

Predictors of Premature Termination of Psychotherapy at a Cape Town Child and Family
Clinic

Laura Taylor
Department of Psychology
University of Cape Town

Supervisor: Dr. Debbie Kaminer

Total word Count: 7504

Abstract: 141

Main Body: 7351

Abstract

Premature termination of psychotherapy is a significant problem for both outcomes research and clinical practice in South Africa and elsewhere. This study aims to investigate factors that predict premature termination (PT) in child-focused psychotherapy interventions at a public service clinic in Cape Town. A retrospective archival analysis of clinic files was conducted. Administrative, child and family variables were explored as predictors of PT. Of these variables, families with higher SES scores and children whose mothers were diagnosed with a psychiatric disorder were found to be less likely to terminate therapy prematurely, whereas children diagnosed with conduct disorder / oppositional defiant disorder, were found to be more likely to terminate therapy prematurely. The findings generated from this study could help both researchers and clinicians to identify clients who are at risk for PT and to put measures into place to prevent this.

Keywords

Premature Termination; South Africa; child psychotherapy; archival data; retrospective study.

Predictors of Premature Termination at a Cape Town Child and Family Clinic

Premature termination (PT) of child and family psychotherapy has been identified as a significant problem for outcomes research, clinical practice and clinical service delivery, with previous studies reporting PT rates of between 30 and 75% in both adult and child and family therapy settings (Aubuchon-Endsley & Callahan, 2009; Reis & Brown, 1999). Kazdin, Holland and Crowley (1997) state that PT has a considerable effect on therapy outcomes research, as the loss of cases during the course of treatment, and resulting changes in group composition, threaten all aspects of validity through the introduction of potential sampling bias, statistical power reductions and limits on the generalizability of research results. In terms of clinical practice, those who terminate therapy prematurely are less likely to benefit from treatment than those who do not (Reitzel et al, 2006). PT also affects the delivery of clinical service: when clients do not arrive for therapy, therapists' time spent conducting intake assessments and making follow up phone calls and emails increases costs, and the opportunity for other clients to receive treatment is reduced. In light of these barriers to effective research, practice and service delivery, an exploration of the predictive factors of PT in child and family psychotherapy is necessary (Johnson, Mellor & Brann, 2008).

There has been considerable interest in PT in adults for some time, with the attention only more recently being directed toward research on PT in child and family psychotherapy. International studies on PT in adult psychotherapy place a great deal of emphasis on the relationship between the client and therapist, whereas studies on PT in child and family psychotherapy suggest that administrative and child and family factors act as the main predictors of PT (Hunsley, Aubrey, Verstervelt & Vito, 1999; Reis & Brown, 1999).

Administrative Factors

Some studies have found that children who are waitlisted for an extended period of time tend to be more at risk for PT (Baekeland & Lundwall, 1975; Sherman, Barnum, Nyberg & Buhman-Wiggs, 2008). However, the research findings on the effect of a wait between referral or initial intake appointment and first proper appointment tend to be inconclusive, for example Reitzel et al. (2006) found that timeliness did not predict PT in

child and family psychotherapy. Rodolfa, Rapaport and Lee (1985) note that a distinction between dropout and PT needs to be made when researching the waitlist variable, as their study indicated that an extended wait between the referral to and commencement of therapy played a greater role in dropping out before therapy began, than in the PT of therapy once it had already started. In terms of researching the waitlist variable, certain studies investigate those who do not turn up for therapy, and others are interested in observing the waitlist variable's effect on PT (Sherman, Barnum, Nyberg, & Buhman-Wiggs, 2008). As can be noted, two different constructs are being measured and the inconsistent findings can be considered to be a result of the lack of consistent measurement of the variable through the absence of a constant operational definition. Reitzel et al. (2006) investigated the relationship between wait time and both dropout before the intake interview and the PT of therapy once it had already commenced, finding that the timeliness of case assignment was significantly related to dropout, but not to PT.

