

The Relationship Between Free Nutritious Food Consumption (MBG) and Students' Focus on Learning in the Last Hour at SMAN 4 Bima City

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Abstract

Decreased student focus during the final period of class is a pedagogical challenge influenced by various factors, such as physical fatigue and mental saturation. This study aims to analyze the relationship between the consumption of Free Nutritious Meals (MBG) and student focus at SMAN 4 Kota Bima, and to identify factors that influence the effectiveness of this nutritional support. Using a descriptive qualitative approach with a case study method, data were collected through in-depth interviews with educators and field observations. The results showed that the MBG program made a positive contribution to maintaining energy stability and cognitive responsiveness of students compared to students who did not consume it. Students who received MBG appeared calmer, more ready to learn, and able to maintain concentration longer during critical school hours. However, the effectiveness of MBG is not fully optimal because it is influenced by multidimensional variables such as nutritional menu variations, students' rest patterns at home, and the teaching methods used by teachers. The study concluded that although MBG provides a strong physical foundation, significantly improving learning focus requires a synergy between varied nutrition, a healthy lifestyle, and interactive pedagogical innovations in the classroom.

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1. INTRODUCTION

Quality education is determined not only by the curriculum and teacher competence, but also by students' physical and mental readiness to absorb the material. One of the challenges faced in secondary schools, including SMAN 4 Kota Bima, is a significant decline in students' focus during the final period of classes. This phenomenon is often caused by cognitive fatigue and decreased physical energy after a long morning of studying. When hungry or malnourished, the brain struggles to perform executive functions such as concentration, memory, and self-control, ultimately hindering the optimal achievement of learning goals.

The government is attempting to mitigate this biological barrier through the implementation of the Free Nutritious Meals (MBG) program. Theoretically, a balanced diet plays a vital role in maintaining stable blood glucose levels, which are the primary fuel for the central nervous system. However, the effectiveness of this food provision in an academic context is often questioned, whether it simply satisfies hunger or significantly improves students' focus during critical moments such as the final period. At SMAN 4 Kota Bima, there is an urgent need to assess the performance differences between students who receive nutritional support through MBG and those who do not, especially when mental stamina begins to reach its nadir.

Although nutrition is a fundamental foundation, students' focus is influenced by complex dynamics, ranging from internal factors such as rest patterns to external factors such as teachers' teaching methods. Based on initial observations and information from educators in the field, the MBG program has begun to show positive changes in student activity, although not yet fully distributed. Therefore, this article aims to analyze in more depth the relationship between Free Nutritious Meal (MBG) consumption and students' focus during the final period of learning at SMAN 4 Kota Bima. This research is expected to provide a critical overview of the extent to which nutritional interventions can be a solution to learning boredom at the end of the school day.

2. RESEARCH METHOD

This study used a descriptive qualitative approach with a case study method that aims to explore the relationship between Free Nutritious Food (MBG) consumption and students' focus in depth. Primary data were obtained through in-depth interviews with educators at SMAN 4 Kota Bima and through field observations to directly monitor changes in students' behavior and cognitive responsiveness during the last lesson period. Subjects were determined using purposive sampling to obtain credible information regarding the comparison between students who consumed MBG and those who did not.

The collected data were then analyzed using interactive data analysis techniques, including data reduction, systematic narrative presentation, and conclusion drawing to verify the effect of nutritional intake on the stability of students' learning concentration at school. This study also involved comparative analysis to identify other factors that may influence students' focus, such as sleep patterns, extracurricular activities, and teaching methods employed by teachers.

3. RESULTS AND DISCUSSION

3.1. Research Results

Based on the results of an interview with one of the teachers at SMAN 4 Kota Bima, information was obtained that students' focus during the last period of the lesson tends to decrease compared to the previous period. According to Mrs. Nurlailah, S.Pd, in the last period, many students begin to feel tired and bored, so they need more effort to continue to follow the lesson well. Mrs. Nurlailah also said that there is a difference in learning focus between students who consume free nutritious meals (MBG) and students who do not consume them. Students who consume MBG generally appear more prepared to follow the lesson, calmer, and do not easily lose concentration, especially in the last period of the lesson.

