

# Role of Socioeconomic Status in Malnutrition in Paediatric Oncology Patients in Government Hospitals in India

Anju Morarka<sup>1</sup>, Sripriya Venkiteswaran<sup>2</sup>

<sup>1</sup>Cuddles Foundation, Research, Knowledge Management and Impact, Mumbai, India

<sup>2</sup>Cuddles Foundation, Cuddles Institute of Clinical Nutrition (CICN), Mumbai, India



## Background

Malnutrition at diagnosis in paediatric oncology patients can result in poor outcomes and treatment abandonment. Children from lower socioeconomic statuses (SES) are at a higher risk of being malnourished and therefore, Cuddles Foundation (CF) supports them by providing nutritional aid and supplements.

## Objective

This study explores the association between SES and nutritional status (NS) in paediatric oncology patients in government hospitals in India.

## Methods

Self-reported data of CF beneficiaries across 23 hospitals were collected in June 2021 and beneficiaries were categorised into different SES groups basis three parameters; total household income of all earning members, education level and occupation of the head of household. The Kuppuswamy scale, an established tool used to determine SES in hospital patients in India, was used. The beneficiary's NS at diagnosis available on the FoodHeals™ app was then correlated to their SES. The NS was determined using MUAC or BMI for age indices and beneficiaries were then categorised as undernourished, well-nourished, or overnourished.

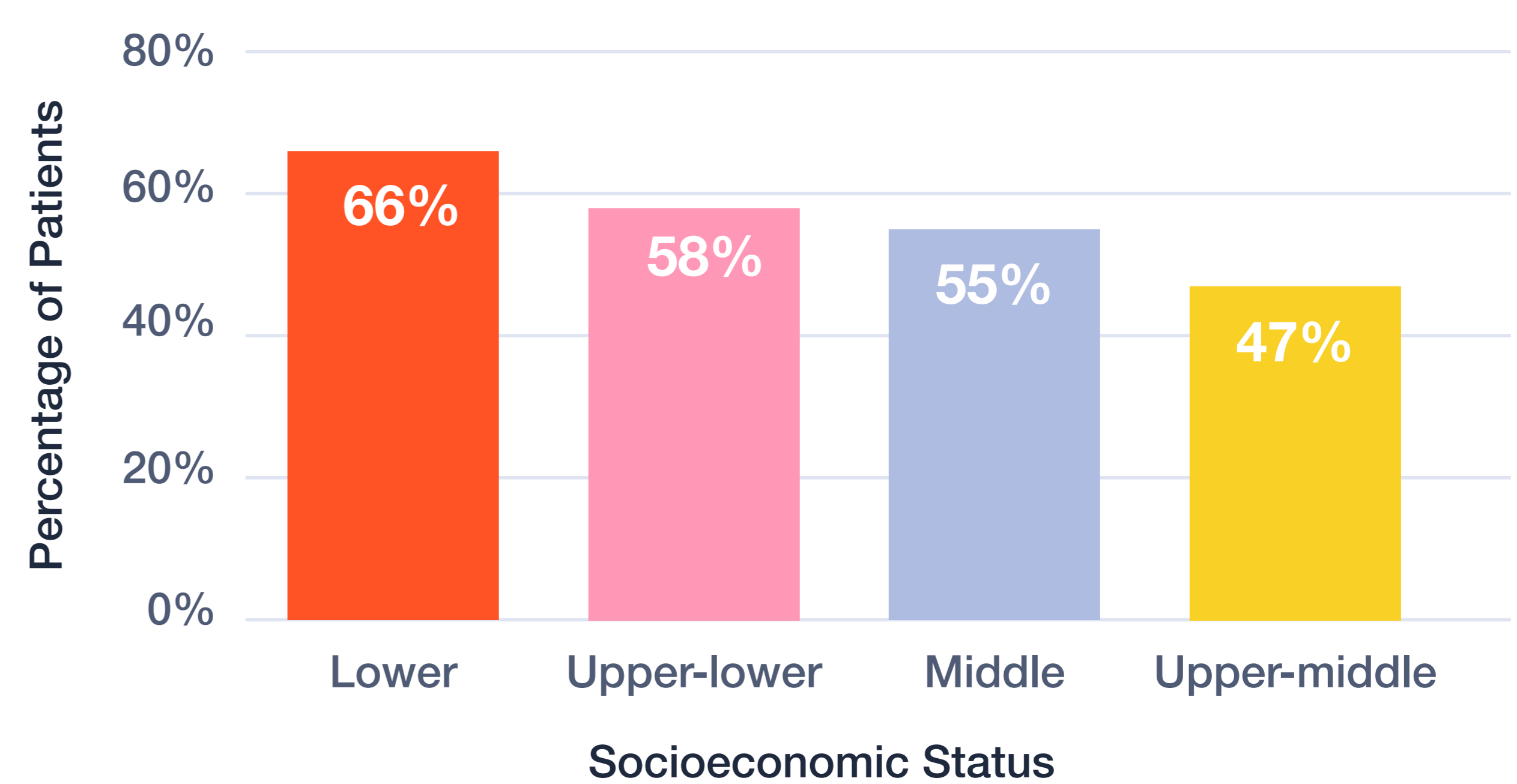
## Results

A total of 667 patients participated in this study. The majority of beneficiaries (75%) were categorised into the lower and upper-lower SES.

