Understanding Belief in Conspiracy Theories: Investigating the Role of Trust and Well-Being

Hannah Tangemann (s2673347)

Department of Behavioural, Management and Social Sciences (BMS)

Bachelor Thesis – Positive Clinical Psychology and Technology

University of Twente

Supervisor: Prof. dr. Menno de Jong

Second Supervisor: Dr. Annemarie Braakman – Jansen

July 02, 2024

Word count: 7340

Purpose: The prominence of conspiracy theories has increased in the last few years, leading to the polarisation of sociopolitical debates and the radicalisation of attitudes. Therefore, it is important to deepen the understanding of the psychology underlying belief in conspiracy theories. In this study, the following research questions are investigated: *How do distinct kinds of trust (epistemic, institutional, and interpersonal) and forms of well-being (psychological and social) influence the extent to which people believe in conspiracy theories? Additionally, does well-being act as a mediator in the relationship between trust and belief in conspiracy theories?*

Method: The sample (N = 167) consisted of German speaking participants that were recruited through the online networks Instagram and Facebook. Hypotheses were tested with linear regression analyses and a mediation analysis.

Results: The analyses showed that institutional trust negatively predicts belief in conspiracy theories ($p < .001$). There were no significant relationships between the other predictor variables (epistemic and interpersonal trust as well as psychological and social well-being) and belief in conspiracy theories, nor any mediating effect of well-being. Epistemic trust positively affected psychological well-being ($p < .05$), and interpersonal trust positively affected social well-being ($p < .001$). Contrary to predictions, interpersonal trust was negatively related to psychological well-being ($p < .05$).

Conclusion: In summary, this research confirms that institutional trust predicts belief in conspiracy theories. It also calls into question prior findings as no other relationships regarding belief in conspiracy theories could be confirmed. The established links between different trust variables and different well-being variables offer a nuanced understanding of the dynamics between trust and well-being. This provides opportunities for the mental health field of practice to foster epistemic and interpersonal trust in their approaches to improving well-being.

Table of Contents

1. Introduction

The prominence of conspiracy theories in global sociopolitical discourse has intensified in the last few years, characterised by the spread of misinformation and the polarisation of sociopolitical debates. At the same time, the effort of research to investigate the psychological mechanisms and constructs that explain why people believe in conspiracy theories has increased (Van Prooijen & Douglas, 2018). By understanding the psychology underlying beliefs in conspiracy theories, researchers aim to develop various strategies to help curb the spread of conspiracy theories and at the same time reduce their negative impact on society (Grodzicka & Harambam, 2021).

In short, conspiracy theories are defined as "beliefs about a group of actors who join together in secret agreement and try to achieve a hidden goal that is perceived as unlawful or malevolent" (Zonis & Joseph, 1994, p. 448). Following the key properties of conspiracy theories, Douglas et al. (2023) further identified a comprehensive framework of logically inferred properties to characterise conspiracy theories based on five factors:

a) Conspiracy theories are oppositional, which means that they go against perceptions and understandings of events that are accepted by the general population
b) Conspiracy theories describe ill-willed or malicious acts
c) Conspiracy theories attribute action and power to persons or groups rather than systems or bureaucratic forces
d) Conspiracy theories pose an epistemic risk, which means that although individual conspiracy theories are not necessarily implausible, taken as a collective, they are more prone to be false compared to other types of beliefs

e) Conspiracy theories are socially constructed, meaning they are not only adopted by persons but also spread with social objectives, having the potential to represent reality and create new social realities

One problem is that believing in alternative explanations such as conspiracy theories can have tremendous effects for individuals and society, not only when it comes to accepting established facts but also when it comes to behaving accordingly, for example adhering to policies (Douglas & Sutton, 2015). Research investigating conspiracy theories suggests that their impact is mostly negative (Douglas et al., 2017). Douglas and Sutton (2023) have found that on the one hand, belief in conspiracy theories may discourage people from engaging in political processes, for example, voting, while on the other hand, it drives radicalised attitudes and behaviours such as engagement in violent acts to show disagreement with politics, as can be seen, for example, in protests.

At the end of 2021, the German "Konrad-Adenauer-Foundation" conducted a two-part study on conspiracy theories in Germany. The first part of the study aimed to gain knowledge about the prevalence of extremism-related attitudes among the German population. In this part of the study, 5511 random participants were interviewed by telephone. The first part of the study concluded that 31% of the representative sample generally believes it is likely or certain that secret powers control the world (Neu, 2023). Furthermore, the second part of the study comprised 90 individual interviews with selected people from the first sample who were willing to be interviewed. The aim was to gain insights into the causes and arguments behind extreme positions. Factors that were identified by the qualitative study as potentially associated with belief in conspiracy theories and advised to be further investigated were related to well-being (e.g. social isolation) and related to trust (e.g. trust in the media) (Neu, 2023). Therefore, this

research was conducted to further investigate whether well-being and trust variables are related to the degree to which people believe in conspiracy theories.

1.1 Research Question

This thesis will investigate the following research questions: *How do distinct kinds of trust (epistemic, institutional, and interpersonal) and forms of well-being (psychological and social) influence the extent to which people believe in conspiracy theories? Additionally, does well-being act as a mediator in the relationship between trust and belief in conspiracy theories?*

2. Theoretical Framework

2.1 Belief in Conspiracy Theories

Belief in conspiracy theories can be explained as "the unnecessary assumption of conspiracy when other explanations are more probable" (Aaronovitch, 2009, p. 5). Several demographic factors are related to belief in conspiracy theories. Examples of those are being male, having a low education level or having a low income (Uscinski & Parent 2014). Other research, for example by Goreis and Voracek (2019) has concentrated on linking beliefs in conspiracy theories to personality traits. They suggest that belief in conspiracy theories is linked to higher openness. This means that individuals who have for example a high degree of curiosity are more prone to accept alternative explanations for societal phenomena such as conspiracy theories. Swami and colleagues (2009) link agreeableness, another personality trait, negatively with belief in conspiracy theories. This suggests that low agreeableness which for example manifests in suspicion towards people makes individuals prone to engage in conspiracy thinking. However, Goreis and Voracek (2019) also state that the link between personality traits and belief in conspiracy theories remains insufficient and unclear. To thoroughly investigate the

psychology underlying beliefs in conspiracy theories, they advise future research to also consider other factors than personality traits.

Such other factors could be psychological motivations. There seems to be an underlying psychology that drives the subjective belief in contextually different theories (Van Prooijen & Douglas, 2018). Based on this insight, there has been a lot of effort to investigate possible predictors of believing in conspiracy theories. Douglas et al. (2017) have come up with a comprehensive model of three levels of psychological motivations that seem to drive belief in conspiracy theories:

1. Motives that are epistemic (e.g. desire to achieve a rich understanding of an event)
2. Motives that are existential (e.g. desire to have control over own experience)
3. Motives that are social (e.g. desire for others to maintain a positive attitude about oneself)

The psychological construct well-being falls within the second and third level of Douglas' psychological model of conspiracy ideation (existential level and social level) (Douglas et al. 2017). Research by Neu (2023) recommends further investigation of well-being in relation to belief in conspiracy theories.

According to Bowes et al. (2023), the psychological construct of trust falls within the third level of Douglas' psychological model of conspiracy ideation (social level). Only in recent years has there been an effort made to investigate trust and a lack of trust as variables predicting belief in conspiracy theories which suggests that further research is needed to fully understand the relationship between trust and belief in conspiracy theories (Pilch et al., 2023).

