

Chapter 6 - Demographics

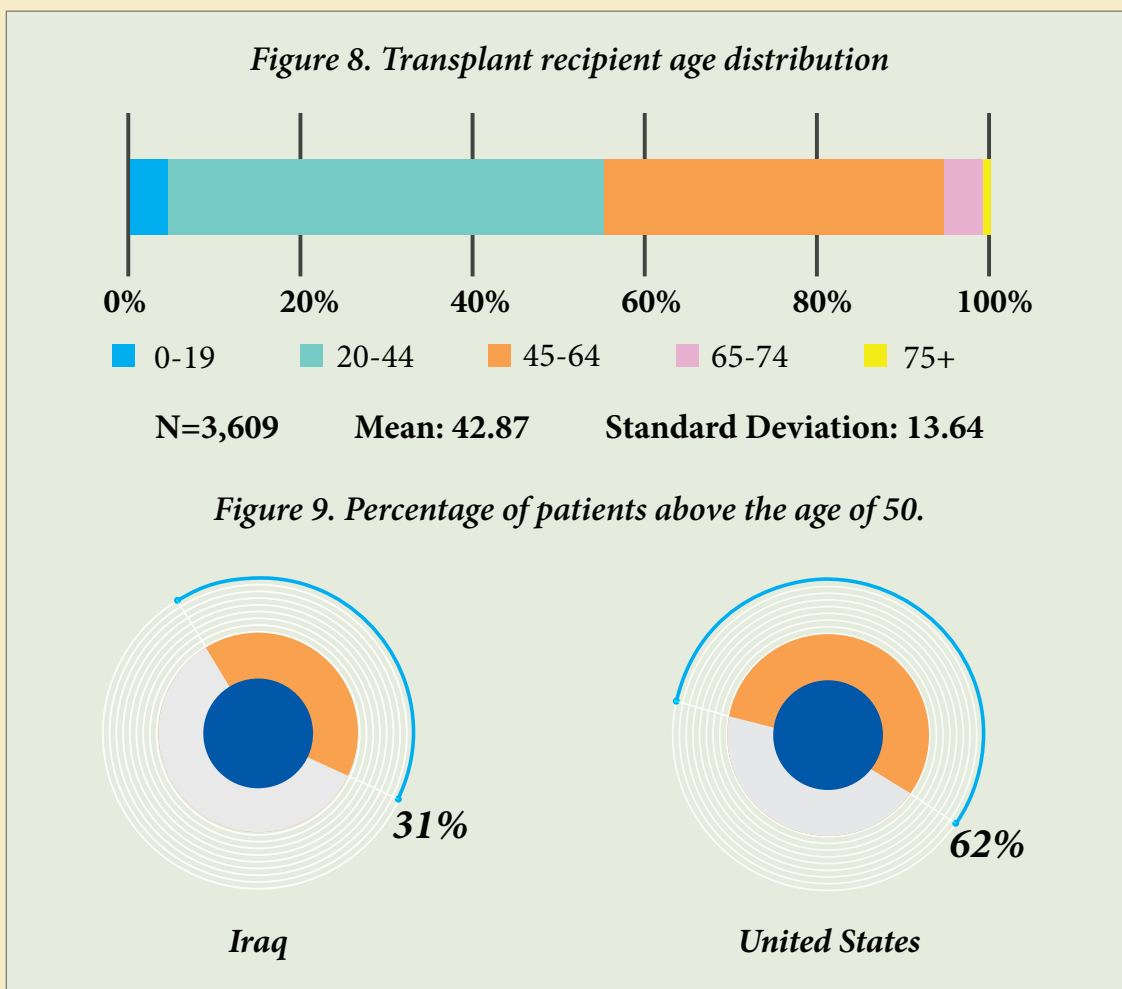
الخصائص الديمغرافية

IRTR patient records were analyzed by demographic variables, including age, marital status, educational status, and gender. These analyses provide insights into the demographic profile of the patient population who have received kidney transplants in the country. Later in this chapter, the modified definition for prevalent patients will be used for all transplants performed prior to 2018, and the incident cohort identified for 2018-2019 will be compared to it, in order to detect any time window changes in the recent kidney transplant cohort relative to the historical prevalent population.

When appropriate, the findings of this study will be contextualized utilizing data from outside sources. These will be notated in footnotes.