Another administrative factor related to PT in child and family psychotherapy is referral source. Reis and Brown (1999) suggest that clients who are involuntarily referred for psychotherapy, such as through the court or schools, are more likely PT candidates than those who seek treatment independently. It is suggested that children are more likely to remain in therapy if their parents have sought the treatment themselves, as opposed to being referred by institutions. Greenspan and Kulish (1985) noted an increase in PT when clients felt they had been pressurized to attend therapy. Armbruster and Fallon (1994), however, concluded that referral sources such as schools, courts, and social services agencies were not associated with PT.

In considering the difference between the results of Greenspan and Kulish (1985) and Armbruster and Fallon's (1994) findings, one can look to the samples used for each study. Greenspan and Kulish's sample was homogenous, in that the individuals studied were predominantly middle-class citizens who were able to pay for therapy, whereas Armbruster and Fallon's sample was more heterogeneous, as research participants' ages ranged from less than one through to 18 years of age, both males and females were included, less than half the children were from two parent families, SES levels varied and the sample was made up of different racial groups. Referral source therefore appears to have less of an effect on

PT in child and family psychotherapy when a more homogenous middle-class sample is used.

Family Factors

Family factors appear to consistently account for the greatest amount of variance in PT in child and family psychotherapy. A family's socioeconomic status (SES), family structure and mental health history are consistently noted by researchers as predictors of PT in child psychotherapy.

Children from socioeconomically disadvantaged families, whose parents have a low level of education or are unemployed, have been found to be more likely PT candidates (Armbruster & Fallon, 1994; Kazdin et al., 1997; Reis & Brown, 1999). It is generally agreed that a client's SES, which is often measured via a scale that takes individual's level of education and job title into account, is a strong predictor of PT (Armbruster & Fallon, 1994; Kazdin et al., 1997, Kazdin & Mazurik, 1994; Reis & Brown, 1999). Armbruster and Fallon (1994) go a step further by stating that the higher one's SES, regardless of ethnic or racial group, the less one is at risk for prematurely ending therapy. Their study suggests that when SES is controlled for, the findings pertaining to race and ethnicity are no longer significant. Research therefore suggests that the children of family's with fewer resources are more likely to end therapy prematurely than those in a more comfortable economic position, as receiving therapeutic treatment might seem of less importance to them than meeting everyday needs. Families from lower SES groups may also struggle to spend money on therapy when they can ill afford other necessities, and may even struggle to pay for transport to and from a clinic in their area.

There appears to be a consensus that parental stress increases the likelihood of child and family PT (Armbruster & Fallon, 1994; Kazdin, 1994; Kazdin et al., 1997). The children of parents who have little social and emotional support, whether it comes from intimate partners or other family members, therefore may be more likely PT candidates. Kazdin and Mazurick (1994) found children who have young mothers, and children who come from single parented or non-biologically headed homes, to be at greater risk for PT. A later study by Kazdin et al. (1997) produced the same findings. In terms of family structure,

Cole and Magnussen (1967) found remaining in therapy to be far more likely if both parents are actively involved in the process.

Although less well studied, parental psychopathology has also been found to be a predictor of PT (Armbruster & Fallon, 1994). Both maternal and paternal antisocial behaviours have been associated with PT in child and family psychotherapy (Armbruster & Kazdin, 1994). Kazdin and Mazurick (1994) note a correlation between maternal antisocial history and child PT, and Kazdin et al. (1997) note a relationship between both maternal and paternal antisocial histories.

As has been noted above, PT generally appears to be the result of an interplay of factors. This is particularly true of the family variable, and as Campbell, Baker and Bratton (2000) note, PT in child psychotherapy is more likely to occur among families headed by a single parent who is young and of a lower SES group. It is thus very difficult to examine the family factors in an isolated fashion as has been done above, as it seems that PT in child and family psychotherapy is the result of a combination of factors.

Diagnostic Factors

The child's diagnosis has also been noted as a factor predictive of PT. Kazdin et al. (1997) found children presenting with antisocial behavior to be more likely PT candidates. Johnson et al. (2008) found that children with diagnoses of conduct disorders /ADHD appeared to be more likely PT candidates, whereas children with diagnoses of anxiety disorders, no diagnosis and with other more complex disorders, such as multiple mental and behavioral disorders were less likely to drop out. Johnson et al's. (2008) study was one of the first that concentrated solely on child diagnosis as a predictor of PT in child and family psychotherapy, and the authors note that further research is needed into how and why certain diagnoses are associated with a greater prevalence of PT.

