

**Determining the Role of Negative Life Events and Well-being in the Rise of COVID-19
Conspiracy Theories**

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Abstract

Purpose: Conspiracy theories have become a reappearing phenomenon in the last decades and reached a new high during the COVID-19 pandemic. As their origins and reason to believe in them are not entirely understood this research proposed that negative life events and well-being play a substantial role in their appearance. Thus, this study's focus was to test for the connection between policy-related negative life events and conspiracy theories in a COVID-19 pandemic context, while focusing on the potential mediating role of well-being.

Methods: A sample of 78 participants from Germany, the Netherlands, and other nationalities including all socioeconomic classes was collected based on convenient sampling and a cross-sectional online survey was conducted. Afterwards, the data were analyzed by the usage of a linear regression analysis and a Sobel test.

Results: Results provide no significant associations between the pandemic's negative life events and the adoption of conspiracy theories. Neither could a mediating role of well-being be confirmed for that relationship. However, a biased sample might account for the missing results. Nevertheless, results provide a significant association between the pandemic's live impacts and decrease well-being scores.

Conclusion: In summary, this research could not indicate an involvement of negative life events or well-being factors in the rise of conspiracy theories during the COVID-19 pandemic but could only show a negative relation between policy-related negative life events and decreased well-being.

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1. Introduction

Conspiracy theories have had a tremendous impact on many people's lives in the past years and have become much more visible during the COVID-19 pandemic (Kuzelewska & Tomaszuk, 2022). Per definition those theories are “an attempt to explain harmful or tragic events as the result of the actions of a small powerful group” (Raid, 2023), indicating that their believers mostly reject the belief in institutions like governments but instead think their environment is influenced by some other organizations or persons. Comparing this definition to the latest protests and government policies it becomes clear that conspiracy theories have reached higher levels of social acceptance relative to a couple of years ago (Uscinski et al., 2022).

By way of example, in the USA over 10 percent believe that Bill Gates was involved in the COVID-19 outbreak and nearly 30% of the population believes that Donald Trump is secretly fighting against such influential persons, making him the actual hero of the American citizen (Armstrong, 2019). However, recent research has also shown that the worldwide COVID-19 pandemic significantly increased the adoption of conspiracy theories in Europe too (Butter & Knight, 2020). That is, studies have shown a link between the COVID-19 pandemic and the appearance of more beliefs in conspiracy theories multiple times for Western societies, making it a key issue to consider when thinking about the COVID-19 pandemic impacts (Kuzelewska & Tomaszuk 2022).

In addition, conspiracy theories can have tremendous consequences for society. For example, they easily lead to radical protests and social aggression with much financial damage to innocent civilians (Sternisko et al., 2020). Furthermore, other studies also linked the belief in conspiracy theories and participation in protests to less adoption of containment behaviors like getting vaccinated (Imhoff & Lamberty, 2020), or linked their content to xenophobic beliefs, thereby, increasing intergroup conflicts between different ethnicities (Oleksy et al., 2021). However, despite their drastic impacts on society, it is not clear what causes

individuals to believe in such theories in the first place, and what can be done to reduce their impact?

Research so far indicates that it might be a combination of the theories' content, and the characteristics or emotional state of the individual that make the theories so successful (Hartman et al., 2017). That is, an individual suffers due to negative life events in a social, economic, or epistemological context and the conspiracy theory offers the individual a way out by creating some fictional content to understand his misery (Douglas, 2017). In fact, research has proven such a link between imposed life challenges, anxieties, and the adoption of conspiracy theories for the COVID-19 pandemic too. (Freeman et al., 2023). Thus, the negative life events people perceived during the pandemic could have caused a search for an explanation which led to the adoption of conspiracy theories as related content helped affected people to make sense of their situation.

Nevertheless, is not clarified yet why this adoption of conspiracies does not always take place when negative life events occur. Clearly, the COVID-19 pandemic has affected all people in some way but only a proportion started to believe in related Conspiracy theories. A potential explanation might be that reduced mental health of individuals is involved in this process (Chen et al., 2020). This idea would also align with the findings of Van Prooijen et al. (2021), showing that reduced well-being can often be found in people believing in conspiracy theories. In fact, there are social scientists claiming that it is specifically the absence of well-being, hence, the reduced mental health in individuals that increases the belief in conspiracy theories (Cichocka, 2020). However, no research so far has tested for this involvement of well-being in the rise of conspiracy theories as a mediator.

Taking this research gap into account this this research claims that well-being was involved in the rise of conspiracy theories. It will test for an association between negative life events of the COVID-19 pandemic and the adoption of conspiracy theories, whether those

events also relate to the individual's well-being, and whether well-being mediates the relationship between negative life events and the adoption of conspiracy theories.

1.1 Research Questions

What is the role negative life events and well-being play in the adoption of conspiracy theories?

1. What is the relation between life events and the adoption of conspiracy theories?
2. What is the relation between well-being and the adoption of conspiracy theories?
3. To which extent does well-being mediate the relation between negative life events and the adoption of conspiracy theories?

2. Theoretical Framework

The theoretical framework includes the following structure. It starts with defining the variable adoption of conspiracy theories. For that, an analysis takes place to see which conspiracy theories or facts have been believed the most during the pandemic, followed by an analysis of which facts were published simultaneously. Afterwards, the two independent variables well-being and negative life events will be defined. For that, two additional analyses take place. First, it will be analyzed which well-being factors were decreased the most during the pandemic and second, it will be analyzed which negative life events were given the most during the pandemic. Based on those two analyses the two concepts will each be divided into different sub-variables. Lastly, a link will be drawn between well-being and the adoption of conspiracy theories, between negative life events and well-being, and between negative life events and the adoption of conspiracies. In that context, hypotheses will be made about their potential relationships.

2.1 Adoption of Conspiracy Theories

As there have been multiple conspiracy theories during the pandemic, it is essential to first of all assess which conspiracy theories were believed the most during the pandemic to

effectively assess the belief in conspiracy theories in this research (Miller, 2020). Nevertheless, the related survey needs to offer participants a chance to indicate other beliefs next to the conspiracy theories as well, which is why the most published facts during the pandemic need to be researched too. To assess the belief in conspiracy theories of facts the variable “adoption of conspiracy theories” will be conceptualized, which measures the tendency to believe in conspiracy theories.

Starting with the belief in conspiracy theories, 11% of the German population thinks the virus does not exist like it is presented in medical terms and 9% believe the vaccine within its properties is much more dangerous than the virus itself (Konrad-Adenauer-Stiftung, 2020). Additionally, these assessments show that also a form of the deep state theory is mostly believed by those percentages, meaning a secret government is controlling the actual government and abuses the virus to enforce social restrictions to gain more power (Neumann, 2023). Furthermore, European assessments have shown that between 15% and 30% of people in modern societies believe the COVID-19 virus has been created and released on purpose, which is mostly coming along with the rejection of proven facts about the virus and the endorsement of pseudoscience (Duplaga, 2020). Taking these assessments together, the COVID-19 deniers, vaccination lies, and deep state theories seem to have been believed most during the pandemic.

However, this paper will also include conspiracy theories that are mainly part of the right extreme ideologies, like the deep state theory in Germany or the great reset theory in the Netherlands. Two reasons mainly accounted for this. First, many protests against COVID-19 measurements and policies in Europe have been seen to intermix with general protests from right-wing activists against the government (Gotev, 2022). This intermixture of protesting people is believed to have created a new narrative of COVID-19 conspiracy theories and older right-wing conspiracy theories, making it increasingly difficult to see both movements and theories as two separate social mobilizations (European Commission, 2021). Secondly, right-

wing populist parties in Western states even encourage these protests, especially against COVID-19 policies, which seems to have increased the prementioned intermixture of right-wing and COVID-19 conspiracy theories even further (Falkenbach & Greer, 2020).

Considering secondly the analysis of facts about the pandemic or COVID-19 most publications referred to prevention strategies like the application of masks, and the development of vaccinations, but also the shutdown of economics (Dergiades et al., 2020). Additionally, the World Health Organisation (2022) published several MythBusters statements about the COVID-19 origins in which conspiracy theories were addressed with verified facts to counteract their spreading. Lastly, a meta-analysis shows many articles were also published focusing on the symptoms and the course of the disease to understand its physiological mechanism (Adhikari et al., 2020). Considering these publications, it becomes evident that MythBusters publications, antiinfection strategies, and disease facts were mostly published during the pandemic.

2.2 Well-being

The second component that needs to be considered for this research is the affection of people's well-being during the pandemic. For example, Usher et al. (2020) showed that many people had difficulties dealing with life challenges especially because the number of problems arising simultaneously seems to have overwhelmed many people, thereby, increasing perceived stress. Other researchers also argue that it was specifically the diversity of problems and vagueness of the pandemic's course that was too debilitating as people were challenged by each infection rate and new policies over and over (Yang & Ma, 2020). Taking these components into account another variable that will be conceptualized for this research is called well-being which can be defined as "a state of happiness and contentment, with low levels of distress, overall good physical and mental health and outlook, or good quality of life" (APA Dictionary, 2023). However, it needs to be mentioned that well-being consists of several factors that were affected to different degrees by different policy-related life challenges during

the pandemic (CDC, 2023). For this research, the following factors could be determined as important.

The first factor of well-being that was decreased substantially by the pandemic can be seen when looking at the study of Cohen-Louck and Levy in 2023. They found that pandemic-related stress could be used as a predictor for happiness, meaning more stress was associated with less happiness. Similar results could be shown by Peker and Cengiz (2021), who provided a significant correlation between fear of COVID-19 and a decrement in happiness, or Long (2021) who showed that happiness was determined by the social agreement with COVID-19 policies. Considering those results happiness will be utilized as a first sub-variable to measure well-being. Thereof, it will be defined as “an enduring state of mind consisting not only of feelings of joy, contentment, and other positive emotions but also of a sense that one's life is meaningful and valued” (Lyubomirsky, 2001).

Another component of well-being that was substantially decreased by the pandemic is the ability to accept daily limitations, called self-acceptance. That is, the pandemic restrictions have shaped conditions for many people's life even beyond the pandemic context, hence, challenging people's self-acceptance abilities over and over (Zettler et al., 2020). For instance, research exposed the insufficiency of new teaching approaches during COVID-19 by displaying that children had difficulties learning when being taught online (Khalifa, 2021). Analogous results were found for adult's self-acceptance showing that the ability to deal with one's limitations and imposed restrictions were depending on mediators like political identification (Ladini & Maggini, 2023), fear of COVID-19 (Demirtaş-Madran, 2021), or trust in politics (Dohle et al., 2020). Considering in retrospect that all those mediators were affected during the pandemic, self-acceptance will also be used as a sub-variable to measure well-being in this research too (Maccinnes, 2006). In the context of this study, it will be defined as “a relatively objective sense or recognition of one's abilities and achievements, together with acknowledgment and acceptance of one's limitations” (APA dictionary, 2023).

