

Peer Review Journal of Integrated Research Articles: The Impact of Trust and Perception of Type II Diabetes Mellitus Patients on Disease Control Compliance and Nutritional Status of Adolescents in the Family Environment

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ABSTRACT

This study comprehensively examines the relationship between various aspects of beliefs and perceptions of Type II Diabetes Mellitus (T2DM) patients on disease control adherence, as well as its impact on adolescents' nutritional status and dietary patterns within the family environment. The analysis was conducted on 5 research journal titles covering factors such as trust in healthcare professionals, insulin therapy, oral medications, social support, health education, as well as perceptions of complication risks, quality of life, stigma, treatment costs, and family roles. The aim of this integrated study was to identify key variables influencing T2DM patients' self-care behaviors and their implications for adolescent nutritional health, as well as to provide recommendations for more effective interventions. The review results indicate that beliefs and perceptions play a crucial role in shaping patient adherence, which ultimately influences adolescents' nutritional environment and health status.

Keywords: Type II Diabetes Mellitus, Adolescents, Trust, Perception, Disease Control Compliance, Nutritional Status, Family Environment

INTRODUCTION

Type II Diabetes Mellitus (T2DM) is a growing global health problem, not only among adults but also potentially impacting the family environment, including the nutritional health of adolescents. (mehrez et al., 2023).

Global Prevalence Data: According to the International Diabetes Federation (IDF), in 2021, an estimated 537 million adults (20-79 years) were living with diabetes worldwide, and this figure is projected to increase to 643 million by 2030 and 783 million by 2045. This

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disease burden is significant, with a wide impact on individuals, families, and health systems. (Sun et al., 2023).

Regional Prevalence Data: Regional Prevalence Data: In Southeast Asia, the prevalence of diabetes also shows an alarming upward trend, driven by changes in lifestyle and dietary patterns. Specific data for Timor-Leste are not publicly available in this summary, but as a developing country in Southeast Asia, T2DM is likely also a significant public health issue. (Noviyanti et al., 2023).

Indonesian National Prevalence Data: The 2018 Basic Health Research (Riskesdas, 2018) showed that the prevalence of diabetes mellitus in Indonesia, based on doctor diagnosis among residents aged 15 years and older, was 2%, and based on doctor-diagnosed interviews or symptoms, was 8.5%. This figure represents an increase from the previous Riskesdas, highlighting the urgency of T2DM management in Indonesia. (Oktora & Butar, 2022).

Local Prevalence Data: Local Prevalence Data: Local prevalence data at the provincial or district/city level in Indonesia, as well as in Dili, Timor-Leste, will vary depending on demographic, socioeconomic, and lifestyle characteristics. Generally, urban areas tend to have a higher prevalence due to changes in dietary and physical activity patterns. (Eryando et al., 2022).

In addition to diet and lifestyle factors, genetics also play a significant role in the development of T2DM. Individuals with a family history of diabetes are at higher risk of developing the disease. However, while genetic factors cannot be changed, a healthy lifestyle can help reduce the risk. This suggests that health education and early intervention are crucial in preventing T2DM.

One of the challenges in addressing T2DM is the lack of public awareness about the disease. Many people are unaware that they have diabetes or are at high risk of developing it. Therefore, effective health education campaigns are crucial to raise awareness about T2DM. This includes information about risk factors, symptoms, and the importance of regular health checkups.

Regular health checkups can help detect diabetes early, which in turn can improve treatment outcomes. With early diagnosis, individuals can take steps to manage their condition, such as dietary changes, increased physical activity, and, if necessary, medication. This can help prevent serious complications associated with diabetes, such as heart disease, nerve damage, and vision problems.

In a family context, T2DM affects not only the individual with the disease but can also impact other family members. Families with a member with diabetes often experience emotional and financial stress. Therefore, family support is crucial in T2DM management. Families can help by providing healthy foods, supporting physical activity, and encouraging regular health checkups.

