

# Comparing Nutritional Support and Cash Transfers in 52 High-Burden Countries for Tuberculosis: A Systematic Review

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## Introduction

### Background:

- Undernutrition is a risk factor for active tuberculosis (TB) infection and associated with increased severity of TB and unsuccessful treatment outcomes.<sup>1</sup>
- Many families with a TB patient experience catastrophic TB costs due to large out of pocket expenditures, which can lead to poor treatment outcomes.<sup>2</sup>
- Current gap in pooled evidence comparing the effectiveness of nutritional supplementation and cash transfers among TB patients

**Purpose:** Assess and compare the effectiveness of nutritional support and cash transfers on treatment and survival outcomes for patients with tuberculosis

## Qualitative Experience

- Dietitians at Kibong’oto Infectious Diseases Hospital (KIDH) provide specialized diets for TB patients based on their condition and comorbidities.
- Upon discharge from KIDH, TB patients are given a food basket and an individualized nutrition plan based on where they live and their lifestyle.
- TB patients in Mererani, Tanzania were supposed to receive nutritional information along with treatment from their health clinic, but each patient we visited did not receive such education.



Photo 1: Dr. Frank Thobias giving Caroline Rich and Tatev Gomtsyan a tour of a health clinic in Mererani

## Methods

	Criteria
Population	Individuals with any form of TB disease (both sensitive and resistant TB), diagnosed clinically or microbiologically
Intervention	Food assistance/supplement or Cash transfer
Control	Placebo or standard of care
Outcome	treatment success rate, loss to follow up, relapse, mortality and hospitalization, weight gain, body mass index improvement, reduction in relapse, and decreased food insecurity

Table 1: Research Question Criteria

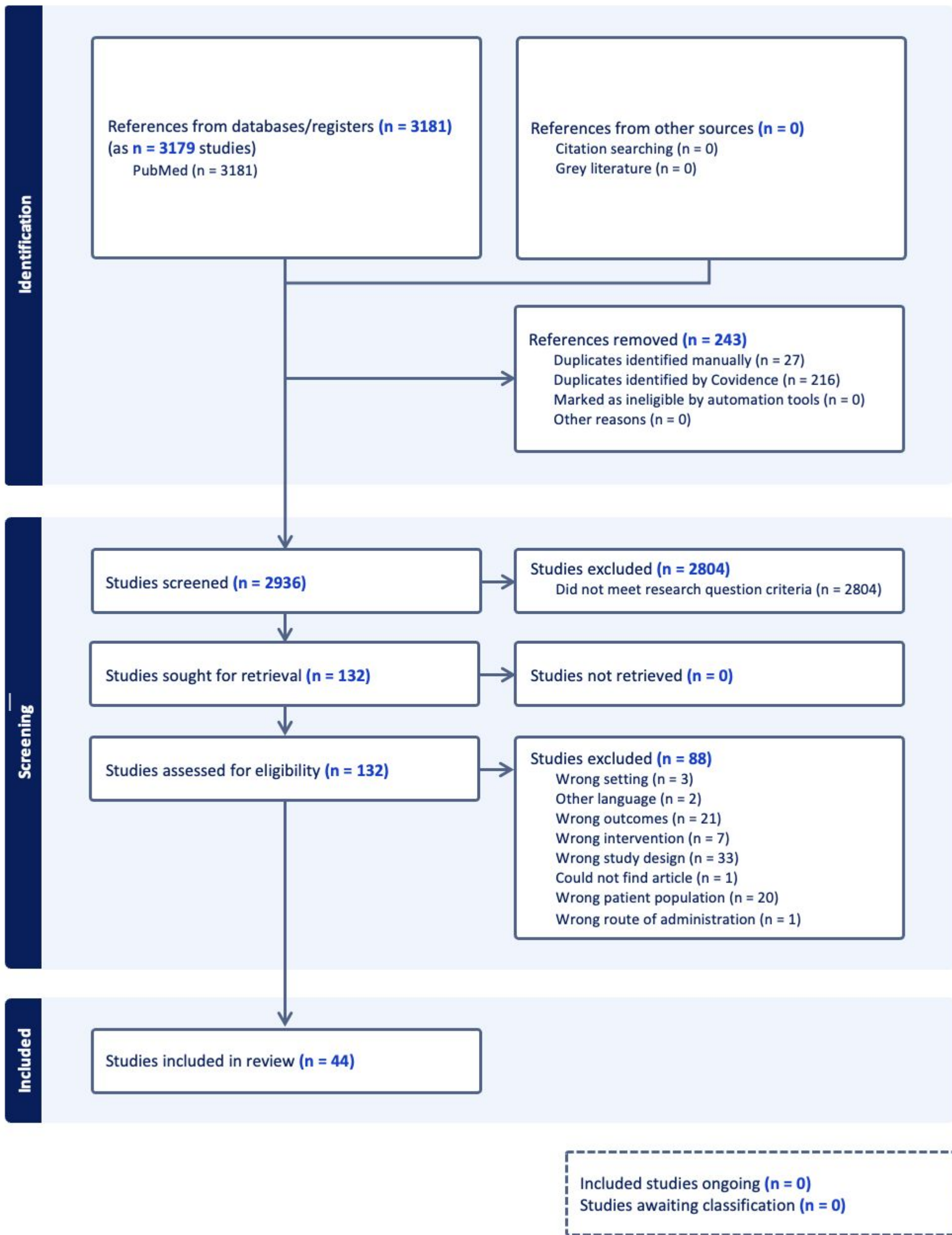


Diagram 1: PRISMA 2020 Flow Chart

## Results

	Nutritional Support	Cash Transfer	Both	Total
Weight Gain	17	0	1	18
Improvement in BMI	10	0	1	11
Treatment Success Rate	8	13	4	25
Mortality	16	9	3	28

Table 2: Number of articles by intervention type and outcome

	Nutritional Support	Cash Transfer	Both	Total
Lower mortality	1	1	0	2
No difference in mortality	10	2	1	13

Table 3: Number of articles showing impact of intervention on mortality stratified by type of support

\*13 studies did not report on a difference in mortality or lacked a comparator group

	Nutritional Support	Cash Transfer	Both	Total
Improved treatment success	3	9	2	14
Did not improve treatment success	4	4	1	9

Table 4: Number of articles showing impact of intervention on treatment success stratified by type of support

\*2 studies reporting on treatment success did not include comparator for analysis

	Macronutrient	Micronutrient	Both	Total
Improved weight gain	3	4	1	8
No improved weight gain	1	6	3	10

Table 5: Number of articles showing impact of nutritional support on weight gain stratified by type of nutrient supplementation

## Conclusions

- Out of 44 articles, none of them examined the impact of cash transfers alone on weight gain or change in BMI (Table 2). Therefore, we cannot compare the effectiveness of nutritional support and cash transfers on these outcomes.
- Further research needs to be conducted on the effectiveness of cash transfers on weight gain and BMI.
- Due to the heterogeneity of the data, it is difficult to draw conclusions on the impact of either intervention on treatment outcomes. This question requires future research to be conducted in a standardized manner.

## References

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