

# The Effect of Covid-19 Pandemic on Glycemic Control and Follow-up Visits in Children with Diabetes Mellitus

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## Introduction

Diabetes Mellitus is a disease characterized by the deterioration of carbohydrate and lipid metabolism, which develops as a result of the absence or reduction of insulin's effect. The restrictions in the Covid-19 pandemic are at a level to affect glycemic control in individuals with type 1 diabetes. In our study, it was aimed to contribute to the literature by analyzing the different characteristics of the patient population who applied to our center by detailed inquiry of the features we have compiled in the light of the literature.

## Method

In this study, the files of children with type 1 diabetes who visited pediatric endocrinology outpatient clinics between March 2018 and March 2022 were reviewed retrospectively. Hospital visits, age, BMI standard deviations, and HbA1c levels of the children were recorded. Ketoacidosis and hypoglycemia attacks, number of daily blood glucose measurements, and physical activity changes were investigated.

## Results

When the data were analyzed, it was determined that 55 patients, 58.2% of whom were women, had a 34.5% covid-19 transmission rate and a 61.8% covid vaccination rate. HbA1c levels increased during pandemic. Insulin dose per kilogram increased. It was determined that physical activity decreased in 63.6% of the patients and increased in 9.1%. There was a decrease in admissions to the endocrinology outpatient clinic. A slight decrease was observed in BMI. It was observed that the number of hypoglycemic and the ketoacidosis attacks increased in the pandemic but these changes were not statistically significant.

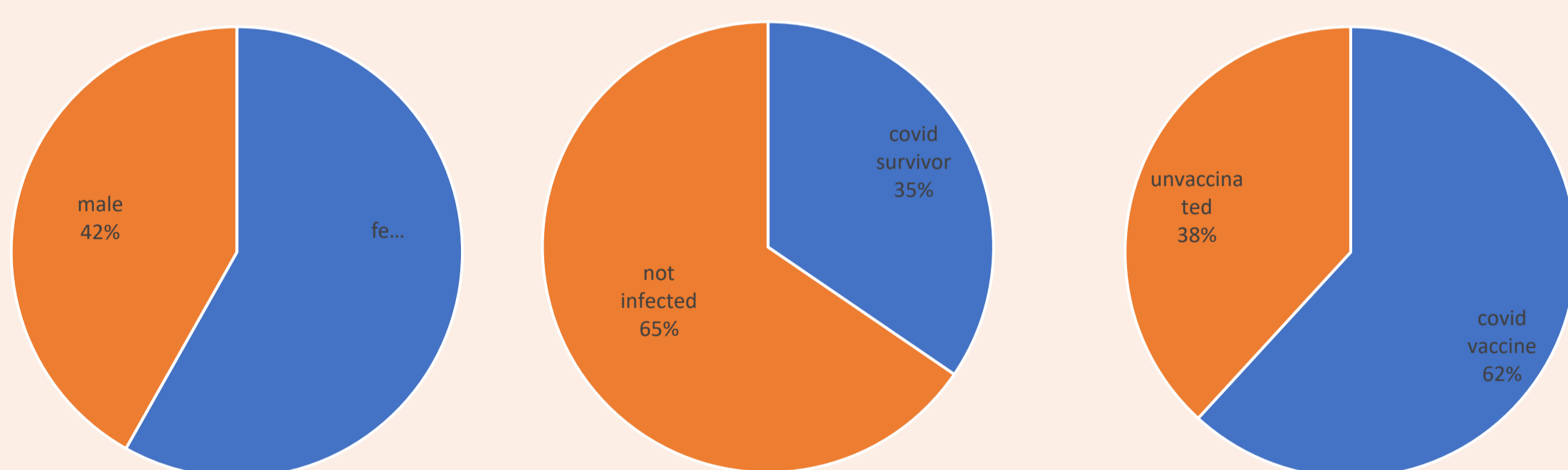


Figure 1 : patient population in our study

	Before Pandemic	After Pandemic	p
HbA1C	8.26 ± 1.24	8.71 ± 1.36	0.006
Endocrinology Visits	6.16 ± 2.35	3.69 ± 2.02	0,000
Hypoglycemic Attack	0.38 ± 1.48	0.67 ± 1.73	0.191
Ketoacidosis	0.23 ± 0.57	0.34 ± 0.88	0.347