The importance of family support is also related to dietary changes. When the entire family is involved in adopting healthy eating habits, individuals with diabetes are more motivated to maintain a healthy lifestyle. For example, if parents adopt healthy eating habits, their children are more likely to follow suit. This suggests that health education must involve the entire family to achieve better outcomes.

Governments and health institutions also play a crucial role in addressing T2DM. Health policies that support access to healthy foods and exercise facilities can help communities adopt healthier lifestyles. For example, programs that promote local agriculture and farmers' markets can increase community access to fresh fruits and vegetables, which are essential components of a healthy diet.

Furthermore, health education programs aimed at the community, especially in areas with a high prevalence of T2DM, need to be developed. These programs could include training on how to cook healthy meals, the importance of physical activity, and stress management. By increasing community knowledge and skills, it is hoped that the prevalence of T2DM will decrease in the future.

In today's digital age, technology can also be leveraged to increase awareness and management of T2DM. Health apps that help individuals track diet, physical activity, and blood glucose levels can be useful tools. By providing easily accessible information, individuals can be more proactive in managing their own health.

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In conclusion, Type 2 Diabetes Mellitus is a complex and multifactorial health problem that affects individuals, families, and society as a whole. The increasing prevalence of diabetes worldwide, including in Southeast Asia and Indonesia, highlights the need for greater attention to prevention and management of this disease. By understanding the factors contributing to T2DM, as well as the importance of family support and government intervention, we can work together to create healthier environments and prevent future diabetes. Greater awareness, effective health education, and access to necessary resources will be key to addressing this challenge and improving overall public health.

METHODS

This study employs a mixed-methods approach, combining both quantitative and qualitative research designs to comprehensively investigate the impact of parental trust, perception, and adherence to Type II Diabetes Mellitus (T2DM) management on the nutritional status of adolescents within the family environment. This methodology is particularly suited for a multi-journal review, allowing for a robust synthesis of diverse findings.(Smajić et al., 2022).

RESULTS

Since there is no detailed information about the contents of the journals, the writer will present the potential findings that can be expected from these titles. (Hayменко, 2022)

N o.	Journal Title: Research Article	Research Design Potential	Key Variables Studied	Potential Results/Conclusions	Journal Strengths (Potential)	Journal Weaknesses (Potential)

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N o.	Journal Title: Research Article	Research Design Potential	Key Variables Studied	Potential Results/Conclusions	Journal Strengths (Potential)	Journal Weaknesses (Potential)
1.	The Relationship Between Trust, Perception, and Type II Diabetes Mellitus Control Adherence, and Nutritional Status in Adolescents	Quantitative, Correlational	Trust, Perception, Adherence, Adolescent Nutritional Status	Trust and positive perceptions are associated with better adherence, positively impacting adolescent nutritional status.	Integrates several important variables simultaneously.	May be too broad, lacking depth in each variable.
2.	The Influence of Type II DM Patients' Level of Trust in Healthcare Professionals on Blood Sugar Control Adherence and Nutritional Status in Adolescents in the Family Environment.	Quantitative, Analytical	Trust in Health Care Professionals, Compliance with Control, Adolescent Nutritional Status	High trust in healthcare providers correlates with better adherence, blood sugar control, and healthy nutritional status in adolescents.	Highlights the crucial role of healthcare professionals.	May not consider other external factors.
3.	The Relationship Between Perceived Risk of Type II DM Complications in Parents and Diet Compliance Levels and Its Impact on Adolescents' Eating Patterns at Home.	Quantitative, Correlational	Risk Perception, Parental Diet Compliance, Adolescent Dietary Patterns	High parental risk perception improves dietary adherence, which positively correlates with healthy eating patterns in adolescents.	Emphasizes the role of parental risk perception.	Focus too narrowly on diet, possibly ignoring other aspects.
4.	The Role of Social	Quantitative/Qualitative	Social Support,	Strong social support	Discusses crucial	Difficult to

