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The effects of stress and COVID-19: expanding the role of the community nurse.

There are currently 15 million people in England who have a long term condition, which is defined as one which currently has no cure, other than drugs and symptomatic management (Bennett et al 2012). At present the population of the UK has been affected by the COVID 19 pandemic, and those with a long term condition have been advised to self isolate to prevent being infected by the virus (Department of Health 2020). This paper will explore some of the effects of stress and anxiety with reference to COVID 19. Also how the pandemic has affected the community nurse role which is recognised as playing a key part in managing long term and acute conditions in primary care (Morgan 2020). This is in recognition that the community nurse caseload has expanded as more people require care at home due to a range of issues surrounding COVID-19 (Green 2020). The added element of COVID-19 has applied extra stress factors which have affected patient condition management and increased the community practitioners caseload. As a whole community staff account for in excess of 100 million patient contacts per year, and the addition of COVID 19 related factors has stretched community services further. A report by the Kings Fund included the fact that the total number of nurses working in the community fell by 14% and qualified District nurses numbers fell by 42% between 2010 -2018 (Charles 2019). Despite these reductions in the nursing workforce. The demands for their care during COVID 19 has increased and been made more complex by the addition of needing to don additional protective clothing to attend to patients (Green 2020).

There is scant research literature available to determine what the short and long term mental and physical effects due to COVID-19 in the UK will be. Although there are some comparatives to this virus with regard to the history of public health. These examples include HIV/AIDS which caused widespread social, demographic, and political disruption in the 1980s and 90s (Whiteside et al 2010). The Chernobyl event in 1986 caused high levels of post traumatic stress disorder (PTSD) also increased anxiety and depression was identified in the general population. Similarly studies have also examined the increase in mental health problems associated with the Severe Acute Respiratory Syndrome (SARS) epidemic (Bonnet et al 2011; Lau et al 2006). Also the after effects of the Ebola epidemic the outcomes of which were found to include issues related to stigma also social and psychological distress (Mohamed et al 2017). The response after these catastrophic events have been guided by the known and affected needs of the population, and in respect to those with health care needs (Saulnier et al 2017).

At present it is difficult to make comparatives as the COVID 19 pandemic in the UK is still evolving and has unknown factors. Also major events have been studied reflectively with hindsight and have been largely based overseas and not in the UK. Also public health events in recent history have been unique to the area in which they occurred or to the individual. The effects and influences surrounding COVID 19 on health and social issues adds to an individuals personal security and anxiety as it is 'on our shores' (Oh et al 2020). Some of these factors include financial security, health, social, and environmental issues. The daily statistics on the national news regarding the amount of new COVID 19 cases and deaths contribute to augment personal anxieties in particular

those people with pre existing conditions. As much of the news has highlighted the increased health effects of COVID-19 on those people with underlying conditions.

The effects of stress

Stress situations can stimulate pathways that assist in the release of corticotrophin which tend to induce the anorexic effects of long term stress (American Psychological Association 2014). Whilst glucocorticoids have the opposite effect and induce dietary over consumption. The term comfort eating in times of stress was defined in a study by Dallman et al (2003). Glucocorticoids can induce the reward value of palatable food typically those food with high sugar and fat levels which in turn can relieve negative emotions related to stress. In some individuals stress can induce over eating. It is noted that obesity increases visceral adipose tissue which is a major source of inflammation (Hackett & Steptoe 2017). Like wise alcohol consumption has been associated as a reliever during stress and anxiety situations. However, a study by (Begona et al 2000) identified an association between negative life events that were associated with an increase in alcohol consumption particularly in men. Although this study also identified that supporting research was ambivalent regarding the extent of alcohol intake during episodes of anxiety.

Stress hormones are considered to help a person to respond to an immediate threat. However, continually increased levels of stress in association with heightened levels of cortisol production have been associated with enhancing the anxious state altering the equilibrium between different aspects of the stress response that accompany long term fear. Also recurrent stress has been associated with mood disorder or depression enhancing anxiety and an increase in symptoms of depression (Mc Ewen 2008). It has been recognised that long term stress puts physiological systems under duress. Psychological stress can be associated with mood disorders enhancing oxidative factors and increase inflammatory processes in the body The effects of depression can affect motivational goals such as reducing smoking, eating a health diet, adhering to medication. (Chauvet et al 2017).. Although the body may cope with acute stress, the factors relating to long term social stress can enhance these processes (Slavich :Mc Irwin 2014)

The Department of health has urged flu vaccination this winter 2020/2021, in order to reduce pressures on the NHS in the UK. Vaccination is important for high risk groups, and now the COVID-19 vaccination has commenced its rollout to older people and vulnerable health groups. However, the efficacy of a vaccine is dependant on producing an immune response in the individual (Lambert et al 2012). A study by Pedersen et al (2009) on the effects of flu vaccination concluded that people with lower stress levels had a higher immune response to vaccination. Whilst those with psychological distress and greater vulnerabilities due to being older or sedentary have a less immune response to flu vaccination. (Segerstrom et al 2012).

