

Conscientiousness Research: A Narrative Review

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ABSTRACT

The current literature on conscientiousness includes its effects on feelings, cognitive function, behaviors and health. The feelings include positive affect, less anxiety and depression and less pain interference. Positive effects for cognitive function include greater accuracy on a visual search task, better learning goals, higher grades, greater achievement and less cognitive decline. Behavioral effects that appeared in this current literature on conscientiousness include less Tik Tok use and fewer conduct problems. The effects on health include better sleep, fewer physical symptoms and less cardiometabolic risk. Predictors of conscientiousness in this literature include genetic factors, morningness, and parent-child relationships. A potential underlying biological mechanism that appeared was the efficiency of the salience/ventral attention network (prefrontal cortex and anterior insula). Methodological limitations of this literature include the predominantly university student samples and the almost exclusive use of mediation/moderation analyses.

Conscientiousness is one of the four positive Big Five personality traits. It is characterized by being organized, responsible, hardworking and goal oriented. Individuals who are high on conscientiousness show self-discipline, impulse control and diligence, often resulting in greater achievement and better health. These qualities and effects highlight the importance of research and reviews of research on conscientiousness.

This current narrative review includes research not only on positive effects of conscientiousness on feelings and behaviors but also on predictors and a potential underlying biological mechanism. The papers were found on PubMed and PsycINFO by entering the term conscientiousness and the years 2022-2026. Exclusion criteria were protocols, case studies and non-English language papers.

The 25 papers in this current literature review can be categorized as facets of conscientiousness (3 papers), positive effects of conscientiousness on feelings and behaviors (15 papers), predictors (6 papers), and a potential underlying biological mechanism (1 paper). These sections are followed by a discussion on methodological limitations of this current literature.

Facets of Conscientiousness

Different research groups have identified both the same and different facets of conscientiousness. The different facets noted by different research groups likely derived from their use of different inventories/questionnaires.

In a paper entitled “The predictive validity of consensual and unique facets of neuroticism, conscientiousness and agreeableness in five personality inventories”, four consensual facets were noted [1]. In this sample (N=4401), the four facets of conscientiousness were achievement striving, order, attentiveness and responsibility.

In a larger sample study (N=446,406), 5 factors resulted from a factor analysis [2]. The factors included deliberation, order, industriousness, self-discipline and deliberation. Only the order factor was consistent with the order facet noted in the previously described study.

Seven facets were noted for conscientiousness by a third research group who were developing and validating a short form questionnaire for those facets [3]. The seven facets included industriousness, perfectionism, tidiness, procrastination refrainment, control, caution and task planning. Only the industriousness facet was consistent with the industriousness factor yielded by the previously described factor analysis.

Positive Effects of Conscientiousness

Several papers in the current literature on conscientiousness can be categorized as positive effects. They include effects of conscientiousness on feelings, cognitive function, behaviors and health.

Feelings

The feelings that have been studied as effects of conscientiousness

include positive affect, less anxiety and depression and less pain interference. In a paper entitled “The relationship between conscientiousness and well-being among Chinese undergraduate students: A cross-lagged study”, undergraduate students (N= 365) were given scales on conscientiousness, affect and life satisfaction [4]. Conscientiousness led to positive affect and life satisfaction. Surprisingly, these were not assessed as reciprocal relationships.

Table 1: Facets of conscientiousness (and first authors).

Facets	First Authors
Achievement striving, order, attentiveness and responsibility	Khoo
Deliberation, order, industriousness, self-discipline and deliberation	Phillips
Industriousness, perfectionism, tidiness, control and caution	Franzen

Conscientiousness has also been studied in Chinese adolescents (N= 5994) [5]. In this sample, conscientiousness led to dispositional mindfulness, which, in turn, led to less anxiety, depression and stress.

In a longitudinal study, the participants (N=93, mean age=73) provided pain and interference ratings twice a year for as long as 10 years. In this sample, conscientiousness led to less pain interference [6]. This was more pronounced in those with greater pain and those who were older. Those who were older and had greater pain would likely be more conscientious about pain and not let it interfere with their activities.

Cognitive Function

A few positive effects have been noted for cognitive function in this literature on conscientiousness. These include greater accuracy, better learning goals, higher grades, greater achievement and less cognitive decline.

