies. In addition, address inequalities regarding access to such technologies (13). These platforms can be used not only for social networking, but also for cognitive exercises such as videogames, brain exercises and similar (14).

* Encourage more frequent telephone contacts by volunteers, for meaningful and supportive conversations and practical help for older people in need (15).

* Deliver specialist psychological support and positive mental health initiatives (16).

* Physical activities. Specifically regarding previously active older people who are now isolated at home due to Covid-19 concerns, it was shown that (17):

A) Even light exercise instead of a totally sedentary life, has positive effects in reducing the risk

B) Effective exercises should include a mixture of resistance, strength and balance exercises

C) Technology (such as use of the internet, video games, media broadcasts or phone calls) may be useful in supporting these exercises programs.

These programs could be presented without charge by television stations, within their sphere of their corporate social responsibility.

* There is a need for a service whereby older vulnerable individuals will receive telephone calls from medical doctors and other healthcare professionals, in order to ensure good medical coverage at home. The calls should be initiated by the health professional and not by the patient.

Conclusions

Social isolation has been shown to have a negative impact on health outcomes with increasing mortality risk, among older people. It is imperative to develop nationwide strategies in order to prevent adverse outcomes, other than those related to Covid-19, in isolated people (18). In our attempt to prevent Covid-19 related deaths, we should not cause many more extra deaths due to the isolation measures we have taken. Examples of interventions that can be implemented as soon as possible, and preferably within a week, include more widespread use of digital technology, a service providing meaningful telephone conversations, psychological and medical support, encouragement for cognitive exercises, as well as physical exercise at home.

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