The development of political trust during the COVID-19 pandemic

Author: Sven Bouwmeester, 507617

Supervisor: Dr. T. Emery

Date of submission: 19-06-2022

Word count: 8686

MSc Politics & Society

Erasmus University Rotterdam

Abstract

The 27th of February marked the beginning of the covid-19 pandemic for the Netherlands. Since that time the government has implemented countless measures to contain the pandemic. Research into the effects of these measures show that political trust increased significantly as a reaction to the imposition of measures to contain the pandemic. Other research shows that older people are at a higher health risk than younger people, and younger people on the other hand are at higher risks of declining mental wellbeing due to the differential effects of the measures. The purpose of this paper is to determine how political trust has developed during the pandemic and how this differentiates between older and younger people. My expectation is that health and mental wellbeing play an important role in the differential impact on old and young during the pandemic. To do this a longitudinal panel study design will be employed using repeated-measures mediation analysis. The results show that political trust increased significantly from 2020 to 2021 and strongly declined again in 2022. The mediation analyses show that the mediating effect of health increased from 50 to 69 percent and of mental wellbeing from 37 to 50 percent from 2020 to 2021. Future search is recommended into the 2022 decline of political trust.

Keywords: COVID-19; political trust; health; mental wellbeing and age

Table of contents

Abstract 1

Introduction 4

Theoretical framework 6

Research design 12

Analysis 17

Conclusion 34

Bibliography 38

Appendix 41

Introduction

The 27th of February 2020 marks the beginning of the COVID-19 pandemic for the Netherlands with its first infection (Rijksoverheid, 2020). Since that time society has experienced multiple lockdowns to prevent the further transmission of the virus and the hospitals from overflowing. Trust in the government is an essential issue during a pandemic where it is imperative that citizens follow public health guidelines and policies set out by the government (Esaiasson et al., 2021). Compliance with these regulations is necessary to contain the spread of the pandemic. To be better able to fight future pandemic or other similar disasters, it is important we learn and understand the mechanisms behind government trust during such turbulent times, and how this might differ for social groups.

The elderly are at a particularly high risk of hospitalization by the virus. For this reason, the measures were aimed at protecting the elderly and curbing the spreading of the virus as best as possible. These lockdown measures affected everyone: from student to business-owner. It is not hard to imagine that the pandemic, which impacted the old and young quite differently, also has had different effects on trust in government for these groups. It is the government after all that implements policies to counter the pandemic. For this reason there was a call for intergenerational solidarity or as Ellerich-Groppe et al., (2021) put it 'all together now' as the new political maxim (pp. 160). So, what do we know about the impact of the pandemic on government trust for the old and young? Research shows that in the early stages of the pandemic trust in government increased in the Netherlands (Oude Groeniger et al., 2021; Schraff, 2021). This has been described as the 'rally around the flag effect', which states that citizens rally around political institutions as a lifebuoy in case of crisis events with high levels of uncertainty (Schraff, 2021). However, there is some scientific debate whether this increase in trust is due to the implementation of lockdown measures or the emotional response to the pandemic (Bol et al., 2021; Oude Groeniger et al., 2021; Schraff, 2021).

Nonetheless, there is ample evidence of an increase in governmental trust in the early stages of the pandemic. Oude Groeniger et al., (2021) finds that the implementation of strict measures increased

trust in government in the Netherlands, and that this effect is stronger for those older than 65 and with poor assessed health. This research is however limited to the first months of the pandemic in 2020. Few studies have looked at whether trust in government has declined during the pandemic in the Netherlands and none to date have focused on whether and how this is different for the old and young. The young had to endure these measures without the large health risk factor experienced by the elderly. The mental wellbeing of younger people is at risk by these measures (Ahrendt et al., 2021; Owens et al., 2022). It is therefore possible that satisfaction with government policy declined later in the pandemic for the young and that this resulted in decreasing governmental trust, for example because of deteriorating mental wellbeing. Research shows that long term dissatisfaction with government policy outputs leads to declining government trust (Belchior & Teixeira, 2021; Grönlund & Setälä, 2007).

The research question for this paper is: '*what is the relationship between age and political trust during the pandemic? How has this relationship developed in the course of the pandemic? and to what extent do health and mental wellbeing explain age differences in political trust?*

Two years have passed since the start of the COVID-19 pandemic and although it is still not over, it is important to look back and assess the effects. This is relevant from a theoretical standpoint because the pandemic provides a unique case for research into government trust. This is especially relevant from the perspective of old and young because of the differential effects of the pandemic on these groups. Scholars before me have researched trust in government during the pandemic, but none thus far have researched the long-term effects of the pandemic on governmental trust in the Netherlands. Because of the enormous impact this pandemic has had on people in society, it is imperative we use science to learn from its effects and improve policy. It is entirely possible that in the future the world will be faced with a new pandemic of a different kind.

Theoretical framework

Political trust

To understand the relationship between age and trust in government I will first elaborate on the conceptualization of trust in government or more generally defined as political trust. Political trust is defined by Van der Meer (2010) as a subjective evaluation of a relationship between citizen and government along four dimensions: 1) competence; 2) intrinsically committed; 3) extrinsically committed and 4) predictable. Firstly, the citizen believes that the government is competent and able to perform according to expectations. Secondly, the citizen beliefs that the government is committed to act in the best interest of citizens for either of two reasons: the first suggests an intrinsic need to act in the interest of that citizen and the second reason for this commitment can lie in the ability of the citizen to enforce the government actions, for example by withdrawing future support. Fourth, predictability is about the extent to which government behavior and actions are consistent. In sum, trust in government or other institutions can be seen as the perception that these institutions are fulfilling the normative expectations held by citizens or other subjects of trust (Grönlund & Setälä, 2007; van der Meer, 2010). Political trust thus requires that there is an agreement about the norms that constitute an institution and that these institutions work according to these norms.

For this paper political trust means trust in incumbent government; parliament; political parties and politicians.

Age and trust

There is extensive research done on the relationship between age and political trust that show differences in the direction of the relationship. Some authors find a negative relationship between age and political trust (van der Meer, 2010; van der Meer & Hakhverdian, 2017), while others find a positive relationship between age and political trust (Christensen & Laegreid, 2014; Gozgor, 2021). These cross-country differences are interesting to note, but research from the Netherlands regarding the relationship between age and political trust show that on average young people have more political trust than older people (Arends & Schmeets, 2015; Dekker & den Ridder, 2020). The expectation is that this initial relationship will change due to the pandemic.

Political trust early pandemic

Research into the early stages of the pandemic in 2020 shows that there was a significant increase in trust in government (Bol et al., 2021; Gozgor, 2021; Oude Groeniger et al., 2021; Schraff, 2021). A paper by Gozgor (2020) assessed the determinants of public trust in government during the early stages of the pandemic around March 2020. He finds that as age increases, public trust in government increases. Gozgor (2020) concludes that in the early stages of the pandemic older and healthy people have more trust in their governments, and he argues that this means that young people have less trust in government and that there is a significant divergence among generations in terms of trust in government during the pandemic.

Some researchers argue that this increase of governmental trust during the initial start of the pandemic is because of a 'rally around the flag effect', while others argue that the imposition of lockdown measures increased trust. Bol et al., (2021) argues that the implementation of lockdown measures in March and April 2020 in Western Europe increased trust in and support for incumbent government and Prime Minister or President. They conclude that there is no evidence of a rally around the flag effect, but that citizens have understood that lockdowns were necessary and therefore rewarded

those responsible. This research is in line with Oude Groeniger et al., (2021) who also concludes that the imposition of covid measures increased trust in government.

Schraff (2021) on the contrary argues that it is not the lockdown measures that increased trust in government, but that the exceptional collective threat created by the pandemic created a 'rally around the flag' effect. This rally effect can also be interpreted as originating from an all-embracing solidarity across generations in the initial stages, as this was the primary political discourse in the beginning of 2020 (Ellerich-Groppe et al., 2021). According to Schraff (2021), we should focus on the dynamic of the pandemic. Therefore, I expect trust in government to change after 2020 due to the dynamic of the pandemic. My expectation is that regardless of whether the initial increase is due to the measures or a rally effect out of solidarity, the continuation of the pandemic and its effects will change this initial relationship.

This leads to hypothesis 1: there is a significant difference between the old and young in levels of political trust in 2020 and I expect this relationship to change in 2021 and 2022 (H1a). To be clear, first I expect a negative relationship between trust and age in our measurement of 2020, because our survey was conducted before the pandemic began. Based on above literature I expect this relationship to change and become positive and stronger in 2021 and 2022. It is also possible that the relationship changes again in 2022 due to the continuation of the pandemic or because of other mechanisms that will be discussed later.

Health

It is clear that there is an increase of trust in government during the first lockdown period of April and March 2020 (Bol et al., 2021; Gozgor, 2021; Oude Groeniger et al., 2021; Schraff, 2021). The first mechanism expected to play a role in this increase in trust is health. So how is political trust related to health in general? Matilla and Rapeli (2018) researched the association between health and trust in nineteen Western European countries. What they found was that people in poor health show

significantly lower levels of political trust than people in good health. One explanation for this is that people with health problems have less capacity for political engagement due to reduced mental and physiological resources because of their health problems. For example, health impairments may lead to increased levels of stress and frustration, which may be directed towards the political institutions in the form of distrust. Important to note is that Matilla and Rapeli (2018) argue that people in poor health do not explicitly blame the government or the system for their poor health, but it is more likely the system gets blamed incase those persons feel the system does not support or care for them. This perspective fits the finding of stronger increase of trust among people with poor health.