Age

A majority of transplant recipients (69%) in Iraq were below age 51, reflecting a patient demographic significantly younger than found in studies of other national populations. For example, in 2019, 61% of transplant recipients in the United States were older than 50, while a cohort study of European recipients from 2005-2018 reported a median age of 52.3 compared to 42.2 among the IRTR dataset.¹ This younger patient demographic is to be expected in Iraq given the comparatively lower life-expectancies in the country. Age distributions were fairly stable across other demographic variables, with the exception of gender. Further analysis found that 8% of the female transplant population was under the age of 20, compared to only 3.8% of male recipients. Figure 4 presents the age distribution of transplant recipients in Iraq, while figure 5 provides a visual comparison of the dramatic difference in patient age distribution in Iraq and the United States.



¹ Percentage of US recipients over the age of 50 calculated using national data from the U.S. Department of Health and Human Services. Organ Procurement and Transplantation Network (2019) National Data. *U.S. Department of Health and Human Services*. Retrieved from <https://optn.transplant.hrsa.gov/data/view-data-reports/national-data/#>. European transplant recipient age statistics taken from Lorent, M., Foucher, Y., Kerleau, K., et. al. (2019). The EKITE network (epidemiology in kidney transplantation-a European validated database): an initiative epidemiological and translational European collaborative research. *BMC nephrology*, 20(1), 365.

Marital Status

The analysis found that the vast majority of patients were married. Male patients were about 30% more likely to be married than female transplant recipients. When disaggregated by age grouping, marriage rates are even more pronounced, with 98% of male recipients aged 45+ reportedly married, compared to 85% of female patients in the same age group. Comparatively speaking, females between the ages of 20-44 were much more likely to be single, divorced, separated, or widowed (57%). Figure 10 reports national data on marital status while Figure 11 reports marital status data by gender and age category.

Figure 10. Patients by marital status and gender.

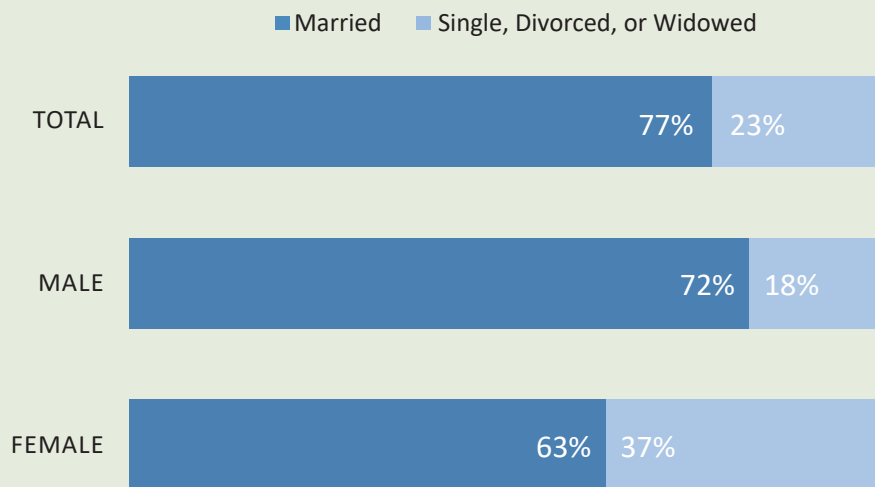
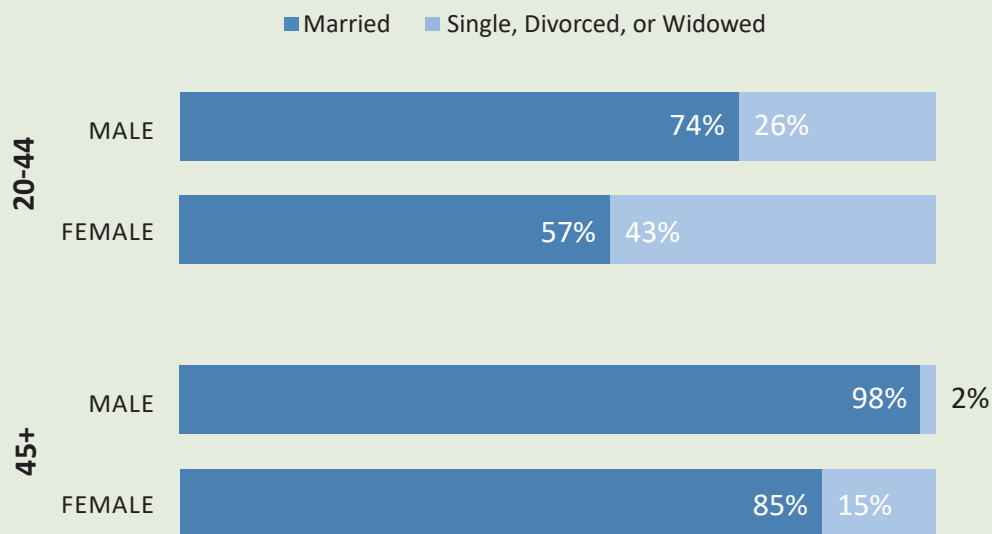


