

# Assessing Trust in Science: Development and Validation of a Short Scale for Adolescents and Adults

Diana Steger<sup>1</sup> , Astrid Schütz<sup>2</sup> 

[1] *Leibniz Institute for Educational Trajectories, Bamberg, Germany.* [2] *Chair of Personality Psychology and Psychological Assessment, University of Bamberg, Bamberg, Germany.*

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**Corresponding Author:** Diana Steger, Leibniz Institute for Educational Trajectories, Wilhelmsplatz 3, 96047 Bamberg, Germany. E-mail: [diana.steger@lifbi.de](mailto:diana.steger@lifbi.de)

**Supplementary Materials:** Code, Data, Materials [see [Index of Supplementary Materials](#)]



## Abstract

Trust in science is vital for informed decision-making and societal progress, especially in times of misinformation. Still, trust in science remains underexplored, particularly regarding its development and determinants. To address this gap, we developed a short scale suitable for longitudinal studies. In Study 1, data from 449 adults supported a 4-item unidimensional scale with excellent fit (CFI = .997, RMSEA = .046) and reliability ( $\omega = .835$ ). The scale was negatively correlated with Conspiracy Mentality ( $r = -.37$ ) as well as Law-and-Order Beliefs ( $r = -.19$ ). Study 2 ( $N = 298$  parent-adolescent dyads) replicated the model fit and confirmed measurement invariance across age groups. A dyadic model revealed a strong parent-child correlation ( $r = .66$ ). Men had higher scores than women. This scale provides researchers and policymakers with a robust tool for assessing trust in science across diverse settings and evaluating interventions to foster this resource.

## Keywords

trust in science, short scale construction, conspiracy mentality, latent variable modelling, measurement invariance

Trust in science and scientists<sup>1</sup> serves as a cornerstone of societal progress, providing the foundation for informed decision-making and strengthening resilience against misinformation (Nadelson et al., 2014). As societies face increasingly complex challenges—from climate change to public health crises—understanding the role of trust in science is



more urgent than ever, as it has far-reaching implications for individual and societal outcomes. Across the lifespan, trust in science seems vital for various life domains: It is associated with academic trajectories and outcomes, with positive reciprocal effects between science-related education and trust in science (Krüger et al., 2022). Beyond academics, it plays a critical role in health-related behaviours, such as vaccine hesitancy (Santirocchi et al., 2023), where higher trust in science correlates with adherence to public health guidelines. Moreover, trust in science is negatively correlated with illiberal attitudes and researchers believe that it may promote informed participation, potentially serving as a buffer against authoritarian tendencies which is in line with evidence of its negative association with conspiracy mentality and extremist ideologies (McCright et al., 2013).

Despite its importance, trust in science remains underexplored. Most studies are cross-sectional (e.g., Santirocchi et al., 2023; Vranic et al., 2022), and existing longitudinal research tends to focus on trend analyses and mean differences (e.g., Gauchat, 2012; Krause et al., 2019), leaving developmental trajectories poorly understood. For example, while personality traits are established antecedents of interpersonal trust (e.g., Hancock et al., 2023; Mooradian et al., 2006), it remains unclear whether similar mechanisms apply to trust in science. Equally, most studies focus on adult samples, even though trust in science may begin to form in adolescence, potentially influenced by education (Krüger et al., 2022). To this end, we aimed to develop and validate a brief yet psychometrically sound measure of trust in science that can be used across the lifespan. Its brevity and age-inclusiveness make it well-suited for large-scale panel studies, helping close existing gaps in our understanding of how trust in science develops and changes over time.