Research by Oude Groeniger et al., (2021) and Gozgor (2021) shows that there is a significant difference in trust in government for old and young and those with poor assessed health and those with good health. More importantly, the positive effect of the lockdown measures on trust in government is greater for those aged 65 or older and those with poor assessed health (Oude Groeniger et al., 2021). The latter is interesting because in general those with poor assessed health have lower levels of political trust (Mattila & Rapeli, 2018), thus this increase clearly indicates that those citizens rewarded the political institutions for their actions. Or in accordance with the argument made by Mattila and Rapeli (2018): those with poor health feel the political system supports and cares for them and therefore experience increased trust.

Following this argument, it is not surprising that those with poor assessed health experience higher levels of trust following the imposition of COVID-19 measures. Those with poor assessed health are at a significantly higher risk of mortality by a COVID infection and related sickness (CDC, 2020; United Nations, 2020). According to the report by the United Nations (2020) those over 80 years old die over five times the normal rate. And about 66 percent of people aged 70 and older have at least one underlying medical condition, which increases the impact of a COVID-19 related infection. The elderly are thus more likely to be those with poor assessed health and the increase in trust is therefore most

likely mediated by their health. Therefore, I expect health to be an important mediator in the age difference in political trust (hypothesis 2).

Mental wellbeing

Another important factor that I expect to play a role in the age differential is mental wellbeing. Since the start of the pandemic, young people have experienced educational disruption, unemployment and negative psychological effects of the lockdown isolations (Butler & Bannock, 2021). Young people aged between 18 and 29 were most likely to have lost their job in 2020 and have expressed anxiety and worry about their future. Mental wellbeing declined across all social groups in 2020 to 2021, but this effect was stronger for young people and those who lost their job: which, consequently, are more likely to be young people. Furthermore, 64 percent of people in the youngest age group (18 - 34) are at risk of depression (Ahrendt et al., 2021).

Research by Owens et al., (2022) shows that the lockdown restrictions had a negative effect on mental wellbeing among young people aged 18-25. They assessed that risk of depression was significantly higher than before the pandemic and that higher levels of lockdown severity were associated with higher levels of depressive symptoms (Owens et al., 2022). The prevalence of poor mental wellbeing was significantly higher than during non-pandemic times (Smith et al., 2020). This decline of mental wellbeing can be the result of worrying about contracting the virus or having a friend or family member being diagnosed with covid. The reduction of social interaction due to self-isolation and social distancing are linked to declining mental wellbeing and increase in levels of anxiety and depression (Loades et al., 2020; Smith et al., 2020).

Now that we established that the consequences of COVID measures most likely leads to lower mental wellbeing we turn to how this translates into more or less political trust. Research from Sweden investigated the association between political trust and self-reported psychological health; a concept similar to mental wellbeing (Lindstrom & Mohseni, 2009). Their results show that low political trust is

associated with poor mental health. They describe this as a consequence of a lower sense of belonging to the community and its authorities for people with low trust (Lindstrom & Mohseni, 2009). In the context of covid I expect that the declining mental wellbeing is not due to lower sense of belonging but due to continuation of the pandemic.

Although the elderly have higher health risks, the decline in mental wellbeing seems to be stronger for younger people. Therefore, my expectation is that mental health is an important mediator of the age differential in political trust (hypothesis 3).

Summary and hypothesis

To sum up, the pandemic has had different effects on the young and old. While the elderly are at a higher risk of being hospitalized by the virus, the mental health and wellbeing of the young is deteriorating by the lockdown measures meant to protect the elderly. I expect that this difference in consequences generates differences in trust in politics for people of different ages. This leads to the following four hypotheses.

1. There is a significant difference between the old and young in levels of political trust in 2020
    a. This relationship changes in 2021 and 2022
2. The differential in health between the young and old mediates this difference in trust
3. The differential in mental wellbeing between the young and old is an important mediator of this difference in trust

Research design

This research will follow a longitudinal panel study design. This means that data is collected from the same panel on multiple occasions, in this case late 2019 to early 2022. The longitudinal design allows insights into the patterns of government trust during the pandemic and how this differs for different ages. It also allows crucial insights into within person differences. For this I will utilize quantitative secondary data from the LISS panel (Longitudinal Internet Studies for the Social Sciences) by CentERdata. The advantage of using secondary data is that LISS has invested enormous resources into getting high quality data over a long period of time. It is a representative panel and provides the opportunity for longitudinal analysis (Bryman, 2016). Because of the high-quality data which is generated by experienced researchers the validity and reliability of the measurements are safeguarded (Bryman, 2016).

Data

The LISS panel consists of a representative sample of approximately 5000 Dutch households and 7500 individuals. It is based on a true probability sample of households drawn from the Statistics Netherlands population register. Households that did not have access to a computer and internet connection were provided one (*About the Panel | LISS Panel Data*, 2022).

The following LISS datasets will be used: 1) health and 2) politics and values (Das et al., 2018; Das & Elshout, 2018). The first dataset focuses on health and health perception, but more specifically for the purpose of this research self-reported health and mental wellbeing. The second set contains items about voting behavior and institutional trust, for this case specifically questions related to political trust. All questionnaires are undertaken between November and March each year. Wave 12; 13 and 14 for both datasets will be used in the analysis spanning from November 2019 to March 2022.

Response rate for the set about health in 2019 is 86.7 percent and 5,162 responses; for 2020 this is 84 percent and 5,736 responses and for 2021 this is 81.4 percent and 5,108 responses. For the set about politics and values in 2020 this is 88.6 percent and 5,471 responses; for 2021 this is 88.4 percent and 5,996 responses and 87 percent with 5336 respondents for 2022.

After the merging of the datafiles and conversion to long format we are left with 3225 respondents who participated and answered on all items from 2019 to 2022.

Operationalization

The following variables will be used and combined from the different datasets. First, from the questionnaire about health, variable 'ch21n004' *'how would you describe your health, generally speaking?'* with answer categories ranging from poor (1) to excellent (5). Secondly, a scale will be constructed using the following items 'ch21n011 to ch21n0115' resulting from this question: *'How have you felt over the past months'* with a) 'I felt very anxious; b) 'I felt so down that nothing could cheer me up'; c) 'I felt calm and peaceful'; d) 'I felt depressed and gloomy' and e) 'I felt happy'; with answer categories ranging from never (1) to continuously (6).

Before performing the factor analysis, the variable; b) 'I felt so down that nothing could cheer me up' and d) 'I felt depressed and gloomy' are reverse coded as to reflect a (6) as never and (1) as continuously. For the factor analysis a principal component analysis with varimax rotation was used. Only one component was extracted with factor loadings varying from .77 to .86 for all years. See table 1 for factor loadings. After the factor analysis a Cronbach's alpha was performed to determine reliability of the items. The Cronbach's alpha varied from α = .88 to .87 for all years, thereby showing a reliable scale. A mean scale was constructed of the items.

Table 1

Factor loadings mental wellbeing

Items	Factor loadings		
	2019	2020	2021
I felt very anxious	.79	.80	.81
I felt so down that nothing could cheer me up	.85	.85	.85
I felt calm and peaceful	.81	.82	.81
I felt depressed and gloomy	.85	.86	.86
I felt happy	.79	.80	.77

For the dependent variable political trust, a scale will be constructed using the items 'cv20l013; 14; 17 and 18' answer categories respectively ranging from no confidence at all (0) to full confidence (10) from the set about politics and values. For the factor analysis a principal component analysis with varimax rotation is used. One component was extracted for all corresponding years varying from .70 to .92. Average of 72 percent of the variance was explained by that component. See table 2 for factor loadings. For the scale four items < .90 were removed because those items, e.g., trust in legal system; police; European Parliament and United nations, are a less robust measurement of political trust. The Cronbach's alpha was α = .95 for all years, indicating a reliable scale.

Table 2

Factor loadings for political trust

Items	Factor loadings		
Trust in	2020	2021	2022
Government	.90	.91	.88
Parliament	.92	.92	.96
Legal system	.80	.79	.81
Police	.69	.74	.70
Politicians	.91	.92	.92
Political parties	.91	.90	.91
European Parliament	.87	.85	.86
United Nations	.81	.81	.82

Lastly, the independent variable age 'lftdcat' will be used from the background variable set. For control variables 'geslacht' for gender and 'oplcat' for educational level will be added. For the analysis educational level was recoded into lower; middle and higher educated in accordance with definition from the Centraal Bureau voor de Statistiek (CBS, 2019).

Analysis

The primary analysis method that will be used is a linear regression analysis using the Process tool by Andrew Hayes in SPSS. To answer the first hypothesis a repeated cross-sectional one-way analysis of variance will be performed to determine whether there is significant between age-group variation in means for political trust in 2020 and how this changes in 2021 to 2022.

Then a fixed-effects panel regression will be used to determine significant within-person variation in political trust. And to answer hypothesis two and three a repeated cross-sectional mediation analysis will be performed using the process tool. Lastly as a measure of robustness a binary logistic regression and a repeated cross-sectional parallel mediation will be performed and compared.