Future Research Directions

International research has identified multiple predictors of PT in child and family psychotherapy, namely administrative, family and diagnostic factors. Despite the identification of the said factors, there is still no profile of factors that can be used to predict,

and therefore mediate and potentially prevent, PT. This may be because numerous studies choose to focus on one or two factors instead of multiple variables, thus making it more difficult to identify a predictive model of PT (Armbruster & Fallon, 1994; Johnson et al, 2008). Based on the current PT literature it appears that research that focuses on evaluating the unique and relative contributions of multiple variables to PT will be useful (Kazdin et al., 1997). As the literature is predominantly international, it may also be useful for South African research to be conducted, especially considering that the South African context may be characterized by specific and unique challenges with regard to patient retention in therapeutic settings. If a predictive model of PT is developed using South African clinic data, local clinicians may be able to identify children and families at risk of PT at an earlier stage.

In light of the lack of a comprehensive understanding of PT in child and family psychotherapy, this study aimed to examine multiple factors that may contribute to this phenomenon in a South African context.

Method

Study Design

A retrospective archival analysis of clinic files at a child and family clinic in Cape Town was conducted (Babbie & Mouton, 2006).

Setting

This study was conducted at the University of Cape Town (UCT) Child Guidance Clinic (CGC) in Cape Town, South Africa. The CGC is a postgraduate teaching centre where clinical psychology masters training takes place, and is also an outpatient treatment clinic for children and families.

Children aged 0 – 18 years are treated at the CGC. Melville (2000) described the age, gender and racial distributions of the CGC clientele, but due to the fact that this study was conducted over 10 years ago it is likely that the distributions have changed. Nevertheless the data provide a rough idea of the clinics patient demographics. Melville (2000) notes that a large number (47.3%) of child clients are between the ages of 5 – 9 years and a smaller number (12%) of child clients are over the age of 16. It appears that more males (59.1%) are treated than females (41.9%). The racial distribution is difficult to report on, as this was shifting during the time of Melville's (2000) study. In 2000, the majority of clients were Coloured (61.5%), then White (29, 6%) and Black (10.3%).

The therapeutic process at the CGC begins when a parent calls to make an appointment, identifying in the process which child they may be concerned about. The child is from then on referred to as the Identified Patient (IP). There is often a waiting period of approximately three months between the initial call made by the parent and the intake appointment. When an appointment is available, the whole family is seen for one or two assessment / history taking sessions, and at the same time the student psychologist also sees the child alone. Thereafter, the student psychologist decides on what further assessment needs to happen, for instance psychometric assessments, meetings with one or both parents and further structured assessment sessions with the child. After assessment, feedback is provided to the family and a treatment plan is recommended. This treatment plan may entail

individual child psychotherapy, parent counselling, family therapy, or a combination of these. This study has examined PT across all of these different forms of intervention, given that a child is involved in the process. The clinic also sees a small amount of adult patients; however, these have not been included in the study.

Sample

The sampling frame all clients treated over the 8-year period from 2002 - 2009 at the UCT CGC. The following files (n=61) were excluded from the analysis.

1. Case files on children wherein there was little or no information on parents were excluded, such as case files on children who had only visited the Child Guidance Clinic once for a psychometric assessment.
2. Case files of children who were noted to live at the SOS Children's Village.
3. Case files of children wherein the student psychologists did not sufficiently capture their client's data.

The remaining sample comprised 332 case files.

Data Collection

Data were collected via a coding schedule (see Appendix A). The variables selected for inclusion in the coding schedule were based on current PT literature and the experience of clinic staff, and were restricted by the type of information available in the case files. The independent variables are both continuous and categorical and the outcome variable, PT, is categorical. The outcome variable is the presence or absence of PT. The independent variables are divided into 3 subsections: administrative factors, child factors, family factors.

