Exploring the Relationship Between Personality and Subjective Cognitive Impairment in Older Adults Without Dementia

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Abstract
Subjective cognitive impairment (SCI) refers to the perception of cognitive impairment that is not detected upon objective testing. Understanding the relationship between SCI and personality traits would influence how SCI is assessed and managed in the older adult population. The purpose of this systematic review was to understand the relationship between the “big five” traits of personality (neuroticism, extraversion, openness, agreeableness, and conscientiousness) and SCI in older adults without dementia. A total of fifteen articles were included in the review.

The evidence was reviewed overall and the most notable finding was that a high level of SCI was found to be positively associated with neuroticism. Future research needs to determine the reason for the relationship between neuroticism and SCI and whether individuals with a high level of neuroticism are better at recognizing their cognitive decline that cannot be measured objectively or more apt to complain about their memory when there is not actual cognitive impairment.

SCI
Subjective cognitive impairment (SCI) is defined as an individual perceiving their cognitive performance to be less than average without any objective cognitive impairment detected upon testing. Some researchers argue that SCI indicates actual cognitive impairment in some people that cannot yet be detected on diagnostic tests.

However, at this point SCI is not well defined and is not used effectively to diagnose preclinical Alzheimer’s disease (AD). A further understanding of SCI may be useful in the early detection of dementia so treatment can be instituted before permanent cognitive impairment occurs.

Personality
The “big five” personality traits
Neuroticism – extent to which an individual is anxious or worried
Extraversion – extent to which an individual is outgoing or friendly
Openness – extent to which an individual is curious or creative
Agreeableness – extent to which an individual is trusting or supportive
Conscientiousness – extent to which an individual is organized or motivated

Objective
The goal of the review of literature is to answer the question, ‘In older adults without dementia, is there a relationship between personality and SCI?’

Significance to Field
Understanding the relationship between SCI and personality can help nurses identify earlier those patients at risk for cognitive decline. Interventions could then be implemented, such as cognitive training that has shown to have lasting benefits for individuals reporting SCI. These interventions could work to reduce cognition decline in individuals with SCI or individuals at risk for dementia.

Significance to Society
With an understanding of SCI, dementia may be able to be detected earlier and intervention strategies can be implemented to decrease cognitive decline.

Methods

<table>
<thead>
<tr>
<th>Databases Searched</th>
<th>Search Terms</th>
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<tr>
<td>Web of Science</td>
<td>(personality OR neuroticism OR neurocognitive) AND (“subjective cognitive” OR “subjective memory” OR “cognitive complaints” OR “memory complaints” OR “cognitive concerns” OR “memory concerns” OR “cognitive difficulties” OR “memory difficulties” OR “cognitive failures” OR “memory failures” OR “perceived forgetfulness” OR “perceived cognitive functioning”)</td>
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<tr>
<td>Pubmed</td>
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<td>CINAHL</td>
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660 articles retrieved
580 Web of Science
47 Pubmed
33 CINAHL

618 articles excluded by title and abstract
12 duplicates
606 not related to topic

42 articles retrieved in full text for evaluation
35 Web of Science
7 Pubmed
0 CINAHL

28 articles excluded after full text evaluation
26 off topic
2 only abstract

1 article added in after searching reference lists of articles selected

15 articles selected for inclusion in the systematic review
13 Web of Science
1 Pubmed
1 other source

Weight of Evidence Framework
Each article was rated for methodological quality, methodological relevance, and topic relevance.

Methodological quality evaluates the overall quality of the study. Methodological relevance evaluates the study design’s appropriateness to answer the review question. Topic relevance evaluates the study’s focus to answer the review’s question.

Ten of the studies received a high on methodological quality and five received a medium. Thirteen of the studies received a high on topic relevance and two received a medium. Nine of the studies received a high on methodological relevance and six received a medium.

Results
The most notable finding was that a high level of SCI was found to be positively associated with neuroticism.

Additionally, just over half of the studies found a negative association between a higher level of extraversion and SCI, a majority of the studies found no relationship between openness and SCI, a majority of the studies found no relationship between agreeableness and SCI, and half of the studies found a negative relationship between higher conscientiousness and SCI.

The results did not differ greatly when comparing the different study designs and characteristics.

Discussion
Higher neuroticism may be associated with higher SCI because these individuals report normal cognitive changes as cognitive impairment.

However, it is also possible that individuals high in neuroticism are more hyper-aware of actual cognitive impairment. A high level of neuroticism may therefore be beneficial to these individuals as they take more appropriate action when they sense that something is wrong.

Conclusion
Overall, a higher level of neuroticism was found to be consistently associated with either the presence of SCI or a higher level of SCI.

The reason for this relationship is still unclear and needs to be studied further to determine whether individuals with a high level of neuroticism are better at recognizing their cognitive decline that can’t be measured objectively or more apt to complain about their memory when there is not actual cognitive impairment.

Implementing a personality test to recognize neuroticism in individuals could help nurses screen which individuals will be more likely to report SCI and which individuals may not.

Implementing cognitive training for these individuals could help improve their subjective and objective cognition and may have lasting beneficial effects.

Future Research
The reason for the relationship between a high level of neuroticism and high level of SCI needs to be further studied.

SCI measurements need to be further studied to determine the best way to accurately measure the level of SCI of an individual.

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