Ethics; privacy and data security

The ethics and privacy considerations of this study are the following. Firstly, this research deals with secondary anonymous data. The identities of the participants are confidential and only known to the Centerdata research institute. There is no way to extract personal identities from the data without help from Centerdata. Nonetheless, it is the responsibility of the researcher to take appropriate steps to safeguard personal data. The data will be handled with care and stored only on the personal computer of the researcher and the EUR approved storage-cloud Microsoft Onedrive. The computer security systems are up-to-date and access to the data is locked behind unique passwords which are only known to the researcher.

Analysis

Descriptives

Table 3

Descriptive statistics

				Year		
Variable		Combined		2020	2021	2022
	n	M (SD)	Min/max	M (SD)	"	"
Age	9666	55,5 (17,1)	16/102			
Gender						
Male	4701					
Female	4965					
Political trust	9669	5,11 (2,07)	0/10	5,02 (2,0)	5,63 (1,98)	4,67 (2,1)
Mental wellbeing	9669	4,79 (0,81)	1/6	4,77 (0,81)	4,79 (0,82)	4,80 (0,81)
Health	9669	3,10 (0,77)	1/5	3,10 (0,77)	3,13 (0,78)	3,06 (0,75)
Education	9669					
Low	2616 (27,1%)					
Mid	3312 (34,2%)					
High	3726 (38,5%)					

Note: M = mean; SD = standard deviation

Looking at the descriptive statistics we see that the mean age is 55. Gender is equally distributed around 48 percent males and 52 percent females. The total sample consist of 3222 unique participants who participated in all two surveys in 2020; 2021 and 2022.

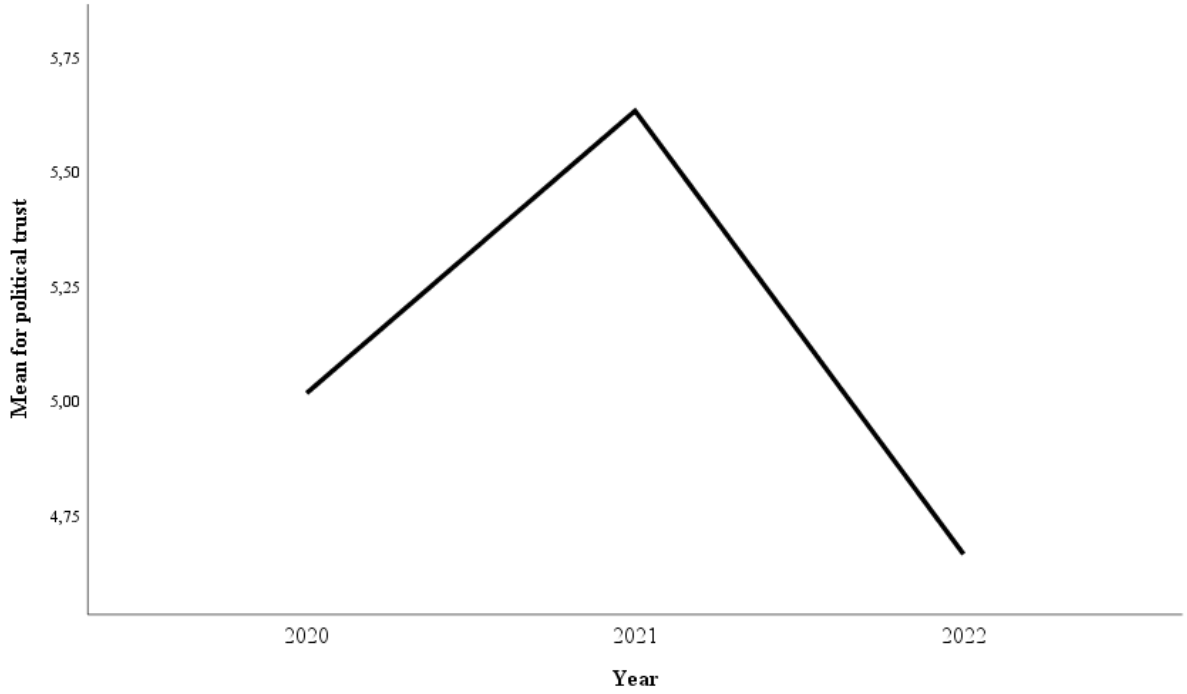
The mean for political trust is 5,11 with a range of 9 from 0 to 10. This value is different for each year: with a baseline in pre-corona times of 5,02 in 2020; 5,63 in 2021 which shows the rally-around-the-flag effect and then a drop in mean for political trust of 4,67 in 2022. See figure one for a visual representation of this pattern. The skewness for political trust was -,80 indicating that the distribution is left-skewed and more leaning towards higher values of trust. Inspection of the quantile-quantile plot shows a normally distributed variable.

As a measure of robustness the respondents who did not participate in all three years had the following means for political trust in 2020 (n = 1290, *M* = 5,08, *SD* = 1,98); 2021 (n = 1819, *M* = 5,71, *SD* = 1,97) and 2022 (n = 1163, *M* = 4,80, *SD* = 2,14). And lastly the mean for political trust in 2019 was *M* = 5,17, *SD* = 1,99, showing slightly higher but similar mean for trust in 2020.

Overall, the pattern of political trust across time fits my expectation, namely that it increases due to a rally effect and then decreases. The expectation is that this decrease is mediated by mental wellbeing and/or health and that this is different for different age groups. This will be elaborated more on later.

Figure 1

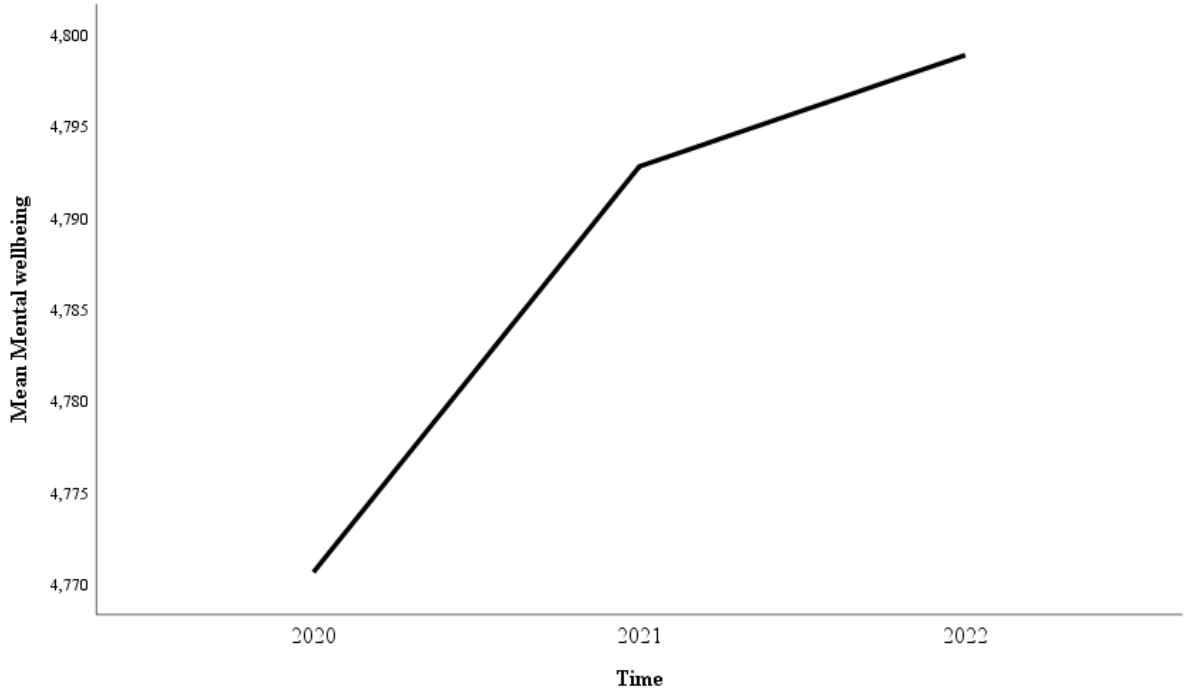
Political trust over-time



The mean for mental wellbeing varies from 4,77 in 2020; 4,79 in 2021 and 4,80 in 2022. This shows a slight increase later in the pandemic, which is interesting. Figure two shows this pattern over-time, but the value difference is small. My expectation was that this would have declined later in the pandemic. On the contrary it is rather stable, but there might be differences in age groups which will be analyzed later. The skewness for mental wellbeing was -,95 indicating that the distribution is left-skewed and leaning towards high values. The median is 5 with a range of 5 between 1 and 6.

Figure 2

Mental wellbeing over-time



Health on the contrary fits the expectation. With a mean of 3,10 in 2020; 3,13 in 2021 and 3,06 in 2022. As can be seen on figure three health declined later in the pandemic across the sample. The skewness for health is ,26 indicating relatively little skewness. With a median of three and a range of 4 between 1 and 5 indicating a normally distributed variable.

