

RESEARCH PEARLS | FEDU PEARL #13

In our series “Research Pearls” we are providing first-hand insights into our dynamic and powerful diaries research. In this and the following edition we are focusing on the energy component of the research, more specifically on the energy usage of our respondents regarding lighting. We will look at the different light sources that are used and how usage varies among different age groups and income levels.

Let there be light

The FEDU research has provided us with a substantial amount of data on lighting usage. Expressed in figures, more than 6000¹ interviews have recorded which light sources people have used over a two-week period.

The graph below provides us with details on the different sources. As can be observed, “kerosene” is the most frequently reported light source. In about one out of two (48%) interviews, people report to have used kerosene as a light source. The second most often reported light source is “grid” (30%), followed by “solar energy”, as the third most common light source (15%). In 2% of the interviews, the respondents reported to not use any form of artificial light. Regarding multiple source usage, just 10% of the respondents stated that they use more than one light source, e.g. both grid and kerosene or both grid and solar.

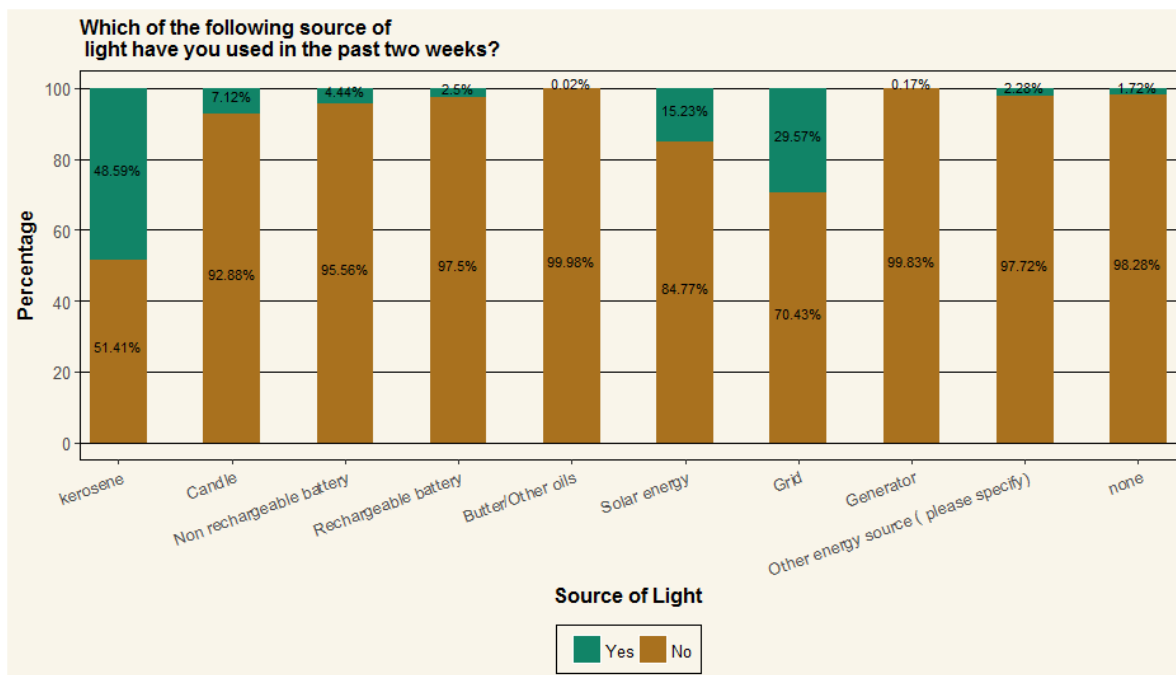


Figure 1: Overview of light sources used for entire sample

Interestingly enough, the type of light sources used varies greatly among different age groups. Younger respondents are more likely to use grid, older more likely to use kerosene.

Within the younger age groups (18-24 and 25-34) kerosene was indicated in 42% of the interviews. As compared to this, within the oldest age group kerosene usage was at 60%, against 48% within the entire sample.

