

# Abstract

Wisdom has been viewed as the pinnacle of human development and character since the beginnings of culture; it would be beneficial to society if we can discern how this elusive attribute can be cultivated. In order to determine how wisdom manifests in certain individuals, it would be helpful to understand its association with other neuropsychological concepts such as social functioning, higher-level brain functions, and personality traits; however, the state of this psychological wisdom research is unclear. Therefore, the purpose of this scoping review was to gain a deeper understanding of the breadth and degree of psychological wisdom research, and its associations with neuropsychological concepts. A 3-stage framework was utilized to execute the review, and to adequately describe the literature on psychological wisdom. Articles published in English were reviewed if they investigated wisdom along with other neuropsychological concepts; no date limits were set. A search was conducted in electronic databases and journals; 74 articles met the established inclusion criteria. The majority of the articles (n = 58) were empirical studies that investigated the associations between wisdom and social functioning (n = 36), higher-level brain functions (n = 15), and personality traits (n = 7). The review highlights gaps in the literature and provides an overview of the areas of wisdom research, the range of tools utilized in its measurement, and describes how neuropsychological concepts are associated with wisdom. The review provides useful recommendations on advancing the field of psychological wisdom research, as well as practical implications for developing wisdom, such as healthy aging.

# Methods

The search was implemented in January of 2016, in four electronic databases: PsycINFO, PsycARTICLES, Web of Science, and MEDLINE (OVID). Studies were included if they specifically described or investigated wisdom as a psychological concept and its neuropsychological correlates including cognition, personality, and social function.



Figure 1. Number of empirical studies investigating wisdom and personality (n=10), cognition (n=22), and social function (n=48) in the psychological literature from 1982-2016.

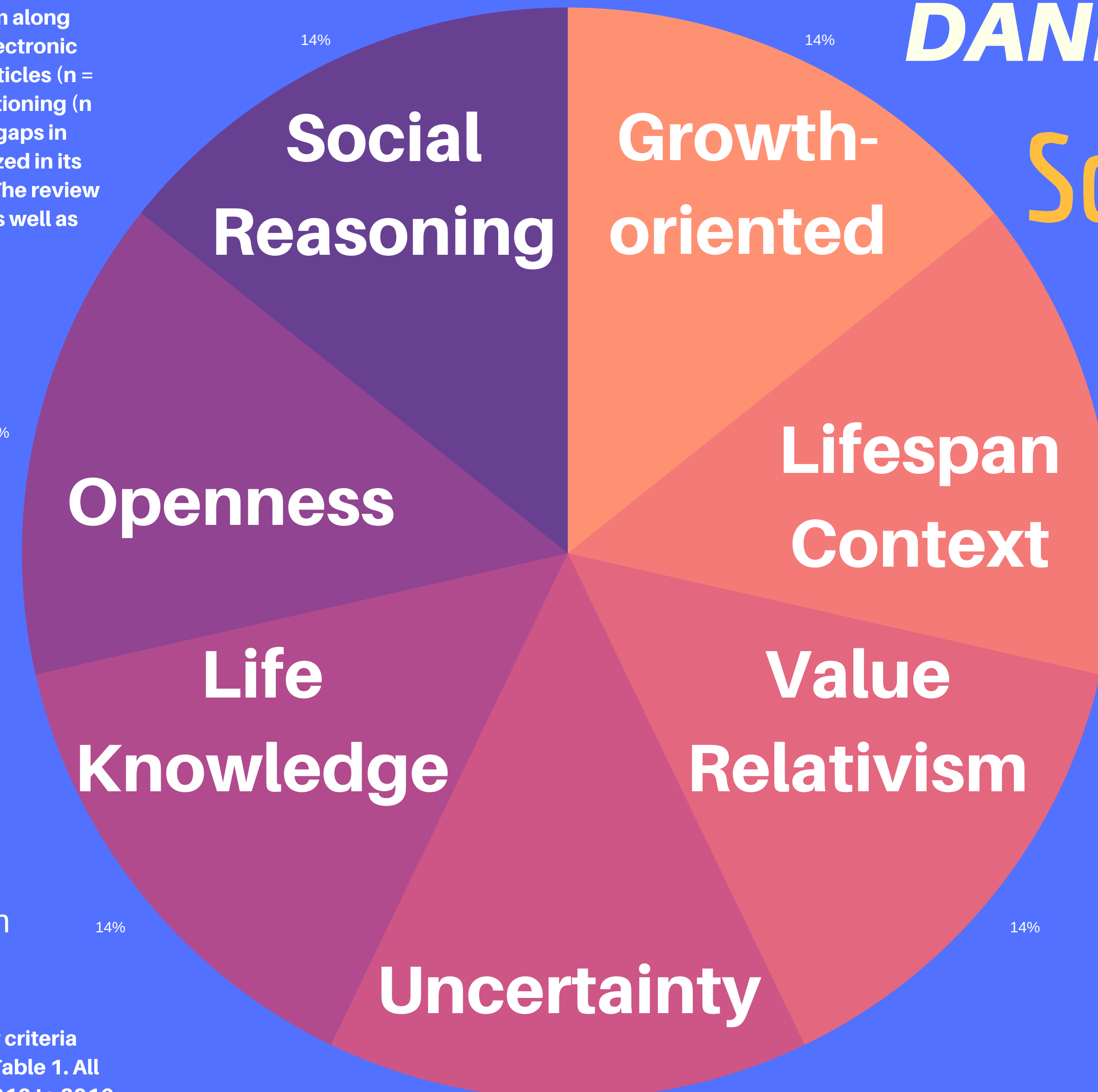
The search conducted in January and February 2016 yielded 74 articles that met the eligibility criteria described above. The general characteristics of articles included in this paper are reported in Table 1. All included articles were published between 1982 and 2016, with 43% (32/74) published from 2010 to 2016. Most of the articles included were empirical studies (78%; 58/74). The majority dealt with social functioning (42/58; 57%). 30% (22/58) of articles were related to cognition, and 14% (10/58) to personality.

