

## Original Research Article

# The Effect of Peer Teaching on Cognitive Congruence and Social Congruence through Balanced Nutrition Training among University Students

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**Abstract:** **Background:** Peer teaching is a student-centered learning method that enhances learning effectiveness through shared understanding and interaction. Cognitive congruence and social congruence are key mechanisms underlying the effectiveness of peer-assisted learning. **Objective:** This study aimed to explore students' perceptions of cognitive congruence and social congruence through peer teaching implemented in balanced nutrition training. **Methods:** A quasi-experimental study with a qualitative approach was conducted among 30 undergraduate students at Nusa Cendana University. Participants were divided into two groups: students taught by peer tutors with prior nutrition knowledge and students taught by peer tutors without prior knowledge. Data were collected through Focus Group Discussions and analyzed thematically. **Results:** Peer teaching facilitated cognitive congruence through the use of simple, familiar language and shared knowledge frameworks. Social congruence emerged in the form of a comfortable learning atmosphere, empathetic tutor-tutee relationships, and open communication. Both tutor groups were perceived as effective, although tutors with prior knowledge delivered material more systematically. **Conclusion:** Peer teaching positively influences cognitive and social congruence and is an effective approach for balanced nutrition education among university students.

**Keywords:** Peer Teaching, Cognitive Congruence, Social Congruence, Balanced Nutrition, University Students.

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## INTRODUCTION

Indonesia faces a double burden of nutrition, encompassing both undernutrition and overnutrition, particularly among adolescents and young adults. University students are at a critical transitional stage where unhealthy dietary behaviors may increase the risk of non-communicable diseases. Limited nutrition knowledge contributes significantly to this problem.

Conventional learning methods are often less effective due to limited interaction, age gaps between educators and learners, and an emphasis on cognitive outcomes alone. Peer teaching offers an alternative approach by promoting student-centered learning, interaction, and shared experiences. Through peer teaching, cognitive congruence—shared understanding and language—and social congruence—comfort, empathy, and supportive communication—can be achieved.

Despite increasing implementation of peer teaching, studies examining its influence on cognitive and social congruence in nutrition education remain limited. Therefore, this study aimed to explore students' perceptions of cognitive congruence and social congruence through peer teaching in balanced nutrition training at Nusa Cendana University.

## MATERIALS AND METHODS

This study employed a quasi-experimental design with a qualitative approach. The study was conducted in August–September 2023 at Nusa Cendana University, Indonesia. A total of 30 undergraduate students from the Faculty of Medicine and Veterinary Medicine, Faculty of Public Health, and Faculty of Teacher Training and Education participated in this study.

Participants were selected using maximal variation sampling and divided into two groups: Group

Ila (students taught by peer tutors with prior nutrition knowledge) and Group IIb (students taught by peer tutors without prior nutrition knowledge). Peer tutors received training through a Training of Trainers program prior to implementation.

Data were collected using Focus Group Discussions conducted after the peer teaching sessions. Discussions followed a semi-structured guide and focused on learning experiences, communication, and comfort during the learning process. Data were analyzed thematically using qualitative analysis techniques.

## RESULTS AND DISCUSSION

Peer teaching was perceived as an effective learning method by students in both groups. Cognitive congruence was reflected in improved understanding of balanced nutrition concepts through the use of simple and familiar language. Students reported that explanations delivered by peers were easier to understand due to similar age and shared learning experiences.

Social congruence was evident in the form of a relaxed and supportive learning environment. Students felt comfortable asking questions, expressing opinions, and engaging actively during the learning process. Empathy and approachability of peer tutors contributed significantly to positive learning experiences.

Tutors with prior knowledge were perceived to deliver material in a more structured manner, although tutors without prior knowledge were still able to facilitate understanding effectively. These findings support previous studies highlighting the role of cognitive and social congruence in peer-assisted learning.

## CONCLUSION

Peer teaching positively influences cognitive congruence and social congruence among university students. Shared language, minimal age differences, and supportive interactions enhance understanding and comfort during learning. Peer teaching can be considered an effective strategy for balanced nutrition education in higher education settings.

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