2.2 Trust

Epistemic trust refers to "trust in communicated knowledge" (Campbell et al., 2021, p. 1), meaning it describes the extent to which an individual will accept new input and conventional

knowledge from others as true and relevant (Schröder-Pfeifer et al., 2018; Pierre, 2020). Pierre (2020) argues that epistemic mistrust manifests itself in rejecting information perceived as authoritarian, such as governmental statements or press releases. Due to this rejection, the individuals are finding themselves in an "epistemic vacuum that can send individuals down the rabbit hole in search of alternative explanations" (p. 624), making them susceptible for misinformation. Research suggests a significant positive relationship between the construct of conspiracy mentality and epistemic trust (Brauner et al., 2023; Pierre, 2020). That means that individuals who have less trust in information that is communicated to them, are more susceptible to misinformation and more likely to seek out alternative explanations for phenomena or events such as conspiracy theories.

Therefore, the following hypothesis was proposed:

H1: Epistemic trust significantly negatively relates to belief in conspiracy theories.

Institutional trust is identified as the degree to which persons see and accept an institution's reliability, good willingness, and competence (Yang, 2006; Spadaro et al., 2020). Governmental trust is a form of institutional trust and is argued by Richey (2017) to reduce conspiracy beliefs in individuals. Survey data from Italy further indicate that low levels of institutional and interpersonal trust are predictive of high levels of belief in conspiracy theories (Mancosu et al., 2021). Similar findings were made by Einstein and Glick (2014) who stated that low institutional trust correlated with high degrees of conspiracy thinking. That means the more one exhibits confidence for example in governmental institutions or the political system itself, the less likely individuals engage in conspiratorial thinking. Therefore, the following hypothesis was proposed:

H2: Institutional trust significantly negatively relates to belief in conspiracy theories.

Interpersonal trust relates to the level of trust that one has in other individuals during their daily lives. This concept is associated with the construct of social capital, which refers to the degree to which an individual is included in interpersonal social network activities, has contact with their community and the degree to which they trust people in their community (Hooghe & Stolle, 2003). High interpersonal trust is found to be associated with low levels of conspiracism, which means that the degree of trust that an individual has in their social environment influences the degree to which that individual engages in conspiracy thinking (Mancosu et al., 2021). Therefore, the following hypothesis was proposed:

H3: Interpersonal trust significantly negatively relates to belief in conspiracy theories.

2.3 Well-Being

According to Keyes (1998), the traditional psychological operationalization of well-being defines it as a subjective evaluation of life via satisfaction and affect. Davis (2024) suggests that well-being encompasses multiple key components such as physical well-being, emotional well-being, more specifically psychological well-being, and social well-being. In this thesis, it is concentrated on psychological and social well-being.

Psychological well-being encompasses feeling good (being satisfied with one's life) and functioning effectively (e.g. developing one's character and having a purpose in life) (Huppert, 2009). Life satisfaction is a key component of psychological well-being and argued by Goreis and Voracek (2019) to make individuals less prone to believe in conspiracy theories. This means that low psychological well-being might predict high levels of conspiracy belief. Researchers have argued that conspiracism might act as an easy explanation for distressing events which means that engaging in conspiracism regulates emotional stress and therefore psychological well-being (Swami et al., 2016). If an individual's psychological well-being is threatened (e.g.

through a pandemic) this makes them prone to believing in conspiracy theories (Freeman et al., 2020). Therefore, the following hypothesis was proposed:

H4: Psychological well-being significantly negatively relates to belief in conspiracy theories.

Social well-being is the perception and evaluation of one`s functioning and role in the social world (Keyes, 1998). Freeman et al. (2020) argued that there is a link between an individual's perception of their social status and engagement in conspiracy theories. They propose that if a person perceives their social status as rather low, they are more likely to believe in conspiracy theories. Past research has identified that one's social identity is connected to the degree to which an individual engages in conspiracy beliefs. Social identity is an individual's tendency to associate themselves with certain groups and it can motivate them to believe in conspiracy theories to maintain a positive social identity. As social well-being is defined as an individual's evaluation of their social identity (Robertson et al., 2022) the following hypothesis was proposed:

H5: Social well-being significantly negatively relates to belief in conspiracy theories.

2.4 The Relationship Between Trust and Well-Being

Although some research indicates that well-being positively predicts trust (Ostic et al., 2021), there is a lot more research that suggests that trust positively predicts well-being: high trust is a key indicator for positive development that manifests in high levels of reported well-being (Poulin & Haase, 2015). In their study, Olagoke et al. (2020) argue that trust, especially institutional trust, has a positive relationship with mental well-being. This means that the higher the confidence that an individual has in institutions such as the government, the higher is their perceived psychological well-being (Nilsen et al., 2019; Garrett, 2020). A study from Wang et al. (2023) states that within communities, higher trust in each other manifests in higher well-being of

the individual members of the community. Olagoke et al. (2020) call for a deeper investigation of the relationship between distrust in the government and well-being. As there is currently much more research suggesting that trust predicts well-being and therefore well-being acts as a mediator in the relationship between trust and belief in conspiracy theories, the following hypotheses were proposed:

H6 a) and b): Epistemic trust significantly positively relates to a) psychological well-being and b) social well-being.

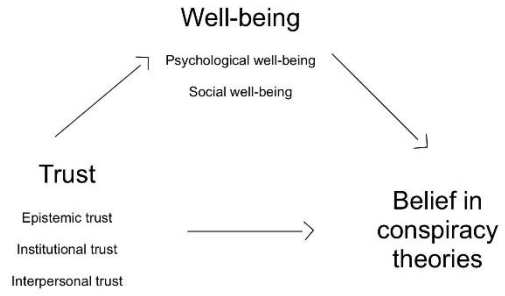
H7 a) and b): Institutional trust significantly positively relates to a) psychological well-being and b) social well-being.

H8 a) and b): Interpersonal trust significantly positively relates to a) psychological well-being and b) social well-being.

H9: Well-being acts as a mediator in the relationship between trust and belief in conspiracy theories.

Figure 1

Visualisation of the Model



3. Method

3.1 Research Design

To investigate the relationship between trust, well-being, and belief in conspiracy theories, a cross-sectional online survey was used. A self-administered online questionnaire using six subscales was used to investigate correlations between the independent variables (epistemic, institutional, and interpersonal trust, as well as psychological and social well-being) and the dependent variable belief in conspiracy theories. Ethical approval for the research design was given by the Ethics Committee of the Faculty of Behavioural Sciences at the University of Twente.

3.2 Participants

The sampling method that was used to recruit the participants was convenience sampling. A link leading the participants to the survey platform was distributed by various means. Most participants were recruited via the social media platforms “Instagram” and “Facebook”. Furthermore, “SONA” the test subject pool system of the University of Twente was used to gather participants. Finally, participants were asked to share the link with other people in their social network. Individuals could only participate if they were of 18 years or older and if they had a proficient mastery of German**.**

In total, 167 individuals participated in the study. After removing 17 participants due to missing values or withdrawal from the study, the final sample consisted of 150 individuals. The sample consisted of 52 male participants (35%) and 99 female participants (65%). The participants had a mean age of 43 (M = 43.1, SD = 6.8). 146 of the participants were German and 4 were Dutch, although Dutch individuals were not aimed for in the recruitment process.

Table 1 provides an overview of the highest educational status that was obtained by the participants.

In the sample, there is an underrepresentation of males (35%) compared to the general population. It can also be said that, compared to the general population, with a total of 38%, there was an overrepresentation of highly educated individuals (bachelor's and master's degree or PhD) (Freitag, 2021).