Regarding grid, 36% within the younger age groups reported its usage, compared to 20% within the oldest age group and 30% within the overall sample.

Solar usage appears the same across age groups (in 15% of the interviews among youngest two groups, 16% among oldest age group and 15% among the entire sample).

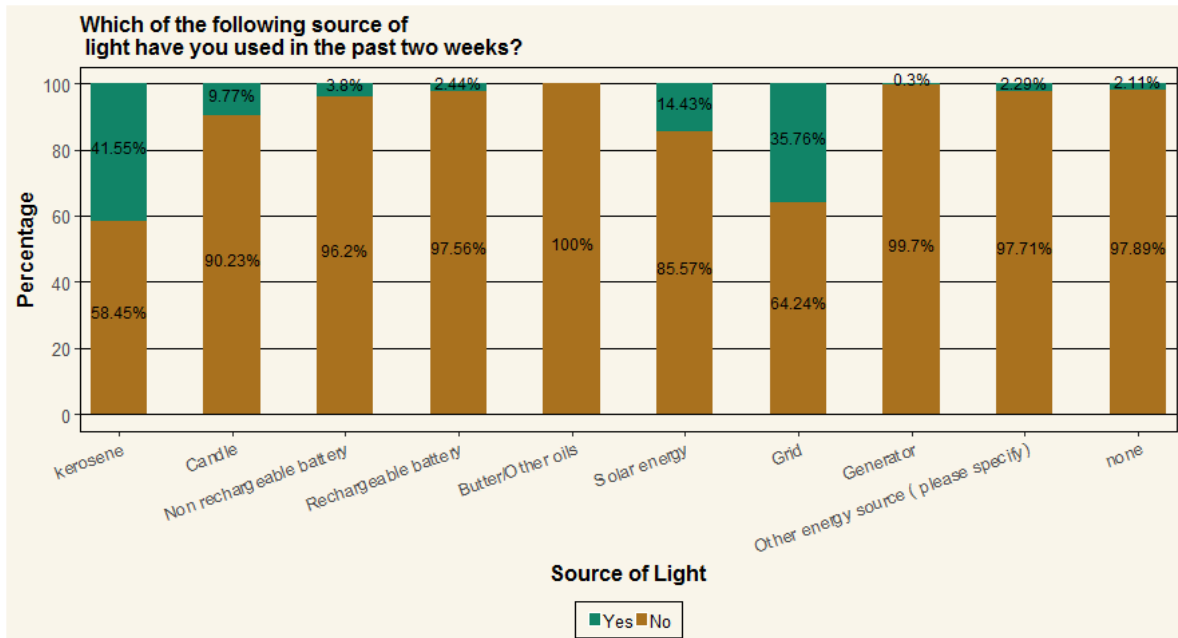


Figure 2: Overview light sources used by 2 youngest age groups

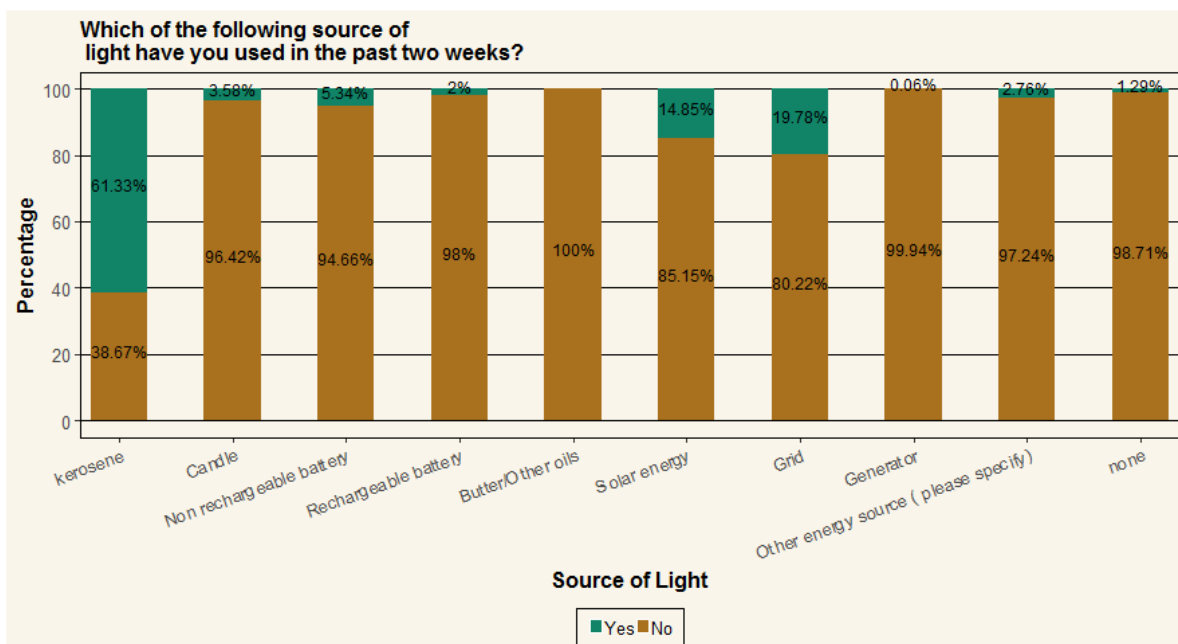


Figure 3: Overview light sources used by oldest age groups