Figure 2 : changing parameters before and after the pandemic

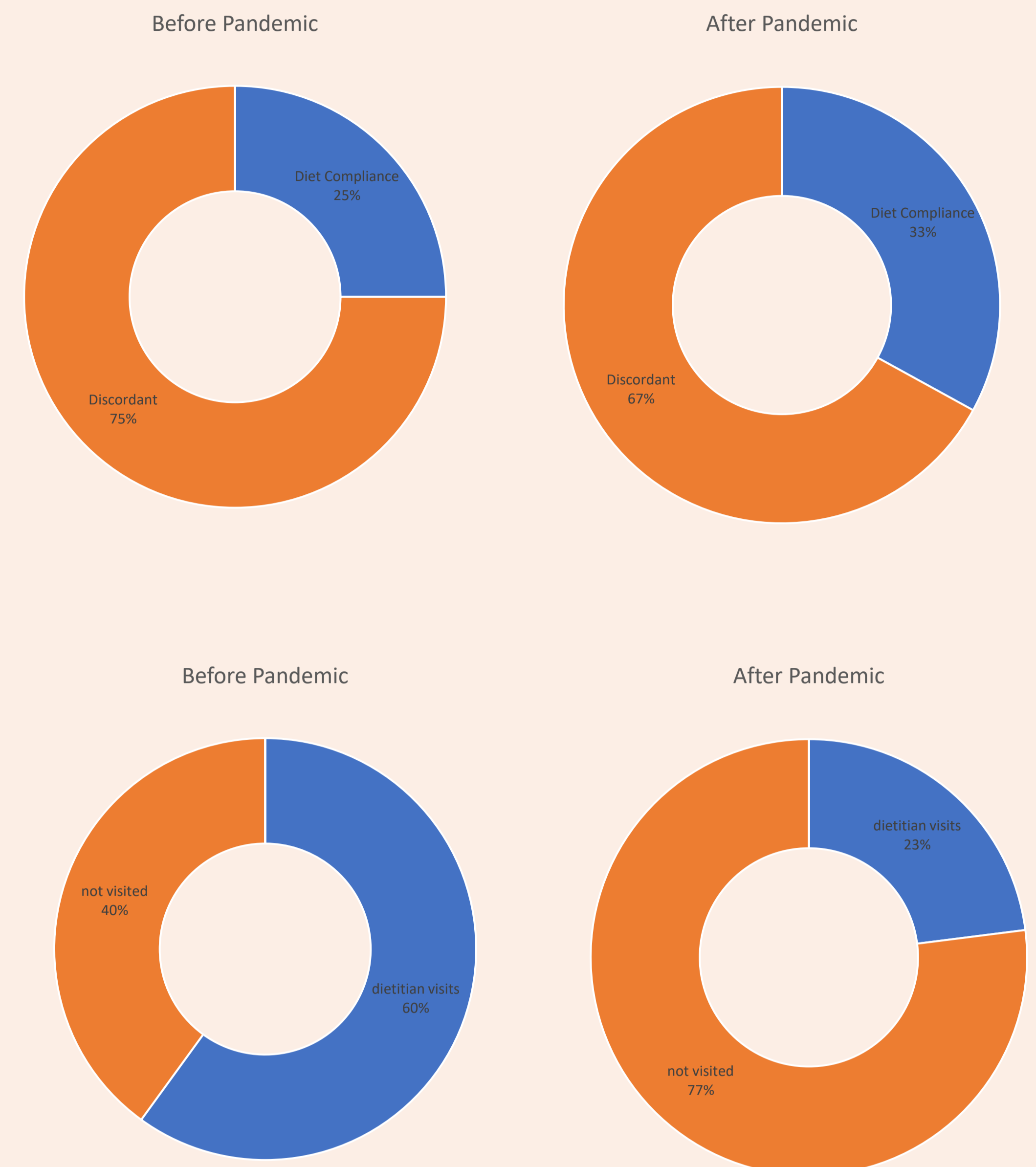


Figure 3: diet compliances and dietitian visits before and after pandemic.

## Conclusion

Although eating habits of children showed minimal changes with the pandemic, their metabolic control went worse throughout the pandemic. This disturbance may be due to decreased physical activity and the lack of regular endocrinology and dietitian visits.

## References

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## Key Words

type 1 diabetes, covid-19, endocrinology visits, metabolic control