PT

For each case examined, the presence or absence of *PT* was coded. In line with various studies, the presence or absence of *PT* was defined by the therapist's judgment of the appropriateness of termination (Johnson et al., 2008; Wierzbicki & Pekarik, 1993). This

information was located in the therapist's termination summary in each case file. Here the student psychologist is required to make notes of the final contact and termination of therapy with the client. In cases of the absence of *PT*, the student psychologists wrote 'termination session', whereas in cases of the presence of *PT*, the student psychologists often wrote 'termination letter sent', or 'failed to meet appointment'. When the presence of *PT* was identified the more in-depth termination summary was read by the researcher, to be certain of the accuracy of the *PT* status.

Administrative variables

The administrative variables of *days on waitlist* and whether the child was *school referred* were included, because they have been consistently noted as predictors of *PT* in the literature (Pekarik & Stephenson, 1988; Reis & Brown, 1999; Reitzel et al., 2006). The continuous variable of *days on waitlist* was calculated by looking at the date of the first phone call on the referral card and the date of the first intake session on the contact sheet. The binary variable of whether or not the child was referred by his or her school was also obtained from the referral card.

Child factors

Child factors of *age* and *gender* represent important demographic information, and were included because both factors are necessary to understand the characteristics of the sample. The *child diagnosis* variable was included because it features as an important predictor variable in many *PT* studies (Greenspan & Kulish, 1985; Johnson et al., 2008; Reis & Brown, 1999; Wierzbicki & Pekarik, 1993). The presence or absence of diagnoses of ADHD / ADD, depression, conduct disorder / oppositional defiant disorder, anxiety disorder and adjustment disorder were considered to have a potential effect on the outcome of *PT*. The diagnoses were selected on the basis of *PT* literature and through an examination of common presenting problems in the case files at the CGC.

Family factors

The presence or absence of a *single parent home*, and *maternal psychiatric diagnosis* were included, because they have been consistently noted as important predictor variables of PT (Cole & Magnussen, 1967; Cartwright, Lloyd & Wicklund, 1980; Reis & Brown, 1999). The presence or absence of a *multiple fathered home*, *maternal trauma exposure*, and a *biological caregiver* were included, as were the *total number of people living in the household* and *number of biological siblings*, because CGC staff members have identified a potential relationship between these factors and increased risk for PT. The various family factors were obtained through the examination of case histories.

The family variable of *SES* was also included, and was evaluated through the exploration of *income level*, *maternal and paternal employment status* and *maternal and paternal completion of high school*. These variables were chosen as indicators of *SES*, because previous studies have made use of these variables in determining the *SES* of families (Armbruster & Fallon, 2004; Reis & Brown, 1999; Sherman et al., 2008). The *income level* was obtained from a fees sheet, found in the case files. The presence or absence of *maternal and paternal unemployment and high school completion* was determined through the examination of case histories.

Procedure

The files were examined manually by two researchers, and were coded according to the coding schedule. Prior to the commencement of coding both researchers coded several files together, in order to ensure consistency. During the coding process there was much communication between the two researchers in order to ensure a continued consistency of coding. The data contained in each file was entered into an electronic database, from which it was transferred to a statistical package for data analysis.

Data Analysis

The information contained within the case files was first coded, according to the selected variables, and was then quantitatively analyzed. The statistical tests were chosen

based on retrospective PT studies with similar data sets (Armbruster & Fallon, 1994; Johnson et al., 2008; Sherman et al., 2008; Wierzbicki & Pekarik, 1993).

The Statistical Package for the Social Sciences (SPSS) version 18.0, with alpha set at 0.05, was used to analyze all of the collected data (Field, 2009). The dependent variable was the dichotomous PT variable, wherein cases were ranked as having prematurely terminated therapy or not. The independent variables included: referral source, time on the waiting list, ADHD, depression, conduct disorder / oppositional defiant disorder, anxiety disorder, adjustment disorder, single parent home, multiple fathered home, SES, maternal trauma, maternal diagnosis, caregiver status, number of biological siblings living at home, and number of people living in the home.

The descriptive data were first examined, making use of frequency, percentage and cumulative percentage tables to analyze the presence of the all binary variables: PT, gender, referral source, ADHD, depression, conduct disorder / oppositional defiant disorder, anxiety disorder, adjustment disorder, single parent home, multiple fathered home, maternal trauma exposure, and caregiver status. The mean, mode, median and standard deviation measures were used to examine the continuous variables of child age, days on waitlist, SES, number of people living at home, and number of biological siblings.

