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AN INVESTIGATION OF COGNITIVE FACTORS IN ADOLESCENT DEPRESSION USING KELLY'S REPERTORY GRID TECHNIQUE

BY

WAYNE A. HAMMOND

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SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

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DEPARTMENT OF CLINICAL PSYCHOLOGY

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  - Linguistics 0290
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  - Classical 0294
  - Comparative 0295
  - Medieval 0297
  - Modern 0298
  - African 0316
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  - Canadian (English) 0352
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  - Marketing 0338
- Canadian Studies 0385
- Economics
  - General 0501
  - Agricultural 0503
  - Commerce-Business 0505
  - Finance 0508
  - History 0509
  - Labor 0510
  - Theory 0511
- Folklore 0358
- Geography 0366
- Gerontology 0351
- History
  - General 0578
  - Ancient 0579
  - Medieval 0581
  - Modern 0582
  - Black 0328
  - African 0331
  - Asia, Australia and Oceania 0332
  - Canadian 0334
  - European 0335
  - Latin American 0336
  - Middle Eastern 0333
  - United States 0337
- History of Science 0585
- Law 0398
- Political Science
  - General 0615
  - International Law and Relations 0616
  - Public Administration 0617
- Recreation 0814
- Social Work 0452
- Sociology
  - General 0626
  - Criminology and Penology 0627
  - Demography 0938
  - Ethnic and Racial Studies 0631
  - Individual and Family Studies 0628
  - Industrial and Labor Relations 0629
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  - General 0473
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  - Plant Culture 0479
  - Plant Pathology 0480
  - Plant Physiology 0817
  - Range Management 0777
  - Wood Technology 0746
- Biology
  - General 0306
  - Anatomy 0287
  - Biostatistics 0308
  - Botany 0309
  - Cell 0379
  - Ecology 0329
  - Entomology 0353
  - Genetics 0369
  - Limnology 0793
  - Microbiology 0410
  - Molecular 0307
  - Neuroscience 0317
  - Oceanography 0416
  - Physiology 0433
  - Radiation 0821
  - Veterinary Science 0778
  - Zoology 0472
- Biophysics
  - General 0786
  - Medical 0760

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- Biogeochemistry 0425
- Geochemistry 0996
- Geodesy 0370
- Geology 0372
- Geophysics 0373
- Hydrology 0388
- Mineralogy 0411
- Paleobotany 0345
- Paleoecology 0426
- Paleontology 0418
- Paleozoology 0985
- Palynology 0427
- Physical Geography 0368
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  - Immunology 0982
  - Medicine and Surgery 0564
  - Mental Health 0347
  - Nursing 0569
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  - Obstetrics and Gynecology 0380
  - Occupational Health and Therapy 0354
  - Ophthalmology 0381
  - Pathology 0571
  - Pharmacology 0419
  - Pharmacy 0572
  - Physical Therapy 0382
  - Public Health 0573
  - Radiology 0574
  - Recreation 0575
  - Speech Pathology 0460
  - Toxicology 0383
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  - General 0485
  - Agricultural 0749
  - Analytical 0486
  - Biochemistry 0487
  - Inorganic 0488
  - Nuclear 0738
  - Organic 0490
  - Pharmaceutical 0491
  - Physical 0494
  - Polymer 0495
  - Radiation 0754
- Mathematics 0405
- Physics
  - General 0605
  - Acoustics 0986
  - Astronomy and Astrophysics 0606
  - Atmospheric Science 0608
  - Atomic 0748
  - Electronics and Electricity 0607
  - Elementary Particles and High Energy 0798
  - Fluid and Plasma 0759
  - Molecular 0609
  - Nuclear 0610
  - Optics 0752
  - Radiation 0756
  - Solid State 0611
- Statistics 0463

Applied Sciences

- Applied Mechanics 0346
- Computer Science 0984
- Engineering
  - General 0537
  - Aerospace 0538
  - Agricultural 0539
  - Automotive 0540
  - Biomedical 0541
  - Chemical 0542
  - Civil 0543
  - Electronics and Electrical 0544
  - Heat and Thermodynamics 0348
  - Hydraulic 0545
  - Industrial 0546
  - Marine 0547
  - Materials Science 0794
  - Mechanical 0548
  - Metallurgy 0743
  - Mining 0551
  - Nuclear 0552
  - Packaging 0549
  - Petroleum 0765
  - Sanitary and Municipal 0554
  - System Science 0790
- Geotechnology 0428
- Operations Research 0796
- Plastics Technology 0795
- Textile Technology 0994

PSYCHOLOGY

- General 0621
- Behavioral 0384
- Clinical 0622
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Enseignement religieux 0527
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Enseignement spécial 0529
Enseignement supérieur 0745
Évaluation 0288
Finances 0277
Formation des enseignants 0530
Histoire de l'éducation 0520
Langues et littérature 0279
Lecture 0535
Mathématiques 0280
Musique 0522
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Philosophie de l'éducation 0998
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- Anciennes 0294
- Comparée 0295
- Médiévale 0297
- Moderne 0298
- Africaine 0316
- Américaine 0591
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- Asiatique 0305
- Canadienne (Anglaise) 0352
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Théologie 0469

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- Archéologie 0324
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Droit 0398
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- Généralités 0501
- Commerce-Affaires 0505
- Économie agricole 0503
- Économie du travail 0510
- Finances 0508
- Histoire 0509
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Études canadiennes 0385
Études féministes 0453
Folklore 0358
Géographie 0366
Gérontologie 0351
Gestion des affaires
- Généralités 0310
- Administration 0454
- Banques 0770
- Comptabilité 0272
- Marketing 0338

Histoire
- Histoire générale 0578
- Ancienne 0579
- Médiévale 0581
- Moderne 0582
- Histoire des noirs 0328
- Africaine 0331
- Canadienne 0334
- États-Unis 0337
- Européenne 0335
- Moyen-orientale 0333
- Latino-américaine 0336
- Asie, Australie et Océanie 0332

Histoire des sciences 0585
Loisirs 0814
Planification urbaine et régionale 0999
Science politique
- Généralités 0615
- Administration publique 0617
- Droit et relations internationales 0616

Sociologie
- Généralités 0626
- Aide et bien-âtre social 0630
- Criminologie et établissements pénitentiaires 0627
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- Études de l' individu et de la famille 0628
- Études des relations interethniques et des relations raciales 0631
- Structure et développement social 0700
- Théorie et méthodes. 0344
- Travail et relations industrielles 0629

Transports 0709
Travail social 0452

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- Généralités 0473
- Agronomie. 0285
- Alimentation et technologie alimentaire 0359
- Culture 0479
- Élevage et alimentation 0475
- Exploitation des pâturages 0777
- Pathologie animale 0476
- Pathologie végétale 0480
- Physiologie végétale 0817
- Sylviculture et faune 0478
- Technologie du bois 0746

Biologie
- Généralités 0306
- Anatomie 0287
- Biologie (Statistiques) 0308
- Biologie moléculaire 0307
- Botanique 0309
- Cellule 0379
- Écologie 0329
- Entomologie 0353
- Génétique 0369
- Limnologie 0793
- Microbiologie 0410
- Neurologie 0317
- Océanographie 0416
- Physiologie 0433
- Radiation 0821
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- Généralités 0786
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Géochimie 0996
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Sciences de la santé
- Généralités 0566
- Administration des hôpitaux 0769
- Alimentation et nutrition 0570
- Audiologie 0300
- Chimiothérapie 0992
- Dentisterie 0567
- Développement humain 0758
- Enseignement 0350
- Immunologie 0982
- Loisirs 0575
- Médecine du travail et thérapie 0354
- Médecine et chirurgie 0564
- Obstétrique et gynécologie 0380
- Ophtalmologie 0381
- Orthophonie 0460
- Pathologie 0571
- Pharmacie 0572
- Pharmacologie 0419
- Physiothérapie 0382
- Radiologie 0574
- Santé mentale 0347
- Santé publique 0573
- Soins infirmiers 0569
- Toxicologie 0383

SCIENCES PHYSIQUES

Sciences Pures

Chimie
- Généralités 0485
- Biochimie 487
- Chimie agricole 0749
- Chimie analytique 0486
- Chimie minérale 0488
- Chimie nucléaire 0738
- Chimie organique 0490
- Chimie pharmaceutique 0491
- Physique 0494
- PolymÇres 0495
- Radiation 0754

Mathématiques 0405
Physique
- Généralités 0605
- Acoustique 0986
- Astronomie et astrophysique 0606
- Electronique et électricité 0607
- Fluides et plasma 0759
- Météorologie 0608
- Optique 0752
- Particules (Physique nucléaire) 0798
- Physique atomique 0748
- Physique de l'état solide 0611
- Physique moléculaire 0609
- Physique nucléaire 0610
- Radiation 0756

Statistiques 0463

Sciences Appliqués Et Technologie

Informatique 0984
Ingénierie
- Généralités 0537
- Agricole 0539
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- Conditionnement (Emballage) 0549
- Génie aérospatial 0538
- Génie chimique 0542
- Génie civil 0543
- Génie électronique et électrique 0544
- Génie industriel 0546
- Génie mécanique 0548
- Génie nucléaire 0552
- Ingénierie des systèmes 0790
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "An Investigation of Cognitive Factors in Adolescent Depression Using Kelly's Rerpertory Grid Technique" submitted by Wayne A. Hammond in partial fulfillment of the requirements for the degree of Master of Science.

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ABSTRACT

The purpose of this study was to investigate some of the cognitive processes that may characterize depressed adolescents and if they are similar to those found in depressed adults.

The investigation utilized a modified version of Kelly's Role Construct Repertory Test to compare clinically depressed adolescents with those who were either mild/moderately depressed or not depressed at all. Results supported the hypothesis that higher levels of depression in adolescents would be related to a greater degree of polarized construing, pessimism, low self-esteem, interpersonal isolation, and external locus of control. However, the prediction that the mild/moderately depressed group would exceed the normal group in polarized construing was not confirmed.

Results were discussed in relation to previous studies of cognitive processes thought to characterize depressed adolescents and theoretical explanations are offered for the differences in levels of the cognitive features found between the three groups.

ACKNOWLEDGMENTS

I would like to express my thanks and sincere appreciation to the many individuals who provided their assistance during the course of my research. In particular, I would like to thank my supervisor, Dr. D. M. Romney for his guidance and support during the preparation of this thesis. Special thanks are extended to the members of my examining committee, Dr. M. Shaw and Dr. C. Violato.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Information about the etiological factors of depression in adults as well as effective treatment approaches for depressed adults is well documented in the research literature. Hodges and Siegel (1985) relate that research on depression with adults has developed to the point where the focus is primarily on identifying specific subgroups within the mood disorders. In sharp contrast to this, it has only been within the last couple of decades that systematic investigations have begun to explore the basic features of depressive disorders in individuals under the age of 18.

Historically, it was generally held that depression was extremely rare, and possibly non-existent in children and adolescents (Hersh, 1977). A great deal of the research on preadult depression addressed questions of whether in fact children and adolescents can in fact become depressed, and if so, what form the depression takes. Although no one has ever doubted that preadults can suffer from sad affect, views have varied regarding whether they can suffer the full set of affective, somatic, cognitive, and behavioral symptoms characteristic of major depression in adults (Cantwell & Carson, 1979; Schulterbrant & Raskin, 1977). Many researchers challenged and even denied the existence of

depressive syndromes among preadults since depression was felt to depend on a well-developed superego (Lefkowitz & Burton, 1978; Rie, 1966).

Interest in the affective disorders of children and adolescents has increased significantly over the last decade. Kovacs (1989) suggests that research on the affective disorders in the preadult years has been bolstered by several factors. First, promising developments in the identification and treatment of affective disorders in adults based on cognitive and behavioral theories have played a role. Second, the emergence of a number of measures of depression in preadults has also allowed researchers to examine the phenomenon in clinic and normal populations. Finally, the new perspective of "developmental psychopathology" has focused additional attention on depression in preadult years. Ehrenberg, Cox, & Koopman (1990) point out that the investigation of depression in preadults has also been prompted by the known association between depression and suicide and by statistics indicating that suicide rates are increasing at a faster rate for adolescents than any other age group.

As a result of further research, the existence of clinical depressive episodes in children and adolescents has now received wide recognition and acceptance (Simeon, 1989; Strober & Carlson, 1982). Kovacs (1989) states that research findings in recent years have provided compelling

evidence "that school-aged children and adolescents do experience depression, whether depression is defined as a painful emotion or negative mood (a symptom); an aggregate of negative mood and associated complaints such as hopelessness, worthlessness, suicidal wishes, and lethargy (a syndrome); or a depressive syndrome with a characteristic symptom pattern and duration that impairs the person's functioning and meets other requirements for a diagnosis as well (a psychiatric disorder)" (p. 209). (For reviews, see Digdon & Gotlib, 1985; Puig-Antich, 1986.)

In many ways, it has been the research on affective disorders in adults that has laid the basis for and played an important role in the marked advance in classifying depressive psychopathology in children and adolescents (Kazdin, 1990; Strober, 1989). Initial attention in research on depression in preadults tended to focus on the controversy regarding the existence and criteria for a distinct clinical syndrome of depression in children and adolescents (Lefkowitz & Burton, 1978; Rie, 1966). Current emphasis has changed to an attempt to identify whether the essential characteristics of depression are the same for preadults and adults (Fleming, Offord, & Boyle, 1989; Puig-Antich, 1982; Ryan, Puig-Antich, Ambrosini, et al., 1987).

A review of the literature reveals that a number of researchers feel that the diagnosis of depression in children over 7, adolescents, and adults may be comparable,

at least on the core set of signs and symptoms that are required for diagnosis (Goodyer, 1992; Schoenbach, Garrison, & Kaplan, 1984). In contrast to this position, other researchers argue that developmental aspects do not allow for a confident conclusion about whether depression in preadults is parallel to adult depression (Hodges & Siegel, 1985). Goodyer (1992) appropriately points out that "this does not mean that the manifestations of the disorder are identical at different ages. The configuration of symptoms accompanying social disabilities, course and outcome of disorder may vary with age or with other developmental factors such as puberty" (pp. 587-587).

Although it is generally accepted now that depression does exist in preadults, further research is needed to determine the emotional and behavioral syndromes which are unique to childhood and adolescent depression or meet an adult criteria. Among the major researchers, there is no consensus as to the essential and associated features of preadult depression and whether there are age specific differences (Hodges & Siegel, 1985). More specifically, disagreement in the literature has existed as to whether adolescents should be included in descriptions of child or adult psychopathology (Carlson & Garber, 1986). Often, adolescents tend to be included in theoretical discussions and research protocols of childhood. But research has demonstrated that appreciable changes do occur in the

frequency and nature of depressive symptoms during the period of adolescence (Gjerde, Block, & Block, 1988). As a result, the current justification for viewing depression in adolescents as similar to that in adults lacks clarity and begs for a greater focus in research on the transitional stage between childhood and adult. Goodyer (1992) affirms the fact that there are few studies of descriptive psychopathology of depression at different ages and stages of development.

