Improvise, adapt, overcome?

The mental health and compliance of youth during the COVID-19 pandemic

Koning, N.

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Chapter 1

General Introduction

The COVID-19 virus brought a substantial period of stress, disruption, and everchanging circumstances. The global spread of the virus was declared as a pandemic by the World Health Organization (WHO) on March 11, 2020, and lasted for more than three years with May 5, 2023, as official end date (World Health Organization, 2024). Particularly at the start of the pandemic there were many uncertainties and urgent issues that needed to be addressed. This led to people trying to improvise the best they could, to deal with the situation (e.g., working from home or having a fancy dinner at home instead of eating out). During the start of the COVID-19 pandemic, public health organizations were confronted with the question how to reduce the spread of the virus as fast and effective as possible, while others started discussing the potential effects of the measures taken to prevent the virus from spreading on the mental health of the population (both negative and positive) (e.g., Bruining et al., 2021; Cullen et al., 2020; Usher et al., 2020; Sahu, 2020).

After all, research on previous pandemics already indicated that measures like quarantine negatively affected mental health (Brooks et al., 2020; Hawryluck et al., 2004; Huremović, 2019; Loades et al., 2020). Over the course of the COVID-19 pandemic an increasing number of studies on mental health appeared, but the results of these studies were inconsistent. Some studies indicated an increase in mental health problems during the COVID-19 pandemic (Kauhanen et al., 2023; Savage et al., 2020), whereas other studies indicated a decrease in mental health problems (Marmet et al., 2021) or did not find a mental health effect at all (Knowles et al., 2022; Stamatis et al., 2022). There were also studies that found mixed results (e.g., an increase in depression and a decrease in anxiety) (Hawes et al., 2021, Lee et al., 2020, McLafferty et al., 2021, Wieman et al., 2022), or found stronger effects for specific population groups, such as younger people or those with pre-existing mental health problems (O'Connor et al. 2021, Samji et al. 2021; Zijlmans et al., 2023). Younger people seemed to be particularly at risk of developing mental health problems during the pandemic with the imposed governmental measures due to their developmental stage (Branje & Morris, 2021; Orben et al., 2021), although research on specifically late adolescents and young adults (aged 16 - 24 years) was limited. This dissertation focused on the mental health of late adolescents and young adults from the general population during the COVID-19 pandemic.

The COVID-19 Pandemic and Preventive Measures

It is first important to address why the COVID-19 pandemic could have had a negative effect on mental health. First, during the COVID-19 pandemic there was a constant threat of getting infected with the COVID-19 virus or the risk of infecting others. Infection with the COVID-19 pandemic could lead to serious symptoms and even death,

as medication and vaccination were not yet available in the first period of the pandemic. This may have increased stress and anxiety. Additionally, the COVID-19 pandemic was accompanied by many preventive measures, with some being (far) more intrusive than others. One of the main preventive measures was the social distancing measure, in the Netherlands referred to as the '1.5 meter rule', which aimed to reduce the spread of the COVID-19 virus. This measure stated that people had to maintain at least 1.5 meter distance between oneself and any other person who did not belong to the same household. Furthermore, other preventive measures were taken to stop the spread of the virus, such as lockdowns with curfew, stay-at-home measures, and quarantine for those who attracted COVID-19 or showed COVID-like symptoms. All these measures severely limited social interaction, and could therefore be seen as stressors on top of the threat of the COVID-19 virus itself.

Although restricting (real-life) social contact is a very effective measure to limit the spread of viruses (e.g., Matrajt & Leung, 2020; West et al., 2020), social interaction remains important for development and mental health, especially in late adolescence and young adulthood. During these life stages the (social) brain is in development and various cognitive abilities such as self-referential processing and mentalizing improve through social interaction (Dumontheil et al., 2010; Van der Aar et al., 2018). Being deprived of social interaction can increase mental health problems, such as loneliness or depression (Orben et al., 2020). It is therefore plausible that the social distancing measures could have negatively affected the mental health of late adolescents and young adults. Perhaps not surprising, particularly the young people who complied with the preventive measures showed more mental health symptoms such as anxiety and depression (Coulaud et al., 2023; Conway et al., 2023). Furthermore, some late adolescents and young adults seemed to show non-compliance to increase their mental wellbeing (McGuire et al., 2023). Considering the effects compliance has on mental health, it seems important to take compliance into account when examining the potential effects of the COVID-19 pandemic on mental health.

Why focusing on late adolescents and young adults?

Multiple studies indicated that age was associated with mental health problems during the COVID-19 pandemic (e.g., Pieh et al., 2020; Talevi et al., 2020), suggesting that young people experienced more mental health symptoms than people in other (although not all) age groups. Particularly late adolescents and young adults (aged 16-24 years) were assumed to be at risk of developing mental health problems during the pandemic due to their developmental stage (Branje & Morris, 2021; Orben et al., 2020).

In their state of development, engagement in social interaction is pivotal for identity formation. According to Erikson (1968), mastering or resolving eight subsequent "stages of crisis" is an important part of identity development. During the developmental stage of late adolescence and young adulthood two stages need to be dealt with: the fifth stage of "Identity versus Role confusion" and the sixth stage of "Intimacy versus Isolation" (Branje & Koper, 2018), which are both mastered and/or resolved through social interaction with others. During the stage of "Identity versus Role confusion" an individual seeks answers on questions about who they are, who they want to be, and what their place and role in society is, while the stage of "Intimacy versus Isolation" is about seeking love and/or companionship in friendships and romantic relationships, and becoming able to make long-term and reciprocal commitments (Branje & Koper, 2018). If one is hindered in this developmental process and fails to master or resolve the "stages of crisis", the risk for developing mental health problems such as anxiety, depression, and loneliness increases (Branje et al., 2018; Crocetti et al., 2009; Harter et al., 1996; Sandhu et al., 2012).