When looking at the distribution of light sources used over age groups in more detail, we see that within the youngest age group (18-24) kerosene usage is practically the same as the average across this population, but significantly higher (at 47%) as compared to the following age group (25-34), where usage is at its lowest (38%).

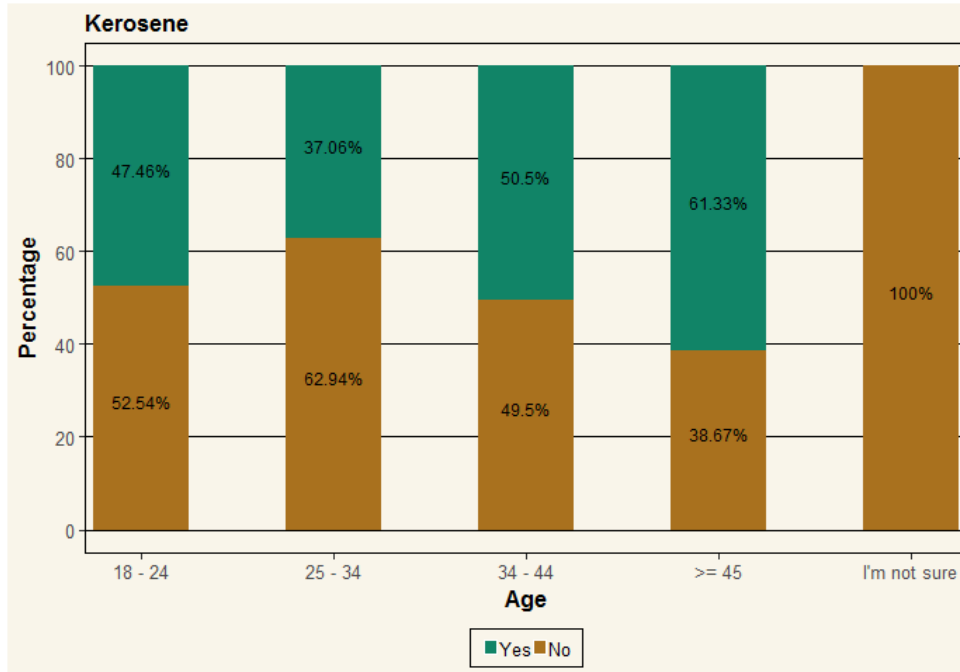


Figure 4: Kerosene usage according to age groups

Concerning grid usage as a light source, again, the age group 25-34 is distinct from the other groups, featuring the most cases reported on grid usage (40%), while the youngest age group has a lower usage (30%), which is the same as the average across all age groups.