Table 1

The Highest Educational Status Obtained by the Participants

	Number of participants	Percentage
Secondary school leaving certificate (9 years of school)	1	1%
Secondary school diploma (10 years of school)	4	3%
High school diploma (12 years of school)	47	32%
Vocational training	40	26%
Bachelor's degree	10	7%
Master's degree	39	26%
PhD	7	5%

3.3 Measures

The full list of items can be found in Appendix A. All scales were measured with a 5-point Likert scale. For all independent variables (epistemic, institutional, and interpersonal trust as well as psychological and social well-being) the participants had to indicate their agreement with the statements on a scale ranging from *strongly disagree* to *strongly agree.* For the

dependent variable belief in conspiracy theories, the participants had to indicate their agreement with the statements on a scale ranging from *definitely not true* to *definitely true.*

3.3.1 Epistemic Trust

Epistemic trust was defined as the degree to which individuals trust knowledge that is communicated to them (Campbell et al., 2021). Following this definition, in total, 7 items from two different scales were used to construct a scale that fully covered the definition. These two scales are the Epistemic Trust, Mistrust and Credulity Questionnaire (Campbell et al., 2021) and the Questionnaire of Epistemic Trust (Knapen et al., 2023). Four items were chosen, for example: “When I speak to different people, I find myself easily persuaded by what they say even if this is different from what I believed before”. Furthermore, three items such as “I feel open to accepting information from others” from the Questionnaire of Epistemic Trust were included in this survey.

3.3.2 Institutional Trust

Institutional trust was defined as the degree to which persons see and accept an institution's reliability, good willingness, and competence (Yang, 2006; Spadaro et al., 2020). Following this definition, the concept was partly measured using items from the Trust in Government measure (Burns et al., 2023). However, this scale did not cover the full construct, taking into account institutions other than the federal government, which is why additional items were self-constructed. Not all items from the Trust in Government scale were used, to reduce the number of questions asked of the participants. Four items with similar content such as “the federal government is genuinely interested in the wellbeing of its citizens”. Additionally, six items were self-constructed and asked similar questions but in the context of mainstream media

and scientists instead of the federal government. An example of a self-constructed item is “the federal government acts in the best interest of citizens”. Eventually, ten items were used in total.

3.3.3 Interpersonal Trust

Interpersonal trust was defined as an individual's confidence in that people they consider to be close to them are good-willed, meaning that they have good intentions (Hooghe & Stolle, 2003). Following this definition, interpersonal trust was measured with five items from the Specific Interpersonal Trust Scale (Johnson-George & Swap, 1982). Not all items were used to reduce the number of questions asked to of participants. Five items were chosen from the scale based on their content, to avoid overlap with the other trust constructs. An example of an item is “Someone who is close to me would never intentionally misrepresent my point of view to others”.

3.3.4 Psychological Well-Being

Psychological well-being was defined as a construct that focuses on someone’s emotional and mental state, including concepts such as happiness, life satisfaction, and having a sense or a purpose in life (Huppert, 2009; Ryff et al., 1995). Following this definition, psychological well-being was assessed with items from the Psychological Well-being Scale (Garcia et al., 2023). From the scale, six items, such as “For me, life has been a continuous process of learning, changing, and growth” were chosen to reduce the number of questions.

3.3.5 Social Well-Being

Social well-being was defined as the perception and evaluation of one`s functioning and role in the social world (Keyes, 1998). Following this definition, social well-being was measured using items from the Social Well-Being scale by Keyes (1998). Seven items that supposedly measure the perception and evaluation of one`s functioning and role in the social world were

chosen from the original scale to reduce the number of questions. An example item is “I feel like I am an important part of my community”.

3.3.6 Belief in Conspiracy Theories

Belief in conspiracy theories was defined as “the unnecessary assumption of conspiracy when other explanations are more probable” (Aaronovitch, 2009, p. 5). As there are an infinite number of conspiracy theories available today, it is difficult to choose specific theories that represent the overall tendency to believe in conspiracy theories (Wood et al., 2012; Brotherton et al., 2013). Therefore, this research operationalizes belief in conspiracy theory in a non-event-based way, including conspiracy theories that are not linked to specific events such as 9/11 or the assassination of former US president John F. Kennedy but rather general attitudes towards alternative explanations (Brotherton et al., 2013). Following this definition, belief in conspiracy theories was assessed using items of the Generic Conspiracist Beliefs scale (Brotherton et al., 2013). To reduce the number of items, ten statements from the original scale were picked based on their content. An example item is: “A lot of important information is deliberately concealed from the public out of self-interest”.

3.4 Scale Construction

To investigate the construct validity of the scales, a principal component analysis was performed where all items of the six scales were put into one principal component analysis. A varimax rotation was applied because it was assumed that the factors were independent from each other. Before testing the principal components, a Kaiser-Meyer-Olkin (KMO) test was performed on all scales to see if the data was an appropriate fit for principal component analysis. The KMO value was 0.58 which indicates that the use of principal component analysis is supported.

In the first principal component analysis, Item 1 from the psychological well-being scale had to be removed because it did not load on the same factor as the other items from that scale. After the item was removed, the principal component analysis was performed again. The results can be seen in Table 3. Here, only loadings above 0.4 were included. The six presumed factors could be verified, and the items were checked for loading differences. To ensure that the items did not correlate similarly high on two factors, only loading differences between factors higher than 0.2 were seen as sufficient. The eigenvalues indicated that about 52% of the variance in the data can be explained by the factors (Table 3) which is acceptable. The results were satisfactory since the presumed factors could be verified which indicates that the constructs are independent from each other, and the percentage of variance explained by the factors was acceptable.

Table 3

Rotated Factor Loadings and Eigenvalues of the Principal Component Analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Epistemic trust						
Q3	0.575					
Q7	0.572					
Q2	0.561					
Q5	0.510					
Q4	0.425					
Institutional trust						
Q1		0.804				
Q5		0.757				
Q7		0.754				

Q10	0.752			
Q3	0.706			
Q8	0.705			
Q6	0.703			
Q2	0.663			
Q4	0.649			
Q9	0.643			
Interpersonal trust				
Q2		0.683		
Q4		0.682		
Q3		0.573		
Q1		0.498		
Psychological well-being				
Q5			0.622	
Q3			0.556	
Q2			0.448	
Social well-being				
Q1				0.839
Q5				0.741
Q4				0.724
Q3				0.671
Q6				0.634
Q2				0.622

Q7					0.579	
Belief in conspiracy theories						
Q6						0.834
Q1						0.801
Q2						0.773
Q4						0.772
Q5						0.764
Q3						0.753
Q8						0.728
Q7						0.599
Eigenvalue	1.91	2.71	1.97	1.93	7.75	4.98
% of variance explained	4.6%	6.6%	4.8%	4.7%	18.9%	12.2%

Note. Factor loadings below 0.4 were not included.

To test the reliability of the scales, Cronbach's alphas were computed. Table 5 shows the Cronbach's alphas for all scales as well as the final number of items that were used. Institutional trust, social well-being, and belief in conspiracy theories had a good Cronbach's alpha (α higher than .80) while epistemic trust and psychological well-being had a marginally sufficient Cronbach's alpha (α higher than .60). Interpersonal trust at first had an insufficient Cronbach's alpha (α = .51). After dropping Item 1 from the interpersonal trust scale, the Cronbach's alpha was increased to α = .59. Finally, it was decided to keep the scale minus the first item. For epistemic and interpersonal trust, two items had to be removed; for psychological well-being, one item was removed.