The imposed preventive (social distancing) measures may have affected mental health also in a different way. According to the Self-Determination Theory (SDT) of Ryan and Deci (1985, 2017), an individual has three basic psychological needs that must be fulfilled to experience well-being, psychological flourishing, and high quality of life. Within SDT, there is a sub-theory called the Basic Psychological Needs Theory (BPNT), which assumes that psychological wellbeing and optimal functioning are based on three basic psychological needs (Baard et al., 2004; Deci & Ryan, 2017; Luyckx et al., 2009; Ryan et al., 2008; Vansteenkiste et al., 2020). These three basic needs are a need for autonomy, a need for competence, and a need for relatedness. If these needs are not met, it can lead to 'need-frustration', which can negatively affect ones (psychological) wellbeing (Niemiec et al., 2006; Ryan et al., 2016, Vandenkerckhove et al., 2020, Vansteenkiste & Ryan, 2013; Vermote et al., 2021). During the COVID-19 pandemic, the need for autonomy could have been constrained by various imposed preventive measures, because they negatively impacted one's freedom of choice. When lockdowns were imposed, people were not able to go where they preferred to go, and they may have felt obligated to stay at home. The need for competence may not have been fulfilled by the closing of schools and other educational institutions, hindering the acquirement of skills and knowledge. Last, the need for relatedness may not have been satisfied due to the social distancing measures. Real-life social interaction was limited, and physically meeting other people became difficult, although digital communication was possible. Given these basic psychological needs that could not be satisfied or were only partly satisfied, it can be reasoned that the COVID-19 pandemic and its preventive measures may have negatively impacted the mental health of late adolescents and young adults.

On the other hand, factors that buffered a potentially negative effect of the pandemic and the preventive measures may have been present. Examples of these factors are the experience of social support (for instance support offered by peers or a (natural) mentor), having adequate coping strategies, and being resilient as perhaps the most important factor (e.g., Demetriou et al., 2021; Flesia et al., 2020; Szkody et al., 2021). Resilience can be described as the dynamic process of positive adaption during and after stressful life circumstances, such as the COVID-19 pandemic (Kalisch et al., 2017). Higher levels of resilience have been associated with fewer mental health problems, and research has suggested that resilience may have buffered against the negative effects of the COVID-19 pandemic (Demetriou, 2021; Ungar & Theron, 2019). Resilience is not only based on one's individual personality and skills, but also on the quality of relations with others (Masten et al., 2021; Raghavan & Sandanapitcha, 2020). As such, empirical evidence has revealed that the availability of a natural mentor (a non-parental adult who is a confidant and advocate for the youth that offers support and guidance) may be beneficial for resilience (Southwick et al., 2007; Van Dam et al., 2018). Research also showed that having a natural mentor was associated with fewer mental health problems (Hagler & Rhodes, 2018; Koper et al., 2022; Van Dam et al., 2018), and may have buffered negative effects of the pandemic. Last, adequate coping strategies can change the impact of stressful life events and crisis situations, such as the pandemic. Studies have revealed that using task-oriented coping to address difficulties such as the COVID-19 pandemic is associated with better mental wellbeing (Budimir et al., 2021; Taylor & Stanton, 2007). This dissertation specifically focused on the potential roles of having a natural mentor, coping strategies, and resilience in the possible relation between the COVID-19 pandemic and mental health problems.

It is evident that the COVID-19 pandemic came with multiple and different stressors, such as the fear of infection and several invasive preventive measures, which could all lead to mental health problems in late adolescents and young adults. On the other hand, young people from the general population may have been sufficiently resilient to cope with these stressors, for instance because they received social support from a natural mentor or other supportive figures, or because they used adequate coping strategies. These factors may have buffered the potential negative effects of the COVID-19 pandemic, and may have led to only small effects on mental health, or even no effects at all. This dissertation aimed to gain more insight into the effect of the COVID-19 pandemic on the mental health of late adolescents and young adults from the general population, and focused on the first year of the pandemic.

Dissertation Outline

This dissertation comprises four studies. Chapter 2 presents the results of a cross-sectional study, which examined factors that were hypothesized to be associated with compliance with the COVID-19 measures, such as social distancing measures. The constructs of interest were mental health problems, coping strategies, resilience, and the availability of a natural mentor.

Chapter 3 presents a qualitative interview study, which aimed to gain insight into the question of what makes late adolescents and young adults comply with the preventive measures. This study was built on two behavioral models, and studied mental health problems, positive outcomes (such as more time for hobbies), and the availability of a natural mentor.

To gain more insight into the effects of the COVID-19 pandemic on the mental health of late adolescents and young adults, a meta-analysis was conducted, which is reported in Chapter 4. This meta-analysis synthesized the available primary evidence on the effect of the COVID-19 pandemic on the mental health of late adolescents and young adults during the first year of the pandemic. In this meta-analytic review, mental health was operationalized in terms of internalizing symptoms, externalizing symptoms, and positive mental health outcomes.

The final longitudinal study examined whether the duration of the COVID-19 pandemic affected the mental health of late adolescents and young adults over the course of the first year of the pandemic. The moderating effect of the severity of the COVID-19 pandemic, operationalized as the severity/intrusiveness of the preventive measures, was examined as well as other factors that could have possibly had an impact, including demographics and resilience. This study is reported in Chapter 5.

Finally, Chapter 6 discusses the results of the above-mentioned studies and presents the overall conclusion of this dissertation. Finally, the strengths and limitations of this dissertation are discussed as well as the implications of the results.