Although the role of psychosocial factors in promoting resilience has been well-characterized, the impact of neurocognitive factors (e.g., attention, working memory, and impulse control) has been relatively understudied. Here, we present neurocognitive and psychiatric profiles of several individuals from an underserved urban youth population who have all experienced varying levels of poverty and trauma. Each individual was administered the CYRM; questionnaires on trauma exposure, self-perception, goals, and family/community involvement and structure, modules from a structured psychiatric interview; and a battery of neurocognitive measures.

These case examples illustrate several interesting points regarding the relationship of resilience (as measured by CYRM scores) and neurocognitive variables.

- CYRM scores do not appear strongly related to IQ in this small sample although it is likely that this relationship could emerge with the addition of more participants.
- Second, CYRM scores appear to be positively related to measures of processing speed/reaction time (Flanker and SDMT).
- There is a negative correlation between CYRM scores and number of psychiatric symptoms whereas the relationship in males is less clear with regard to externalizing symptoms.

Similarly, the relationship between psychiatric symptoms and CYRM scores may also differ by sex with females showing a negative relationship between CYRM scores and number of psychiatric symptoms whereas the relationship in males is less clear with regard to externalizing symptoms.

Because these observations involve a small number of cases, caution is necessary when interpreting these data. Nevertheless, these findings provide interesting initial data that can be used to guide future investigations. It will also be important to investigate other cognitive domains to see if the present correlations between resilience and neurocognitive performance continue to be observed. In addition, the possible contribution of sex differences with regard to risk taking and psychopathology is an area that deserves future investigation as these variables may have significant implications for intervention.

The Keeptrack task involves working memory, inhibition, and semantic processing. On each trial, participants are asked to recall a set of four words (Load 1), or six words (Load 2), or eight words (Load 3), or four words (Load 4) presented that belong to the target categories. The participant is then asked to recall the last two words of each load. If the participant correctly recalls both words in the target category, the trial terminates when the central arrow is encountered. If the participant incorrectly recalls both words in the target category, the trial terminates when the central arrow is encountered. The graph shows a positive relationship between IQ and Keeptrack performance in both resilient and non-resilient youth.

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The Flanker task is a measure of reaction time and cognitive inhibition. In this task, a central arrow appears with either same arrow or different arrows. The participant is asked to press a key corresponding to the direction of the arrow as quickly and accurately as possible except when the central arrow had an X next to it, in which case no key press was necessary. The graph shows a negative correlation between reaction time on the Flanker and scores on the CYRM (i.e., faster reaction time is related to higher CYRM scores).

REFERENCES