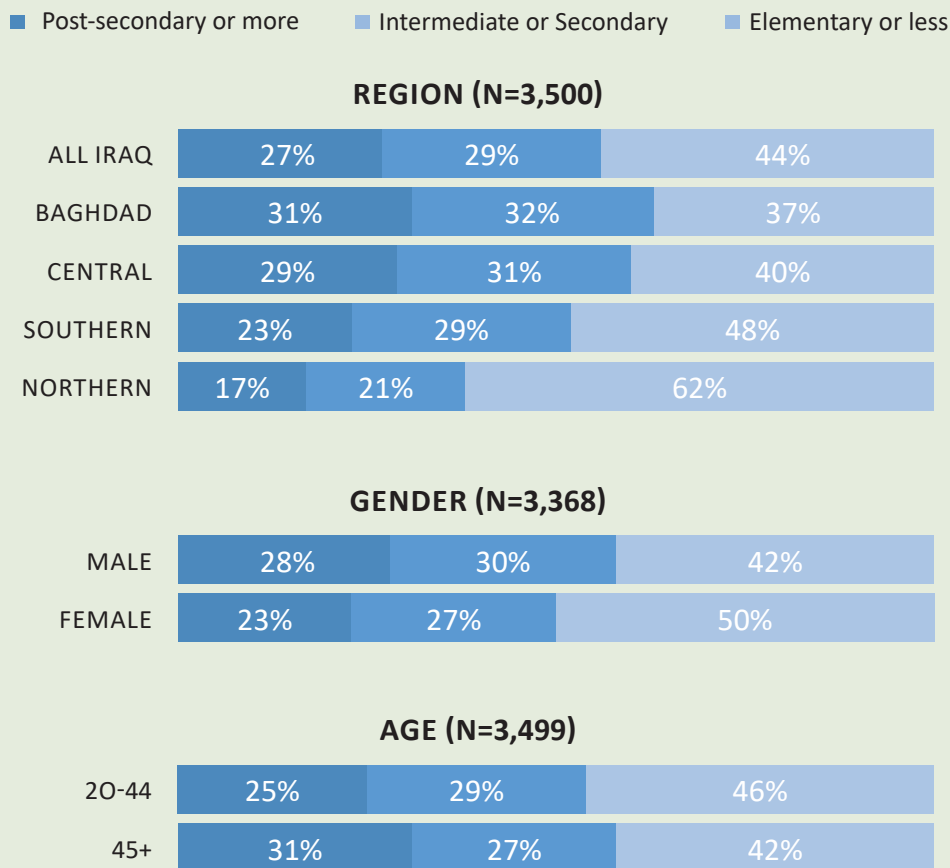
Figure 11. Patients by marital status, gender, and age



Education

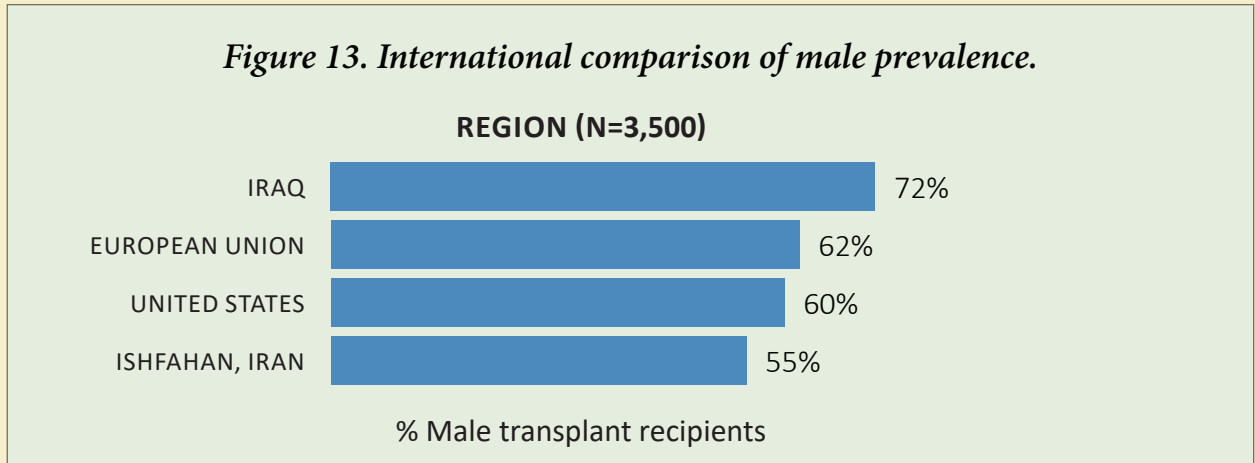
Iraq's transplant population was generally more educated than the Iraqi population. While only 9% of Iraqis have any post-secondary education, 27% of transplant recipients had college, professional, or advanced degrees. Figure 12 reports educational data among different demographic and geographic groupings. Female transplant recipients were 20% more likely to have an elementary education or less compared to male recipients. Patients between 20-44 years old were less likely to have post-secondary education or more. Meanwhile, findings of educational level by region found that patients in Baghdad had the highest level of formal education (31% post-secondary or more), while patients in the North region generally had less formal education (62% had an elementary education or less, compared to 37% in Baghdad).