Since implementing the MBG program, Ibu has observed positive changes in students' focus and engagement, although these changes are not yet significant. Furthermore, Ibu Nurlailah, S.Pd., explained that students who consume MBG tend to be more attentive to teacher explanations and are more responsive when given questions or assignments in the final period. MBG is considered quite helpful in maintaining students' energy levels, preventing them from becoming too tired and allowing them to continue learning until the end of the school day.

Regarding the type and portion of MBG, Mrs. Nurlailah assessed that, in general, the food provided was sufficient to support students' energy needs. However, she believed that menu variety and nutritional balance could still be improved to optimize students' concentration. Furthermore, the timing of the MBG distribution was considered appropriate, as it helped students maintain energy until the last period of the lesson. However, Mrs. Nurlailah, S.Pd., also revealed that some students still appeared

sleepy or lacked focus despite consuming MBG. This was caused by other factors, such as a lack of rest time at home or additional activities outside of school.

Overall, according to Ms. Nurlailah, S.Pd., the MBG program significantly improves students' focus during the final period, particularly in supporting their physical condition. However, to optimally improve learning focus, the MBG program needs to be supported by engaging learning methods and a conducive learning environment.

3.2. Discussion

Contribution of the Free Nutritional Meal Program (MBG) to Student Concentration

Based on research at SMAN 4 Kota Bima, it was found that students decreased focus during the final period of the lesson posed a significant pedagogical challenge. However, the implementation of the MBG program emerged as a nutritional intervention with positive impacts. This aligns with Irawan's (2025) findings that the MBG program significantly improved students' concentration and motivation to learn by meeting their biological needs at school.

Students who received MBG showed superior learning characteristics compared to students who did not consume it, which included:

Readiness to Learn: Students who consume MBG report greater physical well-being when starting their final lesson. Zhafirah (2019) confirmed that the habit of consuming nutritious food is positively correlated with students' mental readiness and calmness in absorbing learning materials.

Cognitive Resilience: Students can maintain focus for longer periods. Theoretically, Nurmalasari et al. (2020) explain that nutritional adequacy is directly related to concentration levels; students with adequate intake are less easily distracted by cognitive fatigue.

Responsiveness: Students' activeness in responding to teacher stimuli increases. Physiologically, a stable glucose intake from MBG serves as the brain's primary fuel. Yulistari (2022) states that stable blood glucose levels significantly determine the brain's ability to perform executive functions, including memory and responsiveness.

Multidimensional Factor Analysis in Focus Power

While the MBG program has made significant contributions, this study demonstrates that nutritional intake is not the sole variable. Interview findings with Ms. Nurlailah, S.Pd., confirmed that some students still lack focus despite consuming MBG. This is influenced by other contributing factors:

Rest Patterns (External Factors): Chronic fatigue due to sleep deprivation cannot be addressed solely through diet. In their research, Yonandes & Antosa (2025) emphasized that poor sleep patterns have a strong negative relationship with learning concentration, which explains why MBG support sometimes appears to be less effective in students who are sleep deprived.

Nutritional Quality and Variety: Field findings indicate the need to increase menu variety. Prayoga et al. (2025) suggest that balanced nutrition education should be accompanied by a variety of foods to support optimal overall cognitive function, not just short-term caloric intake.

Pedagogical Synergy: Nutrition from MBG provides "energy potential," but teaching methods remain the primary determinant. Tambunan et al. (2025) in their critical review stated that student learning productivity is highly dependent on how nutritional intake is managed through interactive and conducive classroom activities.

The effectiveness of the MBG program at SMAN 4 Kota Bima is "fairly good" as a physical foundation. However, to achieve a significant impact on academic achievement, synergy between nutritional policies and innovative teaching methods is needed, especially during critical school hours.