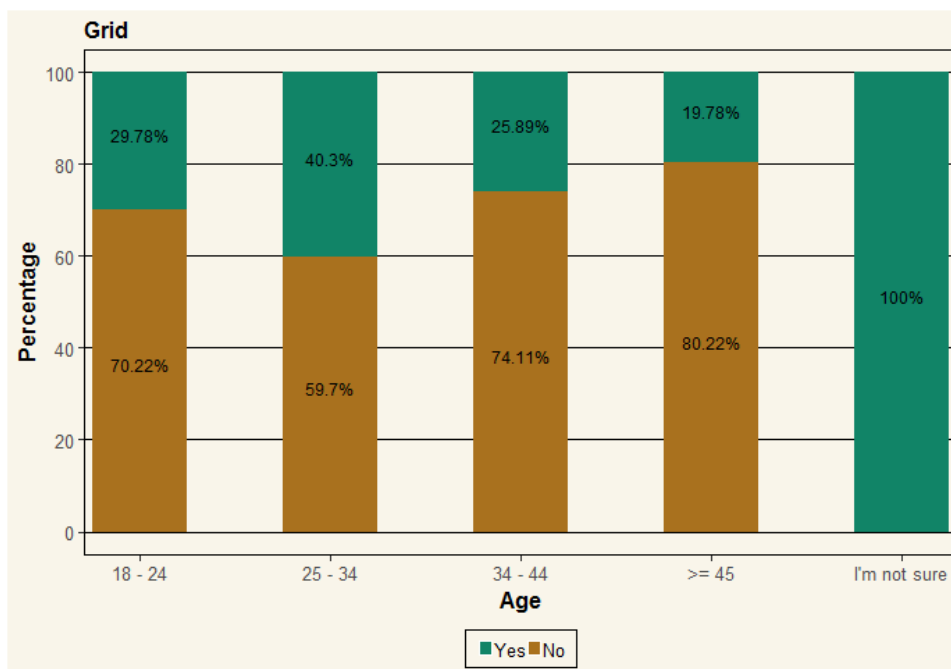


Figure 5: Grid usage according to age group

Solar usage is practically the same across all age groups, with only the very youngest group having a lower usage (13%), while the other three age groups all indicated 16% usage each.