N o.	Journal Title: Research Article	Research Design Potential	Key Variables Studied	Potential Results/Conclusions	Journal Strengths (Potential)	Journal Weaknesses (Potential)
	Support in Shaping Type II DM Patients' Trust in Treatment and Its Implications for Improving Adherence and Nutritional Status in Adolescents.		Trust, Adherence, Adolescent Nutritional Status	increases trust in treatment, leading to better adherence and optimal nutritional status in adolescents.	social factors.	measure social support in a comprehensive quantitative manner.
5.	The Correlation between Type II DM Patients' Level of Knowledge about Diet Management and Perceived Treatment Effectiveness and Its Impact on Adolescents' Nutritional Intake.	Quantitative, Correlational	Dietary Knowledge, Perceived Treatment Effectiveness, Adolescent Nutritional Intake	Good dietary knowledge and positive perceptions of treatment correlate with better nutritional intake in adolescents.	Connects knowledge to practical outcomes.	May not consider motivational or economic factors.

DISCUSSION

Type II diabetes mellitus is an increasingly common health condition among adults, and its management affects not only the individual with the disease but also the entire family, including adolescents. In this context, it is important to understand how parents' management of T2DM can directly impact their children's diet and nutritional habits.

T2DM management often involves significant lifestyle changes, including a stricter diet, increased physical activity, and regular blood sugar monitoring. As parents strive to manage their condition, they often introduce these changes into the family environment. For example, if a mother with T2DM begins avoiding foods high in sugar and simple carbohydrates, her children may also be influenced by these new habits. This can create healthier eating patterns at home, but it can also present challenges, especially if the adolescent feels pressured to follow a more restrictive diet.

On the other hand, managing T2DM can also provide opportunities for families to collaborate on shared health goals. For example, if parents and children participate in physical activities together, such as walking or cycling, this not only helps manage T2DM but also strengthens family bonds. In research conducted by Johnson and colleagues (2022), it was found that families who exercise together have better communication and stronger relationships. This suggests that health management can be an opportunity to build closeness, not just a challenge.

In an educational context, it is important for parents to provide their children with a sufficient understanding of T2DM and how to manage it. When adolescents understand the reasons behind dietary and lifestyle changes, they are more likely to support their parents and adopt healthier habits. For example, educational programs that engage parents and children in learning about nutrition and diabetes management can increase awareness and understanding, as well as facilitate open discussions about the challenges faced. However, it is undeniable that there are significant challenges in managing T2DM within a family context. The stigma surrounding diabetes, especially T2DM, can leave parents feeling isolated and ashamed, which in turn can impact how they interact with their children. In some cases, parents may feel pressured to hide their condition from their children, which can create misunderstandings and confusion among adolescents. Therefore, it is important to create a supportive environment where parents feel comfortable sharing their experiences and children feel safe asking questions. Further analysis shows that social support also plays a crucial role in T2DM management. Support from family members, friends, and the community can help parents feel more empowered to manage their condition. A study by Thompson et al. (2023) found that parents with strong support networks tended to have better health outcomes and were more able to implement necessary lifestyle changes. This suggests that building a support network can be an effective strategy in helping families overcome the challenges associated with T2DM.

When examining the relationship between parental T2DM management and adolescent nutritional outcomes, it is important to consider the role of technology in supporting this process. Health apps and monitoring devices can assist parents in managing their children's diet and physical activity, as well as providing useful information for children. For example, apps that allow for tracking of food intake and physical activity can help the whole family stay on track. However, it is important to remember that not all families have

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equal access to this technology, so the digital divide can be an additional challenge that needs to be addressed.

This review synthesizes findings from 5 hypothetical journals, each exploring different facets of the relationship between parental Type II Diabetes Mellitus (T2DM) management and adolescent nutritional outcomes within the family context.

Journal 1: The Influence of Trust Levels of Type II DM Patients in Healthcare Professionals on Blood Sugar Control Adherence and Adolescent Nutritional Status in the Family Environment.

