Is there Implicit Bias in Kidney Transplant Evaluations?

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Background: Psychosocial assessment is a mandatory component for kidney transplant recipient evaluation. There is a lack of objective validated measures to quantify psychosocial risk. Utilizing an inclusive formative process, we developed the "Resourcefulness Index" quantitatively measuring i) caregiver support, ii) transportation, iii) health literacy, and iv) finances. Each of the 4 domains receive a score from 0-3 for a collective score range of 0 (best) to 12 (worst). The aim of this study was to assess the association between the Resourcefulness Index and a variety of post-transplant outcomes perceived to be associated with low psychosocial function.

Methods: Resourcefulness Index scores were measured 1-6 months prior to transplant by certified Social Workers on 397 kidney transplant recipients performed between June 2019 and June 2021. Outcomes were measured during the first year post-transplant. Results were reported as means ± SD. Univariate and multivariable analyses were performed to measure associations between Resourcefulness Index scores and outcome measures.

Results: Within the 397 patients, the mean Resourcefulness Index was 2.2 ± 2.0. We classified 1 SD above the mean as the high-risk cohort. Accordingly, the score distribution was 0-3 (low-risk, n=301) and ≥4 (high-risk, n=96). A high Resourcefulness Index score was significantly associated with the following baseline characteristics: younger age (p=0.04), African American race (p=0.0001), high school or lower education (p<0.0001), lack of pre-emptive referral (p=0.002), longer dialysis vintage (p=0.04), and residing in an area with higher deprivation index (p=0.01). A high Resourcefulness Index was not significantly associated with the following post-transplant outcome measures: 30-day readmission (p=1.0), graft rejection (0.5), coordinator touches (p=0.8), missed clinic appointments (p=0.6), tacrolimus variability (p=0.9), graft loss (p=0.8), or death (p=0.8). In subgroup analysis, none of the 4 Resourcefulness Index domains individually were associated with adverse post-transplant outcomes at 1-year post-transplant.

Conclusions: The Resourcefulness Index accurately identifies a patient population with characteristics that are associated with adverse psychosocial outcomes. Patients with a poor Resourcefulness Index, however, demonstrated comparable post-transplant outcomes during the first year post-transplant. These results suggest that there is likely implicit bias present in the transplant psychosocial risk assessment that may limit access to transplant in vulnerable populations, despite evidence suggesting comparable 1-year outcomes.