Trust in science can be defined as the assumption that science provides valid knowledge, based on perceptions of scientists' expertise, integrity, and benevolence (Hendriks et al., 2016). Therefore, this concept encompasses both trust in science as an institution and trust in the people who do science, i.e. the scientists. Since laypeople only have limited opportunities to understand how scientific knowledge is generated, trust in science is a necessary prerequisite to use scientific information as a basis for every-day decision-making (Bromme & Gierth, 2021). Thus the construct impacts various spheres of daily life – including individual educational trajectories and academic success (Nadelson et al., 2014), and health-related behaviour (Santirocchi et al., 2023). Conceptually, trust in science is a form of institutional trust, where confidence is placed in abstract entities rather than individuals. In a U.S.-based poll, science was reported to be more trustworthy than other institutions, such as governments or corporations (Krause et al., 2019).

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1) For readability, we use the term *trust in science* throughout the manuscript. This choice reflects the concept's apparent unidimensionality (Nadelson et al., 2014). Whereas *trust in science* and *trust in scientists* are sometimes used interchangeably in the literature (e.g., Agle, 2020), our use of the term explicitly includes both aspects.

Trust in science is a relatively stable attitude when considering overall mean-level trends (Gauchat, 2012; Krause et al., 2019). However, this does not imply rank-order stability, meaning that individuals may still experience meaningful changes in their level of trust relative to others over time. Such variation might be influenced by political attitudes or religiosity (Krause et al., 2019), science-related education or experiences (Krüger et al., 2022), or attitudes towards science (Winterlin et al., 2022). Whereas educational processes can promote trust in science, a lack of understanding of science may lead to the erosion of trust in science (Hendriks et al., 2016). Correspondingly, it was found that low socioeconomic status and low levels of education are negatively related to trust in science (Schoor & Schütz, 2021). However, it is not only personal experience and skills but also the public discourse that affects trust in science (Kreps & Kriner, 2020). For example, trust in science also appears to be closely intertwined with political ideologies. Mean differences are reported between supporters of different parties, with conservatives generally showing lower levels of trust in science than liberals (Agle, 2020). Still, a deeper understanding of the factors shaping the development of trust in science is essential for fostering and sustaining it in diverse contexts.

Trust in science is vital given that laypeople have access to vast amounts of scientific information but often lack the expertise to fully assess its veracity or relevance (Hendriks et al., 2016). Particularly in an era of widespread information access, trust in science thus plays a crucial role, affecting how people evaluate news, process scientific information, and ultimately adapt certain behaviours (e.g., Vecina et al., 2024)—especially in controversial debates where "fake news" can easily overshadow facts. Accordingly, individuals must possess not only the skills to navigate an overwhelming abundance of information but also the commitment to critically analyse sources of information (Hahnel et al., 2019). Reading competence alone, while essential, is insufficient for understanding how different sources are perceived (Schoor & Schütz, 2021); trust in science might be a key factor that influences how individuals evaluate and integrate available information into their beliefs and actions (Vecina et al., 2024).

Building on this, the connection of trust in science to the tendency to believe in conspiracy myths is also important: Conspiracy mentality is a phenomenon that was extremely prevalent during the COVID-19 pandemic (Vranic et al., 2022), but was also already included in original conceptualizations of the authoritarian personality (Adorno et al., 1950; Dilling et al., 2024). For example, Vranic et al. (2022) found that higher trust in science was associated with a lower likelihood of engaging in conspiracy beliefs. Also, trust in science was also reported to be a protective factor against conspiracy beliefs in groups with lower education (Jabkowski et al., 2023), rendering trust in science a promising lever for campaigns to avoid the adoption of misinformation or conspiracy beliefs.