A last component of well-being that was impacted substantially by the pandemic's negative life events is known as the sense of purpose in life. Per definition purpose in life is defined as "the mental sense of a goal or aim in the process of living or in existence itself" (APA dictionary, 2023). Based on that definition it would be a logical presumption that COVID-19 hindered many people from setting such goals for themselves when measurements were set and in fact, many studies provide that this has been the case during the pandemic. For example, a study by Jong et al. (2020) says scientists worried the loss of our normal lives could have facilitated an overall loss of meaning in life. Similarly, some studies even showed that purpose in life could be used as a predictor of how easily people were able to cope and adapt to COVID-19 measurements, indicating a link between those two (Kang, et al., 2021). Considering those connections between the pandemic and purpose in life, this concept will be conceptualized as a sub-variable to assess overall well-being in this research too.

2.3 Well-being Influences on Adoption of Conspiracy Theories

Next to assessing the most important factors of well-being factors during the pandemic, we need to determine which of the aforementioned well-being factors might be essential for the adoption of conspiracy theories, in order to specify the mechanism that might be accountable for mediating the relationship between potential life challenges and conspiracy theories.

The first finding to mention is that happiness and conspiracy theories have been linked by a significant negative relationship. That is a study by Yu et al. (2021) indicated that happiness needs to be facilitated to solve inter-group conflicts and related beliefs in conspiracy theories. As has been argued that well-being was reduced substantially during the pandemic it is logical to assume there might be a complementary relationship in which reduced happiness can be linked to the belief in conspiracy theories. Additionally, Van Prooijen and Douglas found in their study of 2017 that anxiety traits can specifically be linked to higher beliefs in conspiracy theories as well. Considering the dimensional link between happiness and anxiety

it seems logical to assume a negative significant relationship between decreased happiness and conspiracy theories too (O'Connor et al., 2012). Based on those results, it is first hypothesized that happiness significantly negatively relates to the adoption of conspiracy theories (see Figure 1).

Moving on, another research by Hartman and Müller (2022) proved a strong link between conspiracy believers and less acceptance of COVID-19 restrictions. As the results above specially stated there were reduced self-acceptance abilities during COVID-19, it seems logical that reduced acceptance levels of individuals might have caused the belief in conspiracy theories to a certain degree too. This becomes even more evident, considering the psychoanalytical analysis by Causey in 2023, indicating a theoretical link between the client's self-acceptance abilities and conspiratorial thinking which can lead to the adoption of conspiracy theories. Taking those results into account, it is required to secondly hypothesize that self-acceptance significantly negatively relates to the adoption of conspiracy theories (see Figure 1).

Lastly, we should consider the argument made by Van Prooijen lately in 2022, in which he specifically argued that the belief in conspiracy theories offers several benefits for individuals, like creating a sense of purpose in life. Considering that our argumentation above indicates people had difficulties finding a purpose in life during the pandemic, the involvement of a reduced sense of purpose in life in the adoption of conspiracy theories is likely too. Consequentially we thirdly hypothesize that purpose in life significantly negatively relates to the adoption of conspiracy theories (see Figure 1).

2.4 Negative Life Events

Looking at the different challenges for Western societies during the pandemic it becomes clear that there have been many diverse negative life events in the last two years in European societies, all due to different COVID-19 related policies (Goodman-Backon & Marcus, 2020). The list of such covers social restrictions to reduce contacts, closure of stores with

economic and financial implications, or simply quarantine measurements to assess the COVID-19 spreading but forcing the individual into isolation. Considering the influences of such impacts until today, a variable that will be used for this research is called negative life events, which can generally be defined as a life-changing event that has a lasting physical or psychological consequence for a person. However, as the list of COVID-19 related policies and impacts is long it first needs to be assessed which of those negative life events imposed the biggest challenges for people to cope with, especially in terms of well-being, as this is argued to be the potential mediator for believing conspiracy theories in the first place. Additionally, it needs to be assessed which well-being factors, that were described above have been influenced the most by those negative life events the most.

A first essential life impact to recognize can be found when looking at the research of Sansone-Pollock et al. (2020). They assessed the specific impacts of policies that reduced physical activities during COVID-19 and analyzed the effect on people's well-being in Italy. Their findings imply that COVID-19 restrictions substantially reduced overall life quality, especially when those people were forced to stay home. Another study conducted by Nihues and Lesser (2020) shows similar results, finding more anxieties and reduced well-being in women when the COVID-19 measurements affected the physical opportunities to stay active or engage in hobbies. Taking this literature into account the first distinction of the variable negative life events will be called "physical restrictions", thereby, assessing the individuals' prementioned restrictions to take part in trivial physical activities during COVID-19.

However, before continuing with another life impact it needs to be recognized which factors of well-being the physical restrictions might have influenced. For instance, Caputo and Simon (2013) figured out that physical limitations can be linked to depressive symptoms, indicating that happiness might have decreased when physical restrictions during the pandemic occurred. Similarly, Walsh et al. (1989) investigated the relationship between physical restrictions and self-esteem, showing that increased limitations also come along with decreased

self-esteem. Comparing this to the conceptualization of well-being, one might argue that physical restrictions can also decrease the individual's self-acceptance abilities. Lastly, a study by Schultz et al. (2005) has shown that physical constraints can have an effect on people's sense of purpose in life. Even though this study was conducted in a medical context of physical limitations it is logical to assume that similar restrictions of the pandemic might have had a negative influence on people's sense of purpose in life too. Taking these results into account, we fourthly hypothesize that physical restrictions significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life (see Figure 1).

Another pandemic-inflicted life event with major consequences for Western societies can be seen when looking at the social restrictions made to reduce the spreading of COVID-19. That is, studies show that reduced social contact considerably influenced the mental health of older adults, by increasing their suicide tendencies (Sheffler, et al., 2020). Other research indicates similar results for teenagers and adolescents' people, showing that COVID-19 policies have deeply affected their social possibilities to meet friends which in turn affected their capacity to deal with their problems mentally (Mckinley et al., 2021). Considering these results, another conceptualization for negative life events will be made for "social constraints", measuring the individual's social possibilities and limitations during the pandemic.

Again, it needs to be mentioned which well-being factors social constraints might have influenced, during the pandemic. For example, social connections and happiness have been linked multiple times like by the research of Greco et al. (2015). As the research indicates that social connections can increase the happiness of people it is likely to assume that happiness was reduced due to the social constraints given during the pandemic. Furthermore, studies have shown a reciprocal relationship between social connectedness and self-esteem (Harris & Orth, 2020). In comparison to the COVID-19 pandemic, social connectedness was substantially reduced by social constraints, thus, decreasing self-esteem and probably related self-acceptance too. Additionally, social connectedness and mental health seem to have a reciprocal

relationship as well because the former increases a cognitive sense of belongingness, which indicated the pandemic might have decreased people's sense of purpose in life by imposing social distances. Taking these findings together, we fifthly hypothesize that social constraints significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life (see Figure 1).

A third important negative life event can be registered when looking at pandemic-related policies on a socioeconomic level. As was the case in many Western states, the economy was shut down to reduce the spread of COVID-19, thereby, reducing the economic prosperity of such countries profoundly (Ahmad et al., 2020). In that context, millions of people lost temporarily their jobs and had to deal with traumatic experiences of being financially unstable (Crayne, 2020). Additionally, many studies indicate that despite this financial endower many individuals were also affected in their mental health, arguably because the job essentially creates for many people a sense and purpose in their life (Ward & King, 2017). Looking at the economic impact that followed Western societies even until today after COVID-19, the last conceptualization for negative life events will be by the means of two sub-variables, namely "financial impacts" and "work/study impacts". The former will measure how financially stable and supported people felt during COVID-19, while the latter will assess how people were confronted with governmental policies to change or deviate from their work/study routines.

Similar to before, it needs to be evaluated which well-being factors might have been influenced by the financial impacts. For instance, the link between financial liquidity and happiness has been on debate many times, although some studies show that money is essential to the overall happiness of people (Mogilner & Noroton, 2016). Furthermore, financial impacts and self-acceptance have been linked in the context of the pandemic too, showing that the reduced financial possibilities had a negative effect on people's self-acceptance (Ufi et al., 2020). Additionally, money might not be essential for all the quality and people's sense of purpose in life, but it is still a means to an end to address such (Laurence & Arashiro, 2011).

Thus, the financial endower of the pandemic might have decreased people's sense of purpose in life too. Concluding these findings, we sixthly hypothesize that financial impacts significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life (see Figure 1).

Equal to financial impacts, it also needs to be considered which influences work/study impacts had on the predefined well-being factors. For example, Ramirez-Garacia et al. (2019) showed a relationship between job security and happiness. The pandemic, in contrast, decreased job security to a considerable degree for many people, hence, probably also decreasing peoples' happiness. Comparable results were found for the relationship between work on self-acceptance, meaning the better the work-life balance, the better the self-acceptance abilities of people (Rahmawati et al., 2021). As the balance between work and life has been influenced substantially by the pandemic policies, it is likely to assume that self-acceptance was decreased by work/study impacts as well. Lastly, studies claim that work has become for many people a purpose in itself, thus, creating joy and a sense of purpose in life generally (Steger, 2016). However, as mentioned work participation and engagement were reduced substantially during the pandemic, hence, potentially decreasing people's sense of purpose in life as well. Based on those examinations we can seventhly hypothesize that work/study impacts significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life (see Figure 1).

2.5 Negative Life Event Influences on Adoption of Conspiracy Theories

Next to the above-presented literature about the potential consequences of negative life events on well-being, it is a necessity to analyze also which of the preselected negative life events or related consequences have been associated with the adoption of conspiracy theories by previous research.

The first factor that seems to influence the adoption of conspiracy theories can be identified by looking at the research of Sullivan and her colleagues (2010). They showed that

the less people feel in control over their life, the more likely they are to believe conspiracy theories. In the pandemic context, the temporary absence of both work/study freedoms and financial freedoms might have given individuals the sensation that their life is out of control, hence, leading to the adoption of conspiracy theories. This argumentation becomes even more evident, considering that studies have presented the reciprocal relationship between feelings of control and work routines multiple times, showing that the absence of work might reduce the feelings of control over one's life (Ross & Wright, 1998). Considering these results, we can eighthly hypothesize that financial impacts significantly but positively relate to the adoption of conspiracy theories and ninthly that work/study impacts positively significantly relate to the adoption of conspiracy theories (see Figure 1).