Table 5

Cronbach's Alphas and Number of Items for all Scales

	α	Final Number of Items	Items Deleted
Epistemic trust	.65	5	2
Institutional trust	.89	10	0
Interpersonal trust	.59	3	2
Psychological well-being	.60	3	3
Social well-being	.83	7	0
Belief in conspiracy theories	.88	8	0

Note. α= Cronbach's alpha.

3.5 Procedure

After reaching the questionnaire through an online link, the participants were provided with information about the study, its aim, and the instructions. After this information, they were asked to indicate their consent to participation by checking a box. To prevent any order effects from the order of the scales, the online system guided each participant randomly through each of the six scales. After filling in the scales, the participants were asked to fill in demographic questions about their age, gender, nationality, and educational background. Before filling out the questionnaire, the participants were not aware of the study's specific aim to measure belief in conspiracy theories to avoid the stigma associated with the term from influencing the participant's answers.

Consequently, they received a debriefing after filling out the questionnaire to inform them about the missing information. This debrief included the original aim that they were informed about in the beginning: ("This study aims to investigate how psychological factors

contribute to our understanding of society. I try to analyse how well-being and trust variables are related to individual views on societal developments."). After that, the real goal of the study was revealed to the participants: ("In reality, I wanted to investigate how levels of well-being and confidence might be related to belief in alternative explanations for social developments."). The participants were given the opportunity to withdraw their participation after receiving the debrief. In the end, they were thanked for their participation.

3.6 Data Analysis

The data were analysed using version 4.4.1 of the statistical software program "R". Descriptive statistics, such as means, and standard deviations of the scales were first computed. After that, statistical assumptions were tested to see if the data was a good fit for linear regression analysis. Linearity, normality, and homoscedasticity of the residuals were tested using scatter plots. Independence of the residuals were tested using a Durbin-Watson test, the results of the assumptions testing can be found in Appendix B. Pearson correlation coefficients were calculated to examine the strengths of the relationships between the variables. To test hypotheses 1 to 5, namely, to test for relationships between the trust as well as well-being variables and belief in conspiracy theories, a multiple linear regression model was fitted. Furthermore, to test hypotheses 6 to 8, that assume relationships between the trust variables and the well-being variables, three separate linear regression models (one for each trust variable including psychological and social well-being as independent variables) were fitted. Hypothesis 9 assumed that well-being acts as a mediator in the relationship between trust and belief in conspiracy theories. To test for the mediation effect, it was a prerequisite that a) hypotheses 1 to 3 were confirmed (trust influences belief in conspiracy theories) and b) hypotheses 6 to 8 were confirmed (trust influences well-being). Only if this was fulfilled, there was ground for

mediation analysis to be done by using a Sobel test. The Sobel test indicates if the indirect effect of the independent variable (well-being) on the dependent variable (belief in conspiracy theories) can (partly) be explained through the mediating variable (trust).

4. Results

4.1 Descriptive Statistics

Descriptive statistics are provided in Table 6, where mean scores, standard deviations, and confidence intervals of all the scales can be found. The level of epistemic trust that was exhibited by the participants was rather high and the responses were closely clustered around the mean score. This means that the trust the participants have in the information that is communicated to them is consistently high throughout the sample. Institutional trust showed a high variation clustered around a moderately high mean. The level of trust in institutions varies greatly from participant to participant. The participants indicated a high level of interpersonal trust with moderate variability. This suggests that the participants generally view their personal connections as positive and trustful. Similarly, social well-being was rated highly by the participants. This could mean that their satisfaction with their role in society and their immediate environment is high. It was indicated that the level of psychological well-being was rather low throughout the sample, with moderate variability in the scores. This suggests that satisfaction with one's life was rated as rather low throughout the sample. The mean score of belief in conspiracy theories was rather low with a high variability. It seems that the participants in general were not very susceptible to believing in the alternative explanations of societal phenomena presented to them.

Table 6

Mean Scores, Standard Deviations, and Confidence Intervals for all Scales

Scale	M	SD	95% CI lower	95% CI upper
Epistemic trust	3.25	0.43	3.18	3.32
Institutional trust	2.78	0.77	2.66	2.91
Interpersonal trust	3.85	0.66	3.74	3.95
Psychological well-being	1.99	0.58	1.90	2.09
Social well-being	4.06	0.65	3.96	4.17
Belief in conspiracy theories	2.30	0.82	2.16	2.43

Note. All scales were measured on a 5-point Likert scale, meaning 1 represents *strongly disagree* and 5 *strongly agree*. M = mean, SD = standard deviation, CI = confidence interval.

4.2 Correlation Analysis

Pearson correlation coefficients were computed to explore if there were relationships between the different scales and the dependent variable belief in conspiracy theories (Table 7). The results show multiple significant correlations. Concentrating on the associations with belief in conspiracy theories, it stands out that institutional trust has a moderate negative correlation to belief in conspiracy theories. Between psychological well-being and belief in conspiracy theories, there is a weak positive correlation. Another thing that stands out is that psychological well-being is negatively correlated with all other independent variables. This is questionable since it contradicts logical assumptions. This means that it is somewhat questionable that higher psychological well-being is associated, for example, with lower social well-being.

Table 7

Pearson Correlation Coefficients between all Scales

Scale	1	2	3	4	5	6
1. Epistemic trust						
2. Institutional trust	.02					
3. Interpersonal trust	.14	.06				
4. Psychological well-being	-.17*	-.07*	-.29**			
5. Social well-being	.23**	.05	.31**	-.42**		
6. Belief in conspiracy theories	-.08	-.55**	-.08	.11**	.01	

Note. *$p < .05$. **$p < .01$.

4.3 Linear Regression Analysis

4.3.1 Relationship of the Predictor Variables and Belief in Conspiracy Theories

To test hypotheses 1 to 5, namely if there is a relationship between the predictor variables and the dependent variable belief in conspiracy theories, multiple linear regression was performed. The results indicate that in line with expectations, institutional trust has a highly significant negative relationship with belief in conspiracy theories, therefore, hypothesis 2 '*Institutional trust significantly negatively relates to belief in conspiracy theory'* is accepted. Epistemic and interpersonal trust show a slightly negative but insignificant relationship with belief in conspiracy theories. Therefore, hypotheses 1 '*Epistemic trust significantly negatively relates to belief in conspiracy theory'* and 3 '*Interpersonal trust significantly negatively relates to belief in conspiracy theory'* are rejected. Against the predictions, psychological and social well-being have an insignificant positive relationship to belief in conspiracy theories. Therefore, hypotheses 4 '*Psychological well-being significantly negatively relates to belief in conspiracy*

theory' and 5 '*Social well-being significantly negatively relates to belief in conspiracy theory'* are rejected. The adjusted R-squared shows that about 30% of the variance in the dependent variable is explained by the model. Furthermore, the overall model is significant ($p < .001$).

Table 8

Effects of the Trust and Well-Being Variables on Belief in Conspiracy Theories

Scale	Estimate	SE	t-value	*p*-value
(Intercept)	3.824	0.732	5.223	< .001
Epistemic trust	-0.155	0.135	-1.153	0.251
Institutional trust	-0.581	0.073	-7.998	<.001
Interpersonal trust	-0.053	0.091	-0.586	0.559
Psychological well-being	0.127	0.109	1.166	0.245
Social well-being	0.135	0.099	1.363	0.175

Note. Adjusted R-squared: 0.302, F (5, 144) = 13.89, $p < .001$.