## The Present Studies

Given the impact of trust in science across diverse life domains and its potentially protective function against misinformation and authoritarian tendencies, there is a pressing need for precise and efficient tools to measure this construct across the life span. Previous studies frequently relied on single-item measures (e.g., [Algan et al., 2021](#); [Vecina et al., 2024](#); [Wintterlin et al., 2022](#)), which are often criticized for their limited reliability and inability to capture multidimensional constructs. Other existing short scales (e.g., [Pagliaro et al., 2021](#)) lack detailed documentation on their scale development process, their rationale for item selection, and evidence of their psychometric properties beyond basic reliability estimates. To this end, the aim of Study 1 is to develop a psychometrically sound short scale for trust in science by building on an 8-item version ([Schoor & Schütz, 2021](#)) of the *Trust in Science and Scientists Inventory* ([Nadelson et al., 2014](#)). Therefore, we evaluate all potential four-item sets from the original scale to identify a subset that balances model fit, reliability, and conceptual clarity. The resulting *Trust in Science Short Scale* is tested for measurement invariance across gender, educational background, and age. Furthermore, we correlate the newly developed short scale with personality traits to demonstrate construct validity. We expect substantial positive correlations with agreeableness, which has been linked to other aspects of trust ([Mooradian et al., 2006](#)), and with openness to experience due to its relation to intellectual investment ([von Stumm & Ackerman, 2013](#)). We also integrate the scale into a nomological net of tendencies of degradation to ensure its usefulness for understanding this potential resource in critical psychological and societal dynamics. More specifically, we expect the short scale to be negatively related to both conspiracy mentality ([Vranic et al., 2022](#)) and law-and-order positions—an indicator of xenophobia and aggression towards foreigners ([Ulbrich-Herrmann, 2001](#)).

Building on the scale development in Study 1, the aim of Study 2 is twofold: First, we aim to replicate its psychometric quality in an independent sample. Second, we extend the scope of the scale's applicability by examining its model fit in a younger population of adolescents. This approach allows us to assess whether the short scale performs well across different age groups, broadening its applicability for use in both adult and adolescent populations and further establishing its potential for its employment in longitudinal study designs over a wide age range.

For both studies, we provide all material (i.e., data, syntax, and supplemental material) online within the *Open Science Framework* (see [Steger & Schütz, 2024](#)) to make all analyses transparent and reproducible.

# Study 1

## Method

### Sample and Design

In Study 1, we analysed cross-sectional data from German participants collected through an online access panel (*bilendi*). The measures reported here were part of a larger study conducted in January 2024. We excluded 105 cases that either failed *attention check* items, had extremely short or long reaction times, or implausible response patterns (see Figure S1 in the online supplement, see Steger & Schütz, 2024). The final sample comprised 449 adults (aged 16–75 years,  $M = 37.66$ ,  $SD = 16.97$ ; 52.3% female). Sampling quotas were applied to ensure representation of different educational levels: approximately 33% held a university degree or university entrance qualification, 33% had a degree from an intermediate school track, and 33% had a vocational school degree or no degree.

### Measures

Trust in science was assessed with an 8-item version of the Trust in Science and Scientists Inventory (Schoor & Schütz, 2021, adapted from Nadelson et al., 2014;  $\omega = .90$ ). Covariates included the Big Five personality traits, measured with the BFI-2-XS (Rammstedt et al., 2020) with factor saturation ranging from  $\omega = .48$  (extraversion) to  $\omega = .76$  (negative emotionality). These comparatively low reliability estimates are expectable, as the BFI-2-XS is an ultra-short scale with only three items per factor, designed to capture a broad range of content rather than maximize internal consistency. Additionally, we included a 3-item measure of conspiracy mentality (adapted from Imhoff, 2013;  $\omega = .88$ ); and a 3-item measure of law-and-order attitudes (Ulbrich-Herrmann, 2001;  $\omega = .73$ ). All instruments were self-reports and employed a 5-point Likert scale (from 1: *strongly disagree* to 5: *strongly agree*).

### Analyses

For item selection, we computed confirmatory factor analyses for all 70 combinations of four items and evaluated model fit indices ( $CFI > .95$ ,  $RMSEA < .06$ ), factor saturation (McDonald's  $\omega > .70$ ), and factor loading patterns (lowest factor loading  $\lambda_{\min} > .40$ ) to derive a psychometrically sound short scale. To assess the quality of the newly derived short scale, we tested measurement invariance across gender, educational background, and age groups using multi-group confirmatory factor analyses (Putnick & Bornstein, 2016). Finally, we examined the correlational patterns of the short scale: We computed correlations with the big five personality traits to demonstrate effects of convergent and discriminant validity and tested the short scale in the nomological network of degrading tendencies by examining its relationships with conspiracy mentality and law-and-order positions.

