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Emission Of Greenhouse Gases; Way To Reduce Carbon Footprint In Dialysis Units.

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Objectives : India has become the world's third-largest producer of greenhouse gases (GHGs). In 2021, it emitted 3.9 billion metric tons of carbon dioxide equivalent which accounts for 7% of the global total. Around 175,000 individuals receive renal dialysis, with 129 cases per million people in India. However, many healthcare professionals (HPs) may not be aware of the enormous environmental impact of haemodialysis, and there are opportunities for improvement. In this study, we assessed the knowledge level of HPs and educated them about methods to reduce the carbon footprint of a dialysis unit.
Methods : A sample of 32 HPs working at the Dialysis Centre, Baba Hospital, Lucknow, UP, India, were selected by convenient sampling method. Research design was quantitative pre-experimental "one group pre and post-test design". The study began by assessing HPs' knowledge of methods to reduce carbon footprint using structured questionnaires (pre-test). A structured teaching programme (STP) was then conducted for HPs, and after 7 days, the same questionnaires were distributed to the sample (post-test). The data collected were analyzed and results interpreted.
Results : Most HPs were aged between 31 to 40 years, with 59.37% male and 40.63% female. Most of the HPs were nursing officers (81.25%) than Dialysis Technicians (18.75%). The pre-test showed that 17 (53.13%) HPs had inadequate knowledge, 15 (46.87%) had moderately adequate knowledge, and none had adequate knowledge. In the post-test, 11 (34.37%) had moderately adequate knowledge, 21 (65.63%) had adequate knowledge, and no one had inadequate knowledge. The difference in mean value between the pre-test and post-test total knowledge was 14.84 with a t value 18.05, which was statistically significant at $P<0.05$ level.
Conclusions : This study shows a significant increase in HP's level of knowledge regarding methods to reduce carbon footprint in the Dialysis unit after STP, which explored the importance of improving awareness on "green or eco-dialysis" practices.