In a paper entitled “Conscientiousness protects visual search performance from the impact of fatigue”, conscientiousness led to **greater accuracy** (N= 374) [7]. The group above the median on conscientiousness had greater energy and accuracy.

In research entitled “Conscientiousness, students’ goal orientation, and reasoning ability”, conscientiousness explained 29% of the variance in **learning goals** (N=145 secondary school students) [8]. Conscientiousness also contributed to 40% of the variance in work avoidance. At first glance these findings would seem to be inconsistent. However, secondary school students with learning goals would benefit from concentrating on their learning and avoiding any work that distracted them from learning.

In a study on intelligence and conscientiousness, **higher grades** were predicted by greater intelligence and conscientiousness in undergraduate students from Germany (N=3775) [9]. Intelligence and grades were more strongly linked for students who were conscientious. These relationships were based on both theory and empirical evidence.

Academic achievement was addressed in a study entitled “Conscientiousness as a predictor of the gender gap in academic

achievement” [10]. In this Dutch university student sample (N=4719), females showed greater **academic achievement**, as they have in the U.S. and other countries, likely because people in those countries were more conscientious as they were in Holland.

Facets of conscientiousness were addressed in a study called “The association between facets of conscientiousness and performance – based and informant – rated cognition, affect and activities in older adults” [11]. In this Health and Retirement Study sample (N=2516), two facets of conscientiousness including industriousness and responsibility were associated with **greater cognitive performance**. Order, which was another facet of conscientiousness, was associated with **less cognitive decline**.

Table 2: Positive effects of conscientiousness (and first authors).

Positive Effects	Feelings	First Authors
Positive affect		Hu
Less anxiety, depression and stress		Liu
Less pain interference		Judge
Cognitive Function		
Greater accuracy		Grady
Learning goals		Weiss
Higher grades		Friedrich
Academic achievement		Verbee
Greater cognitive performance		Sutin
Less cognitive decline		Sutin
Less motoric cognitive risk		Stephen
Behavioral Effects		
Tik Tok use disorder tendencies		Montag
Conduct problems		Gastaldi
Physical Effects		
Better sleep		Quaedling
Improved health		Hill, Singh
Reduced physical symptoms		Hu
Reduced cardiometabolic risk		Thomas

The same facets of conscientiousness were studied in older adults (N=6001 ranging from 65 to 99 years) from the Health and Retirement Study sample that included data collected at baseline and four years later [12]. The researchers assessed motoric cognitive risk syndrome, a pre-dementia syndrome characterized by slow gait speed and cognitive complaints. Industriousness was associated with 30% less motoric cognitive risk. Other facets of conscientiousness associated with less motoric cognitive risk included self-control, order and responsibility. The findings including industriousness, responsibility and order are consistent with those of the previous study which is not surprising as they are also based on the Health and Retirement Study database.

Only a couple negative behaviors were reduced by conscientiousness in this current literature. They include Tik Tok use disorder and conduct problems.

In the study on Tik Tok use disorder tendencies (N=378), conscientiousness led to a reduction in those tendencies [13]. This relationship was mediated by less depressive tendencies. These results are not surprising as depressive symptoms have been associated with excessive social media use.

Conduct problems have also been less prevalent in conscientious students and teachers [14]. In this sample (N=142 students and 95 teachers) from 22 schools in Italy, conscientiousness was responsible for fewer conduct problems. This relationship was mediated by greater student-teacher closeness and self-control. The relationships between these four variables would have robust theoretical models which are needed for the selection of mediation/moderation analyses variables.

Table 3: Predictors of conscientiousness (and first authors).

Predictors	First Authors
Genetics	Takahashi
Morningness	Carciofo
Parent-child relationships	Cao
Practical thinking	Liu

Positive Physical Effects

Conscientiousness also had physical effects. These included better sleep and health and fewer physical symptoms as well as less cardiometabolic risk. In most of these studies, conscientiousness was a mediator or moderator variable rather than a predictor variable

In a paper entitled “The moderating role of conscientiousness in the temporal association of stress on sleep”, assessments were made during exams and the start of a new course (N= 92 college students) [15]. Actigraphy and self-reports were taken for 14 days. Conscientiousness moderated (lessened) the negative effects of stress on sleep. Conscientiousness also improved health [16]. In this sample of Swiss adults (N= 2305), conscientiousness was a unique correlate of health.