## Results and Discussion

The 8-item measure of trust in science was very homogeneous ( $\alpha = .90$ ;  $M = 3.40$ ,  $SD = 0.73$ , range of item means [3.16; 3.59], see also Table S1 in the online supplement, Steger & Schütz, 2024). Given the high internal consistency and limited variation in item means, deriving a short scale was deemed appropriate, as it was unlikely to result in substantial information loss. The scale mean is in line with previous studies, where trust in science in German samples was also estimated to be moderately high (Cologna et al., 2025; Schoor & Schütz, 2021).

Next, we computed a confirmatory factor analysis for all 70 possible sets of four items of the original scale (results from all item sets can be accessed, see Steger & Schütz, 2024). Of the 70 models, 28 models (40%) met all predefined criteria, with RMSEA < .06 being the criterion that was met least frequently. Since the 28 item samples can be considered psychometrically equivalent, we selected one item sample that reflected the breadth of the construct. The final short scale showed excellent fit (CFI = .997, RMSEA = .046), excellent reliability ( $\omega = .835$ ), and homogeneous loading pattern ( $\lambda_{\min} = .730$ ). The scale had positive correlations with agreeableness ( $r = .19$ ,  $p < .05$ ) and conscientiousness ( $r = .10$ ,  $p < .05$ ), and a small negative correlation with neuroticism ( $r = -.13$ ,  $p < .05$ ; see also Table S2). Contrary to our expectations, the correlation with openness was not statistically significant. Notably, the correlational pattern of the long scale was similar, indicating that the short scale retained the key relationships observed in the original version.

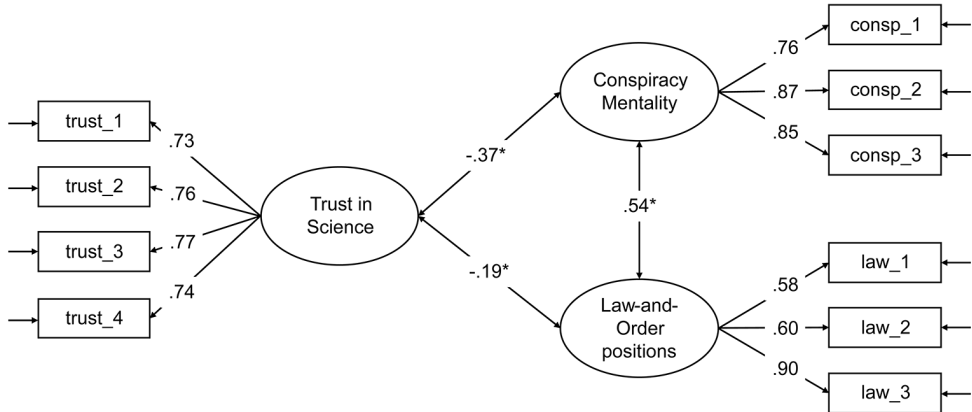
After establishing scalar measurement invariance across gender and educational groups (Table S3), we examined the mean differences across these groups. We found significant latent mean differences between males and females ( $z = 2.731$ ,  $p = .006$ ), with male participants reporting slightly higher scores ( $M_{\text{males}} = 3.50$ ,  $SD_{\text{males}} = 0.80$ ,  $M_{\text{females}} = 3.30$ ,  $SD_{\text{females}} = 0.73$ ). For the educational groups, latent mean scores were significantly lower for both intermediate ( $z = -3.613$ ,  $p < .001$ ) and lower education ( $z = -2.608$ ,  $p = .009$ ) as compared to the higher education group ( $M_{\text{high}} = 3.58$ ,  $SD_{\text{high}} = 0.74$ ,  $M_{\text{inter}} = 3.27$ ,  $SD_{\text{inter}} = 0.73$ ,  $M_{\text{low}} = 3.34$ ,  $SD_{\text{low}} = 0.80$ ). We further explored invariance across age groups (Table S3) and established scalar invariance. A one-way ANOVA revealed no significance between groups, ANOVA,  $F(4, 444) = 0.804$ ,  $p = .523$ .