4.3.2 Trust and Psychological Well-Being

To test the relationship between the three trust variables and psychological well-being, a linear regression model was fitted (Table 9). It is indicated that higher levels of epistemic trust are associated with higher levels of psychological well-being. This relationship is significant; therefore, hypothesis 6a) '*Epistemic trust significantly positively relates to psychological well-being*' can be accepted. Institutional trust has, contrary to expectations, a slightly negative relationship with psychological well-being. However, this relationship is not significant. Therefore, hypothesis 7a) '*Institutional trust significantly positively relates to psychological well-being*' is rejected. Higher levels of interpersonal trust are related to lower levels of psychological well-being. This relationship is significant but contrary to expectations; therefore,

hypothesis 8a) '*Interpersonal trust significantly positively relates to psychological well-being*' is rejected. The overall model is significant, and the three trust variables explain about 9% of the variance in psychological well-being.

Table 9

Effects of the trust variables on psychological well-being.

Scale	Estimate	SE	t-value	*p*-value
(Intercept)	3.149	0.522	6.037	< .001
Epistemic trust	0.197	0.084	2.339	< .05
Institutional trust	-0.048	0.093	-0.518	.605
Interpersonal trust	-0.309	0.101	-3.079	< .05

Note. Adjusted R-squared: 0.089, F (3, 144) = 5.887, $p < .001$.

4.3.3 Trust and Social Well-Being

To test the relationship between the three trust variables and social well-being, a linear regression model was fitted (Table 10). Higher levels of epistemic trust are associated with slightly higher levels of social well-being. However, this relationship is not significant; therefore, hypothesis 6b) '*Epistemic trust significantly positively relates to social well-being*' is rejected. It is indicated that institutional trust has a slightly positive relationship with social well-being. However, this relationship is not significant. Therefore, hypothesis 7b) '*Institutional trust significantly positively relates to social well-being*' is rejected. Interpersonal trust is positively associated with social well-being which means that higher levels of interpersonal trust are related to higher levels of social well-being. This relationship is highly significant. Therefore, hypothesis 8b) '*Interpersonal trust significantly positively relates to social well-being*' is

accepted. The overall model is significant and the three trust variables explain about 7% of the variance in social well-being.

Table 10

Effects of the trust variables on social well-being.

Scale	Estimate	SE	t-value	*p*-value
(Intercept)	2.935	0.376	7.808	< .001
Epistemic trust	0.008	0.061	0.138	.89
Institutional trust	0.019	0.066	0.295	.768
Interpersonal trust	0.269	0.072	3.733	< .001

Note. Adjusted R-squared: 0.072, F (3, 146) = 4.829, $p < .01$.

4.4 Mediation Analysis

Lastly, hypothesis 9 needed to be tested: *Well-being acts as a mediator in the relationship between trust and belief in conspiracy theories.* Before performing the mediation analysis, it was a prerequisite that a) hypotheses 1 to 3 were confirmed (trust influences belief in conspiracy theories) and b) hypotheses 6 to 8 were confirmed (trust influences well-being). However, only hypotheses 2, 6a) and 8b) could be confirmed. As the prerequisite could not be fulfilled, there was no ground to assume that well-being acts as a mediator and performing a Sobel test was redundant.

5. Discussion

5.1 Main Findings

Overall, the proposed research model could not be fully confirmed. Regarding the research question it can be said that institutional trust was found to have a negative effect on the degree to which an individual believes in conspiracy theories. Next to that, epistemic and

interpersonal trust as well as distinct forms of well-being were, in the present study, not found to have any influence on the extent to which individuals believe in conspiracy theories. As there was no relationship between well-being and belief in conspiracy theories, there was no possible mediating effect of trust on that relationship.

Based on the reviewed literature and the results that were found during this research, there are several conclusions and implications that can be drawn here. Previous research has associated institutional trust with belief in conspiracy theories meaning that the more an individual sees institutions as good willing and trusts them, the less likely they are to believe in conspiracy theories (Einstein & Glick, 2014). Based on these results it was hypothesized that there would be a significant negative relationship between institutional trust and belief in conspiracy theories (H2). This could be confirmed by the regression analysis, which indicated a moderate influence of institutional trust ($p < .001$). This suggests that a low level of trust that is laid on institutions would predict a high level of belief in conspiracy theories which is in line with previous research. This means that due to the replication of previous findings, the reliability of those is increased, especially since the previous study is from 2014 which means the results are still relevant even though they are ten years old.

Prior research has linked epistemic and interpersonal trust with belief in conspiracy theories, meaning that the more an individual trusts communicated information and their immediate environment, the less they are prone to believe in conspiracy theories (Mancosu et al., 2021; Pierre, 2020). Based on this research findings it was hypothesized that a significant negative relationship between epistemic and interpersonal trust with belief in conspiracy theories could be found in the present research (H1 and H3). Both hypotheses were rejected because the regression analysis showed no significant relationship. This means that the present findings

suggest that the level of trust in communicated information and one's immediate environment has no influence on the degree to which an individual believes in conspiracy theories. These results stand in contrast to prior research findings. This difference could for example stem from contextual factors. The studies from Mancosu et al. (2021) and Pierre (2020) collected their data during the peak of the COVID-19 pandemic, which is an exceptional situation that might led to the participants responding differently than they do now.

Past research indicated that being satisfied with one's life, which is a key component of psychological well-being, makes individuals less likely to believe in conspiracy theories (Goreis & Voracek, 2019). Similar results have been found for social well-being, with scholars drawing a link between perception of social status and social capital and belief in conspiracy theories (Freeman et al., 2020). Based on these findings, the hypotheses predicted a significant relationship between psychological as well as social well-being and belief in conspiracy theories however they were also rejected. The analyses could not confirm any relationship between well-being and belief in conspiracy theories which contradicts the earlier research findings. These differences could stem from sample differences, for example Freeman et al. 2020 only included British participants which potentially answered differently than the German participants in the present study.

The relationship between trust and well-being was investigated. It was found here that higher amounts of trust in people that are in one's immediate environment (interpersonal trust) predicted higher satisfaction with one's perceived role in society (social well-being) ($p < .001$). This was in line with the proposed hypothesis. On the other hand, trust in one's immediate environment was also related to lower satisfaction with one's life (psychological well-being) ($p < .05$) which was against the predictions that were based on earlier research (Delhey et al., 2011).

This result stands out and should be considered with caution. Lastly, a higher amount of trust in information that is communicated (epistemic trust) predicted higher satisfaction with one's life ($p < .05$). This was in line with the expectations that were based on the literature (Delhey et al., 2011).

5.2 Limitations

There are several limitations that limit the applicability and generalizability of the results. A first limitation is the low mean score of the dependent variable belief in conspiracy theories. As the mean score of belief is low, there is a chance of sampling bias, meaning that the sample might not represent the target population (people who believe in conspiracy theories) well enough to draw conclusions about them. It seems like the general susceptibility of the participants to believe in alternative explanations for societal phenomena was rather low, which makes it difficult to confirm the hypothesised relationships between the variables. This decreases the robustness of the findings, and the results should therefore be taken with caution.

A second limitation is the representativeness of the sample. Research showed that being male is a significant predictor of believing in conspiracy theories (Uscinski & Parent 2014). However, about 65% of the participants were female. This means that there is an overrepresentation of females in the research sample in comparison to the general population which poses a threat to the generalizability of the results (Eurostat, 2023). Another problem is the overrepresentation of people with a high education level. In past research, having a low level of education was proven to be a significant predictor of belief in conspiracy theories (Uscinski & Parent 2014). However, about 38% of the research sample were highly educated individuals (bachelor's and master's degree or PhD), this is much higher than in the general population (Freitag, 2021). This also means that the generalizability of the results is limited. If more male

individuals with less education were included, it is expected that the prevalence of belief in conspiracy theories would be higher and therefore the possibility of a sampling bias undermining the results of the study would be out ruled.