CHAPTER 2

LITERATURE REVIEW

This chapter will review the literature pertaining to preadult depression with a particular focus on adolescent issues. To begin with, the review will attempt to summarize some of the historical perspectives on preadult depression. Following this, the areas of terminology, prevalence, diagnosis, developmental considerations, etiology, and psychological and other risk factors of preadult depression will be discussed. Finally, the personal construct theory and its relevance and potential application to the investigation of depression will be explained.

Historical Perspectives

A brief look at the literature reveals that there have been several perspectives on the nature of a depressive disorder or syndrome in preadults. One view which has been the dominant one in preadult clinical work for many years is the psychoanalytic perspective. Depression as a clinical disorder in children, similar to major depression in adults, was not considered to be possible (Kazdin, 1988). Psychoanalytical theorists have maintained that since depression was the product of a persecutory superego, it could not occur in pre-adolescents, who were supposed to

lack mature superego structures. Depression was said to emerge as a discrete phenomenon only during adolescence, and to be relatively uncommon even then (Rie, 1966). As a result, depression as a disorder in preadults was not specifically studied or included as a viable diagnostic category. However, changes in this perspective have occurred and some more recent psychoanalytic views like the ego-analytic model of depression acknowledge the possible appearance of the disorder in children (Kazdin, 1988).

A second major view has been the concept of "masked depression". This view held that there is a disorder of preadult depression. But it maintained that there are numerous instances when the dysphoric mood and other features usually considered essential to the diagnosis of depression in adults are not present in preadults. Rather, depressive equivalents in adolescents are said to be manifested ("masked") as other behavioral symptoms such as delinquent behavior, learning problems, phobias, etc. (Glaser, 1968). But Hodges and Siegel (1985) point out that the concept of "masked depression" has been criticized because every symptom that has been proposed as an overt manifestation of an underlying depression also represents symptoms that reflect the total range of behavior disorders in preadults. Hence, little is offered in the way of "providing guidelines for a classification or differential diagnosis of depression versus other forms of behavior

disorders" (p. 518).

Although the view of masked depression was limited, it did play an important role in helping to motivate research in the area of preadult depression. Wicks-Nelson and Israel (1991) point out that the "masked" view clearly recognized depression as an important and prevalent problem in preadults and implied that depression may frequently be associated with other forms of childhood psychopathology. Also, it raised the possibility that depression in preadults may be manifested in ways that differ from depression in adults. This perspective contributed, in part, to the evolution of a broader developmental concept of depression in preadults.

A third view is presented by researchers who feel that the depressive symptoms seen in adolescents are often transitory in nature. Since the symptoms are not considered to persist as they do in adults and are often observed in normal preadults at various developmental periods, they are not seen as pathological or dysfunctional in nature (Gittleman-Klein, 1977; Lefkowitz, 1980). Kazdin (1988) points out that the view of depression in childhood not being considered a distinct dysfunction has been a partial reaction to the notion of "masked depression", which permits virtually any sign of deviance to constitute evidence of depression. Although research does indicate that characteristics of depression can be seen at different

developmental stages in preadults (Lefkowitz, 1980; Lefkowitz & Burton, 1978), it is generally accepted that there is a central problem with the idea that depression is merely a developmental phenomenon which they will grow out of. Depression as a symptom or other specific symptoms may emerge at different points of development. But it is different to suggest that a cluster of symptoms is also likely to occur in a large number of preadults at the same developmental level (Kazdin, 1988). Costello (1980) relates that even if the full syndrome were detected to have a relatively high prevalence at a particular age, this cannot lead to the conclusion that a disorder does not exist or that it should not be treated.

Finally, a more current view is that depression in preadults exists and that the essential features of the disorder are similar to those found in adult depression (Cantwell & Carlson, 1983; Carlson & Strober, 1979; Goodyer, 1992; Puig-Antich, 1982; Schoenbach, Garrison, & Kaplan, 1984; Simeon, 1989; Strober, Green, & Carlson, 1982). The idea of depression in adolescents as a syndrome or disorder has gained popularity because of the perceived success in applying unmodified adult diagnostic criteria to preadults (Kazdin, 1988). This position was adopted by DSM-III and to some extent in DSM-III-R in which there is an assumption that when depression occurs in a preadult, the essential features are the same as those when depression occurs in an

adult (American Psychiatric Association, 1980, 1987). But many researchers who hold this view also realize that just because depression as a clinical syndrome can be diagnosed in preadults and adults does not mean that the manifestations of the disorder are necessarily identical (Kaslow, Rehm, & Siegel, 1984; Kazdin, Esveldt-Dawson, Sherick, & Colbus, 1985).

As one can see from this brief historical review, the conceptualization of preadult depression is far from settled. A great deal of research around the essential features and developmental issues related to preadult depression still needs to occur and existing information requires explanation (Wicks-Nelson & Israel, 1991).

Terminology of Depression

For many clinicians, the term "depression" refers to changes in moods and behaviors that range from a mild degree of reactive sadness to intensely experienced feelings of dysphoria as well as possible suicidal thoughts. Because feelings of sadness are within the realm of normal adolescent experience, the distinction between mood changes and affective disturbances is not always clear, but it has important treatment implications (Oster & Caro, 1990). A similar confusion is found in understanding the research that has been done in the area of adolescent depression

around the way the term depression is used. All too often, the term is used in an imprecise manner to refer to a number of different levels of interpretation: depressive symptoms, depressive syndrome, and depressive disorder (Cantwell & Baker, 1991; Oster & Caro, 1990). These levels are laid out schematically by Cantwell and Baker (1991) (see Appendix D).

At one level of interpretation, the term depression is used to refer to a person experiencing a symptom (i.e., sad mood, unhappiness, feeling miserable, feeling blue, feeling down in the dumps, and other related terms). This way of interpreting depression indicates only one aspect of a depressive syndrome or a depressive disorder (Kendall, Cantwell, & Kazdin, 1989).

The term depression can also be used to refer to various symptoms and often called "depressive or vegetative symptoms". "Depressive symptoms" might include poor appetite and weight, initial insomnia, loss of energy, psychomotor agitation or retardation, and suicidality which are often found in adult psychiatric patients who have the clinical features of a depressive syndrome or depressive disorder (Cantwell and Baker, 1991). Cantwell and Baker (1991) relate that "depressive symptoms" are sometimes transient, can be related to specific environmental events, and may not be a part of a definable psychiatric disorder (mood disorder included). With regards to preadults, the "depressive symptoms" are relatively common in many

psychiatric disorders and in normal populations. As a result, when these depressive symptoms occur in adolescents, they do not necessarily make up part of a depressive syndrome or depressive disorder (Cantwell & Baker, 1991).

At another level of interpretation, the term depression refers to a syndrome or a set of symptoms that regularly occur together and are not associated by chance (Cantwell & Baker, 1991). Kendall, Cantwell, and Kazdin (1989) point out that the depressive syndrome is usually viewed as consisting of eight primary symptom clusters in addition to dysphoric mood. These are changes in appetite and weight; changes in sleep pattern (particularly insomnia); psychomotor agitation or psychomotor retardation; loss of interest in usual activities and a loss of pleasure that is generally obtained from doing these activities; feelings of self-reproach or guilt; a diminished ability to concentrate or think; or slow-down thinking; and finally, morbid thoughts of death, thoughts of suicide, and suicidal behavior (Feighner et al., 1972; American Psychological Association [APA], 1980, 1987). It should be noted that a depressive syndrome may occur as a primary problem (e.g., without depressive preexisting psychiatric, medical, neurological, or environmental antecedents) or as a concomitant problem with a wide variety of other psychological and medical disorders (Cantwell & Baker, 1991).

Finally, the term depression can be used to refer to a depressive psychiatric disorder that consists of a depressive syndrome having a certain minimum duration as well as minimal degree of functional impairment in important life areas (e.g., school, interpersonal relationships, and leisure time). Generally, there is an implication that the disorder has a characteristic clinical picture, a characteristic outcome without treatment, a characteristic response to certain types of treatment and possible correlates or combinations of a biological, environmental, cognitive, and family-genetic nature (Kendall, Cantwell, & Kazdin, 1989).

Understanding how the term depression has been used in adult research has an played an important role in the process of diagnosing depression in adolescents. It would also seem that the starting point for the understanding and diagnosis of depressive disorders in adolescents has been based on the apparent success in applying unmodified adult diagnostic criteria. As a result, the view and interpretation of adolescent depression as a syndrome or disorder similar to that of an adult has gained prominence (Kazdin, 1988). Also, adult research has prompted attention to defining subgroups of adolescent depression since no one adolescent reports all of the symptoms surrounding the syndrome or disorder of depression. Although, a great deal of controversy surrounds how to subtype adolescent

depression, subtypes of adolescent depression have taken the forms of psychotic-neurotic, endogenous-reactive, primary-secondary, and unipolar-bipolar dichotomies (Oster & Caro, 1990).

Prevalence of Depression in Adolescents

The incidence of depression has been studied in the general population of adolescents as well as various clinic samples. In the general population, research on prevalence rates for major depression (and dysthymia) tend to range between 2% to 5% using a DSM-III criteria (Kashani, et al., 1987; Kovacs, 1989; Matson, 1989). Some researchers using the Beck Depression Inventory have found that approximately one-third of their non-clinical adolescent population were considered mildly to clinically depressed (Ehrenberg et al., 1990; Rutter, 1986b). In clinical populations, estimates have been reported any where from 2% to 60% (Angold, 1988; Carlson & Cantwell, 1979). But it should be noted that discrepancies in prevalence rates do exist which Kazdin (1988) feels may be due to the different measures that are used, the difficulty in administering similar measures to preadults of different ages, and the different diagnostic criteria that are used.

A review of the literature reveals that usually no gender differences are reported for children ages 6 to 12

(e.g., Fleming, et al., 1989; Lefkowitz & Tesiny, 1985). It has been proposed that differences in frequency of depression between males and females begin in early adolescence and tend to increase over the next several years (Kandel & Davies, 1982). Some researchers (Petersen, Sarigiani, & Kennedy, 1991; Reynolds, 1985; Rutter, 1986a) have claimed that the prevalence of adolescent depression appears to be greater in females than males. But differences in prevalence rates between adolescent males and females are not always found (Kaplan, Hong, & Weinhold, 1984). For example, Fleming et al. (1989) found that although females predominated over males in frequency of mild and moderate depression, there were no sex differences in the clinical cases of adolescent depression. They also related that a possible reason for differences between males and females from a symptom perspective could be the presence of behavioral and anxiety symptoms which may obscure depressive symptoms in males.

Recent longitudinal studies have shown that depression in young people may be limited to a single episode. Where as for others (as many as 30%), the first episode may be the beginning of a relapsing disorder existing throughout adolescence and a risk factor for depression in adulthood (Goodyer, Germany, Gowrusanker, & Altham, 1991; Kovacs & Gatsonis, 1989). Kovacs (1989) relates that an episode of major depression can last up to seven to nine months on

average while an episode of dysthymia may exceed three years. Studies have confirmed that the depression can manifest with or without psychotic features and endogenous or melancholic subtypes can also be identified (Kovacs, 1985; Puig-Antich, 1986). It should also be noted that although adolescents recover from depressive disturbances, they can show residual impairment in social functioning and their educational progress and learning may be slowed down as well (Hodges & Siegel, 1985; Puig-Antich, 1982).

Diagnosis of Depression in Adolescents

Overall, it would seem that the process of assessing depression in adolescents is generally considered to be a complex task. Diagnosis among adolescents is particularly difficult because of the transiency of their moods and the maladaptive behaviors that may be occurring along with the underlying mood disturbance. Additionally, when adolescent depression occurs as a secondary symptom to other psychiatric or medical problems, an accurate diagnosis becomes even more difficult (Oster & Caro, 1990). Hodges and Siegel (1985) note that not only do developmentally related issues need to be considered, but the assessment process tends to involve reporting subjective experience and relies less on direct observation. Yet in light of this apparent difficulty, there is a growing recognition of a

need for some type of specific criteria for diagnosis.

The criteria for preadult depressive disorders originated from the adult "Feighner criteria" (Feighner et al., 1972) which was later modified in the Research Diagnostic Criteria (RDC; Spitzer et al., 1978). The next significant step to define the clinical features of depressive disorder was that of the Diagnostic and Statistical Manual (DSM-III; APA, 1980). The DSM-III criteria for a depressive episode were similar to the RDC criteria in that dysphoric mood or anhedonia had to be present with at least four of seven symptom clusters: disturbance of appetite, weight gain or loss; sleep difficulty; loss of energy; loss of interest or pleasure in usual activity; self-reproach and inappropriate guilt; diminished concentration; and suicidal tendencies. However, the duration of the symptomatology was changed to two weeks, simple bereavement was also an added exclusion along with minor changes in the specification of the symptom cluster (Cantwell & Baker, 1991).

The most recent diagnostic criteria for depression is the revision of the DSM-III which is referred to as the DSM-III-R (APA, 1987). In DSM-III-R, the major class of affective disorders was renamed "mood disorders". The criteria for the diagnosis of a major depressive disorder in DSM-III-R requires five out of nine symptoms which are present during a two-week period as well as an associated

change from the individual's level of functioning. Also, one of the core symptoms must be depressed mood or anhedonia. The nine symptoms that make up the depressive syndrome cluster are as follows: 1) depressed mood, 2) anhedonia, 3) significant weight or appetite changes, 4) insomnia or hypersomnia, 5) observable psychomotor agitation or retardation, 6) fatigue, 7) feelings or worthlessness or guilt, 8) indecisiveness or concentration problems, and 9) recurrent thoughts of death.

Use of the DSM-III-R criteria for diagnosing depression in preadults is by no means a settled issue. Kovacs (1989) relates that use of the DSM-III-R diagnostic criteria of depression in adults for evaluating depression in adolescents has been clinically criticized as insensitive to the developmental issues (Kovacs, 1989). Angold (1988) appropriately points out that there has been "a tendency to shy away from careful study of potential age and developmental-associated changes in phenomenology, and a tendency to overvalue the DSM-III (now the DSM-III-R) criteria as derived originally for adults" (p. 487). However, the claim of DSM-III-R being insensitive to developmental factors is not entirely true because the symptom criteria for affective disorders and their associated features do include some age-related accommodations. For example, DSM-III-R specifies that in children and adolescents an irritable mood can be

substituted for depressed mood and that the weight change criteria must be a failure to make developmentally expected weight gains. It also includes a statement that associated features may differ as a function of age, and some are specified for younger children and for older adolescents. Yet, DSM-III-R does make an implicit and explicit assumption that when depression occurs in a preadult, the essential features are the same as those in a depressed adult (Cantwell & Baker, 1991).