Lastly, we report a latent variable model, relating our newly developed measure of trust in science together with conspiracy mentality and law and order positions to investigate how the Trust in Science Short Scale fits into the context of degrading tendencies (Figure 1). The model fit was excellent (CFI = .980, RMSEA = .050 [.034; .067]). Latent correlations revealed a moderate negative association between trust in science and conspiracy mentality ( $r = -.37$ ), a weaker negative relationship between trust in science and law-and-order positions ( $r = -.19$ ), and a strong positive correlation between conspiracy mentality and law-and-order positions ( $r = .54$ ). All correlations

were significantly different from zero. The findings demonstrate the relevance of trust in science in the context of authoritarian tendencies.

**Figure 1**

*Trust in Science in the Nomological Net of Conspiracy Mentality and Law-and-Order Positions*



Taken together, the results underscore the utility of the Trust in Science Short Scale. Despite its brevity, the scale retains the psychometric strengths of the original version, exhibiting excellent reliability and model fit, and measurement invariance across key demographic groups. The scale's correlations with personality traits and political attitudes, as well as its sensitivity to group differences, suggest it is a reliable tool for capturing variations in trust in science. Whereas no mean differences were found across age, the exploratory nature of these analyses limits strong conclusions about age-related variations. Building on this, Study 2 extends the scale's scope of validity to include surveys of adolescents from around the age of 13.

## Study 2

### Method

#### Sample and Design

Study 2 again utilised cross-sectional data from Germany, collected via an online access panel (*bilendi*). After excluding 222 cases from the analysis following the same data cleaning approach as in study 2, the final sample comprised 298 parent-adolescent-dyads. The adolescents were aged between 13 and 15 years ( $M = 13.77$ ,  $SD = 0.71$ ), with 55.0% being female. The sample included students from various educational backgrounds,

with the most frequently represented school types being intermediate track schools (*Realschule*, 23.5%) and academic track schools (*Gymnasium*, 37.3%). Among the parents, 48.0% were women, and quotas on educational background were applied, mirroring the design of Study 1.

### Measures

The central measure for this study was the newly developed Trust in Science Short Scale. To make the items more accessible and age-appropriate for the younger participants, the wording of some items and their order were slightly adjusted (Table S5). Instructions and answer format remained identical to those used in Study 1. Both parents and children independently completed the self-report.

### Analyses

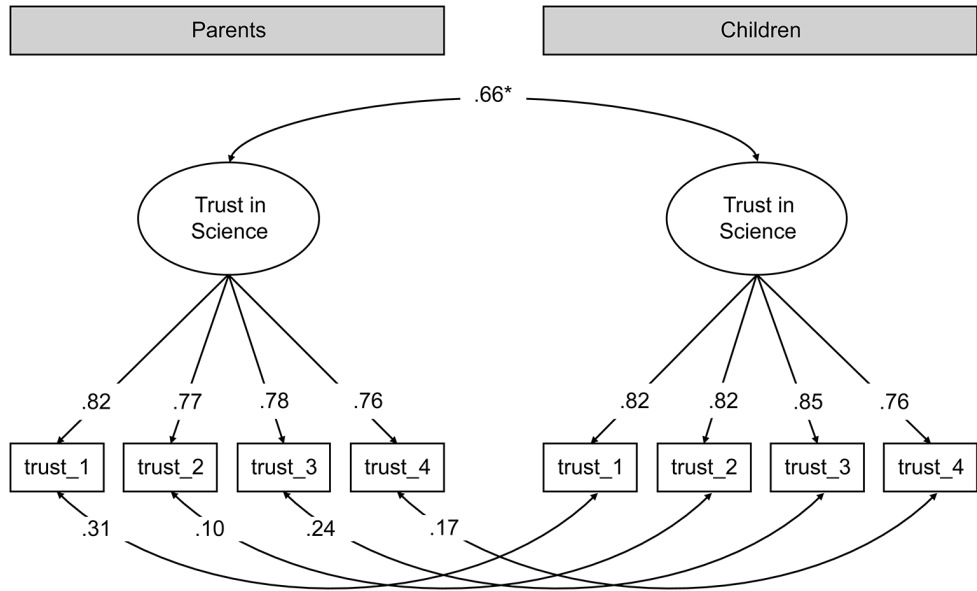
We first estimated measurement models separately for parents and children to assess the psychometric quality of the scale within each group. We then specified a combined model reflecting the dyadic structure of the data by using a correlated factors model with correlated residuals to account for item-specific variance across dyads. Next, we evaluate measurement invariance across key demographic variables: For parents, we test invariance across gender and educational background, while for children, we assess invariance across gender and age. Due to limited group sizes, educational background was not examined for children. Finally, we tested measurement invariance across subsamples (adolescents vs. adults).