A third limitation is the validity of the scales. Three scales, epistemic trust, interpersonal trust, and psychological well-being showed only a marginally sufficient Cronbach's alpha between .59 and .65. This means the results found are limited in their reliability. A marginally sufficient Cronbach's alpha also has consequences for the power of the statistical tests. This means that the probability of finding false positives (Type I error) or false negatives (Type II error) is increased (Heo et al., 2015). Overall, confidence in the results is limited due to Cronbach's alpha scores.

5.3 Theoretical Contribution

First, it was confirmed that institutional trust significantly predicts belief in conspiracy theories which is a replication of prior findings. This increases the reliability of these past findings. The established links between different trust variables and different well-being variables offer a more nuanced understanding of the dynamics between trust and well-being.

However, many of the findings of the present study stand in contrast to the findings of previous research. The failure to replicate almost all findings suggested by research that link trust and well-being variables significantly to belief in conspiracy theories calls into question the universality of these findings. Inconsistent findings suggest that there are other factors influencing whether and to what extent the relationships between the predictors and belief in conspiracy theories can be observed. Such factors could be related to the context in which belief in conspiracy theories is studied, the methodology of the study, or the characteristics of the sample.

The findings concerning the significant relationships between epistemic trust and psychological well-being, as well as interpersonal trust and the well-being variables, contribute to a more nuanced understanding of the dynamic between trust and well-being. There were no confirmed relationships between institutional trust and the well-being variables, which means that it cannot be concluded that there is a universal effect of trust and well-being. This contrasts with previous research and suggests that the relationship between trust and well-being is more complex than assumed in the beginning.

5.4 Practical Implications

A very important implication that follows from the finding is the need for replication studies. This study challenged several previous findings which calls for methodologically rigorous studies that increase the reliability of results by replicating the findings while considering the limitations of the present study and making an effort to change them in future studies.

5.5 Suggestions for Future Research

Future research should consider the limitations in order to increase the quality of the research and therefore, the robustness of the results. A future study should include a sample with a higher representativeness of the population, including an even percentage of males and females as well as more people with lower educational status. To ensure that possible future studies can effectively analyse the phenomenon of belief in conspiracy theories, the sampling method should prioritize targeting participants who hold such beliefs. This could for example be based on the demographic characteristics that indicate high belief in conspiracy theories such as being male and having a low education. The low mean score of belief in conspiracy theories in the present sample indicates that the prevalence of this belief was not high enough to confirm any significant

effects. Lastly, a future study design is advised to include better validated scales that have higher construct validity and reliability scores such as Cronbach's alpha. This would increase the credibility of the findings.

5.6 Conclusion

This study tried to investigate the role that trust, and well-being play in the extent to which people believe in conspiracy theories. It was found that low institutional trust predicts high belief in conspiracy theories. This means that the less individuals trust institutions such as the government or the media, the more they are prone to believe in alternative explanations, namely conspiracy theories. So, to answer the research question, this study found that particularly institutional trust is relevant in the context of conspiracy theories. Beyond the research question, the findings also suggest that high levels of epistemic trust predict high psychological well-being and high interpersonal trust predicts high social well-being. This provides opportunities for the mental health field of practice to foster epistemic and interpersonal trust in their approaches to improving well-being. Future research needs to consider the limitations regarding the sample and the scales to replicate robust findings.

References

Aaronovitch, D. (2009). *Voodoo histories: The role of the conspiracy theory in shaping modern history*. Random House.

Bowes, S. M., Costello, T. H. & Tasimi, A. (2023). The conspiratorial mind: A meta-analytic review of motivational and personological correlates. *Psychological Bulletin*, *149*(5–6), 259–293. https://doi.org/10.1037/bul0000392

Brauner, F., Fonagy, P., Campbell, C., Griem, J., Storck, T. & Nolte, T. (2023). "Trust me, do not trust anyone": How epistemic mistrust and credulity are associated with conspiracy mentality. *Research in Psychotherapy*, *26*(3). https://doi.org/10.4081/ripppo.2023.705

Brotherton, R., French, C. C. & Pickering, A. D. (2013). Measuring belief in conspiracy theories: The Generic Conspiracist Beliefs scale. *Frontiers in Psychology*, *4*. https://doi.org/10.3389/fpsyg.2013.00279

Burns, K. E., Brown, P., Calnan, M., Ward, P., Little, J., Betini, G. S., Perlman, C. M., Nascimento, H. & Meyer, S. B. (2023). Development and validation of the Trust in Government Measure (TGM). *BMC Public Health*, *23*(1). https://doi.org/10.1186/s12889-023-16974-0

Campbell, C., Tanzer, M., Saunders, R., Booker, T., Allison, E., Li, E., O'Dowda, C., Luyten, P. & Fonagy, P. (2021). Development and validation of a self-report measure of epistemic trust. *PLOS ONE*, *16*(4). https://doi.org/10.1371/journal.pone.0250264

Davis, T. (2024, May 21). What is well-being? Definition, types, and well-being skills. *Psychology Today*. https://www.psychologytoday.com/us/blog/click-here-for-happiness/201901/what-is-well-being-definition-types-and-well-being-skills

Delhey, J., Newton, K. & Welzel, C. (2011). How general is trust in "most people"? Solving the radius of trust problem. *American Sociological Review*, *76*(5), 786–807. https://doi.org/10.1177/0003122411420817

Douglas, K. M. & Sutton, R. M. (2015). Climate change: Why the conspiracy theories are dangerous. *Bulletin of the Atomic Scientists*, *71*(2), 98–106. https://doi.org/10.1177/0096340215571908

Douglas, K. M. & Sutton, R. M. (2023). What are conspiracy theories? A definitional approach to their correlates, consequences, and communication. *Annual Review of Psychology*, *74*(1), 271–298. https://doi.org/10.1146/annurev-psych-032420-031329

Douglas, K. M., Sutton, R. M. & Cichocka, A. (2017). The psychology of conspiracy theories. *Current Directions in Psychological Science*, *26*(6), 538–542. https://doi.org/10.1177/0963721417718261

Edlund, J., & Lindh, A. (2013). Institutional trust and welfare state support: On the role of trust in market institutions. *Journal of Public Policy*, *33*(3), 295–317. https://doi.org/10.1017/s0143814x13000160

Eurostat. (2023). *Demography of Europe – 2023 edition*. https://ec.europa.eu/eurostat/web/interactive-publications/demography-2023

Einstein, K. L. & Glick, D. (2014). Do I think BLS data are BS? The consequences of conspiracy theories. *Political Behavior*, *37*(3), 679–701. https://doi.org/10.1007/s11109-014-9287-z

Freeman, D., Waite, F., Rosebrock, L., Petit, A., Causier, C., East, A., Jenner, L., Teale, A., Carr, L., Mulhall, S., Bold, E. & Lambe, S. (2020). Coronavirus conspiracy beliefs, mistrust, and compliance with government guidelines in England. *Psychological Medicine*, *52*(2), 251–263. https://doi.org/10.1017/s0033291720001890

Freitag, F. B. H. (2021, 23. Juni). *Bildungsniveau der Bevölkerung*. bpb.de. https://www.bpb.de/kurz-knapp/zahlen-und-fakten/datenreport-2021/bildung/329695/bildungsniveau-der-bevoelkerung/