Figure 3

Health over-time

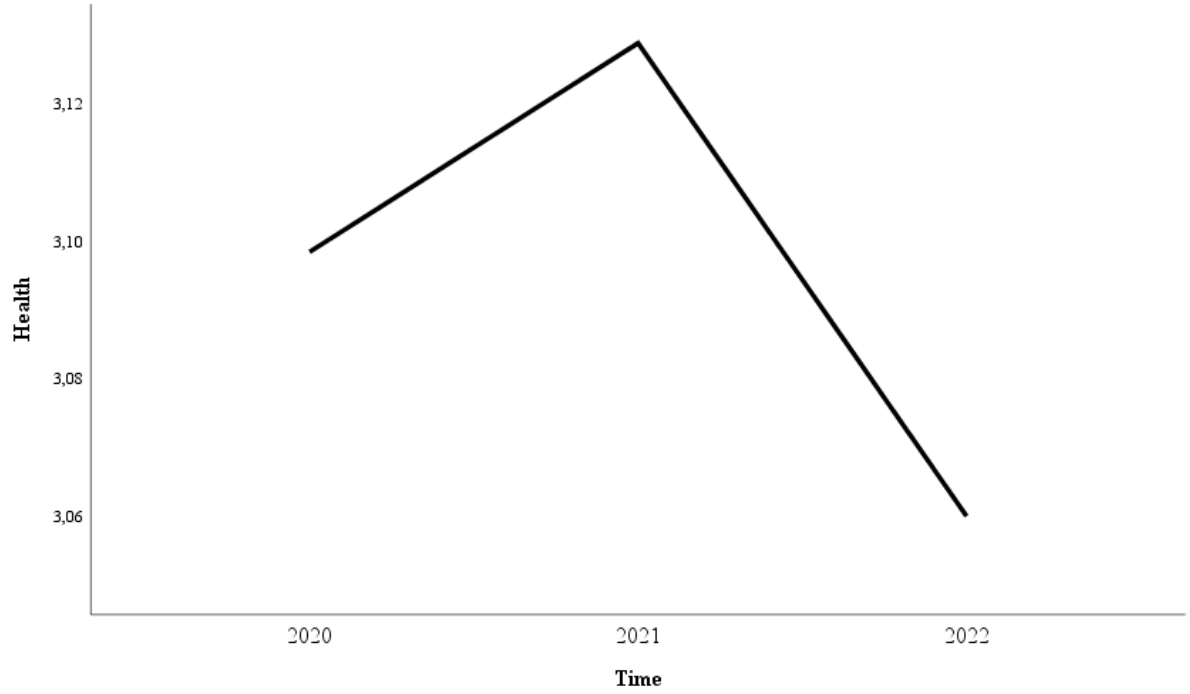


Table 4

Correlations including all years

Variable	N	1	2	3	4
Age	9666	1			
Political trust	"	-,029**	1		
Mental wellbeing	"	,204**	,093**	1	
Health	"	-,244**	,138**	,373**	1

Table 5

Correlations separated by years 2020/2021/2022

Variable	N	1	2	3	4
Age	3222	1			
Political trust	“	-,080**	1		
		,021			
		-,029			
Mental wellbeing	“	,191**	,086**	1	
		,210**	,114**		
		,210**	,086**		
Health	“	-,218**	,152**	,401**	1
		-,264**	,125**	,358**	
		-,250**	,125**	,360**	

p < .05 <.01** < .001****

Results from the Pearson correlation shows a negative and weak correlation between age and political trust, (r (9664) = -,029. p < .01). This negative relationship was expected as described in the theoretical section. Interestingly the correlation between age and political trust turns positive r = .021 in 2021 and turns negative r = -.029 in 2022. This will become clearer in the regression results.

One-way ANOVA results

Table 6

Descriptives per age category

Variable		Age categories		
		< 40	40 - 65	> 65
			Mean (SD)	
Political trust	9666	5,34 (2,06)	4,94 (2,14)	5,15 (1,97)
2020	3222	5,45 (1,95)	4,83 (2,08)	4,99 (1,92)
2021	3222	5,71 (2,01)	5,47 (2,06)	5,77 (1,84)
2022	3222	4,89 (2,14)	4,53 (2,16)	4,69 (1,99)
Mental wellbeing		4,55 (,813)	4,75 (,837)	4,97 (,732)
2020		4,56 (,797)	4,73 (,839)	4,94 (,745)
2021		4,55 (,817)	4,76 (,851)	4,98 (,715)
2022		4,54 (,826)	4,77 (,821)	4,98 (,737)
Health		3.43 (,828)	3,05 (,740)	2,95 (,701)
2020		3,43 (,835)	3,04 (,752)	2,98 (,720)
2021		3,50 (,824)	3,08 (,756)	2,96 (,691)
2022		3,39 (,823)	3,02 (,711)	2,91 (,690)

Note. N = 2103 for < 40; 4038 for 40 – 65 and 3513 for > 65. SD = standard deviation.

To be able to answer hypothesis 1 '*There is a significant difference between the old and young in levels of political trust in 2020'* and hypothesis 1A '*This relationship changes in 2021 and 2022*' a one-way analysis of variance (ANOVA) will be performed to determine whether there is a significant difference between different age groups in political trust. To do this age was recoded into three categories: < 40; 40 – 65 and

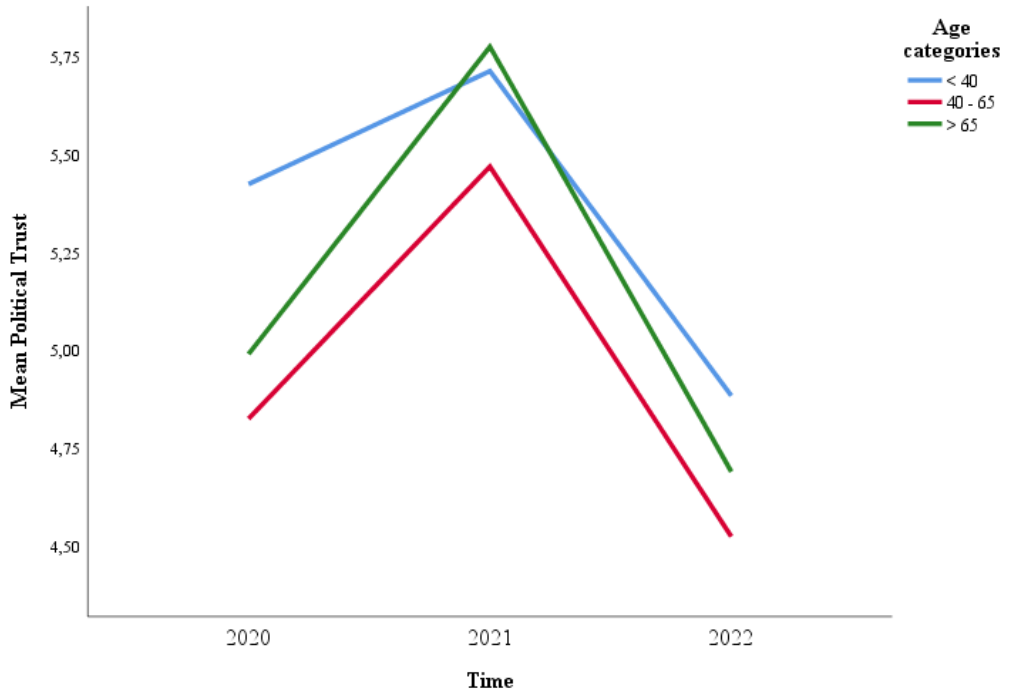
> 65. Then the descriptives were run again to assess the difference in means for political trust; mental wellbeing and health across our entire sample and for the different years.

The one-way ANOVA was performed three times for each year. First, for 2020 the ANOVA showed a statistically significant difference between age group means ($F(2,3219) = 20,91$, $p < .01$). For 2021 there was a significant difference between group means ($F(2,3219) = 8,25$, $p < .01$). For 2022 there was also a significant difference between group means ($F(2,3219) = 6,94$, $p < .01$). In sum, the ANOVA showed significant mean difference in political trust between our age groups.

On closer inspection of the means for political trust between age groups we see that those younger than 40 have the highest mean for trust. This finding is in line with previous findings, namely that younger people in The Netherlands have more political trust. The age group between 40 and 65 score lowest on political trust. When looking at changes over time in political trust the group 65 and older experienced the largest increase in political trust from 2020 to 2021 and also the largest decrease in trust between 2021 and 2022; followed by those 40 – 65. See figure 4 for the over-time variation in political trust for all groups. As can be seen on this figure levels of trust differ between groups and also vary in the strength of the changes. However, all groups show the increase in 2021 and decrease in 2022.

Figure 4

Mean for political trust per age category



Fixed-effects within person regression

To determine whether there is a significant within-person difference in political trust a fixed-effects panel regression model was used with dummy coding for respondents.

In the first model only the dummy variables were included to capture the between-subject variation. This model was statistically significant (R^2 = ,81, F(3222,6445) = 8,04, p < .01). The second model included the dummies for year (R^2 = ,84, F(3224,6443) = 10,36, p < .01). This model shows that there is a significant within-person variation in political trust over-time: 2021 (b = ,616 < p. 01 and 2022 b = -,352 p < .01). Meaning that there is a within-person increase of political trust from 2020 to 2021, and then a decrease from 2021 to 2022. This trend corresponds to the trend of political trust described in the previous section for between age-groups.

The third model included an interaction term (R^2 = ,84, F(3225,6442) = 10,38, p < .01). 2021 (b = ,554, p < .01) and 2022 (b = -,415 p < .01) and age*time (b = -,172, p < .01) This indicates that the relationship

between age and trust changes over time. The fourth model added the variables for health (b = -,055, p > .05) and mental wellbeing (b = ,053, p > .05) with an overall significant model (R^2 = ,84, F(3227,6440) = 10,38, p < .01). This shows no significant within-person difference in political trust as a function of changes in health and mental wellbeing.