A review of the research studies reveals that there is a wide acceptance for the use of DSM-III-R as a diagnostic criteria in research for depression in adolescents. However, other various diagnostic and semistructured interviews as well as self-rating scales for depression in adolescents have been developed which have been outlined by Kazdin (1988) (See Appendix C). Although measures have emerged that are specific to alternative models of depression, most current measures assess the specific symptoms included in the diagnosis of depression and ask raters to evaluate the presence, absence, or severity of individual symptoms (Simeon, 1989). Comprehensive reviews of this area are presented by Cantwell and Carlson (1983) and Kazdin and Petti (1982).

Developmental Considerations in Depressed Adolescents

A brief review of the literature reveals that there is a real lack of research that has examined the symptomatology of depressive disorders across the childhood, adolescent, and adult age range. Cantwell and Baker (1991) state that "much of what is known about the isomorphism of depressive symptomatology has been inferred by comparing the literature on depressed adults to that of depressed children and/or adolescents" (p. 126). As a result, many of the findings in the studies are not conclusive for methodological reasons.

Although the method of comparison is inherently weak, research has shown that there may be a number of similarities in the manifestations of depression in preadults and adults. For example, studies have shown that many cognitive attributes (i.e., locus of control, hopelessness, cognitive distortions), biological correlates (i.e., measures of endocrine functioning), and overt behaviors are similar in depressed preadults and adults (Kaslow, Rehm, & Siegel, 1984; Kazdin et al., 1985: Puig-Antich, 1986; Simeon, 1989). Kendall, Cantwell, and Kazdin (1989) point out that similarities in cognitive processes, symptoms of depression, and correlates of depression among different age groups in many studies has been the rule rather than the exception.

However, a new perspective in research is embracing the

fact that the period of adolescence can be a time of intense cognitive, emotional, and physiological change. In light of this, some researchers (Angold, 1988; Cantwell & Baker, 1991; Kazdin, 1988) feel that the developmental changes in affective, cognitive, biochemical and other systems will inevitably play a role in the manifestation of symptoms in preadults. Supporting this perspective, Kendall, Cantwell, and Kazdin (1989) state that it is essential to consider a developmental perspective in an attempt to take into account the possible age-related differences in the defining attributes or manifest expression of the depressive disorder.

From a developmental perspective, a number of studies have reported possible differences in the symptomatology between depressed adolescents and depressed adults. For example, Simeon (1989) relates that depressed adolescents, in relation to adults, demonstrate more frequently hypersomnia, hyperphagia, a fluctuating course, and greater interpersonal problems. It has also been reported that depressed adolescents demonstrate less anorexia, weight loss, and anergia (Inamdar, Siomopoulous, Osborn, & Bianchi, 1979) and experience more guilt, less morning depression, more low self-esteem and suicidal behaviors as well as more hallucinations (Angold, 1988; Hodges & Siegel, 1985; Kashani, Rosenberg, & Reid, 1989). Cantwell and Baker (1991) report that the most consistent differences reported

in the literature on adolescent depression appear to be the presence of associated disorders (conduct and anxiety) and the degree of suicide attempts and sleep disturbances.

Thus, the literature suggests that there may be some developmental differences in depressive symptomatology between adolescents and adults. Angold (1988) points out that because of the possible developmental differences, it is premature to adopt an unmodified, non-developmental adult criteria as the sole tool in diagnosing depression in preadults.

Carlson and Garber (1986), along with other researchers (e.g., Hodges & Seigel, 1985; Kendall, Cantwell, & Kazdin, 1989), relate that it might be possible to identify certain signs and symptoms that are age-appropriate and then take into account the individual adolescent's level of functioning within the domains (e.g., affective, behavioral, cognitive, and vegetative) that are affected by depression. As a result, certain symptoms in one age group might be de-emphasized in favor of other symptoms that would be considered age-specific. It may also be that the general areas of dysfunction associated with depression (e.g., affective, cognitive, vegetative, and behavioral) are similar across development, but the specific symptoms and behaviors that characterize the dysfunction may vary with age (Carlson & Garber, 1986). Using the developmental perspective as a guide, it may be possible to identify age-

appropriate signs and symptoms that take into account the person's level of functioning within various cognitive, affective, and social domains.

Developmental psychopathologists have questioned the "adult-based" diagnostic criteria as the sole criteria since they feel it does not take sufficient account of possible age-related differences in the signs and symptoms of the depressive disorder. It should be noted that the developmental view does not invalidate the symptom-complex diagnosis, but rather, it seems to have helped theorists to move beyond it. As a result, some unique insights have been gained that could have implications for how adolescent depression is viewed. For example, Carlson and Garber (1986) have suggested a multi-tiered diagnostic system. The first tier would be core clinical signs and symptoms of depression that are consistent across all ages. The second tier would consist of symptoms that occur rarely in the various age groups, but if they occurred, they would be considered signs of depression. The third tier would consist of symptoms that are found to be highly associated with different age ranges. Therefore, the actual number of symptoms required for a diagnosis of depression may change with age, and the actual symptoms and signs that are required for a diagnosis may change.

Etiology of Depression in Adolescents

The literature on the etiology of affective disorders is complex because of the different subtypes of dysfunction as well as the multiplicity of models proposed to account for them. Also, the models that have been developed and researched in the context of adult depression have only recently been extended to preadults.

Some of the more prominent models would include the early psychoanalytic perspectives of depression which focused on intrapsychic influences. Beginning with Freud, an emphasis was placed on the unsatisfied libidinal striving, particularly object loss. Freud's views served as a departure for later psychoanalytic positions that see factors related to depression like repeated disappointment in relation to one's parents, fixation at the oral stage, aggression turned inward, excessive craving for narcissistic gratification, loss of esteem resulting from the unsatisfied need for attention, etc. (Mendelson, 1990).

Despite the attention paid to the underlying features of depression and its manifestations in adults, little attention was given to its correlates in preadults. Rene Spitz's (1946) work was an exception to this omission: he discussed the reaction in infancy precipitated by maternal absence during the early years. This reaction was referred to as "anaclitic depression". Anaclitic depression is

viewed as a result of the experience of object loss and may include several signs such as sadness, withdrawal, apprehension, weepiness, retarded reaction to stimuli, dejection, loss of appetite and weight, and insomnia. Although many of these symptoms were similar to the clinical picture of adult depression, the original formulation of anaclitic depression was not seen as a parallel to affective disorders in adults (Oster & Caro, 1990).

From a classic analytic view, adolescent depression has been considered to be produced by a narcissistic breakdown leading to losses in self-esteem and feelings of helplessness and worthlessness (Jacobson, 1971). The depression could take the form of being predisposed to addictions or self-centered relationships resulting from an intensely close relationship with an inconsistent parental figure who has been overindulgent and critical. Internalized anger was thought to be the source of a depression that could be characterized by guilt and moral masochism which may lead to suicidal thoughts and gestures. Other views have focused attention on late adolescence as a critical period for dealing with strong feelings of powerlessness. If adolescents do not successfully work through the process of separation and individualization, they could experience profound feelings of failure leading to overwhelming eruptions in behavior (Oster & Caro, 1990).

Socioenvironmental models have focused on life events

that may influence the onset or emergence of symptoms of depression. Stressful events are considered in relation to the person's perception or cognitive appraisal of the event. The importance of stressful events as precursors to depressive symptoms is recognized in everyday life (Kazdin, 1988).

Research has supported the role of stressful events in depressive disorders. Bunch (1972) points out that bereavement over the loss of a loved one frequently includes a number of symptoms commonly associated with a depressive disorder. She further states that the risk of suicide is greatly increased following the death of a loved one which may be suggesting that the event may influence the person's feelings of hopelessness and depression. Paykel and Cooper (1992) relate that individuals who are depressed tend to report significantly more stressful life events than non-depressed populations. Brown, Harris, and Peto (1973) have reported that stressful events appear to precede by a few weeks or months the onset of an episode or relapse of depression. In general, studying the impact of stressful events on adolescents is difficult since responses vary according to age and developmental stages and the factors often associated with the event (Bunch, 1972).

Although the socioenvironmental literature seems to indicate that the risk of depression is considerably increased following stressful life events, it is not clear

which type and severity of events are uniquely related to depression. Also, studies need to wrestle with the fact that there are many other causative and modifying factors in depressive disorders as well (Kazdin, 1988; Paykel & Cooper, 1992).

Biological models have made remarkable progress in helping to understand depression in preadults. The research has tended to focus in the following two areas: (1) In the studies around biochemicals, there have been many biological agents implicated in the psychological expression of depression. Much of the reported data has demonstrated that depressed persons have imbalances of the natural biochemicals that allow communication within the brain cells (cf. Pedro, Price, Heninger, & Charney, 1992); (2) In the area of genetics, researchers have started to pinpoint genetic markers (have not found a specific gene) that leave certain individuals susceptible to manic-depressive illness. The discovery of genetic markers has supported earlier research that reported familial links in depression (cf. Nurnberger & Gershon, 1992) models. Although the biological perspective has great promise, the condition of depression still retains a number of formidable questions that research into biology and genetics has yet to address adequately.

The behavioral models of depression have played a leading role in depression research. In general, the behavioral models emphasized the principles of learning

theory and how the acquisition of interpersonal skills and their deficits were associated with various emotional disorders. Symptoms of depression are considered to result from problems in interacting with the environment (Clarkin & Glazer, 1981).

Depression, from a behavioral perspective, was initially defined by Fester (1973) as a reduction in operant behavior which in turn limited the person's ability to receive positive reinforcement from the environment. With behavior not being reinforced, general activity was thought to be reduced and this led to a lessening of rewards which ultimately resulted in a depressed state (Scott, 1992).

Building on Fester's model, Lewinsohn postulated that depression results from the loss or reduction of reinforcement from the environment. If a person does not produce sufficient positive reinforcement or experiences unpleasant outcomes from others, the result will be a passive reaction, withdrawal from interactions, and affective and cognitive symptoms of depression (Lewinsohn & Arconad, 1981). A corresponding behavioral view that overlapped with Lewinsohn's position was the belief that social-skill weaknesses are evident in depressed individuals. The social skills deficits being referred to would include feeling uncomfortable in social interchanges, receiving few positive responses, and being especially sensitive to negative feedback. It was also proposed that

deficits in social skills may cause a depressed person not to meet their interpersonal demands and to suffer anxiety and lack of reinforcement as a result (Oster & Caro, 1990).

Oster and Caro (1990) relate that success in treating depression with social skills and assertion training has caused later behaviorist to maintain the relationship between behavior and mood. Alternative models of depression have also attempted to more fully integrate psychosocial factors. For example, Rehm (1977) has proposed a self-control model that emphasizes the depressed person's inadequate self-regulatory processes for handling stress. Focusing on self-monitoring, self-evaluating, and self-reinforcing behavior, Rehm feels that deficits in these areas will cause a person to focus on negative events, set rigidly high self-standards, and permit themselves little reinforcement. It is an integrative model in that it emphasizes reductions of activity and lack of rewards along with attributions of helplessness and negativism.

Finally, a very productive and insightful model of depression has been the cognitive theory. It is a formulation that grew out of careful clinical observation and experimental testing. The cognitive model emphasizes the perceptual, attributional, and belief systems that underlie depressive symptoms. It also recognizes the role of the environment in directing an individual's experiences as well as the role of the individual in interpreting

environmental stimuli (Moretti, Feldman, & Shaw, 1990).

According to Beck (1976), the cognitive theory postulates three specific notions to explain depression: (1) the cognitive triad; (2) schemas; and (3) cognitive errors. He maintains that the depressed person has a stable, cognitive schema which screens incoming information, and ultimately leads to negative distortion. The schema is considered to be a representation of the past experience for a given individual. But in the schema of a depressed person, the experiences are distorted by dysfunctional thoughts (e.g., arbitrary inference, over generalization, selective abstraction, etc.) with the depressed person tending to exaggerate personal faults and belittle personal strengths. The cognitions are often irrelevant and inappropriate to the actual event and reflect a consistent negative bias toward the self (referred to by Beck as "selective abstraction"). This type of thinking pattern was described by Beck (1976) in the terms of a negative cognitive triad - a negative view of self (e.g., "I'm a failure"), the world (e.g., "this school is a terrible place"), and the future (e.g., "everything will turn out badly"). The reciprocal relationship between depression and cognition is considered to form the basis of a downward spiral that serves to sustain the depression.

Beck's depression model emphasizes that the various symptoms observed in the depressed individual can best be

understood in terms of this cognitive shift. The depressed persons misperceive, mishear, and misconstrue events to match their sustained negative focus. As a result, they view themselves as inadequate in most aspects of their functioning and tend to generalize their faulty assumptions to other situations. Hence, if a person's conceptualization of themselves or of a situation has an unpleasant content, they will experience a corresponding unpleasant affective response. The negative conclusions often end up maintaining and promoting the other depressed symptoms.

Although the etiological-developmental aspects of this theory have not been addressed in detail. Beck (1974) has proposed that certain unfavorable life situations like extreme parental conflict, loss of a parent, chronic and rejection by peers could sensitize a person to become "depression prone". He felt that earlier unfavorable experiences may predispose the individual to overreact to analogous conditions in later life. He also speculated that individuals who tended to be dichotomous in their thinking and too rigid in their goals may be especially "depressive prone".

Seligman (1975) has proposed a cognitive model that viewed depression as resulting from people's experiences and expectations that their responses do not influence events in their lives. As a result "learned helplessness" develops and leads to passivity, social impairment, slowed activity,

and other symptoms of depression. It should be noted that Seligman's original model has been revised (Abramson, Seligman, & Teasdale, 1978). The reformulated model of learned helplessness still asserts the importance of the depressed individual having learned that negative outcomes are uncontrollable. However, it is the attributions that one makes about the negative outcomes that determine whether or not a depressive episode will occur. Therefore, the reformulated learned-helplessness model of depression maintains that vulnerability to depression stems from a habitual style of explaining (a person etiology for failure) the causes of life events. Depressed individuals learn to attribute negative outcomes to internal ("I am unable to control outcomes"), global ("I have no control over any situation in my life"), and stable ("I never have, or will have, any control") factors (Abramson et al., 1978).

Oster and Caro (1990) relate that the helplessness model of depression seems to offer some insight to adolescent depression since it is a time period of risk-taking and experimentation. Many adolescents are trying to define their own self-perceptions through life experiences that have the potential for negative outcomes. This potentially leaves them vulnerable to viewing themselves as unable to change their circumstances because of a lack of experience with negative life experiences.

Another cognitively based model proposes that

depression is related to deficits in internal problem-solving skills (D'Zurilla & Nezu, 1982). Depressed individuals are seen to have deficits in generating alternative solutions to social problems, engaging in means-end thinking, and making decisions. As a result depressive symptoms will emerge in response to negative events or stress and current problems of daily living because of deficits in problem-solving skills.