Garcia, D., Kazemitabar, M. & Asgarabad, M. H. (2023). The 18-item Swedish version of Ryff's Psychological Wellbeing scale: Psychometric properties based on classical test theory and item response theory. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1208300

Garrett, L. (2020). COVID-19: The medium is the message. *The Lancet*, *395*(10228), 942–943. https://doi.org/10.1016/s0140-6736(20)30600-0

Goreis, A. & Voracek, M. (2019). A systematic review and meta-analysis of psychological research on conspiracy beliefs: Field characteristics, measurement instruments, and associations with personality traits. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.00205

Grodzicka, E. D. & Harambam, J. (2021). What should academics do about conspiracy theories? Moving beyond debunking to better deal with conspiratorial movements, misinformation and post-truth. *Journal for Cultural Research*, *25*(1), 1–11. https://doi.org/10.1080/14797585.2021.1886420

Hakhverdian, A., & Mayne, Q. (2012). Institutional trust, education, and corruption: A micro-macro interactive approach. *The Journal of Politics*, *74*(3), 739–750. https://doi.org/10.1017/s0022381612000412

Heo, M., Kim, N. & Faith, M. S. (2015). Statistical power as a function of Cronbach alpha of instrument questionnaire items. *BMC Medical Research Methodology*, *15*(1). https://doi.org/10.1186/s12874-015-0070-6

Hooghe, M. & Stolle, D. (2003). *Generating social capital: Civil society and institutions in comparative perspective*. Springer.

Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied Psychology. Health And Well-being*, *1*(2), 137–164. https://doi.org/10.1111/j.1758-0854.2009.01008.x

Johnson-George, C. & Swap, W. C. (1982). Measurement of specific interpersonal trust: Construction and validation of a scale to assess trust in a specific other. *Journal of Personality and Social Psychology*, *43*(6), 1306–1317. https://doi.org/10.1037/0022-3514.43.6.1306

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, *61*(2), 121. https://doi.org/10.2307/2787065

Knapen, S., Swildens, W., Mensink, W., Hoogendoorn, A. W., Hutsebaut, J. & Beekman, A. T. (2023). The development and psychometric evaluation of the Questionnaire Epistemic Trust (QET): A self-report assessment of epistemic trust. *Clinical Psychology and Psychotherapy*, *31*(1). https://doi.org/10.1002/cpp.2930

Mancosu, M., Seddone, A., Bobba, G. & Veddetti, F. (2021). *"In conspiracies we trust": Interpersonal/institutional trust and beliefs in conspiracy theories during the COVID-19 pandemic*. https://italianpoliticalscience.com/index.php/ips/article/view/167/123

Neu, V. (2023). „Das ist alles bewiesen.“. *Monitor Wahl- und Sozialforschung*. https://www.kas.de/documents/252038/22161843/%E2%80%9EDas+ist+alles+bewiesen%E2%80%9C.pdf/c3d0ee5d-874c-b7c0-8273-7a3eeba60169?version=1.0&t=1690905126193

Nilsen, L. G., Thoresen, S., Wentzel-Larsen, T. & Dyb, G. (2019). Trust after terror: Institutional trust among young terror survivors and their parents after the 22nd of July terrorist attack on Utøya Island, Norway. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.02819

Olagoke, A. A., Olagoke, O. O. & Hughes, A. M. (2020). Psychological pathways linking public trust during the coronavirus pandemic to mental and physical well-being. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.570216

Ostic, D., Qalati, S. A., Barbosa, B., Shah, S. M. M., Vela, E. G., Herzallah, A. M. & Liu, F. (2021). Effects of social media use on psychological well-being: A mediated model. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.678766

Pierre, J. M. (2020). Mistrust and misinformation: A two-component, socio-epistemic model of belief in conspiracy theories. *Journal of Social and Political Psychology*, *8*(2), 617–641. https://doi.org/10.5964/jspp.v8i2.1362

Pilch, I., Turska-Kawa, A., Wardawy, P., Olszanecka-Marmola, A. & Smołkowska-Jędo, W. (2023). Contemporary trends in psychological research on conspiracy beliefs. A systematic review. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1075779

Poulin, M. J., & Haase, C. M. (2015). Growing to trust. *Social Psychological and Personality Science*, *6*(6), 614–621. https://doi.org/10.1177/1948550615574301

Richey, S. (2017). A birther and a truther: The influence of the authoritarian personality on conspiracy beliefs. *Politics and Policy*, *45*(3), 465–485. https://doi.org/10.1111/polp.12206

Robertson, C., Van Bavel, J. J., Rathje, S., Harris, E. & Van Bavel, J. J. (2022). How social identity shapes conspiratorial belief. *Current Opinion in Psychology*, *47*, 101423. https://doi.org/10.1016/j.copsyc.2022.101423

Ryff, C. D. & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, *69*(4), 719–727. https://doi.org/10.1037/0022-3514.69.4.719

Schröder-Pfeifer, P., Talia, A., Volkert, J. & Taubner, S. (2018). Developing an assessment of epistemic trust: A research protocol. *Research in Psychotherapy*, *21*(3). https://doi.org/10.4081/ripppo.2018.330

Spadaro, G., Gangl, K., Van Prooijen, J., Van Lange, P. A. M. & Mosso, C. O. (2020). Enhancing feelings of security: How institutional trust promotes interpersonal trust. *PLOS ONE*, *15*(9), e0237934. https://doi.org/10.1371/journal.pone.0237934

Swami, V., Chamorro-Premuzic, T., & Furnham, A. (2009). Unanswered questions: A preliminary investigation of personality and individual difference predictors of 9/11 conspiracist beliefs. *Applied Cognitive Psychology*, *24*(6), 749–761. https://doi.org/10.1002/acp.1583

Swami, V., Furnham, A., Smyth, N., Weis, L., Lay, A. & Clow, A. (2016). Putting the stress on conspiracy theories: Examining associations between psychological stress, anxiety, and belief in conspiracy theories. *Personality and Individual Differences*, *99*, 72–76. https://doi.org/10.1016/j.paid.2016.04.084

Uscinski, J. E., & Parent, J. M. (2014). *American conspiracy theories*. Oxford University Press.

Van Prooijen, J. & Douglas, K. M. (2018). Belief in conspiracy theories: Basic principles of an emerging research domain. *European Journal of Social Psychology*, *48*(7), 897–908. https://doi.org/10.1002/ejsp.2530

Wang, Q., Zhi, K., Yu, B. & Cheng, J. (2023). Social trust and subjective well-being of first-generation college students in China: The multiple mediation effects of self-compassion and social empathy. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1091193

Wood, M., Douglas, K. M. & Sutton, R. M. (2012). Dead and alive. *Social Psychological and Personality Science*, *3*(6), 767–773. https://doi.org/10.1177/1948550611434786

Yang, K. (2006). Trust and citizen involvement decisions. *Administration and Society*, *38*(5), 573–595. https://doi.org/10.1177/0095399706292095

Zonis, M. & Joseph, C. (1994). Conspiracy thinking in the middle east. *Political Psychology*, *15*(3), 443. https://doi.org/10.2307/3791566

Appendix A

Items

Epistemic trust

1. I'd prefer to find things out for myself on the internet rather than asking people for information. (Reverse coded)
2. When I speak to different people, I find myself easily persuaded by what they say even if this is different from what I believed before.
3. People have told me that I am too easily influenced by others
4. I don't usually act on advice that I get from others even when I think it's probably sound.
5. I feel open to accepting information from others.
6. I am generally curious about things other people know about.
7. I have to be cautious to protect myself from misleading information (Reverse coded).