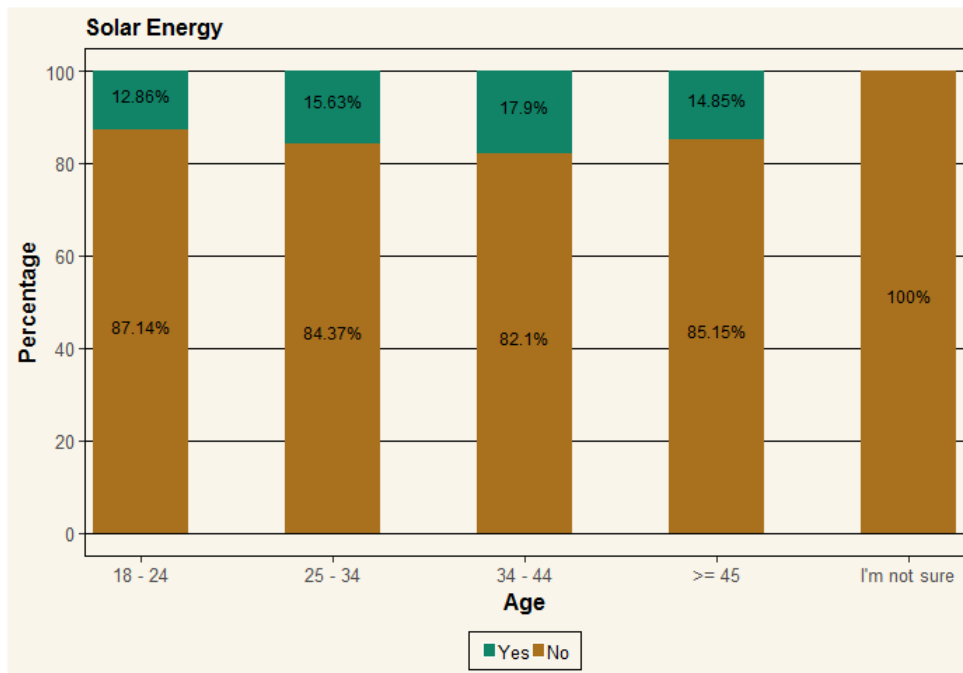


Figure 6: Solar usage according to age group

Apart from age, we see a strong variation according to wealth levels (PPI scores). The lowest PPI scores (the bar at the far left on the graph) use considerably more kerosene, but less grid. Usage of solar appears to be most common for the middle wealth band, indicated as “upper poor” (people with a 41 to 60 PPI score). The ultra poor don’t use solar at all, while the wealthiest also indicated practically no usage (1%).