# Personality & Wisdom

In summary, according to findings from seminal studies, participants with higher wisdom-related performance scores appear to be open-minded, growth-oriented, creative, and do not appear to demonstrate a conservative and judgmental thinking style. They appear to be interested in understanding the psychological functioning of others, are socially competent, have developed some emotional serenity, and are also oriented towards the well-being of others and society. However, the issue remains that the literature shows it is difficult to discuss the relationship between wisdom and personality because conceptualizations of wisdom greatly differ. For researchers who are investigating personal wisdom (i.e self-oriented), it is a rare and special personality characteristic. For other researchers who study general wisdom (i.e other-oriented), certain personality characteristics are derived from wisdom. As previously mentioned, there have also not been any investigations into the relation between personal and general wisdom. No data is available yet that utilizes a similar measurement paradigm for both types of wisdom. Future research endeavors could also explore the relationship between experiencing wisdom and other positive and negative emotions.

# WISDOM: A MODEL FOR HEALTHY AGING

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# Social Function & Wisdom

Taking into consideration the theoretical and empirical research, a likely relationship is that wisdom can be maintained across the lifespan and older individuals are just as likely to have high wisdom-related knowledge. The studies show however, that regardless of age, the chances of possessing high wisdom is low. A number of questions regarding the beginnings of wisdom also remain. A key question is how exactly does a person develop wisdom. There may also be certain factors that facilitate the development of wisdom-related knowledge such as the level of interaction with different generations and the availability of valued individuals to consult on difficult life dilemmas. Given the common decrease in fluid intelligence and physical strength with age, the results that indicate wisdom has no relationship with increasing age is very promising for older adult health. In fact, some healthy aging studies have suggested that wisdom can serve as a compensatory mechanism for declining cognitive function. Experimental work found positive relations between social reasoning and age in which participants predicted how interpersonal conflicts would unfold. Another study with important implications demonstrated that older adults with relatively low executive functioning were able to offer higher quality advice versus young adults in socially distressing scenarios. While decreasing executive function impairs social and cognitive domains, these results suggest that older adults can still be socially adaptive despite moderate degeneration. These findings therefore indicate that wisdom is not dependent on other cognitive or physical abilities and can persist in the face of declines in each.

# Implications

The results of this scoping review indicate that the study of wisdom is still in its infancy but has gained momentum as a distinct field of research in recent years. All of the included studies varied in terms of conceptualizations of wisdom, methods, participant demographics, and findings. Considering all the empirical conceptualizations, researchers looking for a measure of wisdom should first decide which type of wisdom is most central to their study; personal wisdom, general wisdom, or other-related wisdom.

From reviewing the literature, it is clear that the concept of wisdom has proven to be an insightful topic for psychology. Further research will be necessary to continue the search for clues related to wisdom and healthy aging for older adults. Given that wisdom may not be adequately assessed by standard personality questionnaires, future research on the assessment of wisdom should explore new methods and tests. These other approaches can focus on tasks that explicitly require knowledge and expertise about the self and one's own development, rather than general knowledge about the world and lifespan development. In particular, the development of non-self-report measures of wisdom that do not require extensive coding effort would be beneficial. Other key endeavors include: the identification of social and personality factors and life processes relevant for the ontogeny of wisdom, exploring how often personal and general wisdom simultaneously manifest within an individual, interventions designed to increase wisdom-related knowledge levels, and further investigations into a possible neurobiological framework for wisdom.

# Cognition & Wisdom

In summary, the literature describes key intellectual building blocks for wisdom as life knowledge, value relativism, tolerance for uncertainty, and lifespan contextualism. Different perspectives on wisdom have been proposed; for example, wisdom is not necessarily the possession of cognitive skills or knowledge but a particular attitude towards knowledge, a critical balance between knowing and doubting. If wisdom relies on the acquisition of certain kinds of information, it would make sense to expect that it will increase with age as individuals accumulate life experiences. However, it has also been suggested that wisdom requires cognitive strategies that may decrease across the lifespan. Future research endeavors should focus on investigating the relationship between intellectual capacities and wisdom-related action or motivations to become wise. Increasing decision-making capacity may suggest action, but reasoning about decisions may not always lead to action. One area with potential for future research includes looking at how increasing intellectual capacities may facilitate wise action as well as wise knowledge. Another area to explore is whether wisdom-based intervention programs can be developed to compensate for cognitive-losses in older adults; the development of such interventions could be key to promoting health into later life.