Conscientiousness was a moderator in another study on health risk behaviors among adolescents [17]. In this sample of adolescents from India (N=648), conscientiousness lessened the effects of neuroticism on health.

In a paper entitled “Conscientiousness and perceived physical symptoms: Mediating effect on life events stress and the moderating role of resting respiratory sinus arrhythmia”, the results are in the title [18]. In this sample (N= 396), low resting respiratory sinus arrhythmia was a risk factor.

Conscientiousness also reduced cardiometabolic risk in healthy adults (N= 494) [19]. In this sample, conscientiousness led to physical activity and better sleep, which, in turn, reduced cardiometabolic risk.

Predictors of Conscientiousness

Some studies could be categorized as predictors of conscientiousness. They include genetics, morningness, parent-child relationships, and practical thinking.

In the study on genetics, individual differences in conscientiousness were attributed to genetic factors (62–64%) in a sample of twin pairs (N=2000) [20]. Conscientiousness accounted for more than 84% of the genetic variance.

Morningness (preference for morning hours) also contributed to conscientiousness in a sample of Chinese university students (N=369) [21]. Other correlates were morning affect, life satisfaction, mindfulness, and better sleep quality.

In a paper entitled “Understanding the role of parent-child relationships in conscientiousness”, a sample of Chinese middle school students (N=8437) were surveyed [22]. A reciprocal relationship was noted between conscientiousness and parent-child relationships. Surprisingly, this was one of the only studies that reported the independent and dependent variables as being reciprocal.

Parent-child relationships were also correlated with conscientiousness in a sample of the Millenium Cohort Study [23]. This sample of mothers (N=7,436) was surveyed longitudinally at birth, 9 months, 3, 11 and 14 years. Maternal conscientiousness was not only correlated with parent-child relationships but also with self-esteem and children’s behavior problems.

Practical thinking has also been a significant predictor of conscientiousness [5]. In this sample of college students (N=700), practical thinking led to fewer depressive symptoms which, in turn, led to increased conscientiousness. This would likely be a reciprocal relationship with conscientiousness increasing practical thinking.

Potential Underlying Biological Mechanism

A potential underlying biological mechanism has been reported for conscientiousness in this current literature. In a paper entitled “Conscientiousness is associated with efficiency of the salience/ventral attention network”, functional connectivity was noted in that network in the brain (prefrontal cortex and anterior insula) [24]. These findings were not surprising given that the prefrontal cortex is a critical area for managing thinking, emotions and behavior via executive function which includes planning, decision making, problem solving and impulse control. The anterior insula has similar cognitive and emotional processes including emotional awareness and cognitive control.

Methodological Limitations of this Literature

This current literature on conscientiousness has several methodological limitations. These include different definitions of conscientiousness, the almost exclusive sampling of university students, and the prevalence of mediation/moderation analyses.

The different research groups have defined conscientiousness differently. Some have used the Big Five definition and others have defined it more broadly.

The samples were almost exclusively university students. Thus, the generalizability of the data is limited. The gender gap in academic achievement favoring females is difficult to interpret, although it has been attributed to the greater degree of conscientiousness noted in females.

Conscientiousness has not been compared to other positive Big Five variables like openness and agreeableness which is surprising. That these have not been considered confounding variables for conscientiousness effects is also surprising.

Conscientiousness may also be reciprocally related to many of the effects that have been reported for conscientiousness such as achievement and health. Those effects would reciprocally relate to more conscientiousness. However, only one study referred to conscientiousness as a reciprocal variable. Quality of parent-child relationships, for example, were treated as predictor variables for conscientiousness but conscientiousness likely also improves parent-child relationships.

Data analyses have been primarily mediation/moderation models. While these are increasingly popular types of data analyses, they are based on researchers' theoretical models and their selection of variables which might be biased. The multiple variables considered mediators or moderators are typically significant. However, their relative importance in contributing to the variance of outcomes cannot be determined by this type of analysis as it could be by regression or structural equation models.

As important as conscientiousness is for so many functions including achievement and health, it was surprising that there were no interventions for improving conscientiousness. Despite these methodological limitations, this research will help inform future research on conscientiousness.