Following this, a series of chi square tests were run to identify bivariate relationships between the binary independent variables and the dependent variable PT (Howell, 2004). Standardized residuals were used as measure of effect, as they indicate between which levels of dependent and independent variables the significant effect is situated. Given that confidence interval alpha was set at 0.05, Field (2009) suggests that standardized residual values lying outside +1.96 and -1.96 indicates significance. Following this, effect sizes were calculated via Cramer's V and odds ratios in order to establish how much variance in PT is accounted for by the various independent variables.

Independent sample 1-tailed t-tests were used to establish whether or not the mean scores of the continuous independent variables differed significantly across PT and non PT groups. In order to establish the importance of the effect of the dependent variables on PT, effect sizes were calculated.

The bivariate analysis was followed by a multivariate analysis wherein hierarchical binary logistical regression was used to establish which of the variables found to be significant in the bivariate analysis contributed uniquely to the variance in PT when considered simultaneously (Field, 2009).

Ethical Considerations

Informed consent was obtained prior to the commencement of the study, as preceding children's admission into treatment at the Child Guidance Clinic parents are required to sign consent forms giving UCT permission to use all their information, except names, for the purposes of research.

In relation to confidentiality and anonymity client or clinician names are not used in this research report. During the course of the research, the case files were also not removed from the Child Guidance Clinic.

This study presented no obvious risks or benefits, because of the archival nature of the data.

Permission from the University of Cape Town's ethics committee was granted prior to the commencement of the research.

Results

The results have been divided into three sections: (1) sample characteristics; (2) bivariate analysis; and (3) multivariate analysis.

Sample Characteristics

The total number of cases used was 332. Table 1 reports the frequencies of the binary independent variables, and Table 2 describes the sample characteristics of the continuous independent variables. Results follow below in Table 1.

Table 1
Characteristics of the Sample

Variable	Frequency	Percentage %
PT		
Yes	90	27.1
No	242	72.9
Gender		
Male	201	60.5
Female	131	39.5
Referral Source		
School	95	28.7
Other	236	71.3
ADHD		
Yes	49	14.8
No	282	85.2
Depression		
Yes	34	10.3
No	297	89.7
Conduct disorder / oppositional defiant disorder		
Yes	28	8.5
No	303	91.5
Anxiety disorder		
Yes	34	10.3
No	297	89.7
Adjustment disorder		
Yes	19	5.7
No	312	94.3
Single parent home		
Yes	146	44.5
No	182	55.5
Multiple fathered home		
Yes	65	19.8
No	264	80.2
Maternal trauma exposure		
Yes	92	29.2
No	265	70.8
Maternal diagnosis		
Yes	51	16.1
No	265	83.9
Caregiver status		
Parent	298	90.3
Non-biological	32	9.7

In the sample there was 27.1% of PT cases and 72.9% of cases where therapy was completed. The sample was made up of 60.5% males and 39.5% females. In relation to referral source 28.7% of children were school referred, whereas 71.3% of children were referred to the clinic via other means, such as parents. In terms of diagnoses, 14.8% of children were diagnosed with ADHD, 10.3% of children were diagnosed with depression, 8.5% of children were diagnosed with either conduct disorder or oppositional defiant disorder, 10.3% of children were diagnosed with anxiety disorder and 5.7% of children were diagnosed with adjustment disorder. In the sample population 44.5% of the children came from single parent homes, 19.8% of children came from multiple fathered homes, 29.2% of the children's mothers had been exposed to trauma, 16.1% of the participants' mothers had a psychiatric diagnosis and 90.3% of the children were cared for by biological parents.

Table 2
Characteristics of the Sample

Variable	Mean	Median	Mode	Standard Deviation
Age	9.578	9	6	3.299
Days on waitlist	119.094	86.500	85	110.372
SES	3.687	3	2	1.799
Number of people living at home	4.432	4	4	1.715
Number of biological siblings	1.138	1	1	1.051

The mean age of the participants was 9.578 years (SD=3.299), meaning that the majority of children ranged between 6 and 12 years. The mean time spent on the waiting list was 119.094 days (SD=110.372). This implies the average wait to be just under 4 months, however, the standard deviation is large (approximately 3 ½ months) which indicates a large amount of variability in the waitlist variable. The mean SES score is 3.687 (SD=1.799). The mean number of people living in a home is 4.432 (SD=1.715), which indicates that the average family tends to comprise of approximately 3 to 5 members. The mean number of biological siblings is 1.138 (SD=1.051), indicating that on average the children admitted to the CGC have 0-2 siblings.