Another research conducted by Bierwiazzonek et al. (2020) showed that people who demonstrate together against social restrictions have a higher tendency to increase their social well-being as they probably feel more involved in a social cause and purpose. However, this interpretation also implies that if social constraints occur like in the pandemic, the likeliness of groups starting to believe in conspiracy theories to create such a social consensus and demonstrate together might be higher too. Considering this conclusion it is logical to hypothesize tenthly that social constraints positively and significantly relate to the adoption of conspiracy theories (see Figure 1).

Continuing further, Hughes et al. (2020) could find that also physical components like the perception of one's freedom might play a role in the belief in conspiracy theories. He and his team measured the tendency to believe in conspiracy theories and compared it with probands' perception of their freedom, showing that the less people felt free, the more they tend to believe in conspiracy theories. Similar results were shown in the COVID-19 pandemic's context by Romer and Jameson (2020), providing a significant correlation between the reduction of physical freedoms to prevent the spread of COVID-19 and the spreading of conspiracy

theories. Taking these results into account we must eleventhly hypothesize that physical restrictions significantly positively relate to the adoption of conspiracy theories (see Figure 1).

2.6 Mediation Role of Well-being

As the presented literature above indicates the specific relationships between well-being and the negative life events of the pandemic or the adoption of conspiracy theories, we can assume that well-being might also mediate the relationship between negative life events and the adoption of conspiracy theories. That is, both relationships are essential requirements and indications for the potential mediating role of well-being. Furthermore, Van Prooijen et al. (2021) and Chen et al. (2020) also verified the involvement of well-being in the rise of conspiracies, making this assumption even more logical. Hence, we twelfthly hypothesize that well-being significantly negatively mediates the relationship between life impacts and the adoption of conspiracy theories.

2.7 Hypothesis Overview

H1: Happiness significantly negatively relates to the adoption of conspiracy theories.

H2: Self-acceptance significantly negatively relates to the adoption of conspiracy theories.

H3: Purpose in life significantly negatively relates to the adoption of conspiracy theories.

H4: Physical restrictions significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life.

H5: Social constraints significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life.

H6: Financial impacts significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life.

H7: Work/Study impacts significantly negatively relate to (a) happiness, (b) self-acceptance, and (c) purpose in life.

H8: Physical restrictions significantly positively relate to the adoption of conspiracy theories.

H9: Social constraints significantly positively relate to the adoption of conspiracy theories.

H10: Financial impacts significantly positively relate to the adoption of conspiracy theories.

H11: Work/Study impacts significantly positively relate to the adoption of conspiracy theories.

H12: Well-being negatively mediates the relationship between negative life events and the adoption of conspiracy theories.

Figure 1

Visualisation of Hypothesis 1-11

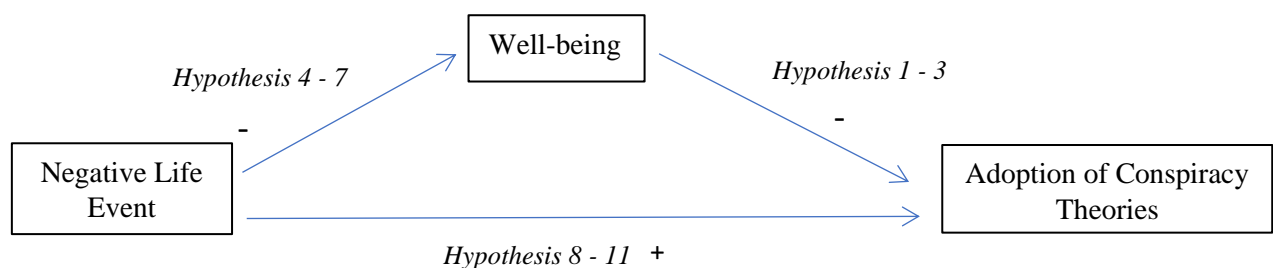
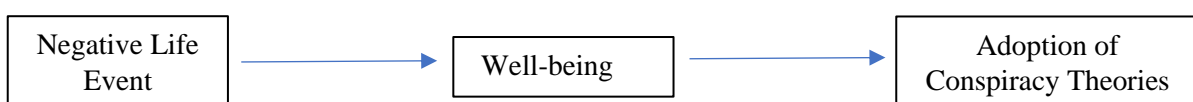


Figure 2

Visualisation of hypothesis 12



3. Methods

3.1 Research Design

A cross-sectional online survey was created on the platform Qualtrics, which was ethically approved by the University of Twente. The population used for this research was specifically focused on Western societies, like Germany or the Netherlands but other nationalities were allowed as well. Each participant received the same survey which consisted of three parts. For the later analysis process, RStudio was utilized.

3.2 Participants

Participant recruitment occurred on the base of convenient sampling. The aim was to find participants from Germany and the Netherlands but from other Western nationalities as well.

People from all socio-economic classes were wanted that also experienced policy-related negative life events on an equal level but would also believe to a certain degree in conspiracy theories. For inclusion, a link to the questionnaire was posted on Instagram within the Netherlands while additional recruitment occurred within German communities (see Appendix B). In the latter case, voluntary community workers were actively recruited by asking for participation and received the link via WhatsApp if willingness to participate was indicated. Furthermore, participants were recruited via the SONA system of the University of Twente and granted participants 0.25 credits for participation. No specific inclusion criteria were addressed, however, exclusion occurred when being under the age of 18.

In total 92 participants took part in the study from which 14 needed to be removed, due to missing consent, missing values in their demographic data, or missing answers in one or multiple questions. After exclusion, the average age of those 78 participants was 24 (Mean = 24.6, SD = 7.3) and the most common nationality was German with 67 participants, while 3 participants came from the Netherlands and 7 participants indicated other nationalities. Due to the low number of participants, the disbalance between German and other nationalities, and the application of convenient sampling the representativeness of the sample should be considered cautiously. In total 33 participants were male, and 45 participants were female. Additionally, 71 people indicated to be employed, 5 considered themselves as unemployed and 2 indicated another undefined occupation status.

3.3 Instruments

To test the twelve hypotheses the following questionnaire with scales for the variable's adoption of conspiracy theories, well-being, and negative life events was created, each containing the predefined sub-variables in their assessment (see Appendix A).

3.3.1 Adoption of Conspiracy Theories

The variable adoption of conspiracy theories was assessed, by including wrong statements about the COVID-19 pandemic, which were based on the analysis of the most common conspiracy theories, and by including correct statements about the pandemic which were oriented at World Health Organisations' MythBusters publications (2023), government publications or medical research papers on COVID-19. An example of the related scale of conspiracy theories would be "COVID-19 is a bioweapon that was developed to harm humans", while an example of the scale of facts would be "The vaccinations against COVID-19 are generally safe despite some smaller side effects".

However, essential to recognize is that long-term investigations indicate a big overlap between old and new conspiracy theories (Brügger, 2015). Thereby, Conspiracy theories and opposing facts are used simultaneously by their believers to create depending on the social situation and published facts new theories with old content instead of having a separate theory with different content from time to time. To take this dimensional link into account, the statements and their related categories (correct & incorrect) were presented simultaneously in an arbitrary order instead of having two separate variables. Again, answers could be given by indicating a response on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). In total, there were 11 statements considered incorrect and 8 statements considered correct.

3.3.2 Well-being

Well-being was divided into three sub-variables including happiness, self-acceptance, and purpose in life, each of which was assessed by the creation of a different sub-variable and scale.

Happiness was assessed by the usage of the Oxford Happiness Questionnaire of Argyle and Hills (2002). To reduce the number of questions six items with similar content were selected from the questionnaire and adjusted to the context of the COVID-19 pandemic. Supposedly those items were intended to measure the pleasure and overall life satisfaction of the

individual during COVID-19. Answers to those statements could be indicated on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). An example of a questionnaire item would be “Life was good” which was adjusted for this research to “During the COVID-19 pandemic, I was satisfied with my life.”, to assess whether the individual was able to experience happiness during the pandemic.

Self-acceptance was assessed by the usage of the self-acceptance scale created by Duke and Nowicki in 1998. Again, six items with similar content were selected to reduce the number of questions in the survey. Similar to happiness they were adjusted to the pandemic context. Their aim was to assess the individual’s ability to accept daily limitations but also the individual’s ability to acknowledge imperfections. Again, answers to those statements could be indicated on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). An example of a questionnaire item would be “I am able to forgive myself for my mistakes” which was adjusted for this research to “Despite the COVID-19 pandemic, I was able to forgive myself”, to assess whether the individual could deal with mistakes during the pandemic.

Purpose in life was measured by the usage of the purpose in life questionnaire of Crumbaugh and Maholick (1981). In total 7 items with similar content were selected to reduce the number of questions in the survey. Like before, they were adjusted to the pandemic context, supposedly measuring the individual’s sense of purpose and direction in life. Answers to those items could again be given on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). An example would of the questionnaire would be “I find joy and fulfillment in pursuing my goals and aspirations” which was adjusted for this research to “Setting goals for myself during the COVID-19 pandemic was a waste of time”, to measure how the individual was able to keep up a sense in life, despite the limitations.

3.3.3 Negative Life Events

The variable negative life events was divided into physical restrictions, social constraints, financial impacts, and work/study impacts, each of which represented a separate sub-variable.

Physical restrictions were assessed by the creation of 6 statements, which could be answered on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). Each statement was meant to assess how far reductions of physical freedoms or possibilities occurred for the individual during the COVID-19 pandemic. An example would be “During the COVID-19 pandemic, I was bored many times”, to assess whether the individual was able to keep himself busy, despite the pandemic restrictions.

Social constraints were also assessed by the creation of 6 statements, which could also be answered on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). Their content was focused on the reduction of social freedoms that individuals might have experienced during the COVID-19 pandemic. An example for this scale would be “During the COVID-19 pandemic, I engaged less frequently in activities with others”, to assess the individual’s social involvement with other people.

Financial impacts were assessed by the creation of 4 statements, which could be answered by the use of a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree), as well. The statements were supposed to assess the individual’s financial liquidity and spending possibilities. An example of such would be “During the COVID-19 pandemic, I worried about making enough money”, to assess whether the individual could make enough money for his living standard despite the financial challenges the pandemic might have inflicted.