Rush (1992) reports that there is substantial empirical support for the cognitive theory of depression from naturalistic studies, clinical observations, and experimental studies. Studies have documented the presence and intercorrelation of the constituents of the "cognitive triad" in association with depression (Hammen & Zupan, 1984; Sacco & Graves, 1984). Several studies document the presence of specific deficits (e.g., impaired abstract reasoning, selective attention) and attributional styles in depressed preadults (Asarnow, Carlson, & Guthrie, 1987; Kaslow & Rehm, 1983). The presence of dysfunctional attitudes or schemas has been found with depressed patients (Beck, 1970). Also, a number of reports have indicated that brief treatments focusing on improving problem-solving, cognitive restructuring and social skills training significantly alleviate depressed symptoms in preadults (Haaga & Beck, 1992; Kazdin, 1990; Kovacs, 1989).

It should be noted that the cognitive theory of

depression does have critics (e.g., Izard, 1972) who have pointed out some weak points: (1) the cognitive theory tends to ignore the motivational properties of emotion; (2) the overt physiological and vegetative symptoms of depression are not really accounted for; and (3) the actual etiology of persistently negative views of the self, the world, and the future is obscure. In response, Beck (Kovacs & Beck, 1977) admits the "possibility and the feasibility that the depressive syndrome might consist of a circular feedback model in which cognition feeds into affect" (p. 22). Beck has also acknowledged that the latter two points still need to be worked on. Although more experimental investigations are needed, the cognitive theory of depression is a practical and useful perspective because the cognitive conceptualization of depression can be operationalized and lends itself to empirical verification.

Psychological and Other Risk Factors Contributing to Adolescent Depression

Adolescence is a period of time where intense cognitive, emotional and physiological change is occurring. Teenagers are faced with the developmental issues of bodily change, identity clarification, sexual maturity, relational, and separation. They must constantly reexamine themselves and reevaluate and clarify their values and perspectives

during this stage of development (Santrock, 1987). According to Kendall, Cantwell, and Kazdin (1989), research studies have reported a number of key cognitive areas that are characteristic of depressive symptoms or are likely to be influenced by depressive symptoms in adolescents.

To begin with, a person's perceived control over events has been found to be highly related to adolescent depression. For example, Moyal (1977) found a strong positive correlation between external locus of control and depressive scores. External locus of control was also found to be negatively related to self-esteem. Siegel and Griffin (1984) found that high levels of self-reported depression were associated with greater external locus of control in a group of adolescents. In addition, locus of control accounted for the greatest amount of variance in the adolescents' scores on the Beck Depression Inventory.

Second, low self-esteem or poor evaluation of personal worth is likely to be part of the symptom picture of depression. Studies support the contention that depressed preadults tend to ascribe negative attitudes to themselves and evaluate their performance as evidence of personal inadequacy and social ineptitude (Beck, 1967, 1976; Carlson & Kasani, 1988; Rutter, 1986b). As a result, they are often critical of themselves and predict that they will fail in both achievement and interpersonal contexts.

Third, cognitive distortion has been highlighted as an

important construct in behavioral and cognitive views of adolescent depression. Kovacs and Beck (1977) relate that depressed individuals often anticipate outcomes of events to be extremely negative (exaggerated), assume that a negative outcome will occur in other situations (over-generalization), or take responsibility for negative events (personalizing).

Fourth, helplessness has been noted in studies where a depressed adolescent attributes undesirable events to internal, stable and global causes. Systematic errors in thinking of individuals result in a misinterpretation of events and a predisposition to thoughts of helplessness which lead to depression (Brightman, 1990; Siegel, & Griffin, 1984; Teasdale & Dent, 1987; Weisz, Weisz, Wasserman, & Rintoul, 1987).

Fifth, hopelessness or negative expectations towards the future are considered important factors, especially in light of the fact that hopelessness has been demonstrated to correlate with suicidal behavior in adolescents (Kashani, 1989; Kashani, Reid, & Rosenberg, 1989; Rotheram-Borus & Tratman, 1988; Topol & Reznikoff, 1982).

Sixth, loneliness or perceived isolation from others by a depressed individual has been considered relevant to depression. Asher and Wheeler (1985) report that feelings of loneliness are related to peer rejection. A number of studies report that family adversity, parental discord and

friendship difficulties all exert direct provoking effects on the risk for depression (Goodyer, 1992; Mitchell & Rosenthal, 1992; Topol & Reznikoff, 1982). Grossman et al. (1992) report that some important protective factors for adolescent resilience are family cohesion, level of positive communication with parents, and existence of a significant relationship with a nonparent adult (e.g. teacher) and peer.

Finally, Siegel and Hodges (1985) point out that studies of life events or factors in the environment that induce stress are considered to be relevant in the study of adolescent depression. For many adolescents, events such as a recent move, loss of a friend, separation of parents or onset of a serious illness can influence their affective symptoms and daily functioning. Studies of adolescents have shown relations between life stressors and changes in life events and depression (Goodyer, 1992; Luther, 1991).

As one can see, depressive symptomatology to be treated may be associated with a number of cognitive factors as well as with differing needs. However, adolescents rarely present themselves to professionals for assessment and treatment. Often, it is not until multiple problems are being presented by the adolescent that some kind of action is taken. The task for those working with emotionally troubled adolescents is to identify whether the presenting problems reflect normal adolescent development, are symptoms of other dysfunctional behavior or warrant specialized

treatment for depression. Further research is needed so as to avoid misidentifying the main problem or underestimating the magnitude and complexity of the depressive disorder.

Personal Construct Theory

Kelly's "personal construct" theory was established long before the concept of cognitive models gained acceptance. Yet his theory has been called cognitive because it emphasizes the way in which people think (Adams-Webber, 1990). An inherent aspect of Kelly's (1955) theory of personal constructs is the assumption that individuals function like scientists, using their own personal theories of themselves and other people to attempt to predict, explain, and control events in their experience. The fundamental postulate of Kelly's theory is described by Kelly in stating that "a person's psychological processes are psychologically channelized by the way in which he anticipates events" (Kelly, 1955, p. 50). He believed that everyone hypothesizes about the meanings of events, and assess, refine, and elaborate these hypotheses on the basis of their subsequent experience in order to predict or anticipate the future better. Also, central to this postulate is the concept of anticipation which Kelly considered to be a motivating factor for individuals.

Kelly (1955) considered these personal theories to be

made up of simple personal constructs which are organized into patterns - personal construct systems. In all his definitions, Kelly maintained the essential notion that constructs are bipolar. He argued that a person never affirms anything without simultaneously denying something. The relationship established within the person's system of constructs is seen as deterministic: the structure determines future behavior. Personal constructs are considered mental frameworks people build on the basis of their past experience in order to help them interpret or construe what happens to them later on (Fransella & Bannister, 1977).

In order to elaborate the nature, organization and function of constructs, Kelly developed eleven corollaries. Some of the main features about constructs depicted by the corollaries were that each construct is bipolar in nature and has what is known as an "emergent pole" and a "contrast pole". Kelly felt that each individual construes in a different way and that learning occurs (constructs are permeable, i.e., admit new information) as people modify their construct systems in light of experience. Another feature Kelly conveyed was a distinction between "core" and "peripheral" constructs. On the one hand, core constructs are defined as comprehensive and relatively impermeable cognitive structures that are employed to maintain one's identity and existence. On the other hand, peripheral

constructs are less comprehensive in nature and therefore more modifiable. Kelly also felt that constructs are organized in a hierarchical fashion with core constructs at the top and peripheral ones below (Scroggs, 1985).

Although a variety of grids have been developed (e.g., a rank order grid; a rating grid; a resistance-to-change grid; a dependency grid, etc.), the methodology Kelly used to determine a person's constructs is called the Role Construct Repertory Test (RCRT; Fransella & Bannister, 1977). Kelly's Role Construct Repertory Test (often called the repertory grid) is essentially a complex sorting test in which a list of elements are judged successively on the basis of a set of bipolar constructs. Subjects are asked to name a list of individuals in their lives, usually individuals (called "elements") who fulfill particular roles (e.g., your closest friend, family member, the happiest person you know, etc.). These names form the rows of a matrix. Taking the names of individuals provided by the subject in triads, the subject indicates in which way two of them are alike, and different from a third. For example, if two individuals are considered friendly and a third unfriendly, then, the construct is friendly/unfriendly. When a given number of constructs has been determined, each individual on the grid is rated as to which pole of the construct best describes person. Therefore, this repertory grids can be used as a method to systematically study an

individual's phenomenology. Kelly's repertory grid technique has played a crucial role in the development of personal construct theory, both as a research instrument and as a clinical tool (Ford & Adams-Webber, 1991).

The repertory grid can be regarded as a summary of the subject's conscious (or unconscious) view of himself and of significant others. At another level, it can also be seen as a definition of the possibilities or options open to the subject (Ryle, 1976). A common approach to administering the repertory grid is to provide the subject with a list of others who play a role in their lives such as mother, rejecting person, peer friend, successful person, etc. The subject is asked to give names to the role titles and then the elicited elements are rated or ranked against elicited constructs (Fransella & Bannister, 1977). Allowing the subject to provide the elements and constructs demonstrates the range and focus of his/her attention and facilitates the investigation of a possible psychopathology. The reasoning for supplying a variety of roles is to provide contrasting figures that represent the area in which the construing is to be investigated (Ryle, 1976).

Ryle (1976) points out that grid studies have obtained additional information about a subject's construing of him/herself by including different versions of self in the test as elements. A person's construct system is not only interrelated and hierarchical, but contains a set of core

constructs (self constructs) that are not easily changed (Sheehan, 1981). How people construe themselves will ultimately determine how they act out psychologically, physically, and emotionally. A person's self-construct system will affect the way of anticipating and coping with both normal and abnormal stresses of life. Hence, self-construct systems are a crucial variable in depression.

Studies have used the distance between self and ideal self (yourself as you would like to be) as an index of self-esteem in depressed clients (Ashworth, Blackburn, & McPherson, 1982; Sheehan, 1981). Sheehan (1985) demonstrated another way in which a variation of self elements could be used with her "looking in grid". Depressed subjects were asked to rate how they believed others see them. The results revealed that the grids were less tightly organized than the usual grid in which subjects rate other people. In light of this, Sheehan concluded that depressed subjects are more differentiated in their views of how others perceive them and have a less organized system for construing others. She also considered the distance between self and others which revealed that depressed subjects felt more isolated from others. In a study on adult depression, Space and Cromwell (1980) used variations of self elements in a grid study and reported higher levels of personal isolation and differentiation, lower self-esteem, more mixed (positive and negative) self-

descriptions, and negative construing.

With regards to the constructs, Adams-Webber (1970) relates that a basic assumption of Kelly's repertory grid technique is that it elicits from subjects a representative sample of the 'personal constructs` which they normally interpret and predict the behavior of important people in their lives. The most common method of eliciting constructs is the triadic elicitation which Kelly (1955) describes as involving the presentation to the subject with three names and asking the subject to think of one important way in which two of these persons are alike and different from the third. The process is based on the belief that in judging any two elements there is always an implicit comparison with a contrasting third element.

Triadic elicitation is normally used in clinical studies because it allows the researcher to investigate the unique patterns of relationships among several constructs and people generally find it more meaningful to describe others in their own words (Bonarius, 1965). However, it has been noted that the triadic method could be problematic since the subject may supply the logical opposite rather than the opposing meaning when they are told that the two poles are opposite (Easterby-Smith, 1981). Rather than using the triadic formula, Fransella and Bannister (1977) point out that some researchers have chosen to provide all the subjects with the same pre-selected list of adjectives.

This new procedure has been used in an attempt to provide a higher degree of standardization.

Although this new procedure could be viewed as a departure from Kelly's emphasis upon the personal nature of each person's system of dimensions for construing behavior, Adams-Webber (1970) states that the available evidence suggest that the procedure of providing all subjects with certain constructs can be justified when investigating certain specific concepts or perceptions, one of the reasons being that subjects may not give the researcher the constructs that are considered relevant and important to the investigation process.

Criticisms of the repertory grid procedure often centre around its use of idiographic techniques and question of its reliability and validity. It has been stated that the use of idiographic techniques cannot provide more information than what can be obtained using the standard nomothetic procedure (Paunonen & Jackson, 1986). However, Watts and Sharrock (1985) contest this criticism in stating that the repertory grid could complement self-report questionnaires and provide insightful information about cognitive processes. They also maintain that the repertory grid is useful because it can be tailored to test unique hypotheses and it is noted to be more sensitive to change than other measures.

In response to the controversy about the reliability

and validity of repertory grids, some researchers (Fransella & Bannister, 1977; Taylor, 1990) have challenged the notion of whether the traditional views of reliability and validity apply to repertory grids. Measures used to study cognitive structure and measure traits should be subject to the same rigor applied to other psychometric tests. However, it is argued that repertory grids are different in that they do not measure a specific trait.

Fransella and Bannister (1977) state that if the goal is to see if the repertory grid will produce exactly the same result for the same subject at different times, then it is inappropriate to talk about the reliability of the grid. The goal of the repertory grid is not to repeat the same result. Rather, it is to see, when it shows change and what it is signifying. Taylor (1990) points out that the repertory grid is more than a set of numbers. It is a framework for the patterning of subjective experience that can be statistically analyzed. It provides a basis for developing intersubjectivity among people involved in construction, analysis, and interpretation of the matrix. Ultimately, the repertory grid can be understood as a dialogue between the investigator, the informant and the data which is a position that challenges conventional notions of validity.

However, Fransella and Bannister (1977) point out that "inferences are based on the assumption that statistical

relationships within the grid reflect psychological relationships within the person's construing system. These psychological relationships represent something relatively stable and permanent in a person's construct system. Because of this, it is important to obey the rules of statistics when interpreting grid results" (p. 59).

Personal Construct Theory and Depression

If the individual is viewed as an active agent operating within a complex environmental context, then a fundamental assumption of cognitive models of psychopathology is that individuals are active information processors. Moretti et al. (1990) relate that people "construct" their experiences, and these constructions largely determine their emotional reactions to events and future behaviors in similar situations. The ability to construct internal cognitive representations of one's experiences allows a person to anticipate events and direct their behavior when confronted with complex environmental circumstances. As a result, the cognitive theory of depression proposes that many of the symptoms depressed individuals experience are the result of a chronic negative bias in self-referent information processing (Beck, 1987).

Although the literature on cognitive theories of depression has grown tremendously in recent years, the

application of personal construct theory to depression is relatively new. Ross (1985) states that "with its focus on personal meanings and the appraisal of experience, the idea of personal construct offers a rich theory and methodology which can make an important contribution to the general understanding of depression" (p. 155).