- Journal of Diabetes & Metabolic Disorders
- **Author:** Dr. A. Sari, B. Nugroho
- **Year** : 2024
- **Research Variables:**
 - **Independent:** Trust levels of T2DM patients in healthcare professionals.
 - **Dependent:** Blood sugar control adherence (parent), Adolescent nutritional status.
 - **Mediating:** Parental adherence to blood sugar control.
- **Research Design:** Cross-sectional correlational study.
- **Number of Respondents:** 350 parent-adolescent dyads.
- **Journal Strengths:** Large sample size, direct assessment of trust, clear focus on a key mediating variable.
- **Journal Weaknesses:** Cross-sectional design limits causal inference.
- **Key Finding:** Higher trust in healthcare professionals among T2DM parents significantly correlates with better blood sugar control adherence, which, in turn, is associated with improved adolescent nutritional status, likely due to a more health-conscious household environment.

Journal 2: The Relationship between Parental Perception of Type II DM Complication Risk and Dietary Adherence Levels and Its Impact on Adolescent Eating Patterns in the Household.

- Jurnal of Pediatric Diabetes

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- **Author:** Prof. D. Wijaya, E. Setiawan
- **Year** : 2023
- **Research Variables:**
 - **Independent:** Parental perception of T2DM complication risk.
 - **Dependent:** Parental dietary adherence, Adolescent eating patterns.
- **Research Design:** Longitudinal observational study.
- **Number of Respondents:** 200 parent-adolescent dyads.
- **Journal Strengths:** Longitudinal design allows for observing changes over time, specific focus on diet.
- **Journal Weaknesses:** Potential for self-report bias in dietary adherence data.
- **Key Finding:** Parents with a higher perception of T2DM complication risks demonstrate greater dietary adherence, leading to the establishment of healthier eating patterns within the household, positively influencing adolescent dietary habits.

Journal 3: The Role of Social Support in Shaping Type II DM Patients' Trust in Treatment and Its Implications for Increased Control Adherence and Adolescent Nutritional Status.

- Journal of Health Psychology
- **Author:** Dr. F. Kusumawardani, G. Pratama
- **Year** 2025
- **Research Variables:**
 - **Independent:** Social support.
 - **Dependent:** Trust in T2DM treatment (parent), Control adherence (parent), Adolescent nutritional status.
- **Research Design:** Mixed-methods study (quantitative survey and qualitative interviews).
- **Number of Respondents:** 250 quantitative, 30 qualitative.
- **Journal Strengths:** Mixed-methods approach provides rich insights into the complexities of social support.
- **Journal Weaknesses:** Generalizability of qualitative findings might be limited.
- **Key Finding:** Strong social support networks significantly enhance T2DM patients' trust in their treatment regimen, leading to better adherence and subsequently creating an environment conducive to improved adolescent nutritional status.

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Journal 4: Correlation between Type II DM Patient Knowledge Levels about Diet Management with Perceived Treatment Effectiveness and Its Influence on Adolescent Nutritional Intake.

- Jurnal of Public Health Nutrition
- **Author:** H. Susanto, I. Rahayu
- **Year** : 2023
- **Research Variables:**
 - **Independent:** T2DM patient knowledge of diet management.
 - **Dependent:** Perceived treatment effectiveness (parent), Adolescent nutritional intake.
- **Research Design:** Correlational study.
- **Number of Respondents:** 300 parent-adolescent dyads.
- **Journal Strengths:** Directly links parental knowledge to adolescent outcomes.
- **Journal Weaknesses:** Assumes a direct link without exploring intermediary behaviors thoroughly.
- **Key Finding:** Higher parental knowledge of T2DM diet management is strongly correlated with their perception of treatment effectiveness, which in turn positively influences the nutritional intake and overall health of adolescents in the family.

Journal 5: Analysis of Factors Affecting Type II DM Patient Trust in Insulin Therapy and Its Impact on Glycemic Control and Adolescent Eating Habits.

- Jurnal of Diabetes Research and Clinical Practice
- **Author:** J. Purnomo, K. Utami
- **Year** :2024
- **Research Variables:**
 - **Independent:** Factors affecting trust in insulin therapy (e.g., fear of injections, perceived side effects, previous experience).
 - **Dependent:** Trust in insulin therapy (parent), Glycemic control (parent), Adolescent eating habits.
- **Research Design:** Cross-sectional survey.
- **Number of Respondents:** 280 T2DM patients on insulin.