Work/study impacts were assessed by the creation of 5 statements, which could be answered by the usage of a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree) too. Their content was focused on the deviation from work and study routines that took place while the economy and many institutions were shut down during the pandemic. An example would be “During the COVID-19 pandemic, I was less satisfied with my work/study results”, to measure the individual’s ability to achieve work/study goals despite having to make behavioral adjustments.

3.4 Scale Construction

Before an analysis of the results could take place a first analysis of the questionnaire itself was done to test its reliability and validity. Thus, a principal component analysis (PCA) was conducted to test whether the differentiation of the predefined sub-variables and their scales was successful in the questionnaire. For all variables and related items, the mean score to those items was used in the PCA. If unfitting items were identified scale modifications occurred. Afterward, Cronbach's alpha was calculated for each scale as well, to assess each scale's internal consistency.

The first PCA that took place was focused on the items of the variable negative life events. The related suitability tests before the analysis showed poor suitability based on a KMO value of 0.51, but a significant Bartlett's test of sphericity, supporting the use of a PCA ($p < .001$). Based on the predefined scales for negative life events four underlying factors were assumed and tested for. The four factors could be verified. However, results provided insufficient loadings below 0.4 or insufficient loading differences of 0.2, for items 3, 4, and 5 of physical restrictions, and 1, 2, and 6 of social constraints (see Table 1). An additional PCA was done to check for the overlap with a potential 5th factor but could find such, which is why those items were simply removed from the later analysis.

Table 1

Factor Loadings of the Scales of Negative Life Events

	Factor 1	Factor 2	Factor 3	Factor 4
Items Physical Restrictions				
1. During the COVID-19 pandemic, I could not do the things I liked to do.	.229		.787	.147
2. During the COVID-19 pandemic, I was bored many times.	.195	.185	.599	.226
3. During the COVID-19 pandemic, I was less active than normal.	.366		.345	.126

Table 1*Factor Loadings of the Scales of Negative Life Events*

	Factor 1	Factor 2	Factor 3	Factor 4
4. During the COVID-19 pandemic, I went out less frequently than before.	.139		.419	.340
5. During the COVID-19 pandemic, I engaged less frequently in outdoor activities.	.265	.133	.3	
6. During the COVID-19 pandemic, I could not try the things I planned on doing.			.714	.242
Items Social Constraints				
1. During the COVID-19 pandemic, I had less contact with other people.			.385	.502
2. During the COVID-19 pandemic, I was often alone.	.227	.127	.375	.303
3. During the COVID-19 pandemic, I had fewer social meetings.			.223	.5
4. During the COVID-19 pandemic, I engaged less frequently in activities with others.				.836
5. During the COVID-19 pandemic, I attended fewer social gatherings or events.			.225	.6
6. During the COVID-19 pandemic, I was less involved in my relationships.	.248		.4	.227
Items Financial Impacts				
1. During the COVID-19 pandemic, I worried about making enough money.	.118	.919	.1	
2. During the COVID-19 pandemic, I worried about my financial situation.	.157	.956		
3. During the COVID-19 pandemic, I was concerned with my income and expenses.	.108	.923	.1	

Table 1*Factor Loadings of the Scales of Negative Life Events*

	Factor 1	Factor 2	Factor 3	Factor 4
4. During the COVID-19 pandemic, I needed to keep an eye on my finances.	.147	.851		
Items Work/Study Impacts				
1. During the COVID-19 pandemic, I was less satisfied with my work/study results.	.742	.188	.154	-.128
2. During the COVID-19 pandemic, I had difficulties taking part in my work/studying routines.	.892	.130		
3. During the COVID-19 pandemic, I had difficulties managing my workload/studyload effectively.	.885		.108	
4. During the COVID-19 pandemic, I had trouble keeping a healthy work/study-life balance.	.589		.243	
5. During the COVID-19 pandemic, I had trouble working effectively.	.805		.240	

Note: If no factor loading is indicated for an item its value is below 0.1

Continuing with the variable well-being, the suitability tests showed questionable suitability with a KMO value of 0.66, but a significant Bartlett's test of sphericity, supporting again the use of a PCA ($p < .001$). Based on the argumentation above three underlying factors representing the three predefined underlying sub-concepts, namely happiness, self-acceptance, and purpose in life, were expected and tested for in the PCA. Additionally, items 3, 4, and 6 were recoded beforehand, as their wording was negative. However, the PCA provided mixed results. They showed items 4 and 7 of the sub-variable happiness have sufficient loadings with multiple factors, hence, representing a confounding influence (see Table 2). Same accounts for the sub-variable self-acceptance regarding items 1 and 5. Additionally, item 1

showed an insufficient loading difference. Consequently, those items were removed from the subscales. Furthermore, items 4 and 6 of the sub-variable self-acceptance showed insufficient loadings with the assumed underlying factor of the subscale but showed sufficient loadings with the factor potentially underlying the items of happiness. As item 6 also indicated an insufficient loading difference below 0.2 between those factors it was removed while item 4 was redistributed to the subscale happiness (see Table 2). Lastly, the sub-variable of purpose in life showed insufficient factor loadings below 0.4 for items 2 and 3. The additional PCA could not find another common underlying factor explaining the items, which is why they were simply removed too.

Table 2

Factor Loadings of the Scales of Well-Being

	Factor 1	Factor 2	Factor 3
Items Happiness			
1. During the COVID-19 pandemic, I felt my life was very rewarding.	.423	.353	.104
2. During the COVID-19 pandemic, I was satisfied with my life.	.784	.358	
3. During the COVID-19 pandemic, I found a lot of happiness in my life.	.853	.341	
4. Despite the COVID-19 pandemic, I had a lot of energy in my everyday life.	.556	.429	.104
5. During the COVID-19 pandemic, I felt relaxed most of the time.	.503	.316	.117
6. Despite the COVID-19 pandemic, I tended to be a happy person.	.675	.323	.158
7. Despite the COVID-19 Pandemic, life was still good.	.577	.408	.274
Items Self-acceptance			
1. During the COVID-19 pandemic, I liked most aspects of my personality	.573	.373	.497
2. During the COVID-19 pandemic, I accepted my fears and weaknesses.	.273	.156	.687
3. Despite the COVID-19 pandemic, I was able to forgive myself.	.363	.225	.789

Table 2*Factor Loadings of the Scales of Well-Being*

	Factor 1	Factor 2	Factor 3
4. During the COVID-19 pandemic, I was comfortable with the way I looked.	.501	.164	.299
5. During the COVID-19 pandemic, I was able to view myself in a positive light, despite my imperfections.	.417	.353	.528
6. During the COVID-19 pandemic, I saw my fears and impulses as being normal.	.463	.125	.365
Items Purpose in life			
1. During the COVID-19 pandemic, some people wandered aimlessly through life, but I am not one of them.	.229	.456	.107
2. During the COVID-19 pandemic, I lived one day at a time and didn't really think about the future.			
3. During the COVID-19 pandemic, I felt as if I'd done all there was to do in life.	.236		
4. Setting goals for myself during the COVID-19 pandemic was a waste of time.	.130	.553	.232
5. During the COVID-19 pandemic, I had a sense of direction and purpose in life.	.296	.795	.108
6. Despite the COVID-19 pandemic, I enjoyed making plans for the future and working towards them.	.131	.737	.183
7. During the COVID-19 pandemic, my days seemed trivial and unimportant.	.289	.702	

Note: If no factor loading is indicated for an item its value is below 0.1

The last analysis that needed to be done before the hypothesis testing focused on the scale of facts about the COVID-19 pandemic and the scale for the items measuring conspiracy theories. The suitability tests showed again poor suitability based on a value of 0.5 for the

KMO, but a significant Bartlett's test of sphericity, supporting the use of a PCA ($p < .001$). Two underlying factors, representing the two scales, were assumed beforehand. Results confirmed two underlying factors as sufficient, however, item 8 for measuring beliefs in conspiracy theories and item 1 of the scale measuring beliefs in facts of the pandemic showed insufficient loadings below 0.4 (see Table 3). An additional PCA testing for another underlying factor could not show any overlap between the items for a third factor. Hence, they were removed from the later analysis as well.

Table 3

Factor Loadings of the Scales of Adoption of Conspiracy Theories

	Factor 1	Factor 2
Items conspiracy theories		
1. The vaccines against COVID-19 were held back on purpose by pharmaceutical companies or the government.	.535	
2. COVID-19 is a bioweapon that was developed to harm humans.	.808	
3. COVID-19 does not exist but is made up.	.690	.146
4. COVID-19 was released within a secret military operation by the USA.	.866	.262
5. COVID-19 was released in a Chinese' lab accident.	.405	
6. COVID-19 was released by the Chinese government.	.643	.223
7. Bill Gates was somehow involved in the spreading or the origins of COVID-19.	.857	.207
8. The 5-G radiation is responsible for the development of COVID-19.	.294	.115
9. The government is secretly controlled by some secret organization that used COVID-19 for their own purposes.	.929	.261
10. The government secretly uses COVID-19 to install a new socialistic or communistic world-order.	.865	.230
11. Corrupt politicians in the government use COVID-19 to take control over the society.	.596	.119

Table 3*Factor Loadings of the Scales of Adoption of Conspiracy Theories*

	Factor 1	Factor 2
Items True facts about the Pandemic		
1. COVID-19 seems to have broken out on a food/animal market in Wuhan (China).		.358
2. The vaccinations against COVID-19 are generally safe despite some smaller side effects.	-.190	.623
3. Wearing a mask or disinfecting your hands can protect you from getting infected with COVID-19.	-.270	.676
4. The vaccinations against COVID-19 protect most people from having a severe disease process.	-.430	.689
5. Despite making some mistakes the governments of EU countries have tried to find solutions for the COVID-19 pandemic.	-.184	.353
6. The EU Governments were in charge of handling the COVID-19 pandemic.		.466
7. Pharmaceutical companies started to work on a vaccine shortly after COVID-19 started to spread.	-.175	.697
8. Once the first vaccines against COVID-19 were legally approved, they were produced and given to the public.	-.161	.554

Note: If no factor loading is indicated for an item its value is below 0.1

After the PCA and related modifications, the reliability of the scales was assessed by calculating Cronbach's alpha. Each scale showed good internal consistency, providing sufficient values above 0.7 (see Table 4). Therefore, the questionnaire was considered to assess the supposed variables of negative life events, well-being, adoption of conspiracy theories, and their related sub-variables sufficiently.