Figure 12. Patient education levels by region, gender, and age.

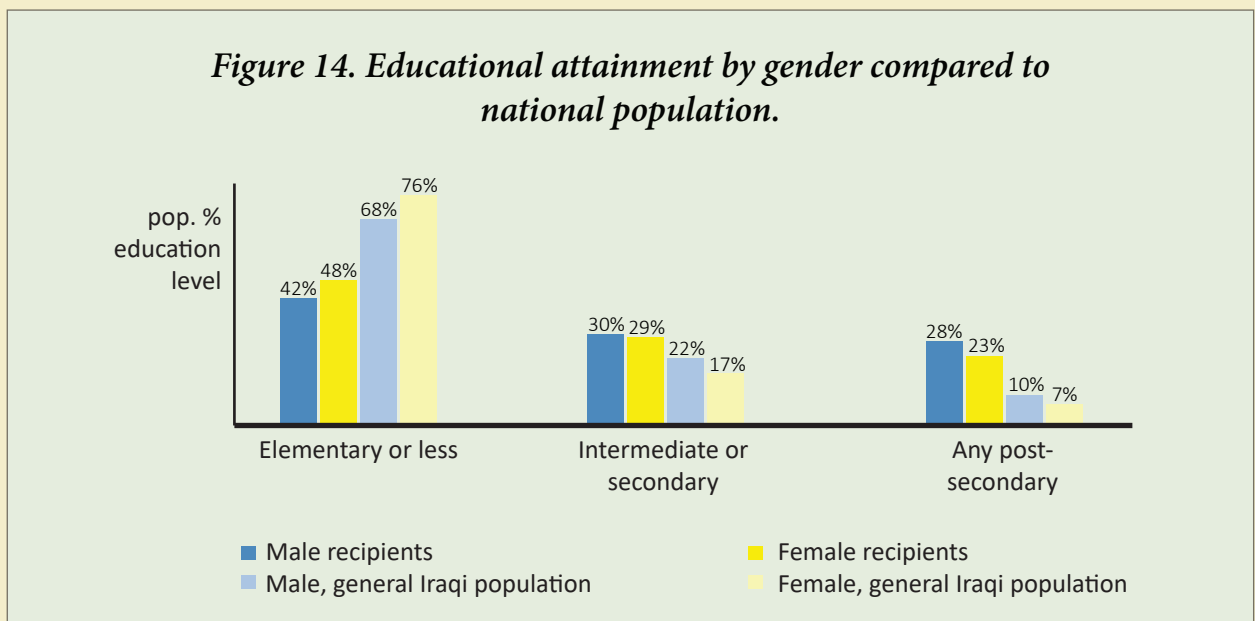


Gender

As reported elsewhere in this report, transplant recipients were predominantly male (72.8%) with little difference across regions of Iraq. This prevalence was higher than reported in other countries, as shown in Figure 13.



Female recipients were relatively more educated than men compared to the general Iraqi population. Female recipients were 3.3 times more likely to have more than a secondary education compared to the general Iraqi female population. This difference was even more pronounced among single female patients, who were nearly 4 times as likely to have a post-secondary degree compared to the general population. Figure 14 highlights these differences.



Incidence Comparison

An analysis was conducted to determine differences between the 2018-2019 incident transplant population (N=407) and recipients who had their procedure before 2018 (N=3,293). The descriptive analysis revealed many consistencies across incident and pre-2018 prevalent patients (Figure 15). Gender, educational level, and marital status were each fairly similar across both groups, while age distributions and regionality showed the greatest differences.

The largest shift in age distribution between incident and pre-2018 patients were observed among patients below the age of 45. There was a 6.5% increase in this group among the incident patients as compared to pre-2018 levels.

There were also variations in regional distributions of patient populations, particularly with large declines in the North region and increases in the Central and South regions. These changes likely are connected to reporting biases, with significant underreporting of incident patients occurring in Baghdad and the Kurdistan provinces.