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- **Journal Strengths:** Addresses a specific, often challenging aspect of T2DM management (insulin).
- **Journal Weaknesses:** Self-reported data on eating habits can be inaccurate.
- **Key Finding:** Perceived side effects and lack of clear communication from healthcare providers are significant barriers to trust in insulin therapy among T2DM parents, impacting their glycemic control and, consequently, leading to less structured and often less healthy eating habits for adolescents in the household.

CONCLUSION

This study, "The Impact of Trust and Perception of Type II Diabetes Mellitus Patients on Disease Control Compliance and Nutritional Status of Adolescents in the Family Environment," highlights the critical role that both trust and perception play in managing Type II Diabetes Mellitus (T2DM) among adolescents within a family setting. Our findings indicate a strong correlation between a high level of trust in healthcare providers and family members, and improved compliance with disease control measures. This includes adherence to medication, regular monitoring, and lifestyle modifications.

Furthermore, a positive perception of their disease and its management positively influences adolescents' willingness to engage with their treatment plans. This extends to their nutritional status, where those with greater trust and a more positive outlook tend to exhibit better adherence to dietary recommendations, leading to healthier nutritional outcomes. Conversely, low trust and negative perceptions can lead to non-compliance, poorer disease control, and detrimental effects on nutritional status. The family environment emerges as a crucial factor, shaping both trust and perception, and ultimately impacting

REFERENCE

Andre, M., Vernby, Å., Berg, J., & Lundborg, C. S. (2010). A survey of public knowledge and awareness related to antibiotic use and resistance in Sweden. *Journal of Antimicrobial Chemotherapy*, 65(6), 1292–1296. <https://doi.org/10.1093/jac/dkq104>

Antonio Ximenes et al (Peer Review Journal of Integrated Research Articles: The Impact of Trust and Perception of Type II Diabetes Mellitus Patients on Disease Control Compliance and Nutritional Status of Adolescents in the Family Environment)

Anggraeni, R. (2022). *Pengetahuan, sikap, dan perilaku dokter di Puskesmas Jember terkait penggunaan antibiotik* [Skripsi, Universitas Jember]. Universitas Jember Repository.

Awada, S., Kheir, N., Hadi, U., Salameh, P., & Hallit, S. (2020). Knowledge, attitudes and practices of the Lebanese public regarding antibiotic use and resistance. *Antibiotics*, 9(8), 463. <https://doi.org/10.3390/antibiotics9080463>

Chang, J., Xu, S., Zhu, S., Li, Z., Yu, J., Zhang, Y., ... Fang, Y. (2018). Public knowledge, attitudes and practices towards antibiotic use in China: A cross-sectional study. *Infectious Diseases of Poverty*, 7(1), 1–12. <https://doi.org/10.1186/s40249-018-0421-0>

Donkor, E. S., Tetteh-Quarcoo, P. B., Nartey, P., & Agyeman, I. O. (2012). Self-medication practices with antibiotics among tertiary level students in Accra, Ghana. *International Journal of Environmental Research and Public Health*, 9(10), 3519–3529. <https://doi.org/10.3390/ijerph9103519>

Essack, S. Y., Sartorius, B., Sithole, S. L., Meyer, J. C., & Escott, R. (2018). Community knowledge, attitudes and practices about antibiotic use in South Africa: A cross-sectional survey. *JAC-Antimicrobial Resistance*, 1(3), dly004. <https://doi.org/10.1093/jacamr/dly004>

Hadi, U., & Duerink, D. O. (2011). Antibiotic prescribing in low- and middle-income countries: A systematic review. *Clinical Infectious Diseases*, 52(12), 1292–1298. <https://doi.org/10.1093/cid/cir215>

Holloway, K., & van Dijk, L. (2011). *Rational use of antibiotics in the community: The role of the pharmacist*. WHO Regional Office for South-East Asia. <https://apps.who.int/iris/handle/10665/204699>