Table 4*Cronbach's alpha for all Scales*

Scale	Cronbach's Alpha
Physical restrictions	.75
Social constrains	.74
Work/Study impacts	.95
Financial impacts	.90
Happiness	.83
Self-acceptance	.75
Purpose in life	.82
Facts	.91
Conspiracy Theories	.80

3.5. Procedure

In the first step of the questionnaire participants needed to give their consent while receiving some basic information about the study's procedure and its aim. Afterwards, each participant was guided automatically through three sections, each assessing one of the three variables and their related sub-variables defined and tested above. Part one assessed the negative life events, part two well-being, and part three the adoption of conspiracy theories or facts. The order was chosen because a priming effect was believed to set in once the negative life events during the pandemic were remembered, which in turn might have influenced the adoption of conspiracy theories and the feelings indicated for well-being (APA, 2023). Within each section, participants were requested to remember the happenings of the pandemic with a specific focus. The first request in part one was to remember as precisely as possible what happened during the COVID-19 pandemic to measure the variable of negative life events. Likewise, it was stated to remember as precisely as possible how they felt during the COVID-19 pandemic to

measure the variable of well-being in part two, or requested to indicate their beliefs of the origins of COVID-19, based on the items provided for the variable adoption of conspiracy theories or the presented facts in part three. After participation, participants were thanked for their input and received a confirmation that their responses have been recorded.

3.6 Data Analysis

For testing the hypothesis and related assumptions of this research the following tests were utilized. First, the descriptive statistics were computed by calculating the means and standard deviations of each scale. Additionally, confidence intervals were provided for each scale to give an overview of the distribution of indicated answers.

Afterwards, a Shapiro-Wilk test was conducted for the scales of the adoption of conspiracy theories and facts about the pandemic to check for equal distribution of the data. Also, a histogram was plotted for both scales to check for potential ceiling or floor effects. Furthermore, person correlation coefficients between all the different scales were calculated to gain a first indication of potential relationships between the variables. Within this context, correlations above 0.6 were considered strong, while correlations of 0.4 were considered moderate. Correlations below 0.4 were considered weak, while correlations below 0.2 were considered negligible.

Afterwards, the hypotheses were tested by using multiple linear regression analyses. Thus, hypotheses one, two, and three were tested by a linear model using the well-being variables happiness, self-acceptance, or purpose in life as the independent variables, while the variable adoption of conspiracy theories was utilized as the dependent variable. Hypotheses eight, nine, ten, and eleven were tested by using a linear model in which physical restrictions, social constraints, financial impacts, and work/study impacts were used as the independent variables and the adoption of conspiracy theories as the dependent variable. Furthermore, the complementary relationships were tested as well, in which the same independent sub-

variables of well-being and life impacts were used while facts the scale for facts about the pandemic was used as the dependent variable.

Lastly, three additional linear regression analyses took place to test hypotheses four, five, six, and seven. Here, the negative life event variables physical restrictions, social constraints, financial impacts, and work/study impacts were utilized as the independent variables while taking each time one of the well-being variables happiness, self-acceptance, or purpose in life as the dependent variable. In all linear regression analyses conducted in this study, a significance level of $\alpha = 0.05$ (5% level) was used.

To test hypothesize twelve, hypotheses one to eleven first needed to be confirmed. That is one of the life impacts needed to have a significant relationship with the adoption of conspiracy theories and a significant relationship with one of the well-being factors. Also, those specified well-being factors needed to have a significant relationship with the adoption of conspiracy theories too. Only if these conditions were fulfilled a Sobel test was utilized to test for a significant mediation of that well-being factor, hence, hypothesis twelve. Again, a significance level of $\alpha = 0.05$ (5% level) was used for the Sobel test.

4. Results

4.1 Descriptive Results

To gain an overview of the answers that participants indicated in the survey the scale's means, standard deviations, and confidence intervals need to be considered (see Table 5). Based on the results the following interpretations and assumptions can be made about the sample.

Table 5*Means, Standard Deviations and Confidence Intervals for all Scales.*

Scale	M	SD	95% CI Lower	95% CI Upper
Physical restrictions	3.9	1.0	3.71	4.10
Social Constrains	4.3	0.8	4.24	4.52
Financial Impacts	1.9	1.1	1.76	2.23
Work/Study Impacts	3.0	1.3	2.74	3.28
Happiness	3.0	1.1	2.81	3.26
Self-acceptance	3.3	1.0	3.08	3.52
Purpose in Life	3.3	1.2	3.03	3.39
Conspiracy Theories	1.5	0.8	1.27	1.56
Facts	4.1	0.9	3.99	4.30

Note: Answers were provided on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). M = Mean, SD = Standard Deviation, CI = Confidence Interval

Starting with the means and standard deviations of negative life events one can see that physical restrictions and social restrictions seem to have been experienced most during the pandemic, followed by work/Study impacts. Nevertheless, the standard deviation and the confidence interval of work/study impacts show that those impacts have been answered with more variations between participants than the other negative life events. A possible explanation might be that there were different impacts on people working in different economic branches, thus, impacting the related jobs to different degrees too. Lastly, one needs to consider that participants showed less trouble in terms of their finances, indicating that these impacts did not affect the participants as much as the other negative life events.

Considering the means of the well-being subscales, one can say that participants indicated for all three subscales similar answers. Thus, it seems people did not feel much different

in terms of their overall happiness relative to their feelings of purpose in life or abilities to accept their limitations. The same is indicated by the related standard deviations or confidence intervals, implying that participants were mainly having similar feelings of well-being during the pandemic in all three subcategories without any big deviations between them. Still, it needs to be mentioned that participants indicated on average mediocre/neutral scores, which can also be interpreted differently. It is possible participants might normally indicate higher scores when not being impacted by a pandemic. As there are no comparative values for this questionnaire, we cannot be excluded this possibility.

Taking the values of the subscales for the variable adoption of conspiracy theories into account one needs to mention that the low mean of conspiracy theories indicates a very low belief in the conspiracy items. The related standard deviation and confidence interval also indicate that there was no big deviation between the participants' answers, implying that the pool of participants mostly agreed with the rejection of those conspiracy items. However, this indicates a big limitation for this research as we cannot test which negative life events or well-being factors might have an influence on the adoption of conspiracy theories if there are no conspiracy theory believers involved in the sample in the first place. Same accounts for the scale of facts about the pandemic. As the related mean, standard deviation and confidence interval indicate that there was an overall agreement for those facts, it is difficult to make assumptions about the relationship between facts about the pandemic with negative life events or well-being factors.

4.2 Data Distribution and Skewness Analysis

Based on the examination of the descriptive data and the determined limitations the skewness of the data was checked by calculating Shapiro-Wilk tests and plotting histograms. That is, the scale for the adoption of conspiracy theories has a very low mean indicating a potential floor effect and the scale for facts about the pandemic has a very high mean, indicating a ceiling effect. Starting with the Shapiro-Wilk test for the scale of adoption of conspiracy theories

it showed a significant result ($W = 0.64, p < .001$), thus, indicating an unequal distribution of the data. The related histogram confirmed a floor effect (see Appendix C). Similarly, the Shapiro-Wilk test for the scale of facts about the pandemic showed significant results too ($W = 0.88, p < .001$), thus, also indicating an unequal distribution of the data. The related histogram confirmed a ceiling effect (see Appendix C). This confirms the limitations to interpret results involving both scales.

4.3 Correlations

To gain a first indication of the relationships between the different variables, the Pearson correlation coefficients between the different sub-variables need to be considered (see Table 6). Based on the predetermined correlation rules above and the depicted results the following assumptions can be made.

Table 6

Correlations Between all Scales

Scale	1	2	3	4	5	6	7	8	9
1. Physical re- strictions									
2. Social Con- strains	.42								
3. Financial impacts	.19	.09							
4. Work/Study impacts	.32	.01	.26						
5. Happiness	-.35	-.19	-.26	-.53					

Table 6*Correlations Between all Scales*

Scale	1	2	3	4	5	6	7	8	9
6. Self-acceptance	-.26	-.01	-.30	-.41	.47				
7. Purpose in Life	-.35	-.11	-.29	-.60	.56	.39			
8. Conspiracy Theories	.01	-.18	.15	.05	-.02	-.04	-.11		
9. Facts	-.01	.08	-.24	-.23	.29	.22	.18	-.44	

First of all, one can see that the negative life events subscales seem to have a moderate correlation with each other, like physical and social impacts, or a weak correlation with each other, as work/study impacts with physical restrictions or social constraints. However, all those sub-variables have a negligible correlation with the subscale of financial impacts. A potential explanation of the latter finding might be that the participants were contrary to our assumption not so much confronted with financial trouble during the pandemic but had to deal much more with impacts on their physical or social freedoms, and probably with impacts on their work/study routines as well.

Continuing further, physical restrictions and financial impacts also show a weak but negative correlation with all well-being subscales. Work/study impacts has a moderate negative correlation with all the well-being subscales. This can be seen as a first indication of a significant relationship between the related negative life events a well-being factors as hypotheses four, five, six, or seven indicate. Still, this potential relationship is only given for physical restrictions, financial impacts, and work/study impacts. Social constraints, however,

only show contrary to hypothesis six a neglectable correlation with the well-being subscales and might not play a big role in people's well-being after all.

Furthermore, there is only a negligible correlation between the negative life events subscale and the conspiracy subscale. In contrast to our assumptions mentioned in hypotheses eight, nine, ten, and eleven, this might show the general idea of the relation between life's impacts and the adoption of conspiracy theories might be incorrect. Similarly, also the well-being subscales show negligible correlation with the conspiracy subscale, indication hypotheses one, two, and three might be incorrect as well.

However, the life impact subscales of financial impacts and work/study impacts show negative but weak correlations with the facts about the pandemic and the well-being subscales of happiness and self-acceptance show positive but weak correlations with facts about the pandemic. This would be in line with the reasoning that negative life events and conspiracy theories are at least linked in some way or another and that this relationship actually might be mediated by well-being, enough though not all negative life events seem to play a role in this relationship. Still, as no weak or moderate correlations can be seen when looking at the adoption of the conspiracy scale, it seems to be unreasonable to assume any relationships here. The only thing that can be assumed to exist is that the conspiracy items and the facts about the pandemic seem to stand in contrast to each other, as these sub-scales show a negative but moderate correlation, indicating a dimensional link and that the scales might represent two opposing sites.

4.4 Hypothesis Testing

The hypotheses from one to eleven were tested by utilizing multiple linear regression analyses, while hypothesis twelve was based on those results assessed by utilizing a Sobel test. Next to the testing of the hypotheses, additional linear regression analyses were conducted between the negative life events sub-variables or well-being sub-variables and the scale for facts

about the pandemic, as those relationships were regarded essential for the interpretation of the results later on too.