Bivariate Analysis of PT

In this section, the significant relationships identified via chi-square tests and t-tests are presented. Table 3 summarizes the significant results of the chi-square tests examining contingencies between PT and the binary independent variables. Table 4 summarizes the significant results of the t-tests that examined the differences of continuous variables in PT and non PT groups.

Table 3
Results of Chi-square Comparisons

	PT n (%)	No PT n (%)	χ^2	<i>p</i>
Referral source				
School	23 (25.6)	72 (29.9)		
Other	67 (74.4)	169 (70.1)	0.598	0.439
ADHD				
Yes	9 (10.1)	40 (16.5)		
No	80 (89.9)	202 (83.5)	2.124	0.145
Depression				
Yes	10 (9.1)	24 (9.9)		
No	79 (79.9)	218 (90.1)	0.123	0.726
Conduct disorder / oppositional defiant disorder				
Yes	13 (14.6)	15 (6.2)		
No	76 (85.4)	227 (93.8)	5.941	0.015
Anxiety disorder				
Yes	8 (9)	26 (10.7)		
No	81 (91)	216 (89.3)	0.217	0.641
Adjustment disorder				
Yes	4 (4.5)	15 (6.2)		
No	85 (95.5)	227 (93.8)	0.349	0.555
Single parent home				
Yes	7 (8.3)	44 (19)		
No	40 (91.7)	188 (81)	5.151	0.023
Multiple fathered home				
Yes	17 (18.9)	48 (20.1)		
No	73 (81.1)	191 (79.9)	0.059	0.808
Maternal trauma				
Yes	27 (31.8)	65 (28.3)		
No	58 (68.2)	165 (71.7)	0.369	0.544
Maternal Diagnoses				
Yes	49 (55.1)	97 (40.6)		
No	40 (44.9)	142 (59.4)	5.498	0.019
Caregiver status				
Parent	10 (11.1)	22 (9.2)		
Non-biological	80 (88.9)	218 (90.8)	0.283	0.595

The variables that were significantly associated with PT were single parent home ($\chi^2 (1) = 5.498$; $p=0.019$), maternal diagnosis ($\chi^2 (1) = 5.151$; $p=0.023$) and conduct disorder/oppositional defiant disorder ($\chi^2 (1) = 5.941$; $p=0.015$).

The variables that were not significantly associated with PT were referral source, ADHD, depression, anxiety disorder, adjustment disorder, multiple fathered home, maternal trauma and caregiver status.

Neither of the two assumptions underlying the chi-square test was violated, as the data were independent and the expected frequencies were all greater than five.

Single parent home

A significant relationship was found between PT and single parent home ($\chi^2 (1) = 5.498$; $p=0.019$). Standardized residual analysis indicated a potentially contingent relationship between PT and single parent home, with a value of 1.5, as more individuals coming from single parent homes terminated therapy prematurely than were expected. Although this variable does not fall outside of the suggested ± 1.96 values, due to the strong overall significance shown in the p-value of .019, this variable will be included in further multivariate testing. Furthermore, standardized residual analysis produces a conservative estimate of a potential relationship. The value of Cramer's V was 0.129, which is rather small, and therefore seems to represent that, based on the odds ratio, the odds of PT occurring were 0.816 times higher if children came from single parent homes.

Maternal diagnosis

Chi-square analysis indicates a significant relationship between PT and maternal diagnosis ($\chi^2 (1) = 5.151$; $p=0.023$). Analyses of standardized residuals suggest a potential relationship between PT and the presence of a maternal diagnosis, with a value of -1.8. The results indicate that significantly less individuals with maternal diagnoses terminated therapy prematurely than were expected. Although the standardized residual score does not fall between ± 1.96 , the effect may still be significant, as was above-mentioned, standardized residuals tend to be conservative measures of effect. The value of Cramer's V was 0.128, which again is small, and therefore seems to represent that, based on the odds

ratio, the odds of PT occurring were 0.193 times lower within the group of children whose mother's had psychiatric diagnoses.