Total effect regression model and predicted values

Before discussing the mediation models it is necessary to first discuss the total effect models. Before mediation can occur we first need a direct relationship between age and political trust. The model was rerun for each year (2020;2021;2022). In all models the same covariates were added: gender (1 = female) and education level, which was dummy coded and middle educated was used as reference category.

The model for 2020 was overall statistically significant (F(4,3213) = 50,45, p < .001, R^2 = ,059). Age is a significant predictor of political trust: (b = -,0059, t(3213) = -2,85, p < .01) controlled for by gender (b = ,25, t(3213) = 3,62, p < .001) and educational level (b = -,37, t(3213) = - 4,11, p < .001) for low and (b = ,73, t(3213) = 9,03, p < .001) for higher educated. This model shows that political trust decreases with age and is lower for males (reference category) and for the lower educated.

The model for 2021 was overall statistically significant: (F(4,3213) = 77,82, p < . 001, R^2 = ,088). Age was a significant predictor of political trust: (b = ,0055, t(3213) = 2,71, p < .01) controlled for by gender (b = ,314, t(3213) = 2,71, p < .001) and educational level (b = -,3166, t(3213) = ,355, p < .001) for low and (b = ,539, t(3213) = 6,71, p < .001) for high. Compared to the previous model the relationship between age and political trust became positive but with a similar effect size: -,0059 vs ,0055. This can be attributed to the rally-around-the-flag effect.

Lastly the model for 2022 was also statistically significant (F(4,3213) = 31,28, p < .001). Age however is not significant in this model (b = -,0002, t(4,3213) = -,097, p = .92) controlled for by gender (b = ,11, t(3213) = 1,46, p = .14) and educational level (b = -,455, t(3213), p < .001) for low and (b = ,55, t(3213) = 6,45, p < .001) for mid. The confidence intervals for age vary from [-,0045 to ,0040] indicating a 95

percent likelihood of the effect ranging somewhere between those two values. When compared to 2020 and 2021 (respectively b = -,0059 and b = ,0055), the relationship between age and trust seems to have settled somewhere in between.

Overall the models have confirmed the expectations: firstly, the relationship between age and trust is negative at 'base-level', which is characteristic for The Netherlands (van der Meer & Hakhverdian, 2017); secondly, this relationship becomes positive in 2021 due to the 'rally effect' and thirdly this relationship changes again in 2022 and settling between the base-level and the rally effect levels of political trust.

The covariate gender ranges from ,10 to ,35 in the sample, indicating the relationship between age and trust to be stronger for females. For educational level the pattern is traditional with lower educated showing negative trust and higher educated showing a positive coefficient.

Predicted values

For example: a 25 year old lower educated male has a predicted value of trust of 4,81 in 2020; 4,86 in 2021 and 4,07 in 2022. A 50 year old lower educated male would have a predicted value of 4,37 in 2020; 4,99 in 2021 and 4,07 in 2022. A 85 year old lower educated male would have a predicted value of 4,16 in 2020; 5,19 in 2021 and 4,06 in 2022; see table 7. Overall the models predict that females have higher values of political trust than males and the higher educated have higher values than the lower educated, with the middle educated between those groups.

Table 7

Predicted values for political trust

Age	2020	2021	2022
25	4,81	4,86	4,07
50	4,37	4,99	4,07
85	4,16	5,19	4,06

Note: predicted values for lower educated males

Results mediation analysis

To determine whether mental wellbeing and health mediate the relationship between age and political trust, a mediation analysis was performed using the Process Tool by Andrew Hayes in SPSS. The data was split into the three corresponding years (2020;2021;2022) and the mediation model was rerun for each year and each mediator separately. Step 1 in the model determines whether age predicts the mediator variable mental wellbeing or health. Step 2 of the model looks whether age and the mediator predict political trust. Step 3 looks at the effect of age on trust without the mediator and is discussed in the previous paragraph on the total effect regression model.

Mental wellbeing

Step 1 of the 2020 model had an overall significant model: (F(4,3213) = 50,03, p < .01, R^2 = ,059). Age significantly predicted mental wellbeing (b = ,0095 t(3213) = 11,44, p < .001). Step 2 had an overall significant model: (F(5,3212) = 46,23, p <. 001). Age significantly predicted political trust (b = -,008, t(3212) = -3,85, p < .001) controlled for by mental wellbeing (b = ,229 t(3212) = 5,26, p < . 001). The indirect effect of mental wellbeing = ,0022, SE = ,0005, CI 95% [,0013, ,0032]. These results show that mental wellbeing partially mediates the relationship between age and political trust in 2020.

Step 1 of the 2021 model was overall significant: (F(4,3213) = 53,29, p < .001, R^2 = ,062). Age significantly predicted mental wellbeing (b = ,0103, t(3213) = 12,47, p < .001). Step 2 of the model was also overall significant (F(5,3212) = 31,88, p < .001, R^2 = ,047). In this model age was not a significant predictor of political trust (b = ,0028 t(3212) = 1,33, p > .05) controlled for by mental wellbeing: (b = ,269, t(3212) = 6,22, p < .001). The indirect effect of mental wellbeing = ,0028, SE = ,006, CI 95% [,0017, ,0039]. This also indicates partial mediation.

Step 1 of the 2022 model was overall significant: (F(4,3213) = 56,56, p < .001, R^2 = ,066). Age was a significant predictor of mental wellbeing (b =,0103, t(3213) = 12,54, p < .001). Step 2 of the model was also significant (F(5,3212) = 29,52, p < .001, R^2 = ,044) with age a non-significant predictor: (b = -,0024, t(2312) = -1,101, p > .05) controlled for by mental wellbeing (b = ,216, t(3212) = 4,65, p <.001).

Step 3 shows an insignificant effect of age on political trust: (b = -,0002, CI 95% [-,0045, ,0040]). This indicates that the relationship between age and political trust is weaker in the sample of 2022 (-,0002 compared to ,0055 in 2021) and is not significant at the conventional .05 level. The indirect effect of mental wellbeing however = ,0022, SE ,0006, CI 95% [,0012, ,0034] and does not include the null for the confidence intervals, indicating partial mediation.

On the basis of the above results we can conclude that mental wellbeing partially mediates the relationship between age and political trust in 2020 and 2021, respectively 37 and 50 percent mediation of the effect. The null hypothesis for hypothesis three can therefore be rejected

Health

Step 1 of the 2020 model for health was overall significant: (F(4,3213) = 64,89, p < .001, R^2 = ,074). Age was a significant predictor of health: (b = -,0097, t(3213) = -12,27, p < .001). Step 2 of the model was also significant: (F(4,3213) = 50,46, p < .001, R^2 = ,059). Age was not a significant predictor of trust: (b = -,0029, t(3213) = -1,39, p > .05) controlled for by health: (b = ,3050, t(3213) = 6,72, p < .001). Age was a significant predictor of political trust: (b = -,0059, t(3213) = -2,86, p < .001). The indirect effect of health = -,0030, SE

,0005, CI 95% [-,0041, -,0020], in combination with the direct effect of step 3 indicates partial mediation of health.

Step 1 for the 2021 model was overall significant: (F(4,3213) = 77,85, p < .001, R^2 = ,088). Age was a significant predictor of health: (b = -,0012, t(3213) = -14,93, p < .001). The model for step 2 was also significant: (F(5,3212) = 34,1, p < .001, R^2 = ,05). Age was a significant predictor of political trust: (b = ,0093, t(3212) = 4,43, p < .001) controlled for by health: (b = ,3223, t(3212) = 7,03, p < . 001). The indirect effect of health = -,0038, SE = ,0006, CI 95% [-,0050, -,0026] indicating partial mediation of the effect of age on political trust.

Step 1 for the 2022 model was overall significant: (F(4,3213) = 71,40, p < .001, R^2 = ,082). Age was a significant predictor of health: (b = -,011, t(3213) = -13,99, p < .001). Step 2 of the model was also significant: (F(5,3212) = 31,92, p < .001, R^2 = ,047). Age was not a significant predictor of political trust: (b = ,0029, t(3212) = 1,29, p > .05), controlled for by health: (b = ,289, t(3212) = 5,76, p < .001).

Step 3 of the model was insignificant, as discussed earlier with model 2022 for mental wellbeing and for the total effects. However, the indirect effect of health = -,0031, SE ,0006, CI 95% [-,0043, -,0019] indicates partial mediation considering the confidence interval does not include the null, similar to the indirect effect of mental wellbeing in step 3 of model 2022 for mental wellbeing.

The above results show that health partially mediates the effect between age and political trust in 2020 and 2021, respectively 50 and 69 percent mediation of the effect. The null for hypothesis two can therefore be rejected.

Robustness analysis

Binary logistic regression

As a measure of robustness a binary logistic regression was used to examine whether our variables are associated with low or high political trust in this model. For this test political trust has been cut-off at the 10th percentile to see how well it predicts those scores. Age; gender; educational level; mental wellbeing and health are the predictor variables.

The first model was statistically significant X^2 (1, N = 9654) = 309,11, $p < .001$, indicating that our full model is a significant better fit than our null model. The model explained between 3,2 (Cox & Snell R Square) and 5,6 percent (Nagelkerke R square) of the variance in the dependent variable and correctly classified 85,3 percent of cases, which are all above the 10th percentile.