To start with the first three hypotheses, it was assumed that all well-being sub-variables, namely happiness, self-acceptance, and purpose in life would significantly negatively relate to the adoption of conspiracy theories. Results of the analysis provided that no significant relationship between any of the sub-variables of well-being on the sub-variable of conspiracy theories could be found (see Table 7). Thus, the first three hypotheses needed to be rejected.

Table 7

Multiple Linear Regression Table for Well-Being on the Adoption of Conspiracy Theories

Scale	Estimate	SE	t(78)	p-value	95% Confidence Interval
Happiness	0.044	0.095	0.468	.641	[-0.146, 0.235]
Self-acceptance	-0.014	0.087	-0.171	.865	[-0.189, 0.159]
Purpose in Life	-0.096	0.097	-0.991	.325	[-0.291, 0.097]

Note: Adjusted R-squared = -.024, $F(3, 78) = 0.381$, $p = .76$

In line with the argumentation of hypotheses one two and three, the complementary relationships were tested as well, to assess whether the well-being factors had a positive relationship with the adoption of facts about the pandemic. However, similar to before the analysis also showed no significant associations (see Table 8).

Table 8

Multiple Linear Regression Table for Well-Being on Facts About the Pandemic

Scale	Estimate	SE	t(78)	p-value	95% Confidence Interval
Happiness	0.162	0.098	1.654	.102	[-0.033, 0.359]
Self-acceptance	0.075	0.089	0.844	.402	[-0.103, 0.254]
Purpose in Life	0.009	0.100	0.095	.925	[-0.190, 0.209]

Note: Adjusted R-squared = .058, $F(3, 78) = 2.587$, $p = .06$

Moving on to hypotheses eight, nine, ten, and eleven, those hypotheses stated that negative life events, namely physical restrictions, social constraints, financial impacts, and work/study impacts, all significantly positively relate to the adoption of conspiracy theories. However, the linear regression analysis could not confirm those assumptions (see Table 9). Thus, hypotheses eight, nine, ten, and eleven, needed to be rejected as well.

Table 9

Multiple Linear Regression Table for Negative Life Events on the Adoption of Conspiracy Theories

Scale	Estimate	SE	t(78)	p-value	95% Confidence interval
Physical Restrictions	-0.056	0.099	0.563	.575	[-0.142, 0.254]
Social Constrains	-0.228	0.129	-1.757	.083	[-0.487, 0.030]
Financial Impacts	0.097	0.072	1.349	.181	[-0.046, 0.242]
Work/study Impacts	-0.007	0.067	-0.109	.913	[-0.142, 0.127]

Note: Adjusted R-squared = 0.012, $F(4, 78) = 1.233$, $p = .031$

Again, in line with the argumentations of hypotheses eight, nine, ten, and eleven, it was tested for the complementary relationships, meaning whether any of the negative life

events significantly negatively relate to the adoption of facts about the pandemic. Still, the linear regression analysis showed no significant associations with the adoption of facts for any of the sub-variable either (see Table 10). However, the association between financial impacts and the adoption of facts can be considered as marginal significant, thus, indicating a negative relationship between financial impacts and the adoption of facts about the pandemic. Even though, this relationship is not directly addressed in the eighth hypothesis, it needs to be considered for its interpretation later on.

Table 10

Multiple Linear Regression Table for Negative Life Events on Facts About the Pandemic

Scale	Estimate	SE	t(78)	p-value	95% Confidence interval
Physical Restrictions	0.057	0.104	-0.548	.585	[-0.151, 0.266]
Social Constrains	0.074	0.136	0.545	.587	[-0.197, 0.345]
Financial Impacts	-1.142	0.076	-1.878	.064	[-0.294, 0.008]
Work/study Impacts	-0.113	0.070	-1.605	.112	[-0.255, 0.027]

Note: Adjusted R-squared = -.024, F(4, 78) = 2.112, p = .08

Continuing, hypothesis four states there is a significant negative relationship between physical restrictions and (a) happiness, (b) self-acceptance, and (c) purpose in life. The related linear regression analyses showed no significant associations between physical restrictions and any of those well-being sub-variables (see Table 11-13). Hence, hypothesis eight needed to be rejected.

Furthermore, hypothesis five stated there is a significant negative association between social constraints and (a) happiness, (b) self-acceptance, and (c) purpose in life. Similar to hypothesis eight, the related linear regression analysis showed no significant relationship

between any of the sub-variables of well-being and social constraints (see Table 11-13). Thus, hypothesis nine needed to be rejected as well.

Moving on, hypothesis six stated there is a significant negative association between financial impacts and (a) happiness, (b) self-acceptance, and (c) purpose in life. As for hypotheses eight and nine, no significant relationship could be found either (see Table 11-13). However, a marginal significant association could be found between financial impacts and self-acceptance. Still, due to missing significant associations hypothesis nine needed to be rejected too.

The last linear regression analysis was conducted for hypothesis seven, stating there to be a significant negative relationship between work/study impacts on (a) happiness, (b) self-acceptance, and (c) purpose in life. In contrast to hypotheses eight, nine, and ten, work/study impacts showed a significant negative association between all sub-variables of well-being and work/study impacts (see Table 11-13). Thus, hypothesis eleven could be confirmed.

Table 11

Multiple Linear Regression Table for Negative Life Events on Happiness

Scale	Estimate	SE	t(78)	p-value	95% Confidence Interval
Physical restrictions	-0.159	0.712	-1.238	.220	[-0.416, 0.097]
Social constrains	-0.179	0.129	-1.069	.289	[-0.514, 0.155]
Financial impacts	-0.099	0.168	-1.064	.291	[-0.286, 0.087]
Work/Study impacts	-0.384	0.093	-4.397	<.001	[-0.559, -0.210]

Note: Adjusted R-squared = .304, $F(4, 78) = 9.418$, $p < .001$

Table 12*Multiple Linear Regression Table for Negative Life Events on Self-Acceptance*

Scale	Estimate	SE	t(78)	p-value	95% Confidence Interval
Physical restrictions	-0.191	0.137	-1.396	.167	[-0.466, 0.082]
Social constrains	0.153	0.179	0.857	.394	[0.203, 0.510]
Financial impacts	-0.188	0.100	-1.882	.063	[-0.387, 0.011]
Work/Study impacts	-0.254	0.093	-2.722	.008	[-0.439, -0.068]

Note: Adjusted R-squared = .190, $F(4, 78) = 5.528$, $p < .001$

Table 13*Multiple Linear Regression Table for Negative Life Events on Purpose in Life*

Scale	Estimate	SE	t(78)	p-value	95% Confidence Interval
Physical restrictions	-0.159	0.115	-1.382	.171	[-0.389, 0.070]
Social constrains	-0.043	0.150	-0.292	.771	[-0.343, 0.255]
Financial impacts	-0.113	0.083	-1.356	.179	[-0.281, 0.053]
Work/Study impacts	-0.416	0.078	-5.322	<.001	[-0.572, -0.260]

Note: Adjusted R-squared = .468, $F(4, 78) = 12.63$, $p < .001$

Lastly hypothesis twelve needed to be tested. It assumed there to be a significant mediation effect of well-being on the relationship between negative life events and the adoption of conspiracy theories. However, as hypotheses one, two, and three needed to be rejected, and hypotheses four, five, six, and seven could also not be confirmed, a follow-up Sobel test to assess hypothesis 12 seemed to be redundant. Logically, the twelfth hypothesis cannot be confirmed nor rejected, however, its likeliness can be considered as being low, as there was no relationship that well-being could mediate in the first place.

5. Discussion

5.1 Main Findings

Considering the literature used for this research and the findings this study provides the following conclusions and interpretations need to be drawn.

Starting with the rejection of the first three hypotheses, stating that one of the well-being factors, happiness, self-acceptance, and purpose in life, significantly negatively relate to the adoption of conspiracy theories, it indicates well-being cannot be associated with the adoption of conspiracy theories. However, this contrasts with previous research. For example, Van Prooijen et al. (2021) showed a correlation between reduced well-being and the tendency to believe in conspiracy theories. Same accounts for Chen et al. (2020) who also hypothesized that reduced mental health can be associated with the belief in conspiracy theories and Cichokack (2020) who argued that well-being needs to be enhanced to reduce the spreading of conspiracy theories. As this study cannot find a relationship between any of the sub-variables of well-being and the adoption of conspiracy theories, all those previous findings need to be questioned. Still, it needs to be considered that this study is highly limited when making conclusions about the belief in conspiracies. It is rather logical that the well-being factors could not be associated with the adoption of conspiracy theories because the sample could not detect conspiracy believers in the first place. Thus, we cannot conclude that well-being is not involved in the adoption of conspiracy theories but must be cautious about the rejection of those previous findings.

The same argumentation applies to the complementary relationship. That is, this research tested whether any of the well-being factors might have a significant positive association with the adoption of facts about the pandemic, as the adoption of conspiracy theories might also come along with the rejection of facts beforehand. Similar to before, no relationship could be found, indicating that well-being is not involved in the belief or disbelieve of facts either, which is in line with the rejection of hypotheses one, two, and three. However, as

this study could not detect people not believing in those presented facts, it is rather logical that the rejection of facts was not associated with reduced well-being because all people involved in the sample believed in the facts presented in this study. Hence, related interpretations need to be considered with caution.

Continuing with the rejection of hypotheses eight, nine, ten, and eleven, which stated there to be a significant association between the negative life events physical restrictions, social constraints, financial impacts, or work/study impacts, and the adoption of conspiracy theories, we can assume that negative life events do not seem to be involved in the adoption or believe in conspiracy theories either. However, this interpretation contrasts with our assumptions and the findings of previous research again. For example, Hartman et al. (2017) and Douglas (2017) both argued in their studies that it must be a combination of the state of the individual and the properties of a conspiracy theory that makes them so successful. Considering the pandemic negative life events, we assumed conspiracy theories are more believed when people have problems understanding their situation, as they can use the conspiracy theory's content to make sense of their misery. Nevertheless, no relationship could not be found between any of the negative life events and the adoption of conspiracy theories, which is why those previous findings and assumptions should be rejected too. However, similar to before, we need to be careful about this interpretation. That is, the same argumentation that no conspiracy believers could be detected applies here too, making it difficult to verify a relationship between negative life events and the adoption of conspiracy theories in the first place.