Conduct disorder/oppositional defiant disorder

Chi-square analysis showed a significant relationship between PT and conduct disorder / oppositional defiant disorder ($\chi^2 (1) = 5.941$; $p=0.015$). The analysis of standardized residuals indicate a significant relationship between PT and the presence of a diagnosis of conduct disorder / oppositional defiant disorder, with a value of >1.96 . The results thus show that more individuals diagnosed with conduct disorder / oppositional defiant disorder terminated therapy prematurely than were expected. The value of Cramer's V was 0.134, which is small, and therefore seems to represent that, based on the odds ratio, the odds of PT occurring were 0.171 times higher if children were diagnosed with conduct disorder / oppositional defiant disorder.

Table 4
Results of T-tests

	Mean (Std. Deviation)	DF	t	p
PT (age)	9.811 (3.378)			
No PT (age)	9.491 (3.272)	330	-0.784	0.217
PT (days on waiting list)	123.197 (103.100)			
No PT (days on waiting list)	177.623 (129.182)	286	-0.377	0.353
PT (SES)	3.256 (1.783)			
No PT (SES)	3.847 (1.782)	330	2.688	0.004
PT (number of people living at home)	4.377 (1.666)			
No PT (number of people living at home)	4.452 (1.735)	327	0.349	0.364
PT (number of biological siblings)	1.156 (1.198)			
No PT (number of biological siblings)	1.132 (0.993)	330	-0.179	0.429

The variables that did not yield significant results were age, days on waiting list, number of people living at home and number of biological siblings.

SES

The SES variable was a score constructed by adding up families reported income level, parent education level and parent employment status. The independent samples t-test showed that, on average, families and children who prematurely terminated therapy had a

significantly lower SES score ($M=3.265$; $SE=0.114$) than those who did not terminate therapy prematurely ($M=3.847$; $SE=0.188$). The standard errors of estimate scores are small, thus indicating the data to represent a more accurate representation of the population from which it came from. This difference was significant ($t(330) = 2.688$; $p=0.004$), however, it only represented a just-above small effect size ($r=0.146$).

None of the underlying assumptions of the independent samples t-test were violated, as Levene's Test was not significant ($p=0.803$), therefore homogeneity of variance was assumed, each score represented an independent observation and the data were normally distributed.

Although the above examinations of standardized residuals, Cramer's V and odds ratio's indicate that the presence of conduct disorder / oppositional defiant disorder, single parent home and maternal diagnoses had a small effect on the change in PT, such results could also be attributed to these groups all representing the least amount of observations within the various groupings of the independent and dependent variable (see Table 4 for the exact figures). Similarly, the effect size of the t-test indicates that SES score only contributed a small amount of variance in PT. That said, all significant p-values were well below the 0.05 cutoff and 4 of the 18 tests conducted (22%) were significant, which is well above the chance level of a 5% significance. Given the significant results and above chance number of tests found to be significant, a multivariate analysis was conducted in order to establish which independent variables contributed uniquely to the variance in PT when tested simultaneously.

Multivariate Analysis of PT

Following the bivariate analysis, the variables which were significantly associated with PT were entered into a hierarchical logistic regression analysis. A hierarchical regression was chosen to enable the researcher to have more control over the analysis, and in an attempt to model the regression on a real-world progression of events. The variables were entered in the following order: SES, single parent home, maternal diagnosis and

oppositional defiant disorder / conduct disorder. The results of this analysis are presented in Table 5.

