UNDERSTANDING WELL- AND ILL-STRUCTURED EVERYDAY PROBLEM SOLVING ABILITY IN RENAL TRANSPLANT RECIPIENTS

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BACKGROUND: Research by our lab has shown associations between everyday problem solving (EPS) and functional outcomes including medication adherence and employment following renal transplant. Other research has also shown associations between well-structured EPS tasks (requiring specific, discrete, answers) and measures of crystallized and fluid intelligence in older adults. The present preliminary analyses examined both well- and ill-structured (requiring spontaneous generation of safe/effective solutions) EPS performance in relation to crystallized and fluid intelligence in renal transplant recipients.

METHODS: Renal transplant recipients (n=129; age: 22-81) completed ill- and well-structured EPS tasks (the EPS Test and the ECB-KQ, respectively), an Instrumental Activities of Daily Living (IADL) questionnaire, and the K-BIT-II (to estimate fluid and crystallized intelligence).

RESULTS: Correlational data indicated a relationship between fluid intelligence and ability to perform IADLs ($p < .05$; 2-tailed). Regression analyses revealed that beyond English as a second language status, and education, fluid intelligence was predictive of both well- and ill-structured EPS performance (well-structured: $\Delta R2 = .082$, F=4.94, illstructured: $p < .01$; $\Delta R2 = .037$, F=4.64, $p < .05$). By contrast, crystallized intelligence was only related to well-structured EPS performance ($\Delta R2 = .047$, F=2.76, $p < .05$).

CONCLUSION: EPS (specifically ill-structured) ability and IADL performance are more strongly related to fluid, than crystallized intelligence. As a result, estimation of fluid intelligence via a relatively short matrices task may provide insight into EPS ability, IADL performance, and, by association, other outcomes of importance (e.g. medication adherence, employment). Information gathered through assessment of fluid intelligence, as well as psychosocial factors (e.g. depression, anxiety) which have previously been related to medication adherence and other outcomes, may aid in development of treatment plans aimed at improving outcomes for individuals post-transplant.