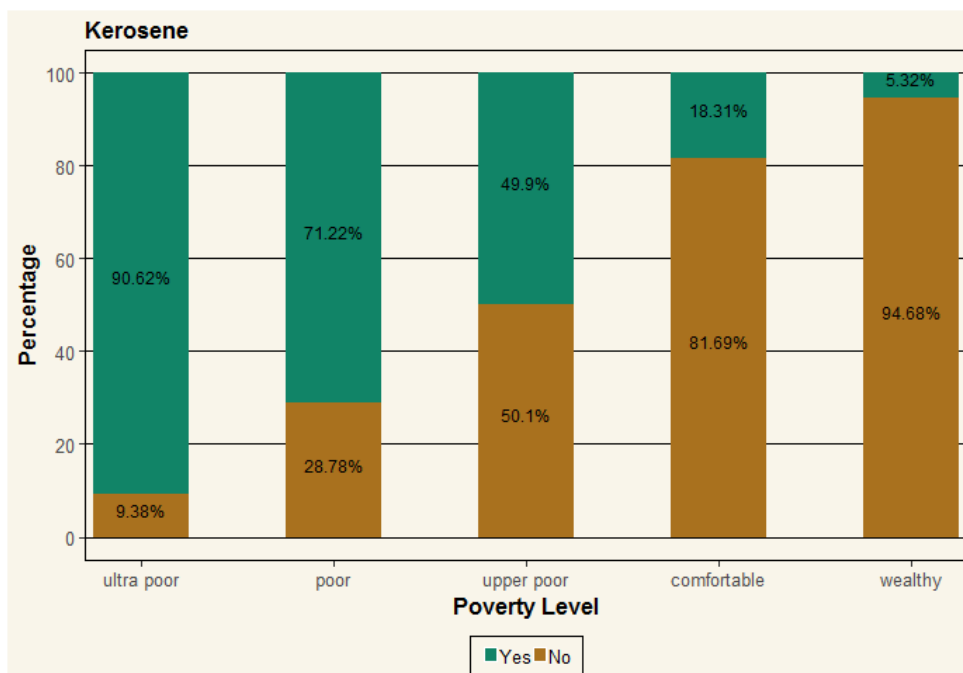


Figure 7: Kerosene usage according to wealth bands

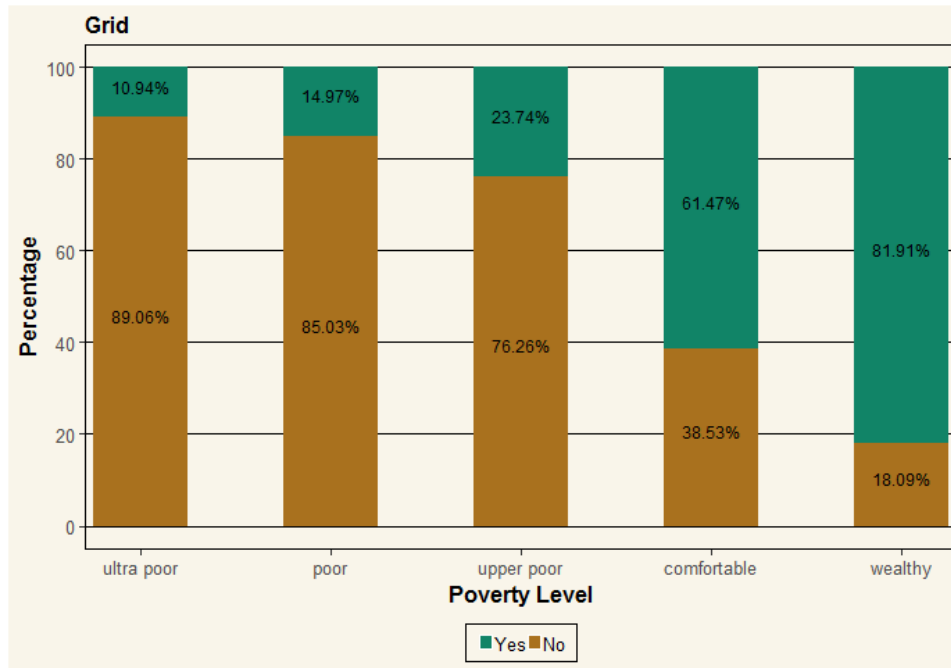


Figure 8: Grid usage according to wealth bands

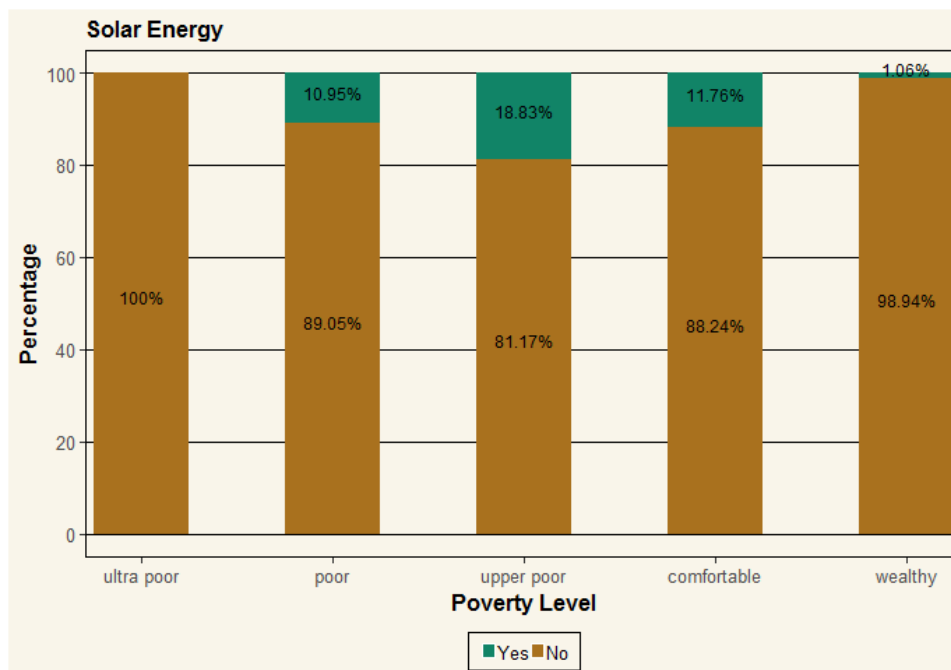


Figure 9: Solar usage according to wealth bands

Implications for energy companies

The above findings revealed that energy usage varies not only greatly among older and younger age groups, but also among wealthier and poorer people. Hence, it is suggested that communication is tailored to the characteristics, behaviours and needs of the different groups. The results on access to solar for example, illustrated that usage is similar across the age bands, apart from the youngest group (18 to 24). Accordingly, an increased focus might be needed to attract these future users.

The wealthier groups also display a low usage of solar. However, it is assumed that this is partly because they are mostly using grid and therefore probably don't need additional light sources. The lowest wealth band (named "ultra poor") and the second lowest wealth band ("poor") have very high usage of kerosene (91% and 69% respectively), while their usage of solar is at 0% and 13% only. Obviously, here lies a substantial untapped market. What these age groups report as preferences and challenges will need to be further explored. Some of the data is available within the FEDU data set. Feel free to dig into the data via the L-IFT data portal: www.lift-fedu.com



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