Institutional trust

1. The federal government acts in the best interest of citizens.
2. The federal government does everything they should to protect the population.
3. The federal government is genuinely interested in the wellbeing of its citizens.
4. The federal government delivers on its promises.
5. The work of scientists is created ethically and honest.
6. The work of scientists is open and transparent.
7. The mainstream media is honest.
8. The news coverage in mainstream media is unbiased.
9. The mainstream media acts in the best interest of citizens.
10. Scientists act in the best interest of citizens.

Interpersonal trust

1. If someone who is close to me gave me a compliment I would question if they really meant what was said. (Reverse coded)
2. If someone who is close to me couldn't get together with me as we had planned, I would believe his/her excuse that something important had come up.
3. Someone who is close to me would never intentionally misrepresent my point of view to others.
4. If someone who is close to me knew what kinds of things hurt my feelings, I would never worry that he/she would use them against me, even if our relationship changed.
5. I would be willing to lend someone who is close to me almost any amount of money, because they would pay me back as soon as they could.

Psychological well-being

1. The demands of everyday life often get me down. (Reverse coded)
2. In many ways, I feel disappointed about my achievements in life. (Reverse coded)
3. I like most aspects of my personality.
4. I judge myself by what I think is important, not by what others think.
5. In general, I feel I am in charge of the situation in which I live.
6. I think it is important to have new experiences that challenge how you think about yourself and the world.
7. For me, life has been a continuous process of learning, changing, and growth.

Social well-being

1. I feel like I am an important part of my community.
2. If I had something to say, I believe people in my community would listen to me.
3. I feel close to other people in my community.

4. I see my community as a source of comfort.
5. I believe other people in society value me as a person.
6. My behaviour has some impact on other people in my community.
7. I think I have something valuable to give to the world.

Belief in conspiracy theories

1. The government uses people as patsies to hide its involvement in criminal activity.
2. The power held by heads of state is second to that of small unknown groups who really control world politics.
3. Certain significant events have been the result of the activity of a small group who secretly manipulate world events.
4. Secret organizations communicate with extraterrestrials but keep this fact from the public.
5. The spread of certain viruses and/or diseases is the result of the deliberate, concealed efforts of some organization.
6. Technology with mind-control capacities is used on people without their knowledge.
7. Experiments involving new drugs or technologies are routinely carried out on the public without their knowledge or consent.
8. Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public.
9. New and advanced technology which would harm current industry is being suppressed.
10. A lot of important information is deliberately concealed from the public out of self-interest.

Appendix B

Figure B1

Linearity of the residuals

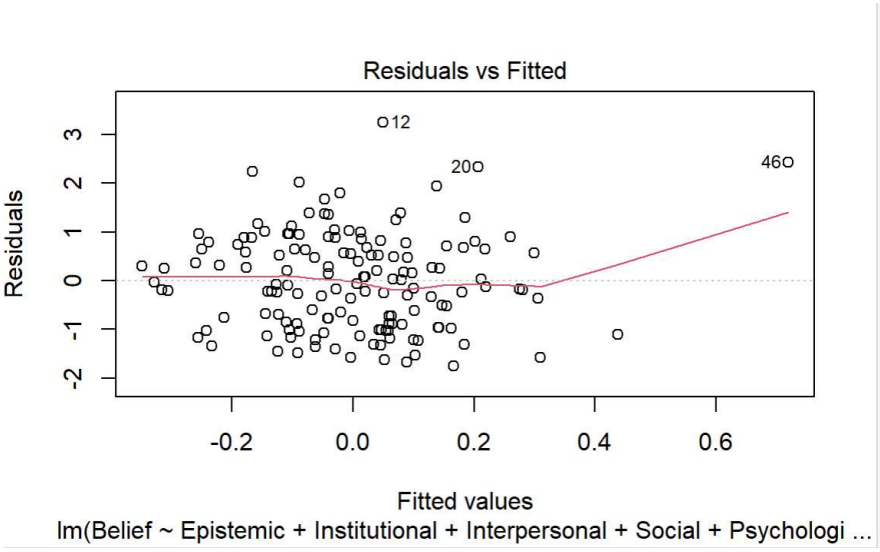


Figure B2

Homoscedasticity of the residuals

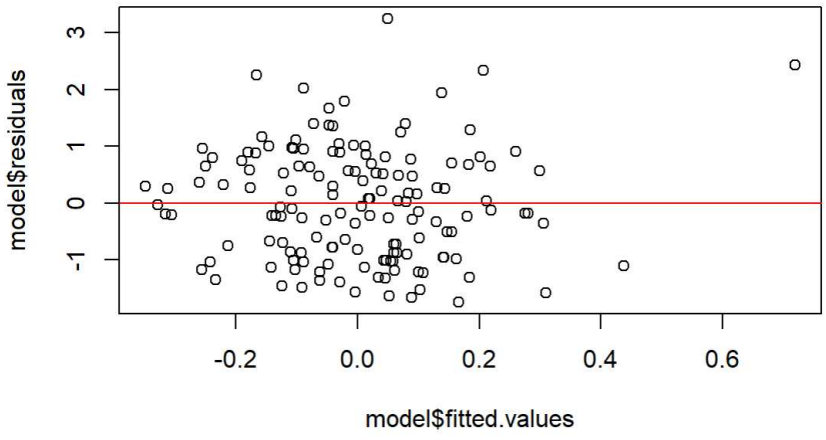
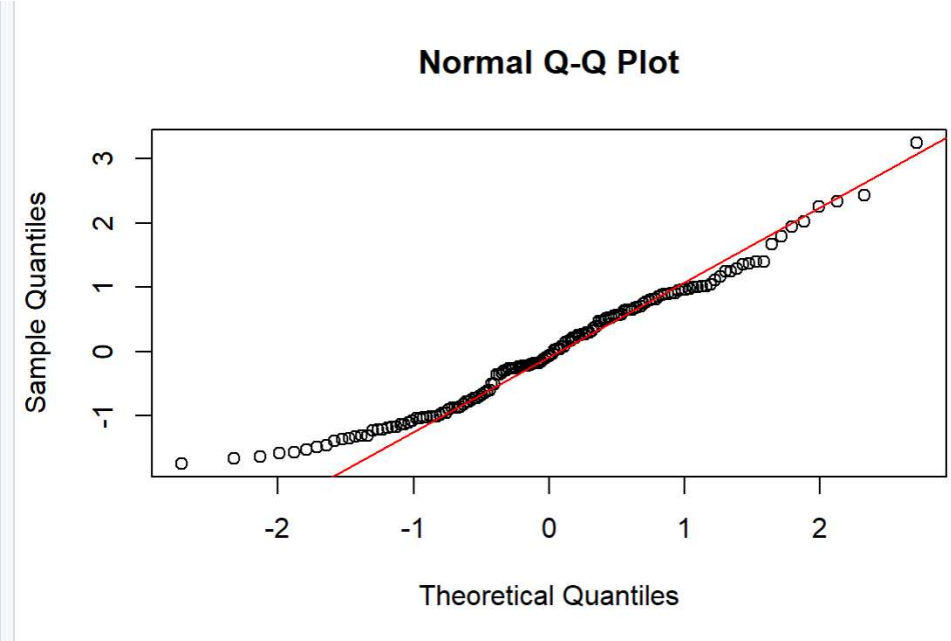


Figure B3

Normality of residuals



Independence of Residuals

The Durbin-Watson test showed that DW = 1.9228, with p-value = 0.3206.