Table 8

Binary logistic regression model

	B	SE	Wald	df	p	OR	95% CI	
							LI	HI
Age	,005	,002	6,65	1	,010	1,005	1,001	1,009
Gender	,337	,059	32,39	1	,000	1,400	1,247	1,572
Lower educated	-,399	,068	33,86	1	.000	,671	,587	,768
Higher educated	,715	,076	88,16	1	,000	2,044	1,761	2,373
Mental wellbeing	,082	,039	4,35	1	,037	1,086	1,005	1,173
Health	,202	,045	20,4	1	,000	1,224	1,121	1,336

Constant	,225	,201	1,242	1	,265	1,252

Note: male and middle educated are held constant. CI = confidence interval

Parallel mediation

As a measure of robustness I performed a repeated cross-sectional parallel mediation in addition to the models with each mediator separately to see whether it differs when both mediators are in the model. Because of this step 1 (the question whether age predicts the mediator) of the models are the same as the ones done separately for health and mental wellbeing. Therefore only the multivariate model (step 2) containing both mediators as controls and the indirect effects will be discussed.

The 2020 model had an overall significant model ($F(6,3211) = 42{,}73$, $p < .001$, $R^2 = ,07$) with age significantly predicting political trust ($b = -,0046$, $t(3211) = -2{,}10$, $p < .05$) controlled for by mental wellbeing ($b = ,122$, $t(3211) = 2{,}50$, $p < .05$) and health ($b = ,247$, $t(3211) = 4{,}86$, $p < .001$). The indirect effect of mental wellbeing = ,0012, SE = ,0005, CI 95% [,0002, ,0022] and health = -,0024, SE = ,0006, CI 95% [-,0036, -,0013] indicating partial mediation for both mediators.

The 2021 model had an overall significant model ($F(6,3211) = 30{,}63$, $p < .001$, $R^2 = ,06$) with age significantly predicting political trust ($b = ,0066$, $t(3211) = 2{,}98$, $p < .005$) controlled for by mental wellbeing ($b = ,170$, $t(3211) = 3{,}56$, $p < .001$) and health ($b = ,245$, $t(3211) = 4{,}86$, $p < .001$). The indirect effect of mental wellbeing = ,0018, SE = ,0006, CI 95% [,0007, ,0029] and health = -,0029, SE = ,0007, CI 95% [-,0042, -,0016] again showing partial mediation by both mediators.

The 2022 model also had an overall significant model ($F(6,3211) = 27{,}63$, $p < .001$, $R^2 = ,05$) with age being an insignificant predictor of political trust ($b = ,001$, $t(3211) = ,408$, $p > .05$) controlled for by mental wellbeing ($b = ,125$, $t(3211) = 2{,}44$, $p < .05$) and health ($b = ,232$, $t(3211) = 4{,}17$, $p < .001$). The indirect effect of mental wellbeing = ,0013, SE ,0006, CI 95% [,0001, ,0025] and health = -,0025, SE = , 0007, CI 95% [-,0038, ,-,0012] also indicating partial mediation.

To summarize all models show similar mediation effect sizes and directions as the separate cross-sectional mediation models. The difference is that mental wellbeing and health slightly reduce each others' effects, which is not surprising. For example, the indirect effect of mental wellbeing and health respectively = ,0022 and -,0030 for the separate model in 2020 compared to ,0012 and -,0024 for the parallel model. See the appendix for all the mediation tables.

Conclusion

The research question consisted of three parts 1) '*what is the relationship between age and political trust during the pandemic? 2) How has this relationship developed in the course of the pandemic? And 3) to what extent do health and mental wellbeing explain age differences in political trust'*, will be answered in that same order. First, I will summarize the main findings for each part of the research question and corresponding hypothesis, then I will relate these results to previous findings and theory and discuss how these results fit into those.

What is the relationship between age and political trust during the pandemic? And how has this developed in the course of the pandemic? Firstly, the results from the ANOVA showed significant differences in levels of political trust for the young; middle aged and old in 2020; 2021 and 2022. This is in line with former research into political trust in The Netherlands that shows younger people in general have more political trust than older people (van der Meer & Hakhverdian, 2017). The negative relationship between age and trust is typical for The Netherlands and differs from findings from other countries (Gozgor, 2021). In 2021 however I find that older people experience a large increase in political trust compared to younger people, most likely as a response to the imposition of covid measures (Bol et al., 2021; Gozgor, 2021; Schraff, 2021). Secondly, the fixed-effects within-person regression adds to the between-group difference by showing significant within-subject difference in political trust from 2020 to 2022.

For the covariates gender and education, I find that females have more political trust across the years. The difference with males however is halved in 2022. Males on the other hand report higher mental wellbeing and health. More interestingly is that educational level shows traditional patterns of the lower educated having less political trust compared to higher educated. The difference in trust however becomes smaller in 2021 where the lower educated are predicted to have a smaller negative mean for trust, whereas the higher educated are predicted to have a smaller positive level of trust. In

2022 the level of political trust for the lower educated plummet to levels below 2020; higher educated do not change.

Furthermore, political trust has made significant variations from 2020 to 2022: first showing a strong increase in 2021 and then an even stronger decrease to levels of trust below 2020, which is the baseline of political trust; see figure 1. This pattern is similar for all age groups, see figure 4. Our findings on the levels of political trust for 2021 correspond to findings made by Bol et al., (2021) and Oude Groeniger et al., (2021) about the increase of political trust following the imposition of lockdown measures. These findings add to the ones made by Bol et al., (2021) and Oude Groeniger et al., (2021) by showing that this increase of trust lasted from around March 2020 to at least December/January 2021. What remains unexplained however is the decrease of trust in 2022. Oude Groeniger et al., (2021) write that trust might decline in the long-term depending on the covid measures and the extent to which those are reimposed during virus upsurges.

All in all, these findings confirm that the increase of trust experienced after the imposition of lockdown measures lasted well into the year and confirms my expectation that the continuation of the pandemic would change this relationship. What remains is the question whether health and mental wellbeing mediate the age trust relationship.

To what extent does health explain age differences in political trust and does health mediate the differences? As expected the models predicted a negative relationship between age and health with a consistent effect across all years. The findings from the multivariate analysis or step two of the health models predict that higher self-reported health leads to higher political trust in all three years. This shows that older people who tend to have lower self-reported health have less political trust on average. This could explain a part of the divergence of political trust between old and young in general in the Netherlands.

The mediation analysis showed that health partially mediates the relationship between age and political trust in 2020 and 2021. The mediation effect increases in strength from 50 percent in 2020 to 69

percent in 2021, meaning health accounted for 19 percent more in the relationship between age and trust from 2020 and 2021 in the models for health.

My findings regarding health and political trust are similar to those found by Matilla and Rapeli (2018) that people with lower health have less political trust. I also found a similar stronger positive effect of health on political trust in 2021 (compared to 2020) as Oude Groeniger et al., (2021) and Gozgor (2021). Important to note here is that their measurement followed the lockdown measures of early 2020 and my measurements are late 2020. My findings on health and political trust are stable across all years. The effect becomes slightly stronger in 2021 compared to 2020 and becomes weaker in 2022. Although health has an increasing mediating effect in 2021, the decline of trust in 2022 cannot be explained by health.

Now we turn to what extent mental wellbeing can explain the age differences in political trust and whether it mediates this relationship. The results for the mental wellbeing models showed that mental wellbeing increases with age and higher mental wellbeing is related to higher political trust. The effect of age on mental wellbeing is consistent in all three years. Older people tend to have higher mental wellbeing and those with higher mental wellbeing are predicted to have more political trust.

Furthermore, the mediation analysis showed that mental wellbeing partially mediated the relationship between age and mental wellbeing in 2020 and 2021. Also increasing in strength from 37 percent in 2020 to 50 percent in 2021, indicating that mental wellbeing accounts for 13 percent more in the relationship between age and trust in the models for mental wellbeing.

Although mental wellbeing has been shown to partially mediate the relationship, my expectations regarding its decline later in the pandemic was not confirmed. With the effects of the pandemic on different age groups I expected to see a decline across all groups, but most strongly amongst young people. However, there are only small variations in the means for mental wellbeing across all groups in all years. This contrasts with findings by Owens et al., (2022) who found that lockdown restrictions had a negative effect on the mental wellbeing of young people.

To conclude, I have found that the relationship between age and political trust varies significantly during the years of the pandemic. In line with findings by other scholars I find evidence for a strong increase of trust in the year following covid-19 measures. Political trust is partially mediated by both health and mental wellbeing and this effect increases in 2021. In 2022 however I found a sharp decrease of political trust that is yet unexplained.

Limitations and recommendations

This study has some limitations. Firstly, this study did not contain any variable or measurement related to lockdown measures or the state of the pandemic. It is possible that controlling for current lockdown measures and/or what state the pandemic is in that this provides some insights into the declining trust in 2022. Another limitation is that the measurements for mental wellbeing and health are self-reported. It is possible that people might elicit less objective and more positive responses. A recommendation for future research is to look at explanations for the 2022 decline of trust and see if this changes again in 2023 to levels of pre-corona. If this were the case it would provide valuable insights into how political trust develops during events such as the worldwide pandemic.

Bibliography

About the Panel | LISS Panel Data. (2022). https://www.lissdata.nl/about-panel

Ahrendt, D., Massimiliano, M., Nivakoski, S., & Sándor, E. (2021). *Living, working and COVID-19 (Update April 2021): Mental health and trust decline across EU as pandemic enters another year*. 21. https://doi.org/10.2806/76802

Arends, J., & Schmeets, H. (2015). *Sociaal en institutioneel vertrouwen in Nederland* (Bevolkingstrends). Centraal Bureau voor de Statistiek.