Kelly (1955) shared with Beck (1967) the view that the abnormalities in cognition which are often observed in depressed individuals are not merely a consequence of a mood disorder, but have an important causal role in the etiology of depression. Kelly (1955) proposed that the personal construct system of a depressed individual was characterized by constriction and pre-emptive thinking. Constriction was seen as the cognitive process where an individual tries to minimize the disruptive implications of events (i.e., reducing the perceptual range of elements) that seem foreign and uninterpretable (Neimeyer, 1983). Whereas pre-emptive thinking involved the limiting of the number of constructs to be applied to environmental elements. This process supposedly leads to a fixed, rigid construct system with few contradictions (Sheehan, 1985).

Kelly (1955) also theorized that depressed individuals can become suicidal at the end of a long process of constriction. He felt that having evolved a construct system that can only interpret and predict a very limited range of experience, the depressed person may be unable to

anticipate a future from a positive perspective (i.e., the negative construing of self and future).

A number of researchers have assessed the personal construct systems of depressed individuals in an attempt to explore the theory of depression forwarded by Kelly (e.g., Landfield, 1976; Neimeyer, Klein, Gurman, & Greist, 1983; Rowe, 1978; Space & Cromwell, 1980). Neimeyer (1983) reviewed many of the research studies in light of the broader literature on cognitive processes in mood-disturbance and self-destruction and found that the results tended to emphasized six general features of the personal construct systems of depressed and suicidal persons. They are:

1) Anticipatory failure: Depressed individuals, relative to controls, are less oriented to the future and conceptualize it in less extended, less detailed, and more negative terms. Suicidal persons show these same tendencies to an even more marked degree.

2) Negative self-construing: As depression deepens, the core role structure gradually loses its positivity and coherence, until at moderate levels, an unstable mixed self-valence dominates the system. Finally, at the deepest levels of depression, a consistent self-schema again emerges but is organized along negative lines.

3) Polarized construing: Clinical depressed individuals construe events in highly polarized or in dichotomous terms. This all-or-nothing thinking becomes more pronounced with increasing suicidality.

4) Constriction: At least in the case of suicide, the construct system tends to be concrete in content and inapplicable to many interpersonal events.

5) System disorganization: Acutely suicidal individuals may be distinguished from depressed individuals in general by the excessively differentiated, loosely organized nature of their interpersonal construct systems.

6) Perceived interpersonal isolation: Depressed individuals, and perhaps self-destructive individuals as well, tend to construe themselves as unidentified with and distant from others (pp. 182-183).

Of these six general features of the personal construct systems of depressed and suicidal persons, the first three were implicit in Kelly's original discussions about depression and suicide. The latter three have been derived from more recent research by construct theorists and other

cognitively oriented investigators. Neimeyer (1983) points out that studies have supported a positive correlation of anticipatory failure (Neimeyer et al., 1983), negative self-construing (Space & Cromwell, 1980), polarized construing (Neimeyer et al., 1983), and interpersonal isolation (Rowe, 1978) with adult subjects diagnosed with depression.

Rationale of the Study

With its focus on personal meaning and the appraisal of experience, the personal construct theory developed by George A. Kelly (1955) offers a unique method of investigating the cognitive processes that may characterize depressed adolescents. The repertory grid technique provides a way to assess the organization of cognitive structure along dimensions generated and used by subjects rather than imposed upon them. Previous construct studies of adult depression have highlighted such cognitive features of depression as anticipatory failure, negative self-construing, polarized construing and interpersonal isolation (Neimeyer, 1983).

The purpose of this study was to explore whether depressed adolescents (ages 13 to 16) possess similar cognitive features (anticipatory failure, negative self-construing, polarized construing, and interpersonal isolation) to those found in depressed adult construct studies. Also, the relationship between locus of control and adolescent depression was investigated.

In this study, it was hypothesized that higher levels of depression in adolescents will be related to:

1. a greater degree of polarized construing, that is, overuse of extreme points on rating scales (e.g., at 1-

2 or 6-7 levels);

2. a greater degree of pessimism about the future;

3. a greater degree of low self-esteem;

4. a greater degree of interpersonal isolation - viewing themselves as different from others;

5. a greater degree of external locus of control.

For all hypotheses proposed, clinically depressed adolescents were predicted to exceed the mild/moderately depressed, who were in turn predicted to exceed the normal subjects.

CHAPTER THREE

METHOD

Subjects

The participants in this study were 45 English speaking, adolescent volunteers who fell in the age range of 13 to 16. The 45 subjects were divided into three groups that consisted of 15 normal, 15 mild/moderately depressed, and 15 clinically depressed individuals. The normal and mild/moderately depressed subjects were obtained from Balmoral Junior High School and the Stabilization Program at Wood's Home. The clinically depressed subjects were obtained from the Young Adults Program at Foothills Hospital and the Crisis Units at the Holy Cross and Rockyview Hospitals. Fifteen subjects for each group was chosen because of the limited number of clinically depressed subjects available that would meet the required criteria. This number of subjects per group was sufficient to produce an effect size of one standard deviation, with a power of 80% and with a p value of .05 (Bartko, Carpenter, & McGlashan, 1988).

The first group (normal) consisted of 8 female and 7 male subjects. Subjects were eligible for inclusion in this group if they were between 13 to 16 years of age, were not and never have been in psychiatric treatment, and were not

suspected of being mentally challenged. A cut-off score range of 0 to 9 on the Beck Depression Inventory was also used since scores of less than 10 are not considered to be depressed.

The second group (mild/moderately depressed) consisted of 13 female and 2 male subjects. Subjects were eligible for inclusion in this group if they were between 13 to 16 years of age, were not and never had been in psychiatric treatment, and were not suspected of being mentally challenged. A cut-off score range of 10 to 19 on the BDI was used as a conservative criteria in order to select subjects experiencing mild to moderate symptoms of depression. The score range of 19 to 20 (moderate to severe) was not used to ensure that subjects possibly experiencing symptoms of severe depression would not be included in this group. Beck, Steer, and Garbin (1988) relate that "the appropriateness of various cut-off score ranges for the BDI is variable, depending on both the nature of the sample and the purposes for which the instrument is being used" (p. 80).

The final group (clinically depressed) consisted of 12 female and 3 male subjects. Subjects were eligible for this group if they were between 13 to 16 years of age, obtained a BDI score of 21 or higher, and most importantly had an official diagnosis of major depression (nonpsychotic). Although diagnoses were made by each subject's psychiatrist

in the clinically depressed group, in order to ensure diagnostic conformity, this researcher confirmed each diagnosis of major depression using the DSM-III-R (1987) and the Feighner et al. (1972) criteria.

Psychological Instruments

Beck Depression Inventory (BDI):

The Beck Depression Inventory (BDI; Beck et al., 1961) is a clinically derived self-report measure which consists of 21 items relating to affective, cognitive, motivational, and physiological symptoms of depression. Each item consists of four statements reflecting increasing depressive symptomatology. Statements are ranked from 0 to 3, with 0 being the least serious and 3 representing the most serious. In terms of readability, Teri (1982) classified the BDI as requiring a fifth-grade reading level, making it readily comprehensible to an average adolescent aged 13 to 16. It has been validated as a reliable self-report measure of depression in both clinical and nonclinical samples of adolescents (Baron & Perron, 1986; Beck, Steer, & Garbin, 1988; Ehrenberg, Cox, & Koopman, 1990; Strober, Green, & Carlson, 1981; Strober & Werry, 1986).

The more recent version (Beck, Rush, Shaw, & Emery, 1979) in which the subjects are asked to check responses that best describe the way they have been feeling during the

"past week, including today" was used as the measure of the existence as well as the severity of depression (e.g. nondepressed, mild-moderately depressed, and clinically depressed). The range of possible summated scores extends from 0 to 63. Scores of 0 to 9 are generally considered normal, 10 to 15 mild, 16 to 19 mild to moderate (mild mood disturbance), 20 to 29 moderate to severe and 30 to 63 severe (Beck, 1970).

A modified version of Kelly's Role Construct Repertory Test (RCRT):

As stated earlier, Kelly's repertory grid is essentially a complex sorting test in which a list of elements are judged successively on the basis of a set of bipolar constructs. For this study, the repertory grid was designed so as to elicit a list of names of individuals in the subject's life who fulfilled a list of roles provided by the researcher (e.g., closest parent). The role titles chosen were based on an example of a Role Construct Repertory Test (Kelly, 1955 p. 270). Support for choosing the specific role titles was also found in a number of research studies that reported a high correlation between adolescent vulnerability or stability and various relationships (Grossman, Beinashowitz, Anderson, Sakuri, Finnin, & Flaherty, 1992; Lempers & Clark-Lempers, 1992; Petersen, Sarigiani, & Kennedy, 1991; Urberg, 1991). To the

list of names provided by the subject would be added three variations of self elements (self - as you are now, ideal self - as you would like to be, and perceived self - as others see you).

Taking the names (including the three variations of self) in triads, the researcher asked the subject to indicate in which way two of them are alike, and different from a third. Using the triadic method, 12 constructs were elicited (the subject providing both an emergent and a contrasting pole - e.g., kind and mean) and added to the three constructs (hopeful/hopeless; in control/out of control; happy/sad) provided by the researcher. These three constructs were added because a number of researchers have reported that pessimism, locus of control and sad affect are highly correlated with adolescent depression (Hodges & Siegel, 1985; Luthar, 1991; Rotheram-Borus & Trautman, 1988; Weisz, Weiss, Wasserman, & Rintoul, 1987). When all 15 constructs had been obtained, the researcher would then ask the subject to rate each element on a 7-point scale with two poles for each of the 15 constructs.

Procedure

The subjects for this study were obtained by referral through clinicians at Woods Homes, designated staff at the Young Adults Program at the Foothills Hospital and the

crisis units at the Holy Cross and Rockyview Hospitals and the vice-principal, Mr. Pederson, at Balmoral Junior High School. When an appropriate subject was referred, the researcher scheduled a meeting with the subject where the study was explained before a request for voluntary participation was made. If the subject agreed to participate and signed the consent form (see Appendix E for consent form), the adolescent's legal guardian was contacted in order to obtain verbal permission as well as written consent (see Appendix E).

Once parental consent was obtained, the researcher then interviewed briefly each subject in order to make sure the acceptance criteria for the group (normal; mild/moderately depressed; clinically depressed) was being met. In the case of the subjects referred as clinically depressed, in depth questions were asked about depressive symptoms which were evaluated using the diagnostic criteria for mood disorders found in the DSM-III-R (1987) and Feighner et al. (1972). The Beck Depression Inventory was also administered to all the subjects on an individual basis with the scores being used as part of the group eligibility criteria (i.e., scores for normals 0 to 9; scores for mild/moderately depressed 10 to 20; and scores for clinically depressed 21 to 63).

When a subject met a group criteria, the modified role construct repertory grid was administered on an individual basis. Each subject was asked to provide names for each of

the 11 following role titles: 1) closest parent; 2) a relative (aunt or uncle); 3) a male friend; 4) a female friend; 5) a person you dislike; 6) a person you feel has rejected you; 7) a brother or sister (or cousin); 8) a successful person; 9) a teacher; 10) a threatening person; 11) a person in control. To the list of names provided by the subjects were added three variations of self elements (self - as you are now, ideal self - as you would like to be in the future, and perceived self - as others see you).

It was explained to the subject that the people selected should be important to them, although not necessarily the people they like the most. In other words, they are to name people whose opinions of them, good or bad, matter to them. Next, the names of the people selected were written on separate cards. Twelve constructs were be elicited by placing three of the cards in front of the subject and asking them to think of some way in which two of the people are alike and therefore different from the third. The elements were presented systematically by changing one in the triad each time. For example, having been presented with 1, 2, and 3, number 1 is removed and number 4 substituted for it and so on. Then the subject was asked for the opposite of the construct they used to describe the two similar people (e.g., a possible construct could be - friendly/unfriendly). To these 12 constructs would be added 3 more constructs determined by the researcher (i.e.,

hopeful-hopeless; in control-out of control; happy-sad).

A 7-point rating scale was used for the grid cells. Each subject was asked to rate each element (all 14 elements) on the 7-point scale with a score of 1 being the emergent pole and 7 being the contrasting pole. This procedure was carried out for each construct until a 14 x 15 grid had been completed. Finally, at the end of the repertory grid administration the subject was asked to indicate for each dimension whether the construct or its opposite was the more positive. This permitted analysis of the subject's own valence attribution on each construct.

The interview, Beck Depression Inventory, and repertory grid procedure were administered by the researcher in the privacy of an interview room so as to address any problems or misunderstandings that may have arisen. The results of the repertory grid administrations were collected for each group and compiled for data analysis.

In accordance with the General Faculties Council Standing Committee on the ethics of human studies (section #5), the following steps were taken to safeguard the anonymity of the participants. The adolescents were asked not to record their name on any of the research forms (i.e., grid structure forms) or measures (Beck Depression Inventory). The consent forms were separated and the completed research forms and measures from the adolescents were identified with a number code to ensure responses

remain unidentifiable for the purpose of data analysis. For the duration of the study, all data were kept in a locked filing cabinet in the researchers office. Also, although the actual test data will be kept for future reference or inquiries, any forms with the names of the subjects were destroyed upon completion of the study.

Analyses

Descriptive statistics (e.g., means and standard deviations) for the three groups were calculated for the data collected from the repertory grids. Analyses of variance were also performed to determine any between group differences. All significant F-ratios were scrutinized post hoc using the Newman-Keuls procedure for the .050 level. The Newman-Keuls was chosen because of its common use when there is a significant F-ratio in the ANOVA and the group sizes are equal. In comparison to the Tukey, Hinkle, Wiersma, and Jurs (1979) consider the Newman-Keuls method to be "the more powerful test statistically (p. 275).

CHAPTER FOUR

RESULTS

Independent and Extraneous Variables

The three experimental groups (NOR: normal, MD: mild/moderately depressed, and CD: clinically depressed) were compared on the following sociodemographic variables: age and BDI score. Although a number of studies have reported sex differences (i.e., females scoring higher on depression inventories) in adolescent depression (Baron & Perron, 1986; Connelly, Johnston, Brown, Mackay, & Blackstock, 1993; Ehrenberg, Cox, & Koopman, 1990), the current study did not statistically analyze gender as a variable since male subjects were extremely under-represented in the MD and CD groups. Yet, it is interesting to note that significantly more females were available to recruit for the MD and CD groups which may imply that gender differences in adolescent depression could exist.

Overall, 45 subjects were involved in the current study with a mean age of 14.29. The mean age for each group was as follows: NOR = 14.20; MD = 14.20; and CD = 14.46. The group comparisons of mean ages were examined using a one-way ANOVA. The results revealed that there were no significant differences among the three groups [$F(2,42)=.30$, $p < .74$).

With respect to the BDI scores, the overall mean score

for the 45 subjects was 19.35 and the mean score for each group was as follows: NOR = 6.27; MD = 15.73; and CD = 36.07. Analysis of variance revealed that there were significant differences among the three groups with respect to degree of depression [$F(2,42)=110.59$, $p < .0001$]. Newman-Keuls post hoc analysis confirmed group comparisons as significantly different at the .05 level: the CD group had a significantly higher score than the MD group which in turn had a significantly higher score than the NOR group.