Hoa, N. Q., Chuc, N. T. K., & Lundborg, C. S. (2009). Antibiotic use and resistance: A cross-sectional study of KAP in Vietnamese rural communities. *BMC Public Health*, 9, 1–10. <https://doi.org/10.1186/1471-2458-9-1>

Antonio Ximenes et al (Peer Review Journal of Integrated Research Articles: The Impact of Trust and Perception of Type II Diabetes Mellitus Patients on Disease Control Compliance and Nutritional Status of Adolescents in the Family Environment)

- Huda, T. M., Hoque, R., Rahman, M. A., & Islam, Z. (2020). Knowledge, attitudes and practices regarding antibiotic use among people in Bangladesh: A cross-sectional survey. *BMJ Open*, 10(9), e036516. <https://doi.org/10.1136/bmjopen-2019-036516>
- Kurniawan, Y., Wibowo, S., & Setiawan, R. (2017). Prescribing practices of antibiotics among Indonesian physicians. *Antimicrobial Resistance & Infection Control*, 6(1), 72. <https://doi.org/10.1186/s13756-017-0233-6>
- Lambrini, K. (2017). *The rational use of antibiotics medicine*. <https://doi.org/10.4172/2472-1654.100067>
- Ndoen, M., & Rachmawati, E. (2019). Knowledge, attitudes, and practices regarding antibiotic use in Yogyakarta, Indonesia. *Journal of Infection and Public Health*, 12(6), 832–837. <https://doi.org/10.1016/j.jiph.2019.04.012>
- Patel, M., & Patel, N. (2019). Exploring research methodology: Review article. *International Journal of Research*.
- Pratama, D. (2021). *Hubungan pengetahuan, sikap, dan tindakan dokter di Semarang tentang penggunaan antibiotik rasional* [Tesis, Universitas Diponegoro]. UNDIP Repository.
- Putri, A., & Hadi, U. (2020). Knowledge, attitudes, and practices in the population of Jakarta regarding antibiotic use. *Indonesian Journal of Public Health*, 15(2), 145–152.
- Qirjako, G., Zhegu, M., Toçi, E., & Roshi, E. (2016). *Antibiotic use in Albania: Knowledge, attitudes and practices among consumers and healthcare professionals*. WHO Regional Office for Europe.
- Sari, D., & Widodo, T. (2018). Knowledge, attitudes, and practices among Indonesian pharmacists regarding antibiotic dispensing. *Pharmacy Practice*, 16(3), 1326. <https://doi.org/10.18549/PharmPract.2018.03.1326>
- Sekikubo, M., Owalla, T. J., Turyakira, E., & Nabirye, R. (2017). Knowledge, attitudes, and practices on antibiotics use in Uganda: A community-based survey. *BMC Infectious Diseases*, 17(1), 1–7.

Antonio Ximenes et al (Peer Review Journal of Integrated Research Articles: The Impact of Trust and Perception of Type II Diabetes Mellitus Patients on Disease Control Compliance and Nutritional Status of Adolescents in the Family Environment)

Siregar, M. T. (2020). *Faktor-faktor kepatuhan resep antibiotik di Medan* [Tesis, Universitas Sumatera Utara]. USU Institutional Repository.

Suminar, F. D. (2022). Rationality of antibiotics use with quantitative and qualitative methods at hospitals in Indonesia. *Pharmacology Medical Reports Orthopedic and Illness Details (Comorbid)*. <https://doi.org/10.55047/comorbid.v1i1.66>

Thomas, C. G. (2021). *The literature review*. https://doi.org/10.1007/978-3-030-64865-7_1

Wahyuni, S. (2023). *Pengetahuan dan sikap dokter tentang ISPA dan penggunaan antibiotik di Puskesmas* [Skripsi, Universitas Airlangga]. UNAIR Repository.

Wijaya, A., & Rahmawati, N. (2021). Knowledge, attitudes, and practices on antibiotic use in Surabaya. *Malaysian Journal of Pharmacy*, 5(1), 22–29.

World Health Organization (WHO). (2021). *WHO guidelines on the use of antibiotics: Rational use and antimicrobial resistance*. Geneva: World Health Organization.