Belchior, A. M., & Teixeira, C. P. (2021). Determinants of Political Trust during the Early Months of the COVID-19 Pandemic: Putting Policy Performance into Evidence. *Political Studies Review*. https://doi.org/10.1177/14789299211056193

Bol, D., Giani, M., Blais, A., & Loewen, P. (2021). *The effect of COVID-19 lockdowns on political support: Some good news for Democracy? 60*, 497–505. https://doi.org/10.1111/1475-6765.12401

Bryman, A. (2016). *Social Research Methods* (Vol. 5th). University Press.

Butler, K., & Bannock, C. (2021, June 2). 'A sacrificed generation': Psychological scars of Covid on young may have lasting impact. *The Guardian*. https://www.theguardian.com/world/2021/jun/02/a-sacrificed-generation-psychological-scars-of-covid-on-young-may-have-lasting-impact

CBS. (2019). *Opleidingsniveau* [Webpagina]. Centraal Bureau voor de Statistiek. https://www.cbs.nl/nl-nl/nieuws/2019/33/verschil-levensverwachting-hoog-en-laagopgeleid-groeit/opleidingsniveau

CDC, C.-19 R. team. (2020). *Severe Outcomes Among Patients with Coronavirus Disease 2019 (COVID-19)—United States, February 12–March 16, 2020*. *69*(12), 343–346.

Christensen, T., & Laegreid, P. (2014). TRUST IN GOVERNMENT: The Relative Importance of Service Satisfaction, Political Factors, and Demogra. *28:4*, 487–511. https://doi.org/10.1080/15309576.2005.11051848

Das, J. W. M., & Elshout, S. (2018). *Politics and Values (LISS Core Study)*. Data Archiving and Networked Services (DANS). https://doi.org/10.17026/DANS-ZMS-R5RZ

Das, J. W. M., Marchand, M., & CentERdata-Institute For Data Collection And Research-Tilburg University. (2018). *Health (LISS Core Study)*. Data Archiving and Networked Services (DANS). https://doi.org/10.17026/DANS-ZE3-5UK9

Dekker, P., & den Ridder, J. (2020). *Burgerperspectieven 2020*. Sociaal en Cultureel Planbureau.

Ellerich-Groppe, N., Pfaller, L., & Schweda, M. (2021). Young for old—old for young? Ethical perspectives on intergenerational solidarity and responsibility in public discourses on COVID-19. *European Journal of Ageing*, *18*(2), 159–171. https://doi.org/10.1007/s10433-021-00623-9

Esaiasson, P., Sohlberg, J., Ghersetti, M., & Johansson, B. (2021). How the coronavirus crisis affects citizen trust in institutions and in unknown others: Evidence from 'the Swedish experiment.' *European Journal of Political Research*, *60*(3), 748–760. https://doi.org/10.1111/1475-6765.12419

Gozgor, G. (2021). Global Evidence on the Determinants of Public Trust in Governments during the COVID-19. *Applied Research in Quality of Life*. https://doi.org/10.1007/s11482-020-09902-6

Grönlund, K., & Setälä, M. (2007). Political Trust, Satisfaction and Voter Turnout. *Comparative European Politics*, *5*(4), 400–422. https://doi.org/10.1057/palgrave.cep.6110113

Lindstrom, M., & Mohseni, M. (2009). Social capital, political trust and self-reported psychological health: A population-based study. *Social Science & Medicine*, *68*(3), 436–443. https://doi.org/10.1016/j.socscimed.2008.11.004

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., Linney, C., McManus, M. N., Borwick, C., & Crawley, E. (2020). Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. *Journal of the American Academy of Child & Adolescent Psychiatry*, *59*(11), 1218-1239.e3. https://doi.org/10.1016/j.jaac.2020.05.009

Mattila, M., & Rapeli, L. (2018). Just sick of it? Health and political trust in Western Europe. *European Journal of Political Research*, *57*(1), 116–134. https://doi.org/10.1111/1475-6765.12218

Oude Groeniger, J., Noordzij, K., van der Waal, J., & de Koster, W. (2021). Dutch COVID-19 lockdown measures increased trust in government and trust in science: A difference-in-differences analysis. *Social Science & Medicine*, *275*, 113819. https://doi.org/10.1016/j.socscimed.2021.113819

Owens, M., Townsend, E., Hall, E., Bhatia, T., Fitzgibbon, R., & Miller-Lakin, F. (2022). Mental Health and Wellbeing in Young People in the UK during Lockdown (COVID-19). *International Journal of Environmental Research and Public Health*, *19*(3), 1132. https://doi.org/10.3390/ijerph19031132

Rijksoverheid. (2020, July 27). *Februari 2020: Eerste coronabesmetting in Nederland - Coronavirus tijdlijn - Rijksoverheid.nl* [Onderwerp]. Ministerie van Algemene Zaken. https://www.rijksoverheid.nl/onderwerpen/coronavirus-tijdlijn/februari-2020-eerste-coronabesmetting-in-nederland

Schraff, D. (2021). *Political trust during the Covid-19 pandemic: Rally around the flag or lockdown effects? 60*, 1007–1107. https://doi.org/10.1111/1475-6765.12425

Smith, L., Jacob, L., Yakkundi, A., McDermott, D., Armstrong, N. C., Barnett, Y., López-Sánchez, G. F., Martin, S., Butler, L., & Tully, M. A. (2020). Correlates of symptoms of anxiety and depression and mental wellbeing associated with COVID-19: A cross-sectional study of UK-based respondents. *Psychiatry Research*, *291*, 113138. https://doi.org/10.1016/j.psychres.2020.113138

United Nations. (2020). *Policy Brief: The Impact of COVID-19 on older persons*. United Nations sustainable development group.

van der Meer, T. (2010). In what we trust? A multi-level study into trust in parliament as an evaluation of state characteristics. *International Review of Administrative Sciences*, *76*(3), 517–536. https://doi.org/10.1177/0020852310372450

van der Meer, T., & Hakhverdian, A. (2017). Political Trust as the Evaluation of Process and Performance: A Cross-National Study of 42 European Countries. *Political Studies*, *65*(1), 81–102. https://doi.org/10.1177/0032321715607514

Appendix

Mediation tables health and mental wellbeing

Table 9 2020 mediation analysis health

Variable	b	95%CI	SE b	R^2
Step 1				,072
Constant	3,637	[3,537, 3,736]	.0507	
Age	-.0097***	[-,0113, -,0082]	,0008	
Gender	-,1211***	[-,1733, ,0319]	,0267	
Lower Educated	-,0358	[-,1035, ,0319]	,0345	
High educated	,1868***	[,1258, ,2477]	,0311	
Step 2				,072
Constant	3,925	[3,5123, 4,3374]	,2104	
Age	-,0029	[-,0070, ,0012]	,0021	
Health	,305***	[,2160, ,3940]	,0454	
Gender	,2874***	[,1524, ,4224]	,0688	
Low education	-,3566***	[-,5309, -,1823]	,0889	
High education	,6710***	[,5133, ,8288]	,0805	

Table 10 2021 mediation analysis health

Variable	b	95%CI	SE b	R^2
Step 1				,088
Constant	3,7903	[3,6922, 3,8884]	.05	
Age	-,0117***	[-,0132, -,0101]	,0008	
Gender	-,1080***	[-,1596, -,0564]	,0263	
Lower Educated	-,0609	[-,1277, ,0059]	.0341	
High educated	.1469***	[,0868, ,2070]	,0307	
Step 2				,050
Constant	3,8198	[3,3941, 4,2454]	,2171	
Age	,0093***	[,0052, ,0134]	,0021	
Health	,3223***	[,2324, ,4122]	,0459	
Gender	,3485***	[,2140, ,4730]	,0686	
Low education	-,2970**	[-,4708, -,1232]	,0887	
High education	,4921***	[,3351, ,6490]	,0800	

Table 11 2022 mediation analysis health

Variable	b	95%CI	SE b	R^2
Step 1				,082
Constant	3,6429	[3,5477, 3,7382]	,0486	
Age	-,0106***	[-,0121, -,0091]	,0008	
Gender	-,0886***	[-,1387, -,0385]	,0256	
Lower Educated	-,0475	[-,1124, ,0174]	,0331	
High educated	,1648***	[,1063, ,2232]	,0298	
Step 2				,047
Constant	3,4787	[3,0289, 3,9286]	,2294	
Age	,0029	[-,0015, ,0072]	,0022	
Health	,2895***	[,1910, ,3880]	,0502	
Gender	,1324	[-,0106, ,2753]	,0729	
Low education	-,4419***	[-,6268, -,2570]	,0943	
High education	,5025***	[,3353, ,6697]	,0853	

Table 12 2020 mediation analysis mental wellbeing

Variable	b	95%CI	SE b	R^2
Step 1				,059
Constant	4,35	[4,26, 4,45]	,053	
Age	,0095***	[0,008, 0,011]	,0008	
Gender	-,174***	[-0,229, -0,119]	,028	
Lower Educated	-,1377***	[-0,209, -0,066]	,036	
High educated	,051	[-0,012, 0,115]	,032	
Step 2				,067
Constant	4,038	[3,587, 4,479]	,23	
Age	-,008***	[-0,012, -0,004]	,0021	
Mental wellbeing	,2286***	[[0,143, 0,314]	,044	
Gender	,2902***	[0,155, 0,426]	,069	
Low education	-,336***	[-0,511, -,0161]	,089	
High education	,716***	[0,559, 0,874]	,080	