Further analyses were performed with a Pearson product-moment correlation on the two variables (age and BDI scores) for the entire sample. However, no significant correlation was found ($r=.1118$).

A summary of the means and standard deviations for age and BDI scores are presented in Table 1.

Table 1

Means and Standard Deviations for Age and BDI Scores

	Group							
	NOR n=15		MD n=15		CD n=15			
Variable	M	SD	M	SD	M	SD	F(2,42)	p
Age	14.20	1.01	14.20	1.15	14.46	1.06	.3077	.7368
BDI	6.26	2.74	15.73	3.94	36.07	8.45	110.58	<.0001

NOR Normal Group
MD Mild/Moderately Depressed Group
CD Clinically Depressed Group

Psychological Measures

A summary of the means and standard deviations of all the average value-ratings (on a scale of 1 to 7) of the elements on each grid for all subjects by group (normal, mild-moderately depressed, and clinically depressed) are presented in Table 2.

Self-Esteem

Self-esteem was investigated by examining the average value-rating (on a scale of 1 to 7) of "self" and "perceived self" on each grid for all subjects in the three groups. Any value-rating in the 1 to 3 range was considered to be a reflection of positive construing of self and any value-rating in the 5 to 7 range to be the opposite. A value-rating of 4 was also viewed as neutral. The group comparisons of value-ratings were examined in a one-way ANOVA. The results in Table 2 indicate that there were significant differences among the three groups on the elements "self" [$F(2,42)=109.45$, $p < .0001$] and "perceived self" [$F(2,42)=17.87$, $p < .0001$].

Newman-Keuls post hoc analyses were therefore completed for these two ANOVA's (see Table 3). In the case of both elements, all group comparisons were significantly different at the .05 level. The NOR group had a

Table 2

Means and Standard Deviations of the Average Value-Rating of the Elements on Each Construct Scale for Each Group

	Group							
	NOR n=15		MD n=15		CD n=15			
Element	M	SD	M	SD	M	SD	F(2,42)	p
Self	2.52	.67	3.63	.68	6.11	.70	109.45	<.0001
Closest Parent	2.07	.99	2.87	.81	2.79	1.33	2.55	.0898
Relative	2.70	.84	3.11	.99	2.45	1.00	1.79	.1791
Male Friend	2.45	.99	2.82	.66	2.58	1.02	.64	.5342
Female Friend	2.21	.59	2.84	.95	2.66	1.31	1.57	.2197
Disliked Person	4.41	.75	5.31	1.04	5.25	.70	5.31	.0088
Rejecting Person	3.97	1.10	4.73	.77	4.41	1.00	2.32	.1114
Brother/Sister	2.66	.95	3.21	1.16	3.32	1.06	1.57	.2193
Successful Person	2.27	.97	2.98	.67	2.39	.86	3.03	.0592
Teacher	2.07	.66	2.18	.58	2.20	.80	.15	.8659
Threatening Person	4.91	.89	5.19	.87	5.22	.84	.53	.5922
Person in Control	2.09	.81	2.92	1.00	2.18	.80	4.00	.0255
Ideal Self	1.50	.31	1.73	.55	1.63	.52	.89	.4181
Perceived Self	2.72	.77	3.58	1.20	5.15	1.33	17.87	<.0001

Table 3

Newman-Keuls Post Hoc Analyses for the Elements at the .05 Level

Element	PAIRS OF GROUPS NOR vs. MD	NOR vs. CD	MD vs. CD
Self	*	*	*
Disliked Person	*	*	-
Person in Control	*	-	*
Perceived Self	*	*	*

* Denotes significant difference at the .05 level

significantly higher level of positive construing compared to the CD group which demonstrated a strong negative construing. And the MD group had a significantly more positive score of construing than the CD group; however, the mean value-rating for both elements (self and perceived self) was extremely close to a neutral rating.

Ranges for the value-ratings of the elements "self" and "perceived self" are presented in Table 4. The results indicate that for the element "self", the value-ratings of the NOR group remained in the positive range, the value-ratings of the MD group included both the positive and neutral ranges, and the value-ratings of the CD group included both the neutral and negative ranges. For the element "perceived self", the value-ratings of the NOR group included the positive and neutral ranges and the value-ratings of the MD and CD group included all three ranges.

Self-esteem was also investigated by calculating the mean distance between "self" and "ideal self." as shown in Table 5. The group comparisons of mean distances were examined in a one-way ANOVA. Table 5 reveals that there were significant differences among the three groups [$F(2,42)=121.27$, $p < .0001$]. The Newman-Keuls post hoc analysis supported that there were significant differences

Table 4

Ranges of the Value-Rating of the Elements "Self", "Perceived Self", and "Ideal Self" for Each Group

	Group					
	NOR		MD		CD	
Variable	Min.	Max.	Min.	Max.	Min.	Max.
Self	1.50	3.69	2.50	4.67	4.92	7.00
Perceived Self	1.62	4.07	1.43	6.07	1.92	6.47
Ideal Self	1.00	2.07	1.00	2.85	1.00	2.53

Table 5

Means, Standard Deviations, and Ranges of the Distance Between the Elements "Self" and "Perceived Self" for Each Group

	Group				
	NOR	MD	CD	F(2,42)	p <
Means	1.12	2.20	4.80	121.27	.0001
SD	.52	.53	1.01		

among the three groups. With a smaller distance indicating higher levels of self-esteem, the NOR group had a significantly smaller distance than both the MD or CD groups with the MD group having a significantly smaller distance than the CD group.

Interpersonal Isolation

The degree to which subjects viewed themselves as different from others was determined by calculating the mean distance between the element "self" and all other elements (excluding the "ideal self"). The group comparisons of mean distances were examined in a one-way ANOVA. The results in Table 6 indicate that there were significant differences among the groups on the following elements: "closest parent" [$F(2,42)=29.58$, $p < .0001$]; "relative" [$F(2,42)=39.97$, $p < .0001$]; "male friend" [$F(2,42)=39.97$, $P < .0001$]; "female friend" [$F(2,42)=41.96$, $p < .0001$]; "brother or sister" [$F(2,42)=26.77$, $p < .0001$]; "successful person" [$F(2,42)=64.00$, $p < .0001$]; "teacher" [F9$(2,42)=85.39$, $p < .0000$]; "threatening person" [$F(2,42)=5.49$, $p < .0078$]; "person in control" [$F(2,42)=87.96$, $p < .0001$]; and "perceived self" [$F(2,42)=4.73$, $p < .0140$].

Newman-Keuls post hoc analyses at a .05 level were completed for all the ANOVAs confirming the significant

Table 6

Means and Standard Deviations of the Distance Between the Elements "Self" and Other Elements (Excluding "Ideal Self") For Each Group

	Group							
	NOR n=15		MD n=15		CD n=15			
Element	M	SD	M	SD	M	SD	F(2,42)	p
Closest Parent	1.16	.59	2.19	.52	3.84	1.47	29.58	<.0001
Relative	1.13	.75	1.70	.51	3.87	1.22	39.97	<.0001
Male Friend	1.12	.75	1.70	.51	3.87	1.23	39.98	<.0001
Female Friend	.93	.50	1.65	.49	3.79	1.37	41.96	<.0001
Disliked Person	2.42	.79	2.79	.90	2.07	.85	2.64	.0829
Rejecting Person	1.85	.66	2.42	.74	2.41	1.05	2.29	.1129
Brother or Sister	1.00	.47	2.01	.57	3.30	1.24	26.77	<.0001
Successful Person	1.08	.47	2.13	.51	4.29	1.18	64.01	<.0001
Teacher	.96	.46	2.08	.59	4.27	.96	85.39	<.0001
Threatening Person	2.69	.64	2.89	.62	1.99	.90	5.49	.0078
Person in Control	1.05	.52	2.05	.53	4.46	1.01	87.97	<.0001
Perceived Self	.57	.34	1.14	.36	1.12	.87	4.73	.0140

findings (see Table 7). The results revealed that on the elements "relative", "male friend", "threatening person", the NOR and MD groups were not significantly different from each other and yet both were significantly different from the SD group. However, the reverse was noted on the variable "perceived self" where the groups MD and CD were not significantly different and yet both were significantly different from the NOR group.

Pessimism About the Future

Pessimism was investigated by examining the average rating of the element "ideal self" on each grid for each group of subjects - similar procedure to the examining self-esteem. Any value-rating in the 1 to 3 range was considered to be a indication of a positive construing and value-rating in the 5 to 7 range to be the opposite. A value-rating of 4 was also viewed as neutral. The group comparisons of the value-ratings was examined in a one-way ANOVA. The results in Table 2 and 3 (Newman-Keuls post hoc analysis) revealed that there were no significant differences among the three groups.

Pessimism was also investigated by examining the average value-rating of the element "self" and on the construct "hopeful/hopeless". Any value-rating in the 1 to

Table 7

Newman-Keuls Post Hoc Analyses of the Distance Between the Elements "Self" and Other Elements (Excluding "Ideal Self") for Each Group

Element	PAIRS of GROUPS NOR vs. MD	NOR vs. CD	MD vs. CD
Closest Parent	*	*	*
Relative	-	*	*
Male Friend	-	*	*
Female Friend	*	*	*
Brother or Sister	*	*	*
Successful Person	*	*	*
Teacher	*	*	*
Threatening Person	-	*	*
Person in Control	*	*	*
Perceived Self	*	*	-

* Denotes significant difference at the .05 level

3 range was considered to be a reflection of a positive view of the future and value-ratings in the 5 to 7 range to be the opposite. A value-rating of 4 was again viewed as neutral. The group comparisons of the value-ratings were examined in a one-way ANOVA. The results in Table 8 indicate that there was a significant difference among the groups for the element "self" [$F(2,42)=105.00$, $p < .0001$].

Results of the Newman-Keuls post hoc analyses on the ANOVAs revealed significant findings at the .05 level for the element "self". On the "hopeful/hopeless" construct, the NOR group had a significantly higher score in the positive range whereas the CD group scored at the extreme end of the negative range. The MD had a value-rating that clearly fell in the neutral range.

Polarized Construing

Polarized construing was determined by the degree of excessive use of value-rating scale points at the poles of the construct scale. Totals were calculated for where each of the possible 14 elements for each group were value-rated on construct scales in the two categories of extreme = 1-2 and 6-7 and neutral = 3-5. Excessive use of the extreme category at the expense of the neutral category was viewed as polarized construing. The group comparisons of the average value-ratings were examined in a two-way ANOVA on

Table 8

Means and Standard Deviations of the Value-Rating of the Elements "Self" on the Construct "Hopeful/Hopeless"

	Group							
	NOR n=15		MD n=15		CD n=15			
Variable	M	SD	M	SD	M	SD	F(2,42)	p
Self	2.00	.76	4.00	1.46	7.00	.00	105.00	<.0001

two factors (i.e., a between subject involving three levels - NOR, MD, CD; and a within subject involving two levels - extreme and neutral). A summary of the means and standard deviations of all the average frequency value-ratings on the two categories (i.e., extreme and neutral) for all the constructs by the three groups is presented in Table 9. Analysis of variance revealed that there was a significant interaction [$F(2,42)=8.12$, $p < .001$] between the categories and groups. There was also a significant group effect [$F(2,42)=3.64$, $p < .0349$] and a significant category effect [$F(2,42)=110.97$, $p < .0001$].

Since a significant interaction was found, simple effect procedures were completed and the results revealed a significant group difference for the category extreme [$F(2,42)=8.48$, $p < .0008$] and a significant group difference for the category neutral [$F(2,42)=7.04$, $p < .0023$]. This disordinal interaction found is presented in Figure 1. The CD group had a significantly higher level of extreme value-ratings compared to the comparable value-ratings of the MD and NOR groups. On the other hand, the CD group had a significantly lower level of neutral value-ratings than did the MD and NOR groups.

Table 9

Means and Standard Deviations of the Average Frequency of Value-Ratings on the Categories: Extreme = 1-2 and 6-7, Neutral = 3-5

	Group		
	NOR	MD	CD
Extreme			
Means	8.27	8.47	10.60
SD	1.91	1.55	1.68
Neutral			
Means	4.67	4.93	3.07
SD	1.80	1.10	1.44

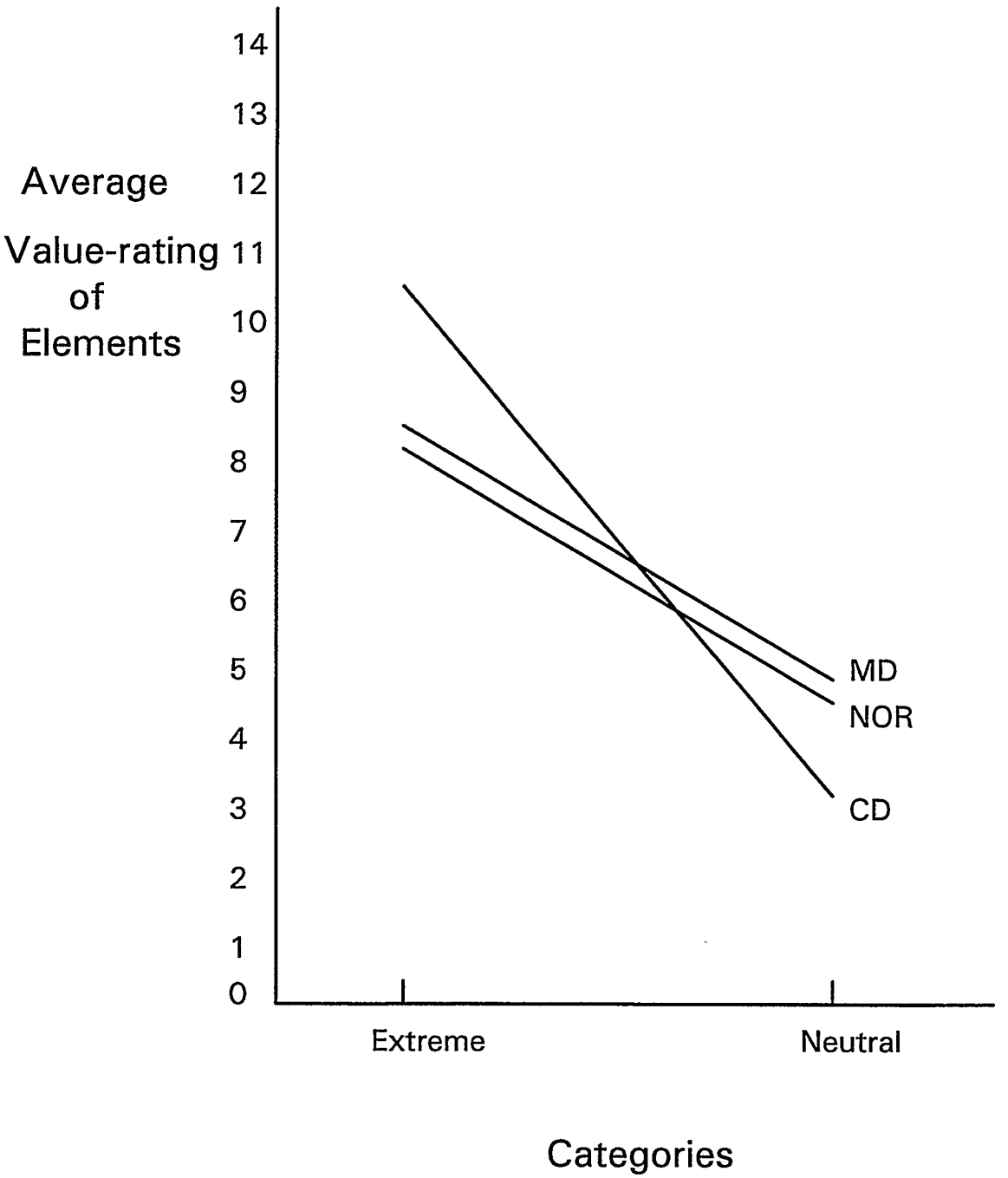

Figure 1: Disordinal Interaction Showing Polarization Effects

Locus of Control

The distance between the elements "self" and "a person in control" was used as a measure of locus of control. The greater the distance between the two elements the greater the degree of external control. The group comparisons of the value-ratings were examined in a one-way ANOVA. The results in Table 10 indicate that there was significant differences among the three groups [$F(2,42)=87.97$, $p < .0001$].