## Results and Discussion

For the Trust in Science Short Scale (for descriptive statistics, see Table S5), we were able to replicate the model fit in adults (CFI = 1.00, RMSEA = .000,  $\omega = .861$ ) and adolescents (CFI = 1.00, RMSEA = .000,  $\omega = .886$ ). Next, we considered the dyadic structure and estimated a combined model of children's and parent's trust in science (CFI = .987, RMSEA = .063), which revealed a latent correlation of .664 ( $p < .001$ ), indicating a substantial relationship between parents' and children's trust in science (Figure 2).

Figure 2

Dyadic Relation Between Parents' and Children's Trust in Science



In Study 2, the tests for measurement invariance within the two subsamples were not as clear as in Study 1 (with some changes in model fit larger than the predefined cut-offs, see Tables S6 and S7), which may be due to the comparatively small group sizes. Accordingly, mean differences across these groups must be interpreted with caution and should be examined in a larger sample. However, scalar measurement invariance across subsamples was established (Table S8), revealing a significant latent mean difference ( $z = 2.793, p = .005$ ) with higher scores for adolescents ( $M_{\text{adolescents}} = 3.59, SD_{\text{adolescents}} = 0.90, M_{\text{adults}} = 3.38, SD_{\text{adults}} = 0.89$ ). This finding contradicts the results of Krüger et al. (2022) who found no mean differences between adolescents and young adults, and thus underlines the importance of further research that focuses on the life course perspective of trust in science.

Taken together, we successfully replicated the model fit of the Trust in Science Short Scale in adults and adolescents, confirming its applicability to both age groups. When accounting for the dyadic structure of the data, the combined model for parents and children revealed a strong latent correlation. These findings demonstrate that the Trust in Science Short Scale is reliable and valid in both adult and adolescent samples and thus offers the option to investigate age-related specifics. Further, the findings also suggest the influence of family socialization processes in this field with parental levels of trust

in science being strongly associated with children's levels of trust in science. Further research with larger, more diverse samples is needed to refine these findings and explore the factors contributing to the observed mean differences.

## General Discussion

Understanding trust in science is a key step towards equipping individuals with a resource to navigate in a world of information overload and fake-news and examine pieces of information critically. It seems crucial to further comprehend the mechanisms to foster resilience against misinformation and protect against the appeal of extremist movements. To this end we developed and validated the Trust in Science Short Scale. We demonstrated the scale's robustness and applicability across different demographic groups as well as relations with broad personality, as well as conspiracy mentality and law-and-order positions. Notably, the scale is valid for both adolescents and adults, and thus well-suited to further investigate inter- and intraindividual changes across the lifespan.