Table 13 2021 mediation analysis mental wellbeing

Variable	b	95%CI	SE b	R^2
Step 1				,062
Constant	4,32	[4,217, 4,425]	,053	
Age	,010***	[,0087, ,0120]	,0008	
Gender	-,1633***	[-,2181, -,1085]	,0280	
Lower Educated	-,1222***	[,1931, -.0512]	,0362	
High educated	,0393	[-0246, ,1032]	,0326	
Step 2				,047
Constant	3,879	[3,422, 5,354]	,2278	
Age	,0028	[-,0013, ,0068]	,0021	
Mental wellbeing	,2690***	[,1843, ,3538]	,0432	
Gender	,3576***	[,2226, ,4927]	,0689	
Low education	-,2838**	[-,4587, -,1094]	,0889	
High education	,5288***	[,3722, ,6855]	,0799	

Table 14 2022 mediation analysis mental wellbeing

Variable	b	95%CI	SE b	R^2
Step 1				,066
Constant	4,330	[4,227, 4,434]	,053	
Age	,0103***	[,0087, ,0119]	.0008	
Gender	-,1784***	[-,2329, -,1240]	,0278	
Lower Educated	-,1206***	[-,1911, -,0501]	,0360	
High educated	,0510	[-,0124, ,1145]	,0324	
Step 2				,044
Constant	3,5992	[3,1210, 4,0774]	,2439	
Age	-,0024	[-,0068, ,0019]	,0022	
Mental wellbeing	,2157***	[,1249, ,3066]	,0463	
Gender	,1452*	[,0013, ,2891]	.0734	
Low education	-,4297***	[-,6152, -,2442]	,0946	
High education	,5392***	[,3724, ,7059]	,0850	

Parallel mediation tables

Table 15 parallel mediation analysis 2020

Variable	b	95% CI	R^2
2020			,073
Constant	3,6051		
Age	-,0046*	[-,0089, -,0003]	
Mental wellbeing	,121*	[,0273, ,2169]	
Health	,247***	[,1476, ,3471]	
Gender	,30***	[,1663, ,4369]	
Lower Educated	-,342***	[-,5165, -,1674]	
High educated	,676***	[,5179, ,8332]	
Indirect effect			
Total	-,0012	[-,0030, ,0005]	
Mental wellbeing	,0012	[,0002, ,0022]	
Health	-,0024	[,,0036, -,0013]	

Table 16 parallel mediation analysis 2021

Variable	b	95% CI	R^2
2021			,054
Constant	3,379		
Age	,0066**	[,0023, ,0110]	
Mental wellbeing	,1701***	[,0765, ,2636]	
Health	,2447***	[,1453, ,3441]	
Gender	,3679***	[,2332, ,5025]	
Lower Educated	-,2809**	[-,4547, -,1072]	
High educated	,4968***	[,3401, ,6535]	
Indirect effect			
Total	-,0011	[-,0032, ,0010]	
Mental wellbeing	,0018	[,0007, ,0029]	
Health	-,0029	[-,0042, -,0016]	

Table 17 parallel mediation analysis 2022

Variable	b	95% CI	R^2
2022			,054
Constant	3,149		
Age	,0010	[-,0037, ,0056]	
Mental wellbeing	,1246**	[,0244, ,2249]	
Health	,2317***	[,1228, ,3406]	
Gender	,1485*	[,0060, ,2930]	
Lower Educated	-,4296***	[-,6147, -,2446]	
High educated	,5056***	[,3386, ,6727]	
Indirect effect			
Total	-,0012	[-,0033, ,0009]	
Mental wellbeing	,0013	[,0001, ,0025]	
Health	-,0025	[,0038, -,0012]	

Privacy and ethics checklist

CHECKLIST ETHICAL AND PRIVACY ASPECTS OF RESEARCH

INSTRUCTION

This checklist should be completed for every research study that is conducted at the Department of Public Administration and Sociology (DPAS). This checklist should be completed *before* commencing with data collection or approaching participants. Students can complete this checklist with help of their supervisor.

This checklist is a mandatory part of the empirical master's thesis and has to be uploaded along with the research proposal.

The guideline for ethical aspects of research of the Dutch Sociological Association (NSV) can be found on their website (http://www.nsv-sociologie.nl/?page_id=17). If you have doubts about ethical or privacy aspects of your research study, discuss and resolve the matter with your EUR supervisor. If needed and if advised to do so by your supervisor, you can also consult Dr. Jennifer A. Holland, coordinator of the Sociology Master's Thesis program.

PART I: GENERAL INFORMATION

Project title: Trust in government during the covid-19 pandemic

Name, email of student: Sven Bouwmeester; 507617sb@eur.nl

Name, email of supervisor: Tom Emery; tom@odissei-data.nl

Start date and duration: April 1; 2022 to July 1; 2022

Is the research study conducted within DPAS **YES** - NO

If 'NO': at or for what institute or organization will the study be conducted?
(e.g. internship organization)

PART II: HUMAN SUBJECTS

1. Does your research involve human participants. **YES** - NO

   If 'NO': skip to part V.

   If 'YES': does the study involve medical or physical research? YES -**NO**
   Research that falls under the Medical Research Involving Human Subjects Act (WMO) must first be submitted to an accredited medical research ethics committee or the Central Committee on Research Involving Human Subjects (CCMO).

2. Does your research involve field observations without manipulations that will not involve identification of participants. YES -**NO**

   If 'YES': skip to part IV.

3. Research involving completely anonymous data files (secondary data that has been anonymized by someone else). **YES** - NO

   If 'YES': skip to part IV.

PART III: PARTICIPANTS

1. Will information about the nature of the study and about what participants can expect during the study be withheld from them? YES - NO

2. Will any of the participants not be asked for verbal or written 'informed consent,' whereby they agree to participate in the study? YES - NO

3. Will information about the possibility to discontinue the participation at any time be withheld from participants? YES - NO

4. Will the study involve actively deceiving the participants? YES - NO
   Note: almost all research studies involve some kind of deception of participants. Try to think about what types of deception are ethical or non-ethical (e.g. purpose of the study is not told, coercion is exerted on participants, giving participants the feeling that they harm other people by making certain decisions, etc.).

5. Does the study involve the risk of causing psychological stress or negative emotions beyond those normally encountered by participants? YES - NO

6. Will information be collected about special categories of data, as defined by the GDPR (e.g. racial or ethnic origin, political opinions, religious or philosophical beliefs, trade union membership, genetic data, biometric data for the purpose of uniquely identifying a person, data concerning mental or physical health, data concerning a person's sex life or sexual orientation)? YES - NO

7. Will the study involve the participation of minors (<18 years old) or other groups that cannot give consent? YES - NO

8. Is the health and/or safety of participants at risk during the study? YES - NO

9. Can participants be identified by the study results or can the confidentiality of the participants' identity not be ensured? YES - NO

10. Are there any other possible ethical issues with regard to this study? YES - NO

If you have answered 'YES' to any of the previous questions, please indicate below why this issue is unavoidable in this study.

_____

_____

_____

_____

What safeguards are taken to relieve possible adverse consequences of these issues (e.g., informing participants about the study afterwards, extra safety regulations, etc.).

_____
_____
_____
_____

Are there any unintended circumstances in the study that can cause harm or have negative (emotional) consequences to the participants? Indicate what possible circumstances this could be.

_____
_____
_____
_____

Please attach your informed consent form in Appendix I, if applicable.

Continue to part IV.

PART IV: SAMPLE

Where will you collect or obtain your data?
LISS panel

_____

_____

Note: indicate for separate data sources.

What is the (anticipated) size of your sample?
5000 participants

_____

_____

Note: indicate for separate data sources.

What is the size of the population from which you will sample?

_____

_____

Note: indicate for separate data sources.

Continue to part V.

Part V: Data storage and backup

Where and when will you store your data in the short term, after acquisition?
Microsoft onedrive and on work computer

_____

_____

Note: indicate for separate data sources, for instance for paper-and pencil test data, and for digital data files.

Who is responsible for the immediate day-to-day management, storage and backup of the data arising from your research?
The student

_____

_____

How (frequently) will you back-up your research data for short-term data security?
Onedrive does this automatically

_____

_____

In case of collecting personal data how will you anonymize the data?

_____

_____

_____

_____

Note: It is advisable to keep directly identifying personal details separated from the rest of the data. Personal details are then replaced by a key/ code. Only the code is part of the database with data and the list of respondents/research subjects is kept separate.

PART VI: SIGNATURE

Please note that it is your responsibility to follow the ethical guidelines in the conduct of your study. This includes providing information to participants about the study and ensuring confidentiality in storage and use of personal data. Treat participants respectfully, be on time at appointments, call participants when they have signed up for your study and fulfil promises made to participants.

Furthermore, it is your responsibility that data are authentic, of high quality and properly stored. The principle is always that the supervisor (or strictly speaking the Erasmus University Rotterdam) remains owner of the data, and that the student should therefore hand over all data to the supervisor.

Hereby I declare that the study will be conducted in accordance with the ethical guidelines of the Department of Public Administration and Sociology at Erasmus University Rotterdam. I have answered the questions truthfully.

Name student: Sven Bouwmeester Name (EUR) supervisor: Tom Emery

Date: March 20th 2022 Date: March 20th 2022

APPENDIX I: Informed Consent Form (if applicable)