References

1. Khoo S, Stasik-O'Brien SM, Ellickson-Larew S, Stanton K, Clark LA, et al. Predictive validity of consensual and unique facets of neuroticism, conscientiousness, and agreeableness. *Assessment*. 2023. 30: 1182-1199.
2. Phillips NL, Van Til K, Lynam DR, Miller JD. Item-level examination of conscientiousness structure across large samples. *J Pers*. 2024. 92: 985-1005.
3. Franzen P, Arens AK, Greiff S, van der Westhuizen L, Fischbach A, et al. Short-form questionnaire for assessing facets of conscientiousness. *J Pers Assess*. 2022. 104: 759-773.
4. Hu Y, Wang Z, Fan Q. Conscientiousness and well-being among Chinese undergraduate students. *Int J Environ Res Public Health*. 2022. 19: 13565.
5. Liu L, Yi D, Li T. Mediated moderation of conscientiousness and depression. *Psychol Res Behav Manag*. 2024. 17: 3005-3019.
6. Judge ST, Meyr KJ, Segerstrom SC. Conscientiousness and pain interference in older age. *J Gerontol B Psychol Sci Soc Sci*. 2024. 79: gbae024.
7. Grady JN, Cox PH, Nag S, Mitroff SR. Conscientiousness and visual search performance under fatigue. *Cogn Res Princ Implic*. 2022. 7: 56.
8. Weiss S, Böhnisch M. Conscientiousness, goal orientation, and reasoning ability in education. *J Intell*. 2024. 12: 11.
9. Friedrich TS, Schütz A. Conscientiousness and academic performance. *J Intell*. 2023. 11: 146.
10. Verbree AR, Hornstra L, Maas L, Wijngaards-de Meij L. Conscientiousness and gender gap in academic achievement. *Res High Educ*. 2023. 64: 451-472.
11. Sutin AR, Aschwanden D, Stephan Y, Terracciano A. Facets of conscientiousness and cognition in older adults. *J Pers*. 2022. 90: 121-132.
12. Stephan Y, Sutin AR, Luchetti M, Aschwanden D, Terracciano A. Conscientiousness and motoric cognitive risk syndrome. *J Psychiatr Res*. 2022. 151: 73-77.
13. Montag C, Markett S. Depressive inclinations and TikTok use disorder tendencies. *BMC Psychol*. 2024. 12: 81.
14. Gastaldi FGM, Zaheer UA, Longobardi C, Mastrokukou S. Conscientiousness and conduct problems in students. *J Genet Psychol*. 2025. 1-14.
15. Quaedflieg CWEM, Bossi C, Bruijtel J. Conscientiousness and stress-sleep relationship. *J Sleep Res*. 2024. 33: e14224.
16. Hill PL, Olaru G, Allemand M. Sense of purpose and conscientiousness as health correlates. *J Health Psychol*. 2024. 29: 1195-1209.
17. Singh P. Conscientiousness and health-risk behaviors in adolescents. *Scand J Psychol*. 2022. 63: 256-264.
18. Hu Y, Wang Z, Lü W. Conscientiousness and physical symptoms: role of stress. *J Health Psychol*. 2022. 27: 1819-1832.
19. Thomas MC, Duggan KA, Kamarck TW, Wright AGC, Muldoon MF, et al. Conscientiousness and cardiometabolic risk. *Ann Behav Med*. 2022. 56: 100-111.
20. Takahashi Y, Zheng A, Yamagata S, Ando J. Genetic and environmental architecture of conscientiousness. *Sci Rep*. 2021. 11: 3205.
21. Carciofo R. Morning affect and conscientiousness indicators. *Chronobiol Int*. 2022. 39: 1590-1600.
22. Cao X, Liu X. Parent-child relationships and conscientiousness development. *Behav Sci*. 2023. 13: 876.
23. Furnham A, Cheng H. Correlates of conscientiousness from cohort study. *J Genet Psychol*. 2024. 185: 114-123.
24. Sassenberg TA, Burton PC, Mwilambwe-Tshilobo L, Jung RE, Rustichini A, et al. Conscientiousness and salience network efficiency. *Neuroimage*. 2023. 272: 120081.
25. Liu T, Liu Z, Zhang L, Mu S. Mindfulness mediates conscientiousness and mental health. *Pers Individ Dif*. 2022. 184: 111223.