



**Adolescents' Adherence to Chronic Medical Regimens:  
Parent-Adolescent Conflict and Adolescent Autonomy in  
Relation to Adherence to Insulin Dependent Diabetes  
Treatment Regimens.**

**Volume One.**

**Michael Fotheringham.**

B.A. (Honours - Psychology). University of Adelaide.

A thesis submitted in fulfilment of the requirements of the degree of  
Doctor of Philosophy, Department of Psychiatry,  
University of Adelaide.

**VOLUME ONE.**

Contents .....	<i>ii</i>
Abstract .....	<i>vii</i>
Declaration .....	<i>viii</i>
Acknowledgements .....	<i>ix</i>
List of Abbreviations .....	<i>x</i>
Preface: The Nature and Management of Insulin-Dependent Diabetes Mellitus .....	<i>xi</i>
<b>Chapter 1. Literature Review. _____</b>	<b>1</b>
1.0 Introduction. ....	2
1.1 The Historical Context of Research into Patient Adherence to Medical Recommendations. ....	3
1.2 Factors Influencing Patient Adherence to Medical Recommendations.....	50
1.3 Adolescents' Adherence to Medical Regimens.....	66
1.4 Summary. ....	100
<b>Chapter 2. The Aims and Hypotheses of this Thesis. _____</b>	<b>102</b>
2.0 Introduction. ....	103
2.1 Aims of This Thesis. ....	105
<b>Chapter 3. Methodology. _____</b>	<b>107</b>
3.1 Subjects. ....	108
3.2 Procedure.....	109
3.3 Measures.....	114
3.4 Statistical Analyses.....	130

<b>Chapter 4. Demographic and Psychosocial Characteristics of the Sample.</b>	<b>135</b>
4.1 Sample Characteristics.....	136
4.2 Descriptive Statistics of Sample Responses.....	141
<b>Chapter 5. Results: The Assessment of Patient Adherence.</b>	<b>160</b>
5.1 The Relationship Between Different Measures of Adherence.....	161
5.2 The Variation in Reported Adherence According to Demographic Characteristics.....	167
5.3 The Variation in Adherence Over Time.....	187
<b>Chapter 6. Discussion: The Assessment of Patient Adherence.</b>	<b>202</b>
6.1 The Relationship Between Different Measures of Adherence.....	203
6.2 The Variation in Reported Adherence According to Demographic Characteristics.....	213
6.3 The Variation in Adherence Over Time.....	226
6.4 Summary.....	240
<b>Chapter 7. Results: The Relationship Between Patient Adherence and Parent- Adolescent Conflict.</b>	<b>244</b>
7.1 The Reporting of Parent-Adolescent Conflict in Relation to Sample Characteristics.....	245
7.2 The Level of Association Between Measures of Parent-Adolescent Conflict and Adherence.....	250
7.3 Differences in Associations Between Parent-Adolescent Conflict and Adherence According to Sample Characteristics.....	258
7.4 The Level of Association Between Measures of Parent-Adolescent Conflict and Adolescents' Metabolic Control.....	262

<b>Chapter 8. Discussion: The Relationship Between Patient Adherence and Parent-Adolescent Conflict.</b>	<b>266</b>
8.1 The Reporting of Parent-Adolescent Conflict in Relation to Sample Characteristics.	267
8.2 The Level of Association Between Measures of Parent-Adolescent Conflict and Adherence.	279
8.3 Differences in Associations Between Parent-Adolescent Conflict and Adherence According to Sample Characteristics.	289
8.4 The Level of Association Between Measures of Parent-Adolescent Conflict and Adolescents' Metabolic Control.	295
8.5 Summary and Future Directions: The Relationship Between Patient Adherence and Parent-Adolescent Conflict.	299
<b>Chapter 9. Results: The Relationship Between Patient Adherence and Adolescent Autonomy.</b>	<b>307</b>
9.1 The Reporting of Adolescent Autonomy in Relation to Sample Characteristics.	308
9.2 The Level of Association Between Measures of Adolescent Autonomy and Adherence.	314
9.3 The Level of Association Between Measures of Adolescent Autonomy and Adolescents' Metabolic Control.	322
<b>Chapter 10. Results: The Relationship Between Patient Adherence and Adolescent Autonomy.</b>	<b>323</b>
10.1 The Reporting of Adolescent Autonomy in Relation to Sample Characteristics.	324
10.2 The Level of Association Between Measures of Adolescent Autonomy and Adherence.	329
10.3 The Level of Association Between Measures of Adolescent Autonomy and Adolescents' Metabolic Control.	336
10.4 Summary and Future Directions: The Relationship Between Patient Adherence and Adolescent Autonomy.	337