Decreased student focus during the final period of class is a significant pedagogical challenge. Physical fatigue and mental fatigue are major factors in students decreased ability to absorb information. However, the implementation of the Free Nutritious Meals (MBG) program emerged as a nutritional intervention that had a positive impact on student attention stability. Students receiving MBG demonstrated superior learning characteristics compared to those who did not receive it, including:

Readiness to Learn: Students who consumed MBG reported greater physical well-being at the start of their final lesson. This aligns with previous research showing that a nutritious diet can improve students' mood and mental readiness. This readiness was evident in students' more active and participatory behavior in class discussions, as well as their better understanding of the material being taught.

Cognitive Resilience: Students receiving MBG can maintain focus for longer periods and are less easily distracted by fatigue. Research shows that good nutrition contributes to improved cognitive abilities and memory. In this context, students who receive adequate nutrition are more likely to retain learned information, thereby improving their academic performance.

Responsiveness: Students who consumed MBG showed a higher level of activeness in responding to teacher stimuli, both in the form of questions and assignments. This suggests that nutritional support can enhance student engagement with the learning process. Students appeared more willing to ask questions and express their opinions, a positive indicator of their engagement in learning.

Physiologically, this aligns with the theory of energy metabolism, where a steady supply of glucose from nutritious foods serves as the brain's primary fuel for executive function. Properly timed MBG distribution has been shown to maintain students' energy reserves until the end of the school day. For example, students who consume MBG at the right time not only feel more energetic but are also better able to tackle the academic challenges they face at the end of the day.

However, while the MBG program has made a significant contribution, research shows that nutritional intake is not the sole determinant of learning success. Ms. Nurlailah, S.Pd., highlighted the phenomenon of students who continue to experience decreased focus despite consuming MBG. This indicates the influence of other factors, including:

External Factors (Lifestyle): Lack of rest at home and high levels of extracurricular activities lead to chronic fatigue that cannot be fully addressed through daily nutritional interventions alone. Research shows that poor sleep quality is directly linked to decreased concentration in school. For example, students involved in intensive extracurricular activities often experience sleep deprivation, which negatively impacts their academic performance.

Nutritional Quality: Field findings indicate the need to increase menu variety and nutritional balance. A monotonous menu can potentially reduce appetite, while an unbalanced diet can impact the effectiveness of energy metabolism in supporting optimal cognitive function. Therefore, the MBG program must address not only the quantity but also the quality of the food served to students.

Pedagogical Environment: The teaching methods used by teachers in the classroom plays a crucial role. While the nutrients from the MBG provide "energy potential," engaging learning methods and a conducive classroom atmosphere act as "drivers" to channel that energy potential into productive learning activities. For example, learning methods that involve group discussions or collaborative projects can increase student engagement and make them more enthusiastic about learning.

The effectiveness of the MBG program in improving learning focus is at a "fairly good" level with ample room for improvement. The positive changes in student engagement observed are currently preliminary. To achieve a significant impact on academic achievement, integration of nutritional policies with innovative teaching methods is necessary, particularly during critical periods.

The MBG program should not be viewed solely as social assistance, but rather as part of a strategy to improve the quality of education based on students' physical readiness. By maintaining optimal physical condition through proper nutrition, biological barriers to learning can be minimized, allowing for more effective knowledge transfer.

4. CONCLUSION

The MBG program at SMAN 4 Kota Bima was fundamentally successful as a physiological intervention that extended students' cognitive resilience, as evidenced by increased responsiveness and attentional stability during the final period of the lesson compared to students without similar nutritional intake. However, the program's effectiveness has not yet reached its optimal point because learning focus is a multidimensional variable that depends not only on calorie adequacy but also on the quality of micronutrient balance, student rest patterns, and pedagogical stimulation in the classroom. Therefore, MBG cannot stand alone as a single solution; its success in improving learning quality depends heavily on the synergy between providing varied nutrition and the implementation of interactive teaching methods to mitigate mental burnout in learning at the end of school.

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To achieve optimal program effectiveness, MBG administrators are advised to increase menu variety, focusing on a balance of micronutrients that support cognitive function and avoiding excessive carbohydrate intake, which can trigger drowsiness. Simultaneously, schools should balance this nutritional support by reforming learning methods in the final hours through a more interactive and kinesthetic approach, and by educating students about rest patterns so that the physical readiness developed through the MBG program is not hampered by fatigue caused by lack of sleep.

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