Links between the long term effects of stress such as those experienced in childhood and in older life have been established as leading to mental health issues and depression in adulthood(Dunn 2017). These stressors include, life changing events such as exposure to trauma which may lead to post traumatic stress disorder. Increases in anxiety levels can enhance inflammatory factors associated with the ageing process, in doing so this affects cells which suppress immune protective cells that normally protect against bacteria and viruses. However, increases in inflammation may also may affect the central nervous system. This deregulation can enhance the effects and

symptoms of neurodegenerative disorders such as Alzheimers or Parkinsons Disease (Shukla et al 2011)

A range of research has been published relating to the after effects of people who have developed COVID across the age ranges. A study by Oh et al (2020) identified that COVID 19 survivors had a higher probability of developing psychological disease and depression, with men affected more than women. This fact was supported by the Samaritans who released figures of suicides in the UK in a 2019- 2020 suicide report. The Samaritans in their report used data from the Office of National Statistics which identified that 5,691 people had committed suicide . The report identified an increase of 321 more suicides in comparison to the previous year. and in particular rising rates in middle aged men aged between 45-49, from disadvantaged social groups (Simms et al 2019). Modern life concerns that may include issues such as financial, work related or family concerns are an inclusion in stress related worries. The impact of COVID-19 complicates matters and adds to stressors. In May 2020 the Samaritans identified that a third of their calls were related to COVID-19 related issues.

The reasons that have been cited for post COVID-19 depression include unemployment due to in hospitalisation (Dragano et al 2020). Also the issue of isolation which has been a necessity for those in high risk groups. Social isolation can add to the heightened awareness of anxiety, panic and fear enhanced by the inability to engage in normal social activities and is an addition to increasing stress levels (Serafini et al 2020).

All of these factors are of importance for the community health care professional at a time when there have been additions to their role. These additions have included providing emotional support to patients due to the impact of lockdown and loneliness. Also the demands of the service have increased, and in some cases new patients who would not normally receive community nursing visits now require care at home as they have become the new housebound. These include not only patient's with long term conditions but also the younger acutely ill and end of life patients. . In some examples community nurses have provided care, due to a patient's personal fears of receiving care in hospital and fear of catching COVID 19.

However, other complications have been caused by COVID-19 whether due to extra pressures on the health service resulting in reduced medical services, or patient's non attendance for treatment due to fears of COVID-19. These issues have included delays in medical diagnosis, postponements to elective surgery and limitations in screening. All of which will add to the current and future health burden of the individual and health services of both primary and secondary care, and in particular the care demands of the community nurse (Green 2020). However, these problems have promoted innovative and collaborative working practises in order to meet the higher demands of community care. This has intitiated the introduction of virtual wards which entails the use of health and social care colleagues,also local intelligence to support patients with complex conditions within the community.

Conclusion

A range of issues have been included within this paper related to the stress processes on an individual, and those people with current health conditions. Also with reference to the current pandemic of COVID-19.

At present research is not fully available regarding the overall effects and legacy of COVID -19 which is an ongoing scenario. It is evident that viewing comparative literature relating to previous public health issues provides little evidence of the potential long term effects of the current COVID 19 pandemic on health and social issues in the UK.

The role of the community nurse has expanded to prevent unnecessary hospital admissions, and the community nurse is now providing more complex nursing to a growing caseload of housebound patients that would not normally require care (Green 2019: Green 2020). There is evidence that community nursing numbers have fallen (Charles 2019). However, the introduction of changing delivery models and new ways of working in a more integrated way with the primary health care team have been introduced (Morgan 2020). The objectives for these changes have been to improve care co ordination to community patients. This new care delivery has the effect of bringing together a range of community services across the health and social care spectrum, assisting in raising the community nursing profile which has often been described as 'invisible' (Charles 2019).

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