<b>Chapter 11. Results: The Relationship Between Patient Adherence and the Proposed Antecedents Of Adherence.</b>	<b>343</b>
11.0 Introduction.	344
11.1 The Reporting of The Proposed Antecedents of Adherence in Relation to Sample Characteristics.	345
11.2 The Level of Association Between Measures of Proposed Antecedents of Adherence, and Adherence.	351
11.3 The Level of Association Between Measures of Proposed Antecedents of Adherence and Adolescents' Metabolic Control.	360
<b>Chapter 12. Discussion: The Relationship Between Patient Adherence and the Proposed Antecedents Of Adherence.</b>	<b>363</b>
12.1 The Reporting of The Proposed Antecedents of Adherence in Relation to Sample Characteristics.	364
12.2 The Level of Association Between Measures of Proposed Antecedents of Adherence, and Adherence.	369
12.3 The Level of Association Between Proposed Antecedents of Adherence and Adolescents' Metabolic Control.	379
12.4 Summary and Future Directions: The Relationship Between Patient Adherence and Proposed Antecedents of Adherence.	382
<b>Chapter 13. Results: The Multivariate Prediction of Patient Adherence.</b>	<b>391</b>
13.1 Evaluation of the Six-Factor Model of Adherence.	392
13.2 Evaluation of the Six-Factor Model of Adherence With the Addition of Adolescent Variables.	396
13.3 The Maximal Prediction of Adherence	401

<b>Chapter 14. Discussion: The Multivariate Prediction of Patient Adherence.</b>	<b>405</b>
14.1 Evaluation of the Six-Factor Model of Adherence. ....	406
14.2 Evaluation of the Six-Factor Model of Adherence With the Addition of Adolescent Variables. ....	412
14.3 The Maximal Prediction of Adherence and Metabolic Control .....	421
14.4 Summary and Future Directions: The Multivariate Prediction of Medical Adherence by Adolescents. ....	425
<b>Chapter 15. Conclusions.</b>	<b>437</b>
15.0 A Review of the Aims of This Thesis. ....	438
15.1 A Synthesis of the Thesis Findings in Light of these Aims. ....	439
15.2 Limitations of the Thesis Findings. ....	448

## **VOLUME TWO.**

Tables and Figures Cited in the Text.....	Volume 2: 1
Appendices.....	Volume 2: 168
Bibliography.....	Volume 2: 334

*The contents of Volume Two are described in more detail at the start of the volume.*

## Abstract.

*The principal aim of this thesis was to examine adherence to medical recommendations amongst adolescents with insulin-dependent diabetes. The relationships between adolescents' adherence and their experience of conflict with parents and of personal autonomy were examined. In addition, the relationships between adolescents' adherence and a range of factors proposed to relate to adherence in the Six-Factor Model of Adherence (DiMatteo & DiNicola, 1982) were also examined.*

*Measures of general and diabetes-specific adherence were completed by 135 adolescents and their parents attending Diabetes Outpatient Clinics at the Women's and Children's Hospital, Adelaide. Objective data of blood glucose monitoring adherence was obtained from the electronic memory of glucose sensors amongst a subsample of the adolescents. All adherence measures addressed behaviour over the four weeks prior to assessment. During clinic attendance, adolescents and parents also completed measures of parent-adolescent conflict and adolescent autonomy, as well as measures assessing factors included in the Six-Factor Model of Adherence. Metabolic control was assessed by HbA<sub>1c</sub> assays recorded in the clinics.*

*Large correlations were detected between each of the adherence measures. Reports of adherence were significantly associated with the adolescents' level of metabolic control. Blood glucose monitoring adherence levels varied over the four weeks prior to assessment, increasing with a linear trend as clinic appointments approached.*

*The findings of this research supported the hypothesis that adherence would be lower amongst adolescents who experienced high levels of conflict with their parents than amongst adolescents who experienced less conflict with their parents.*

*The findings of this research did not provide support for the hypothesised direct association between adolescents' experience of autonomy and their level of medical adherence. However, it seems premature to conclude that adolescents' medical adherence is unrelated to their experience of autonomy.*

*The findings of this research also provided support for the relevance, and general support for the structure, of the Six-Factor Model of Adherence in understanding adolescents' medical adherence. These findings further supported the inclusion of parent-adolescent conflict and adolescent autonomy with this model when assessing adolescents' medical adherence.*