With regard to NS, our findings indicate that patients in the lower SES category had the highest percentage of undernourishment (66%) as compared to the upper-lower (58%), middle (55%) and upper-middle classes (47%).

Figure 2

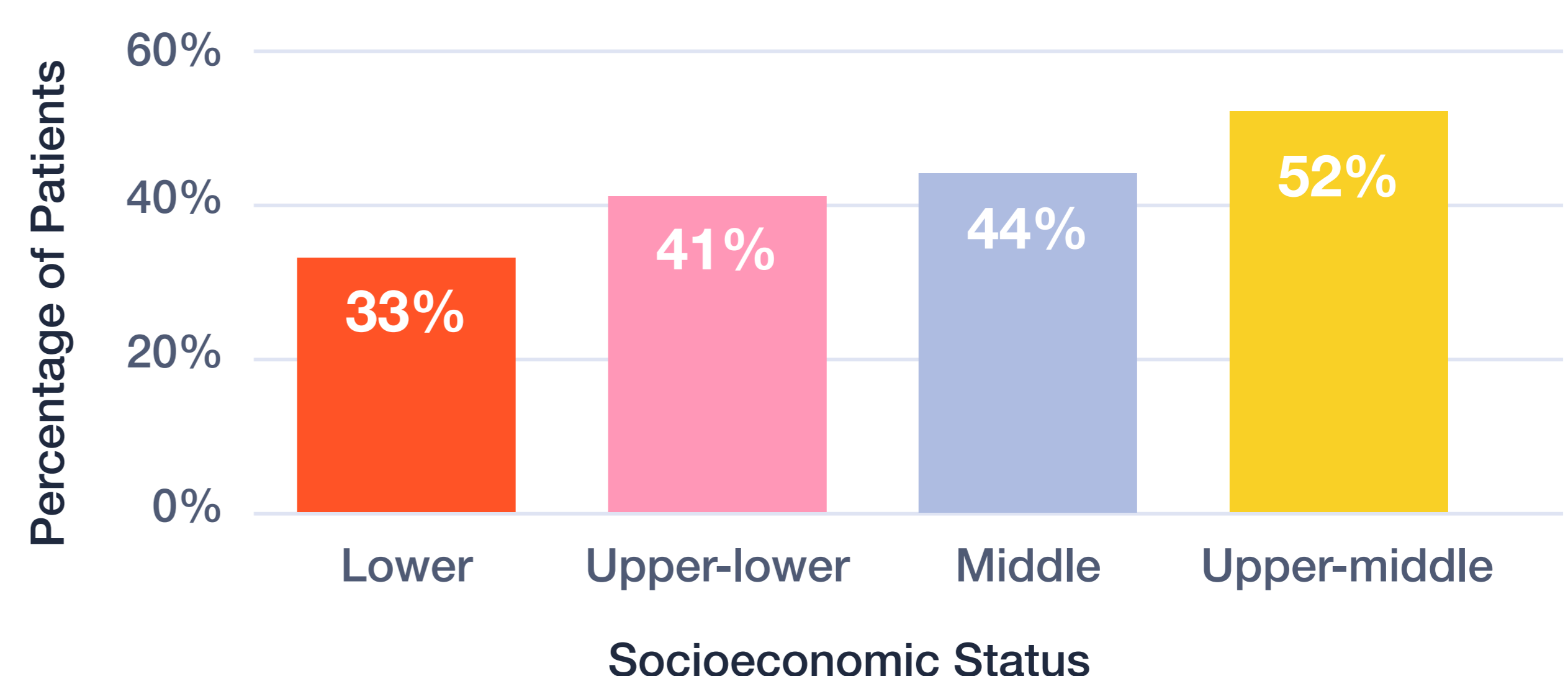
Prevalence of undernourished patients by socioeconomic status



As expected, the upper-middle class had the highest percentage of well-nourished (52%) compared to the other classes, in particular the lower class (33%). The strongest negative correlation was found between SES and undernutrition based on the Pearson correlation test ( $r = -.64$ ).

Figure 3

Prevalence of well-nourished patients by socioeconomic status



## Conclusion

This study indicates that there is a negative correlation between SES and undernutrition in pediatric oncology patients and emphasises the urgent need for nutrition interventions to address the health disparities experienced by children from a lower SES.

Figure 1

Socioeconomic Status of Cuddles Foundation Beneficiaries