A Newman-Keuls post hoc analysis was completed for this ANOVA. The CD group had a significantly greater mean distance than did the MD which had a greater mean distance than the NOR group.

Clinical Observations

Clinical observations during the testing did not reveal any noticeable differences between the normal and the mild-moderately depressed groups in terms of their comprehension and attentional levels. For both groups, the researcher was able to engage them appropriately for testing purposes and found that they tended on average to complete the test in 50 minutes.

On the other hand, the clinically depressed subjects often needed to be encouraged to complete the task at hand and displayed overt symptoms of depression (i.e., sad

Table 10

Means and Standard Deviations of the Distance Between the Elements "Self" and "A Person in Control"

	Group				
	NOR	MD	CD	F(2,42)	p <
Mean	1.05	2.05	4.46	87.97	.0001
SD	.52	.53	1.01		

affect, personal references to worthlessness, slow thought and speech processes). At times, the researcher had to restate the directions about the triadic eliciting task to some of the subjects when they displayed signs of becoming tired and impatient. Also, some depressed subjects would initially present as somewhat apprehensive and worried. However, the researcher was able to use positive reinforcement techniques and humur to encourage cooperation. Although some subjects in the clinically depressed group were able to finish the test in an hour, most of them took 20 to 30 minutes longer.

Overall, the subjects from the three groups reported that they found the testing procedure an enjoyable and enlightening experience insofar as subjects felt that they had learned something about themselves. None of the subjects manifested hearing or vision deficits or speech impediments.

CHAPTER FIVE

DISCUSSION

The purpose of this study was to examine the relationship between depressed adolescents and depressed adults with respects to certain cognitive features (pessimism, negative self-construing, polarized construing, and interpersonal isolation) by means of a modified version of Kelly's repertory grid technique. Also, the relationship between locus of control and adolescent depression was investigated. In this chapter, the results of this study will be summarized and interpreted with respect to the significant and nonsignificant differences among the three experimental groups. Following this, the limitations of the study and recommendations for future research will be discussed.

Independent and Extraneous Variables

Data obtained for this study revealed no significant differences in the ages of the subjects among the groups. But as expected, the CD group exhibited the greatest degree of depression on the BDI while the MD group scored in the mild/moderate range and the normal group in the nondepressed range.

Psychological Measures

Self-Esteem

In agreement with several adolescent cognitive studies (e.g., Carlson & Kashani, 1988; Ehrenberg, Cox, & Koopman, 1991; McCauley, Burke, Mitchell, & Moss, 1988) and adult repertory grid (e.g., Ashworth, Blackburn, & McPherson, 1982; Space & Cromwell, 1980) studies on depression, there is strong evidence from this study to support a direct relationship between negative self-construing and degree of adolescent depression. As predicted, the CD group scored highest on all the measures of low self-esteem (self-ideal discrepancy and nonpositive "self" and "perceived self" value-ratings). Overall, the CD exhibited the greatest degree of low self-esteem while the NOR group had the least, and the MD group fell in between, remaining significantly different from the other two groups.

Space and Cromwell (1980) report in their study that the depressed subjects demonstrated a "mixed self-valence", that is, they tended to construe themselves positively on some construct dimensions and negatively on others. They proposed that inconsistent self-construing could explain why depressed individuals are susceptible to rapid mood shifts in response to relatively minor environmental changes. In the current study, the idea that depressed individuals tend

to view themselves inconsistently was not supported by the findings since the value-ratings from the CD group for the element "self" were consistently negative. However, the MD group revealed a value-rating of "self" that spanned both positive and neutral ranges. This could be interpreted as a type of mixed self-valence.

A possible explanation for the current study's results has been proposed by Kuiper and Derry (1981). They suggested that the normal individual functions with a consistent and predominately positive core role structure. If a person experiences mild levels of depression, their self-schema begins to lose some of its organization as it begins to incorporate negative as well as positive self-referent information. As this process continues, inconsistent self-construing gradually starts to dominate the thinking of the moderately depressed person. Eventually, depression in its extreme stages results in a person developing a stable and consistent negative self-schema. This supports Beck's (1976) view that depressed individuals show a perceptual bias whereby they focus on negative events while minimizing the significance of positive ones.

In light of Kuiper and Derry's explanation, the CD subjects, who were all officially diagnosed with major depression, may have been demonstrating a stable negative self-schema by consistently value-rating "self" in the

negative ranges of the constructs. Whereas, the value-ratings in the positive and neutral ranges by the MD group may be a reflection of the beginning process of assimilating negative and positive self-referent information into their thought patterns.

It was interesting to note that although the range of value-ratings used by the CD group for the element "self" was predominately negative, the range of value-ratings by the CD group for the element "perceived self" consisted of positive as well as negative valences. This poses the question as to why the range of value-ratings for "perceived self" was not similar to those of "self". Possibly the difference could be accounted for by Kelly's (1955) idea that a person's mental processes follow core structures which are arranged in a hierarchical fashion with various degrees of rigidity (i.e., tight and loose constructs). Depressed people's perception of themselves may be more important and rigidly construed in a negative direction than how they feel they are being perceived by others. Therefore, the CD group might be expected to consistently value-rate "self" in a negative direction, yet demonstrate varying value-ratings for "perceived self".

It should also be noted that the results in Tables 2 and 3 indicate that certain group comparisons were significantly different at the .05 level for the elements "disliked person" and "person in control". Of particular

interest were the results for the element "person in control" where the MD group had a significantly higher average value-rating than both the NOR and CD groups whose average value-ratings were not significantly different from each other and in the same positive range. It was thought that the average value-rating for the NOR group would have been significantly different from both the MD and CD group.

A possible explanation as to why the NOR and CD group had similar average value-ratings for the element "person in control" may be due to the NOR group aligning themselves with the person chosen for the role title and the CD group distancing themselves. On the one hand, the means of the average value-rating by the NOR group for the elements "self" and "person in control" was 2.52 and 2.09. On the other hand, the means of the average value-rating by the CD group for the elements "self" and "person in control" was 6.11 and 2.18. Possibly the CD group's negative schema caused them to see someone they perceived as being in control as very different from their own self-perception. As a result, they value-rated the element "person in control" in a direction (positive) similar to the average value-rating of the NOR group and yet, for a very different reason. If this is the case, further research would be needed to confirm this explanation. However, it may be that the results are merely due to chance and that a Type I error was made.

Interpersonal Isolation

With respect to interpersonal isolation, cognitive theorists (Beck, 1967; Derry & Kuiper, 1981) argue that depressed individuals ascribe negative attributes to themselves and evaluate their performance as evidence of personal inadequacy and social ineptitude, especially in comparison to others around them. As a result, this pervasive negative self-view leads to an overwhelming sense that they are unique in their inadequacy and different from others. A number of construct theorists (Ashworth, Blackburn, & McPherson, 1982; Rowe, 1978; Space & Cromwell, 1981) have examined the interpersonal dimensions of depressed adults by calculating distance between "self" and other elements and their results lend support to this cognitive viewpoint. In general, the conclusions of their studies affirmed that depressed individuals perceive themselves as different or distant from other persons.

The current study's investigation of to what degree depressed adolescents view themselves as different from others was consistent with previous depressed adult construct studies. The CD group, as predicted had significantly greater differences than the other two groups on 8 out of 11 self- other comparisons indicating that they construed themselves as unlike other people. But the data collected on the two self-other comparisons with "disliked

person" and "rejecting person" revealed that no significant differences existed between the three groups. Possibly the self-other calculated distances were not significantly different because all the subjects were asked to choose names for the two role titles based on a negative criteria (i.e., a person they dislike and a person who has rejected them). As a result, all the subjects may have tended to distance themselves because they chose people they would not likely feel comfortable with.

It was interesting to note that on the "self"-"threatening person" comparison, the CD group had the smallest distance which was significantly different from the NOR and MD groups suggesting a sense of affiliation with the negative element. Possibly depressed individuals may align themselves with negative individuals not because they like the individuals, rather because they feel they have something in common. Such an explanation is consistent with Moretti, Feldman, and Shaw's (1990) conclusion that individuals with negatively biased self-evaluations are prone to interact with others in such a way as to elicit responses that confirm their negative expectancies and self-perceptions.

Pessimism About the Future

From a personal construct viewpoint, Kelly (1955) maintained that a predominant characteristic of depression is a negative view of the future. In extreme cases, this negativity can take the form of severe hopelessness, the conviction that the future offers no chance for real satisfaction. As a result, depression entails an impairment in the individual's ability to extend (postively) into the future. Neimeyer and his colleagues (1983) performed a study that examined several dimensions of self-construing in a group of depressed subjects. The subjects were administered the SCL-90 depression scale along with a modified form of the repertory test that required the subjects to rate themselves in various situations (e.g., "Me one year in the future") on a set of 10 personal construct scales coded for valence (positive versus negative). Results of the study concluded that negative construing of self in the future was a significant predictor of symptomatic distress (as gauged by the SCL-90).

In the current study, the degree of pessimism about the future was investigated by calculating the average value-rating of the element "ideal self" on each grid. The element "ideal self" was considered to be an appropriate indicator of the subjects' construing of themselves in the future since it was presented in that context. It was

explained to each subject that the element "ideal-self" stood for "what you would really like to be like in the future". Although it was hypothesized that the CD group would be inclined to value-rate the element "ideal self" in the negative range on each grid, the results of the statistical analysis revealed that there were no significant differences among the three groups.

This may have been due in part to a misunderstanding of the intended meaning of the element "ideal self" by the subjects. In addition, developmental differences may have played a role. Erikson (1968) suggests that adolescents are undergoing a change in their social role from that of a child to that of an adult. Often there is an identity crisis characterized by extreme mental turmoil and a search for a particular identity. He also relates that during this period adolescents are often very idealistic and tend to invent new roles which they test out. Unlike adults, the cognitive processes and identity formation that adolescents are experiencing may in some way protect them from not being able to see themselves in a different way in the future.

The degree of pessimism was also examined by calculating the average value-rating of the element "self" on the construct "hopeful/hopeless". Results from the data analysis supported the hypothesis that the CD group would report higher scores of hopelessness that the MD who would in turn be less hopeful than the NOR group. This finding

supports a number of adolescent depression studies that report a high correlation between hopelessness and depression (Carlson & Kashani, 1988; Ehrenberg, Cox, & Koopman, 1991; Johnson & McCutheon, 1981; Kashani, Reid, & Rosenberg, 1989; McCauley, Burke, Mitchell, & Moss, 1988) as well as risk of suicide (Mitchell & Rosenthal, 1992; Rotheram-Borus & Tratman, 1988; Topol & Reznikoff, 1982).

Polarized Construing

Beck and his colleagues (Beck, Rush, Shaw, & Emery, 1979) contend that "dichotomous thinking", the tendency to interpret events in an extreme fashion is a typical correlate of depression. One of the distinctive features of personal construct theory is its emphasis on the bipolarity of a person's cognitive processes (Kelly, 1955). In light of this, construct theorists have investigated the relationship between polarized construing and depression. For example, Neimeyer, Klein, Gurman, and Griest (1983) reported in their study that those subjects who were more symptomatic tended to construe themselves in more extreme terms.

Neuringer (1961) found a similar cognitive process in suicidal individuals. Dichotomous thinking was investigated by calculating the extreme ratings of concepts (e.g., myself, God) on 7-point semantic differential scales (e.g.,

good versus bad). He reported that the suicide group did display higher scores of dichotomous judgment than the normals.

In support of these studies, the current investigation found that the polarized construing was significantly correlated with depression. As predicted, the CD group had significantly higher frequency of scores in the extreme category and lower frequency of scores in the neutral category than did both the other groups. However, the MD and NOR groups were actually very similar in how the subjects scored in both categories. This may be due to the subject's degree of pathology.

Kelly (1955) theorized that depression was a gradual constriction of one's awareness in an attempt to minimize the disruptive implications of threatening events. Cognitive theorists (Levitt, Lubin, & Brooks, 1983) complement Kelly in proposing the depressed individuals have negative schemas that are characterized by dichotomous thinking. But in order for the negative schemas to develop and be maintained, the depressed individual must experience perceived situations that engender negative self-concepts. As this process becomes more prominent, the downward spiral toward depression occurs. If this is the case, then possibly the MD group has not progressed in their depressive state to the point where they are so constricted in their thinking that they reflect a quality of polarized

construing.

Locus of Control

As for the relationship between locus of control and adolescent depression, a number of studies have reported a high correlation (Lester, 1989; Siegel & Griffin, 1984; Topol & Reznikoff, 1982). Therefore, it was not surprising that the current study was able to find significant differences among the three groups. The CD group had a significantly higher level of external control than did the MD and NOR groups. Of the latter two groups, the NOR group had the strongest sense of internal control.

Limitations

There are a number of limitations to this study that should be mentioned. First, although this study has found some compelling evidence that depressed adolescents do share some similar cognitive features (e.g., poor self-esteem, pessimism, polarized construing, and interpersonal isolation) to those found in depressed adult studies and demonstrate a strong correlation with poor locus of control, the fact that this was a comparison study does not address the stability of these findings. A longitudinal study would be required to ultimately address this issue and establish

the degree of stability of the cognitive characteristics.