In Study 1, we found excellent reliability and model fit for the short scale and established measurement invariance across gender, educational groups, and age groups. As for the long scale, individuals with lower educational degrees reported less trust in science than others (Jabkowski et al., 2023; Nadelson et al., 2014). Across both studies, we found men to report higher levels of trust in science than women, matching previous findings of women reporting lower levels of trust (Gauchat, 2012). We also found that the scale's correlations with personality traits and political attitudes, such as conspiracy mentality and law-and-order positions, aligned mostly with theoretical expectations and underscored its relevance in understanding societal dynamics. Specifically, participants who reported higher trust in science also reported lower agreement with conspiracy beliefs and lower racist tendencies.

In Study 2, we extended the scale's validity to adolescents and found a strong latent correlation between parents' and children's trust in science, which highlights the importance of familial influences. While, to our knowledge, this is the first study to address intrafamilial relations or transmission of trust in science, these findings might be a starting point for further research on potential mechanism for these relations, such as educational and socioeconomical background, but also parental modelling, or communication patterns within families. In general, these findings contribute to the existing literature by providing a reliable and efficient tool for assessing trust in science, facilitating future research on its developmental trajectories and influencing factors across the lifespan.

Overall, it is important to better understand the interplay of political ideologies, authoritarian tendencies and trust in science. For example, it was shown that during the COVID-19 pandemic there was a negative correlation between extreme political positions and the willingness to take protective measures, and this relation was mediated

by mistrust in science (Santirocchi et al., 2023). This finding highlights the relevance of strategies in communicating scientific results with the public and establishing trust in scientific results (Kreps & Kriner, 2020). However, despite the apparent beneficial effects of trust in science, it seems only logical that there may be a limit and that the optimum level is not the theoretical maximum. Unrestricted trust may hinder the critical evaluation of information, which is also reflected in the finding that people with extremely high level of trust in science may not question pseudoscientific findings (O'Brien et al., 2021). Future research should also consider possible non-linear relationships of trust in science and its outcomes as an inverted u-shape may depict the effects of trust in science better, since extreme levels of trust on both ends may be associated with negative cognitive or behavioural consequences.

## Limitations and Future Research

One limitation of this study is the use of only positively phrased items, leaving open whether trust in science and scepticism toward science represent opposite ends of a single construct or distinct but related attitudes. Likewise, the question prevails whether trust in science and scientists is really a unidimensional construct. While our results support this notion, trust in scientists may draw on different psychological processes than trust in science as an institution—particularly because central characteristics of interpersonal trust like assumed benevolence and intentionality, are more applicable to scientists. However, while prior research reports different levels of trust for science versus scientists, findings were limited to specific subgroups (Mann & Schleifer, 2020). Future research should examine emotional and cognitive processes in the formation of trust to better understand the underlying dynamics.

Lastly, the present study relies on cross-sectional data. While the correlational patterns look promising, future research should adapt a longitudinal perspective, allowing to map developmental trajectories of trust in science across different learning environments (such as schools, universities, and family settings), together with potential influencing factors, as well as outcomes to help us better understand which sociodemographic, psychological, and societal factors shape the development of trust in science and how trust in turn may affect various life-outcomes.

## Conclusion

We offer a psychometrically sound and efficient tool to measure trust in science across diverse age groups. This scale is a valuable resource for research, informing educators and policymakers on how trust in science develops and how it can be fostered in various learning environments, including families and educational settings. As societies grapple with complex challenges, from public health crises to technological advancements, understanding and fostering trust in science is essential. Our scale not only also provides

a foundation for evaluating interventions that promote scientific literacy and informed decision-making.

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**Competing Interests:** The authors have declared that no competing interests exist.

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**Ethics Statement:** Since online data collection was conducted according to the guidelines of the German Society for Online Research and in compliance with the European General Data Protection Regulations, no additional ethics approval was required.

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**Data Availability:** For this article, data is freely available (see Steger & Schütz, 2024).

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## Supplementary Materials

The data set associated with this study and the supplemental material is available on the Open Science Framework (see Steger & Schütz, 2024).