Moving on, another finding to consider is that the complementary relationship between negative life events and the adoption of facts about the pandemic could be confirmed to some degree. That is, this study could show the less people were affected in terms of their finances the more likely they were to believe the facts published by the WHO or the government about COVID-19. Although only a marginal significant association could be determined this implies a dimensional link between negative life events and believes or disbelieves in facts as it is

argued for hypothesis seven. In fact, it can be concluded based on this relationship that people were probably also less likely to believe in facts when they were more affected by financial impacts, which might have caused the marginal significant association of this relationship in the first place. This would also be in line with the assumption that negative life events cause the adoption of conspiracy theories, as the process might go hand in hand with the rejection of facts when experiencing a negative life event beforehand. Nevertheless, we need to be careful with this interpretation too. As mentioned, this study could not identify people not believing the presented facts. Arguably, the positive relationship might have been caused by the overall high belief in facts and a rather low financial impact as depicted in the descriptive statistics above. The high contrasts resulted in the marginal significant effect in the analysis which would also explain why only financial impacts seem to be involved in the belief or disbelief of facts but not the rest of the negative life events.

Continuing with the rejection of hypotheses four, five, and six, stating that the negative life events physical restrictions, social constraints, and financial impacts will each have a significant association with all the well-being factors, we can conclude those life impacts do not seem to be significantly involved in the decrement of well-being after all. Still, it needs to be evaluated that one marginal significant association could be found. That is financial impacts could be associated with a decreased self-acceptance ability, which is in line with Cranye who provided a similar correlation between financial impacts and well-being in 2020. Nevertheless, what seems to have played a major role in people's well-being is the deviation of work/study routines during the pandemic, as the confirmation of hypothesis eleven indicates. In fact, it can be concluded that work/study impacts seemed to have played a substantial role in the decrement of all well-being factors assessed by this study, namely happiness, self-acceptance, and purpose in life, which is in line with the overall results of Ward and King (2017).

A last thing to mention is, as this study could not find a relationship between any of the well-being factors or life impacts and the adoption of conspiracy theories, the potential mediating role of well-being on the relationship between negative life events and the adoption of conspiracy theories could not be tested for sufficiently. Still, as the predetermined requirements for well-being to be a mediator also included finding a significant association of well-being with the adoption of conspiracy theories, we can conclude that well-being might not play a mediating role after all. However, due to the determined limitations for testing those relationships involving the adoption of conspiracy theories, this interpretation should be considered with cautiousness too.

5.2 Limitations

Despite the findings this research presented, some limitations of this study need to be mentioned. Starting with the sample, it did not have enough participants to be representative. Only 78 participants were included in the dataset, which might have led to a bias that resulted in a turn to the missing results for the relationship between negative life events or well-being and the adoption of conspiracy theories. Furthermore, it needs to be mentioned that the sampling method was based on convenient sampling, via Instagram, the University of Twente's SONA system, and German communities. This might have also affected the sample's participants. For example, it could have led to the inclusion of more people with an academic background who in turn might have led to biases in the answers, simply because different socio-economic classes were affected differently by the pandemic, thus, indicating different answers on how they felt and believed in conspiracy theories in the survey. Also, more socially desirable answers like agreeing less with the conspiracy theories and agreeing more with the facts might have influenced participants in the sample. Considering these factors, interpretations like the relationship between negative life events or well-being and the adoption of conspiracy theories does not exist should be viewed with cautiousness.

In the context of the sample, another limitation needs to be addressed. As indicated above by the low mean for the adoption of conspiracy theories scale, the general amount of people in our sample believing in conspiracy theories was very low. Logically, the relationships and hypotheses involving the adoption of conspiracy theories could not be tested sufficiently, as has been explained individually for each hypothesis tested above. However, this also makes the accountability and generalizability of related findings and interpretations beyond this study context difficult. Same accounts for all relationships and hypothesis testing involving the scale of facts about the pandemic, as it has a very high mean. The sample logically does not include many people who disagree with the facts about the pandemic, hence, this study cannot test sufficiently whether a rejection of facts is associated with negative life events or reduced well-being factors either. This decreases again accountability and generalizability of related findings beyond this study context.

Another limitation this study might have concerns the structure of the conspiracy scale used for assessing the adoption of conspiracy theories. Arguably, it is also possible that conspiracy theories, which were used in this study to find conspiracy believers, are partially mutually exclusive to each other, which would explain why this research could not find any indication of conspiracy believers in this sample as well. That is, this study design took as many theories into account as possible to detect a wide range of conspiracy believers, which is why many diverse items related to different theories were included in the questionnaire. However, this inclusion of too many diversified theories and related items might have led to a distinctive pattern for conspiracy believers in which the individual only chose a few items of one specific theory. Thereof, choosing specific items meant logically renouncing other ones, which would explain the low mean for the conspiracy scale and finding no significant relationship between negative life events or well-being factors and the adoption of conspiracy theories, assuming the relationships do in fact exist. However, this explanation only accounts for the adoption of the conspiracy scale. It does not consider that there was also an overall agreement on the facts

about the pandemic. Hence, the assumption of a biased sample is much more logical than mutually exclusive items in the scale.

A last limitation to mention which also might account for the low mean of the adoption of conspiracy theories or the high mean for facts about the pandemic concerns the time between the pandemic and the date of this study. That is, this research took place almost one year after the end of the pandemic. Thus, the participants might not remember all the negative life events they experienced during the pandemic accurately or might not feel as much affected in their well-being anymore. Also, one needs to consider the assumptions that if negative life events or well-being and the adoption of conspiracy theories are in fact linked, it is logical that once the negative life events vanished or the well-being improved after the pandemic ended, the belief in conspiracy theories might have ended too. This argumentation would also explain the low mean in the conspiracy theory scale, and probably also the high agreement for facts about the pandemic when the pandemic's happenings started to clarify after its ending. Whatever might be the case, the time between the COVID-19 pandemic and the time of this research limits the accountability of this study's findings too.

5.3 Theoretical Contributions and Implications

Considering the results and interpretations the following contributions were made by this research. However, as this study shows high limitations in the context of the adoption of conspiracy theories and the belief or disbelief in facts about the pandemic, related contributions will be disregarded here, but other implications will be considered.

The first essential contribution this research made, relies upon the potential influences the pandemic had on the mental health of people. That is, this research shows the pandemic's impacts have a negative association with people's well-being. Even though this has already been confirmed multiple times this study can specify that these potential influences took place in a financial context, meaning people felt financially under pressure and had trouble

managing their finances, or in a work/study context, meaning people had difficulties to deal with the deviations from their work/study routines.

Also, this study contributes that these relationships specifically concerned the well-being components that were assessed in this research. Thereby, financial impacts decreased people's overall self-acceptance abilities, and work/study impacts decreased all well-being components, namely happiness, self-acceptance, and feelings of purpose in life. Additionally, we can assume say that social constraints, like the inability to meet up with friends or engage in other social gatherings, or physical restrictions, like the inability to engage in outdoor activities, were not essential in the decrement in people's well-being, despite the assumptions made by many researchers like McKinley et. al. in 2021. Nevertheless, financial impacts only showed a marginal association with self-acceptance, hence, the relationship should be considered with cautiousness.

5.4 Practical Implications

Looking at these theoretical contributions, it should be considered what can be done to reduce the negative relationships between financial impacts or work/study impacts, and people's mental health.

A first practical implication would be to counteract the negative financial impacts. Therefore, this study proposes a state support intervention program, by which the government could rebalance the financial situation of civilians when a crisis occurs. This could increase people's self-acceptance abilities as they would feel less limited to finance their living standard but would offer more financial freedoms. Additionally, we would advise engaging less in peoples' work/study practicalities. Only if engagement in the market and work facilities seems to be a necessity to reduce the crisis this step should be considered. However, if that is the case, a variety of alternatives should be offered simultaneously like better online services to take part in work/study routines, or the establishment of shift workings to reduce contacts but allow for more work engagement. The essential component is that people still need to

have a certain degree of self-determination in their jobs, and the ability to take part in it, despite having to make shortcuts.

However, next to those practical implementations it is necessary to assess the situation within the society when a crisis emerges vastly. Thus, the predefined implementations should go hand in hand with social satisfaction assessments that request citizens' mental health in terms of their happiness, self-acceptance, and feelings of purpose in life. Logically, those assessments are supposed to help target practical implementations to counteract a crisis more successfully and are intended to make reactions to changes in society faster before mental well-being deviations occur.

5.5 Suggestions for future research

Based on the limitations this study had, this research proposes a new investigation to assess whether the relationship between negative life events and the adoption of conspiracies does in fact exist or not. That is, this research could not prove whether the relationship exists because a biased sample probably led to an overall rejection of the conspiracy items and overall agreement with the facts about the pandemic. Hence, it is proposed that a new similar research with a cross-sectional design should be conducted, including a bigger and more representative sample. However, as there might also be mutually exclusive items in the conspiracy theory scale, this research should only be focused on specific negative life events relative to specific conspiracy theories. Meaning, an investigation should be made to determine which negative life events might be linked to specific conspiracy theories, assuming the idea that conspiracy theories are in fact used as a coping mechanism for the individual to make sense of his misery. This would specify the research substantially and would allow us to indicate whether negative life events are in fact involved in the adoption of conspiracy theories or not.

Based on the results of the first research a second study with a cross-sectional design should then investigate which of those determined negative life events can be linked to specific decrements in well-being factors. That is, this research could only prove the specific

association between work/study impacts and the well-being factors that were assessed here, namely happiness, self-acceptance, and purpose in life. However, a more specified research that takes more of those predetermined negative life events and well-being factors into account could, first of all, confirm the findings of this study and could secondly also determine other decreased well-being factors not assessed by this research. This would thirdly also allow for better investigation of whether there are even well-being factors that mediate the relationship between specific negative life events and specific conspiracy theories and, if that is the case, would allow assessing which factors might be involved in which conspiracy theories.

5.6 Conclusion

This study's aim was to investigate the rise of conspiracy theories in Western societies during the COVID-19 pandemic. In line with current research, it was hypothesized that the severe negative life events which took place during the pandemic might have caused an epistemological searching process in people to find an explanation for their suffering. This in turn might have led to the adoption of conspiracy theories, as those could offer depending on their content an explanation and indicate groups to blame for other people's misery. However, as not all people seemed to believe in conspiracy theories when negative life events occurred, well-being was assumed to regulate whether the adoption of conspiracy theories took place. Hence, this study design chooses to test for the relationship between negative life events and the belief in conspiracy theories while it assessed for the potential mediating role of well-being within that.

In conclusion, this research could only prove a significant association between negative life events and well-being, thereby, showing the impacts of the COVID-19 pandemic on people's mental health. The potential relationship between negative life events or well-being and the adoption of conspiracy theories could not be investigated as the participants showed no belief in the conspiracy theories but an overall agreement with the presented facts about the pandemic. Consequentially, the role of well-being as a mediator for the relationship

between negative life events and the adoption of conspiracy theories could not be tested for sufficiently either.