Second, it would have been interesting to have obtained a better representation between males and females for the purpose of investigating potential sex differences. Also, the ages of the subjects in this study were representative of early adolescence. In order to better assess the relationship between symptom presentation and age, a developmental approach could have been used in selecting subjects. For example, subjects could have been selected from a number of age ranges that would have been sensitive to the cognitive and physiological stages of preadult development. This would have provided an opportunity to examine differences in the symptomatology in early childhood through to late adolescence.

Third, it is assumed that the role titles used for eliciting elements are representative of the people with whom the subject relates or perceives as important or threatening and that how the elements are construed is relevant. But Kelly (1955) pointed out that a construct only has meaning within a context of a person's experience. As a result, adolescents could construe very differently in the context of a family to the way they would construe in the context of their peers, even though the verbal labels of the constructs are identical. It may be that some variance in the results is due to the subjects assuming a context for their judgments (implicitly) but are changing this context

during the course of completing a single grid because the later elements have been experienced in a different context.

Fourth, most of the subjects who participated in this study reside in middle- to upper-class homes, suggesting that this study should be repeated in samples of different socioeconomic status. But it should be noted that Kandel and Davies (1982) studied a large sample of high school students for differences between level of depression and sex, religion, and social class status and found that the only demographic variable on which differences were observed was gender.

Finally, although Bartko et al. (1988) maintain that 15 subjects in each group is a sufficient number to find statistical significance 80% of the time when the null hypothesis is rejected with $p < .05$ for the effect size of .5, conclusions from a larger and more representative sample size would have been more reliable and generalizable.

Recommendations for Future Research

In light of the fact that very little research has been carried out using the repertory grid technique to investigate adolescent depression, it would be important to replicate this study using a larger number of subjects as well as incorporating a balance of gender in each group. With regard to the above mentioned limitations, it would be

helpful to carry out a longitudinal study so as to measure and evaluate whether the cognitive features found in the three groups would be stable at several time periods. Moreover, if subjects were selected across the age span, data could be collected to examine the critical issue of the isomorphism of cognitive construing across the childhood, adolescent, and adult depressive disorders.

Developmental issues need to be considered in future studies of preadult depression with repertory grid techniques. Some areas to investigate might be the relationship between symptom presentation and age. Typical research tends to relate symptoms to chronological age based on the assumption that age is equivalent to developmental level. However, it may be that symptoms vary with developmental level of the adolescent's cognitive ability (Hodges & Siegel, 1985). Another developmental issue to be investigated involves the impact of pathological influences on the ongoing development of the adolescent. It would be important to understand the medical history of the subjects. If an adolescent experienced depression in childhood, a depressive disorder could affect that person's various socialization processes and personality development.

Future considerations to investigate the context in which individuals interpret their experiences could be important. If individuals are their own scientist working out their own theories from their own experiences, then

future grid studies need to take context into account both as a source of confusion as well as an opportunity to gain a clearer picture of how people construe (Fransella & Bannister, 1977). Instead of forcing the subject to think along a certain path, grids need to be designed more as a template which can be placed over the uniquely perceived constructions of the person.

Future studies using the repertory grid technique may prove useful in the area of evaluating treatment. The repertory grid technique appears to be effective in identifying construct areas where disequilibrium or polarization exits. Since the goal of psychotherapy is to reduce the vulnerability to depression or eliminate it all together, the unique cognitive features of depression identified by the repertory grid technique could be matched with an appropriate therapeutic intervention. The effectiveness of therapy utilized could be assessed by monitoring the subject's movement towards the positive pole of the construct. Future work could also extend and refine some existing interventions like Kelly's (1955) strategies for dilating the constricted focus a depressed subject and for tightening loosely organized constructs into an integral system. Space and Cromwell's (1980) group therapy would seem particularly valuable in breaking down the depressed adolescent's sense of distance from others.

Winter (1985) proposes that an interesting research

issue is the use of the repertory grid technique to evaluate the type of treatment that would complement the unique needs of the depressed person. He relates that treatment approaches for depressed individuals whose construct systems are tightly knit may need to be a relatively structured treatment approach (e.g., cognitive therapy) where more control over the invalidation of the person's construing can occur. On the other hand, depressed individuals with construing that is more differentiated may respond effectively to group analytic therapy. Also, the current study investigated a number of cognitive features that depressed adolescents seem to have in common with depressed adults. Therefore, treatment approaches found to be effective with depressed adults could be investigated as to their effectiveness and when applied to depressed adolescents.

Future research needs to examine whether the cognitive features found to correlate with adolescent depression are symptom-linked or vulnerability-linked (Neimeyer, 1983). Symptom-linked variables are detectable only when the adolescent is actively displaying the clinical syndrome. Whereas vulnerability-linked variables are considered somewhat stable and predispose the adolescent to become symptomatic when faced with a relevant environmental stress. In the current study, different degrees of the depressive features existed between the three groups. It could be

investigated in future studies as to which combination of cognitive features predispose an adolescence to become vulnerable and to what degree do the symptoms need to be experienced in order to allow for the onset of a depressive episode. Exploring which cognitive features are vulnerability-linked might lay the ground work for a preventative approach to treating depressed adolescents and for a conceptualization of the depressive or suicidal personality.

Finally, another avenue that research might focus on are the ideas of Carlson and Garber (1986). They have suggested a multi-tiered diagnostic system. The first tier would be core clinical signs and symptoms of depression that are consistent across all ages. The second tier would consist of symptoms that occur rarely in the various age groups but if they occurred, they would be considered signs of depression. The third tier would consist of symptoms that are found to be highly associated with different age ranges. This view challenges the actual number of symptoms required for a diagnosis of depression since they may change with age. The repertory grid technique may be useful in investigating this approach to diagnosis since it is flexible and adaptable to the unique symptoms of the subject as opposed to assuming and exclusively imposing adult criterion for depression based on DSM-III-R. Also, Kelly's (1955) concept of constructs being arranged in a

hierarchical fashion and the idea of "core constructs" and "peripheral constructs" could be a useful framework for investigating this unique theory of diagnosis.

Summary and Conclusions

The purpose of this study was to: (1) explore some of the cognitive processes that may characterize depressed adolescents and to determine if they have similar cognitive features (pessimism, negative self-construing, polarized construing, and interpersonal isolation) to those found in adult construct studies; and (2) investigate the relationship of adolescent depression and locus of control.

Results indicated that CD adolescents had significantly higher levels of poor self-esteem, pessimism, polarized construing, interpersonal isolation and external locus of control in comparison to the MD and NOR adolescents. Results also supported the contention that the MD group would have higher levels of poor self-esteem, interpersonal isolation, pessimism, and external locus of control than did the NOR group. Should future research confirm these results, this would have important implications for the diagnosis and treatment of depressed adolescents. It may be shown in future studies that psychological treatments typically used to treat adult depression such as cognitive therapy (Beck et al., 1979), behavioral therapy (Williams,

1984), and reattribution training (Seligman, Abramson, Semmel, & Von Baeyer, 1979) may be beneficial in treating depressed adolescents.

This study has lent support to the view that some of the essential cognitive features of depression found in adolescents are similar to those found in adult studies (Carlson & Strober, 1979; Goodyer, 1992). However, it was interesting to note that the prediction of the MD group having a stronger characteristic of polarizing than the NOR group was not confirmed. The MD group was also somewhat ambivalent as to whether they perceived themselves in a consistently positive or negative light. These results suggest that adopting an exclusive adult criteria for the diagnosis and understanding of adolescent depression may be inadequate. Rather, there is a need to consider the developmental perspective (Kendall, Cantwell, & Kazdin, 1989) and the multi-tiered approach to diagnosis (Carlson & Garber, 1986) in future studies of adolescent depression in order to identify certain signs and symptoms that are age-appropriate and to take into account the individual adolescent's level of cognitive functioning. It may be that during the turbulent years of adolescence, developmental changes in cognitive processing will inevitably play a role in the manifestation of symptoms.

Finally, the current study has lent support to the claims that personal construct psychology offers a rich

theory and methodology which can make an important contribution to the emerging cognitive conceptualization of adolescent depression. Results of this study suggest that the repertory grid technique is a potentially effective method of investigating the cognitive processes that may characterize depressed adolescents. Because of its adaptability and focus on personal meaning and appraisal of experience, the repertory grid technique offers a unique way to examine the organization of cognitive processes along dimensions generated by the depressed adolescents rather than imposed upon them.

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APPENDIX A

The Criteria For Diagnosis Of A Major Depressive Syndrome In DSM-III-R

A. At least five of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood, (2) loss of interest or pleasure. (Do not include symptoms that are clearly due to a physical condition, mood-incongruent delusions or hallucinations, incoherence, or marked loosening of association.)

1. Depressed mood (or can be irritable mood in children and adolescents) most of the day, nearly every day, as indicated either by subjective account or observation by others
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated either by subjective account or observation by others of apathy most of the time)
3. Significant weight loss or weight gain when not dieting (e.g., more than 5% of body weight in a month), or decrease or increase in appetite nearly everyday (in children, consider failure to make expected weight gains)
4. Insomnia or hypersomnia nearly everyday
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
6. Fatigue or loss of energy nearly every day
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or specific plan for committing suicide

B. 1. It cannot be established that an organic factor initiated and maintained the disturbance.
2. The disturbance is not normal reaction to the death of a loved one (uncomplicated bereavement).

C. At no time during the disturbance have there been delusions or hallucinations for as long as 2 weeks in the absence of prominent mood symptoms (i.e., before the mood symptoms developed or after they remitted).

D. Not superimposed on schizophrenia, schizophreniform disorder, delusional disorder, or psychotic disorder.

APPENDIX B

Diagnostic Criteria for Primary Affective Disorders as Adopted By Feighner et al. (1972)

Depression - For a diagnosis of depression, A through C are required.

A. Dysphoric mood characterized by symptoms such as the following: depressed, sad, blue, despondent, hopeless, "down in the dumps," irritable, fearful, worried, or discouraged.

B. At least five of the following criteria are required for "definite" depression: 1) poor appetite or weight loss (positive if 2 lb. a week or 10 lb. or more a year when not dieting); 2) sleep difficulty (including insomnia or hypersomnia; 3) loss of energy, e.g., fatigability, tiredness; 4) agitation or retardation; 5) loss of interest in usual activities, or decrease in sexual drive; 6) feelings of self-reproach or guilt (either may be delusional); 7) complaints of or actually diminished ability to think or concentrate, such as slow thinking or mixed-up thoughts; and 8) recurrent thoughts of death or suicide, including thoughts of wishing to be dead.

C. A psychiatric illness lasting at least one month with no preexisting psychiatric conditions such as schitzophrenia, anxiety neurosis, phobic neurosis, obsessive compulsive neurosis, hysteria, alcoholism, drug dependency, antisocial personality, homosexuality and other sexual deviations, mental retardation, or organic brain syndrome.

APPENDIX C

A. Diagnostic Interview:

1. ISC - Interview Schedule for Children (age - 8 to 17)

2. K-Sads - Schedule for Affective Disorders and Schitzophrenia Childhood Version (age - 6 to 17)

3. DICA - Diagnostic Interview for Child and Adolescent (age - 6 to 17)

4. BID - Bellevue Index of Depression (age - 6 to 16)

B. Self-Report Inventories:

1. BDI - Beck Depression Inventory (adolescents and adults)

2. CDI - Children's Depression Inventory (age - 7 to 17)

3. SCDI - Short Children's Depression Inventory (age - 7 to 17)

4, CDS - Children's Depression Scale (age - 9 to 16)

APPENDIX D

Levels of Representation of "Depression"

Level	Meaning/Significance
#1: Symptom	dysphoric mood is present (i.e., feeling sad, blue, down in the dumps) (does not necessarily signal psychiatric disorder)
#2: Various Symptoms	certain symptoms are present (e.g., poor appetite, dysphoria, weight loss, insomnia, fatigue) (psychiatric or affective disorder is not necessarily present)
#3: Syndrome	a specific cluster of symptoms is present (involving the areas of mood, cognitive, vegetative functions, psychomotor function, and motivation) (disorder is present; may or may not be primary affective disorder)
#4: Psychiatric Disorder	A specific syndrome of depressive symptomatology is present for a certain minimal duration, producing a certain minimal impairment, and having external validation including characteristic outcome and correlates

APPENDIX E

CONSENT FORM - ADOLESCENT

Research Project: Depressed Adolescents and Kelly's Personal Construct Theory

Investigator: Wayne Hammond

This consent form, a copy of which has been given to you, is only part of the process of informed consent. It should give you the basic idea of what the research project is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The purpose of this research is an attempt by the investigator to investigate whether depressed adolescents share similar patterns of thinking (e.g. negative self-image, negative perception of the future, constriction in thinking, personal isolation, and degree of not feeling in control of oneself) to those of depressed adults.

Each participant will be asked to complete a Beck Depression Inventory - a means of categorizing and determining the degree of depression being experienced - as well as a variation of a Role Construct Repertory Test (RCRT) protocol. Completing the RCRT will consist of being asked to provide the investigator with 12 names for 12 role titles (e.g. name of closest parent, a person you dislike, a teacher, a successful person etc.). Next, the names will be written on separate cards and ten constructs (e.g. friendly and unfriendly) will be selected by placing three of the cards in front of you and you being asked to think of some way in which two of the people are alike and therefore different from the third. Then you will be asked for the opposite of the construct you used to describe the two similar people. To the ten constructs provided by you will be added three more by the investigator. At this point, you will be asked to categorize the 13 construct dimensions on a 9-point scale and a positive-negative scale in various ways. These procedures will be fully explained to you in a more detailed manner at the interview.

The investigation involves three groups of adolescents - nondepressed, mild to moderately depressed, and clinically depressed. It is an investigative type study and is not meant in any way to be a form of treatment. Therefore, one should not experience any discomforts and it is to be understood that you are free to withdraw your consent and terminate your participation at any time. In an indirect way, one might benefit from results of the study as it may help one to become more informed about some of the major characteristics of depression in adolescents. The actual interview with each participant will take about one and a half hours and will be a one time event only. Also, parental consent for your participation in this study will be required.

The following steps will be taken to safe-guard the confidentiality of the information you will provide. You will be asked not to record your name on any of the research forms (i.e. grid structure forms) or measures (i.e. Beck Depression Inventory). The consent forms will be separated and the completed research forms and measures from you will be identified with a number code to ensure responses remain unidentifiable for the purpose of data analysis. For the duration of the study, all data will be kept in a locked filing cabinet in the investigator's office. Also, test data will be destroyed upon completion of the study.

At the end of the research project, a summary explanation of the results will be available to those participants who request it.

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the investigator, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time without jeopardizing your health care. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact:

Wayne Hammond Phone Number: 274-3742

If you have any questions concerning your rights as a possible participant in this research, please contact the Office of Medical Bioethics, Faculty of Medicine, The University of Calgary, at 220-7990.

_____
(Name)

_____
(Signature of Subject)

_____
(Signature of Legal Guardian)

_____
(Name of Witness)

_____
(Signature of Witness)

_____
(Date)