### Index of Supplementary Materials

Steger, D., & Schütz, A. (2024). *Assessing trust in science: Development and validation of a short scale for adolescents and adults* [Data, codebook, code, materials]. OSF. <https://osf.io/mgfu3/>

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## Appendix

### Items Used in Study 1: Trust in Science Scale (Schoor & Schütz, 2021)

#### German Version (Schoor & Schütz, 2021)

Geben Sie zu den folgenden Aussagen bitte an, wie sehr Sie jeweils zustimmen. Bitte die zutreffende Antwort markieren.

1. Man kann Wissenschaftlerinnen und Wissenschaftlern vertrauen, dass sie ihre Entdeckungen veröffentlichen, auch wenn sie ihre Ergebnisse nicht mögen.
2. Ich vertraue darauf, dass die Arbeit von Wissenschaftlerinnen und Wissenschaftlern das Leben der Menschen besser macht.
3. Wir sollten der Arbeit von Wissenschaftlerinnen und Wissenschaftlern vertrauen.
4. Wir sollten darauf vertrauen, dass Wissenschaftlerinnen und Wissenschaftler in ihrer Arbeit ehrlich sind.
5. Wir sollten darauf vertrauen, dass Wissenschaftlerinnen und Wissenschaftler moralisch einwandfrei arbeiten.
6. Wissenschaftliche Theorien sind vertrauenswürdig.
7. Leute, die Wissenschaft besser verstehen, haben mehr Vertrauen in die Wissenschaft.
8. Wir können darauf vertrauen, dass die Wissenschaft die Antworten findet, die die natürliche Welt erklären.

1: stimme überhaupt nicht zu – 2: stimme eher nicht zu – 3: teils/teils – 4: stimme eher zu – 5: stimme voll und ganz zu

#### English Version (Original item wording according to Nadelson et al., 2014)

Please indicate how much you agree with each of the following statements. Select the response that best applies to you.

1. We can trust scientists to share their discoveries even if they don't like their findings.
2. I trust the work of scientists to make life better for people.
3. We should trust the work of scientists.
4. We should trust that scientists are being honest in their work.
5. We should trust that scientists are being ethical in their work.
6. Scientific theories are trustworthy.
7. People who understand science have more trust in science.
8. We can trust science to find the answers that explain the natural world.

1: strongly disagree – 2: somewhat disagree – 3: neither agree nor disagree – 4: somewhat agree – 5: strongly agree

### Items Used in Study 2: Trust in Science Short Scale

#### German Version

Geben Sie zu den folgenden Aussagen bitte an, wie sehr Sie jeweils zustimmen. Bitte die zutreffende Antwort markieren.

1. Ich vertraue darauf, dass die Wissenschaft das Leben der Menschen besser macht.

2. Wir sollten darauf vertrauen, dass Wissenschaftlerinnen und Wissenschaftler bei ihrer Arbeit ehrlich sind.
3. Wissenschaftliche Theorien sind vertrauenswürdig.
4. Wir können darauf vertrauen, dass Wissenschaftlerinnen und Wissenschaftler ihre Entdeckungen veröffentlichen, auch wenn ihnen ihre Ergebnisse nicht gefallen.

1: stimme überhaupt nicht zu – 2: stimme eher nicht zu – 3: teils/teils – 4: stimme eher zu – 5: stimme voll und ganz zu

*Note.* Item order and content were adapted to reduce complexity.

**English Version** (Original item wording according to [Nadelson et al., 2014](#))

Please indicate how much you agree with each of the following statements. Select the response that best applies to you.

1. I trust the work of scientists to make life better for people.
2. We should trust that scientists are being honest in their work.
3. Scientific theories are trustworthy.
4. We can trust scientists to share their discoveries even if they don't like their findings.

1: strongly disagree – 2: somewhat disagree – 3: neither agree nor disagree – 4: somewhat agree – 5: strongly agree