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Appendix:

Appendix A.

Questionnaire Bachelor Thesis:

Consent Form for the Study “Conspiracies and well-being”.

Information about the study

The following study aims to gain an understanding of how the COVID-19 pandemic impacts might have affected people in their beliefs and assumptions about their environment. Thereby, the study specifically looks out for a connection of impacts on the individual and whether these impacts can be connected to changes in the individual's beliefs about the COVID-19 pandemic or related topics and also tries to assess whether the individual's health during the pandemic might have played a role in such changes too. For assessing those concepts, a questionnaire was created that measures the COVID-19 pandemic impacts, the individual's well-being, and beliefs/assumptions about the COVID-19 pandemic in general.

Taking part in the study

I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and that I can withdraw from the study at any time, without having to give a reason. Additionally, I understand that taking part in the study involves filling out a questionnaire that consists of three parts.

Use of the information in the study

I understand that the information I provide will be kept confidential. I understand that personal information collected about me that can identify me, such as my name, will not be shared beyond the study team. I understand and consent to the conclusions drawn based on my provided data to be reported in the realm of this research project and agree that my information can be used in research outputs.

Future use and reuse of the information by others

I give permission for the data collected throughout this study to be used by other researchers based on the research output. The researchers will not contact me for additional permission to use this information.

Study contact details for further information and questions

Schleicher, J.L. j.l.schleicher@student.utwente.nl

Contact information for questions about your rights as a research participant

If you have questions about your rights as a research participant or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities & Social Sciences of the Faculty of Behavioural, Management, and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl.

I have read and understood the study information I have been provided with.

I consent I do not consent

Demographic data

What gender do you identify as?

- Male
- Female
- Non-binary/third gender
- Prefer not to say

What is your age?

What is your country of origin?

- Netherlands
- Germany
- Other

What is your employment status?

- Employed
- Unemployed
- Student
- Other

Part I:

The following questions try to assess the impacts the COVID-19 pandemic might have had on your life, in a physical, social, financial, or work/study context. Please try to remember as precisely as possible what happened during the pandemic and indicate on a scale from 1 (strongly disagree) to 5 (strongly agree) how much you agree or disagree with the following statements.

*Negative Life Events**Physical restrictions* (Disagree or Agree: 1-5):

1. During the COVID-19 pandemic, I could not do the things I liked to do.
2. During the COVID-19 pandemic, I was bored many times.
3. During the COVID-19 pandemic, I was less active than normal.
4. During the COVID-19 pandemic, I went out less frequently than before.
5. During the COVID-19 pandemic, I engaged less frequently in outdoor activities.
6. During the COVID-19 pandemic, I could not try the things I planned on doing.

Social constraints (Disagree or Agree: 1-5):

1. During the COVID-19 pandemic, I had less contact with other people.
2. During the COVID-19 pandemic, I was often alone.

3. During the COVID-19 pandemic, I had fewer social meetings.
4. During the COVID-19 pandemic, I engaged less frequently in activities with others.
5. During the COVID-19 pandemic, I attended fewer social gatherings or events.
6. During the COVID-19 pandemic, I was less involved in my relationships.

Financial impacts (Disagree or Agree: 1-5):

1. During the COVID-19 pandemic, I worried about making enough money.
2. During the COVID-19 pandemic, I was financially stressed and under pressure.
3. During the COVID-19 pandemic, I worried about my financial situation.
4. Due to the COVID-19 pandemic, I was concerned with my income and my expenses.
5. During the COVID-19 pandemic, I needed to keep an eye on my finances.

Work/study Impact:

1. During the COVID-19 pandemic, I was less satisfied with my work/study results.
2. During the COVID-19 pandemic, I had difficulties taking part in my work/studying routines.
3. During the COVID-19 pandemic, I had difficulties managing my workload/studyload effectively.
4. During the COVID-19 pandemic, I had trouble keeping a healthy work/study-life balance.
5. During the COVID-19 pandemic, I had trouble working effectively.

Part II:

The following questions try to assess the impacts the COVID-19 pandemic might have had on your feelings. Please try to remember as precisely as possible how you felt during the pandemic and indicate on a scale from 1 (strongly disagree) to 5 (strongly agree) how much you agree or disagree with the following statements.

Well-being

Statements during the covid-19 pandemic (Disagree or Agree: 1-5):

Happiness:

1. During the COVID-19 pandemic, I felt my life was very rewarding.
2. During the COVID-19 pandemic, I was satisfied with my life.
2. During the COVID-19 pandemic, I found a lot of happiness in my life.
3. Despite the COVID-19 pandemic, I had a lot of energy in my everyday life.
4. During the COVID-19 pandemic, I felt relaxed most of the time.
5. Despite the COVID-19 pandemic, I tended to be a happy person.
6. Despite the COVID-19 Pandemic, life was still good.

Self-acceptance:

1. During the COVID-19 pandemic, I liked most aspects of my personality
2. During the COVID-19 pandemic, I accepted my fears and weaknesses.
3. Despite the COVID-19 pandemic, I was able to forgive myself.
4. During the COVID-19 pandemic, I was comfortable with the way I looked.
5. During the COVID-19 pandemic, I was able to view myself in a positive light, despite my imperfections.
6. During the COVID-19 pandemic, I saw my fears and impulses as being normal.

Purpose in Life:

1. During the COVID-19 pandemic, some people wandered aimlessly through life, but I am not one of them.
2. During the COVID-19 pandemic, I lived one day at a time and didn't really think about the future.
3. During the COVID-19 pandemic, I felt as if I'd done all there was to do in life.
4. Setting goals for myself during the COVID-19 pandemic was a waste of time.
5. During the COVID-19 pandemic, I had a sense of direction and purpose in life.
6. Despite the COVID-19 pandemic, I enjoyed making plans for the future and working towards them.
7. During the COVID-19 pandemic, my days seemed trivial and unimportant.

Part III:

The last part of the questionnaire contains statements about the COVID-19 pandemic in general. Please try to remember as precisely as possible what you believe has happened during the pandemic and indicate on a scale from 1 (strongly disagree) to 5 (strongly agree) how much you agree or disagree with the following statements.

Believes about the COVID-19 pandemic:

Statements about Covid (Wrong), (Disagree or Agree: 1-5):

1. The vaccines against COVID-19 were held back on purpose by pharmaceutical companies or the government.
2. COVID-19 is a bioweapon that was developed to harm humans.
3. COVID-19 does not exist but is made up.
4. COVID-19 was released within a secret military operation by the USA.
5. COVID-19 was released in a Chinese' lab accident.
6. COVID-19 was released by the Chinese government.
7. Bill Gates was somehow involved in the spreading or the origins of COVID-19.
8. The 5-G radiation is responsible for the development of COVID-19.
9. The government is secretly controlled by some secret organization that used COVID-19 for their own purposes.
10. The government secretly uses COVID-19 to install a new socialistic or communistic world order.
11. Corrupt politicians in the government use COVID-19 to take control over the society.

Statements about Covid (Correct), (Disagree or Agree: 1-5):

1. COVID-19 seems to have broken out on a food/animal market in Wuhan (China).
2. The vaccinations against COVID-19 are generally safe despite some smaller side effects.
3. Wearing a mask or disinfecting your hands can protect you from getting infected with COVID-19.

4. The vaccinations against COVID-19 protect most people from having a severe disease process.
5. Despite making some mistakes the governments of EU countries have tried to find solutions for the COVID-19 pandemic.
6. The EU Governments were in charge of handling the COVID-19 pandemic.
7. Pharmaceutical companies started to work on a vaccine shortly after COVID-19 started to spread.
8. Once the first vaccines against COVID-19 were legally approved, they were produced and given to the public.

Note: The correct and incorrect statements have not been measured separately as shown here but have been intermixed during their assessment.

Appendix B

Recruitment Message on Instagram:

“Hey there, I am looking for participants for my bachelor Thesis and would appreciate it if could you fill in my survey. Takes only 10 minutes to do so! Thank you, guys”

Appendix C

Figure 3.

Histogram depicting answers for the scale facts about the pandemic.

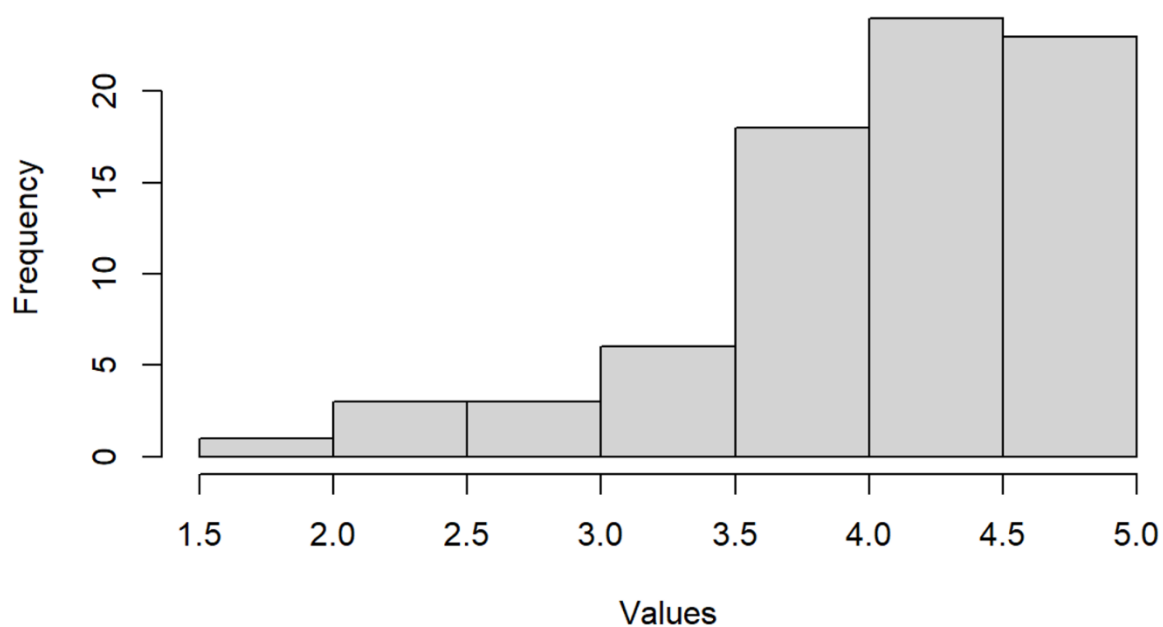


Figure 4.

Histogram depicting answers for the scale adoption of conspiracy theories.