Table 5
Logistic Regression Analysis: Contributors to PT

Variables	B (S.E.)	Wald (df)	p	Exp(B)	(95% CI)
Constant	-0.215 (0.309)	0.486 (1)	0.486	0.806	
SES	-0.216 (0.078)	7.588 (1)	0.006	0.806	(0.691-0.940)
Maternal diagnosis (0/1)	-0.936 (0.436)	4.885 (1)	0.027	0.382	(0.163-0.879)
Conduct disorder / oppositional defiant disorder (0/1)	0.935 (0.427)	4.785 (1)	0.029	2.547	(1.102-5.886)

When considered simultaneously with other predictor variables, the single parent home variable was no longer found to be a significant contributor to variance in PT (OR = -1.630; CI= 0.989-2.689; p= 0.055). The results above were obtained at step 2 of the hierarchical logistic regression, after which another hierarchical logistic regression was attempted, leaving out the no-longer-significant single parent home variable.

The variables that remained significant, when examined simultaneously were: SES, maternal diagnosis and conduct disorder / oppositional defiant disorder. These variables were entered into the model in this order also. The strongest predictor of PT was SES (OR = 0.806; CI = 0.691-0.940; p=0.006), followed by a maternal diagnosis (OR 0.382; CI= 0.163-0.879; p=.027), and conduct disorder / oppositional defiant disorder (OR = 2.547; CI=1.102-5.886; p=0.029).

The significant predictors of PT have Wald statistics ranging between 4.785 and 7.588, which are all well below zero, further indicating that each of the predictor variables make a significant contribution to the PT variable (Field, 2009).

The odds ratio scores aid the directional interpretation of the regression analysis. The SES odds ratio score indicates that those with higher SES scores are 0.806 times less likely to terminate therapy prematurely. The odds ratio score for maternal diagnosis indicates that children whose mothers have a psychiatric diagnosis are 0.382 times less likely to terminate therapy prematurely. The odds ratio score for conduct disorder / oppositional defiant disorder indicates that children diagnosed with these disorders were 2.547 times more likely to terminate therapy prematurely.

Model fit, residuals and outliers

The Hosmer and Lemeshow goodness of fit test for the regression model is not significant ($\chi^2 (6) = 4.620$; $p = 0.593$). The results of this test indicate that the model fit is acceptable, as the model does not deviate substantially from the observed data. The Hosmer and Lemeshow test also indicates that the model fit improves as a result of the inclusion of all of the significant independent variables (Field, 2009). The analysis of residuals indicates that the individual cases also fit well with the model. All but two of the 330 cases included in the regression analysis have standardized residuals that fall between ± 2.58 . Of the 328 cases, 314 cases have standardized residuals that lie between ± 1.96 . All values of both DF Beta ($M < 0.001$) and Cook's Distance ($M = 0.031$) are well below 1, showing that there are no individual outliers that exert great influence over the model (Field, 2009). Similarly, all Leverage values fall within the threshold of three times the size of the average Leverage value of 0.038 in the current data. In sum, residual analysis indicates there to be no particular cases that exert an overt effect on the model.

Collinearity statistics

In testing for multicollinearity, none was identified. The VIF values ranged between 1.000 and 1.003, with all values being below 10. The Tolerance values ranged between 0.997 and 1.000, and no values approached 0.1. Both the VIF and Tolerance values indicate that the variables identified as significant are not too highly correlated with each other. These scores are important, as they indicate that each of the variables that remained significant when tested simultaneously were not too strongly correlated with each other.

Confidence intervals

None of the variables that remained significant when examined simultaneously cross the confidence interval of 1, which predicts that their associations with PT may be stable in greater populations.

Discussion

Prevalence of PT

Several international studies have reported on PT prevalence in child and family psychotherapy, but there has been inadequate research conducted in the South African context. The international studies report rates of PT that vary between 30 and 75% (Aubuchon-Endsley & Callahan, 2009; Kazdin, Holland & Crowley, 1997; Reis & Brown, 1999; Reitzel et al, 2006). The rate of PT in the current study was 27.1%, which falls just beneath the range reported in previous studies. Although the percentage of premature terminators was slightly less than has been reported in international studies, this should not detract from the fact that PT is a significant problem at the CGC, as just under a third of the child and family clients end therapy prematurely. Given that such a large amount of child and family clients have discontinued therapy contrary to student psychologists' recommendations, an investigation of the reasons for this may assist with client retention in future.

Administrative Factors

Both the time spent on the waiting list and the nature of the referral source did not predict PT. In relation to the waitlist variable, such a finding is consistent with Reitzel et al. (2006), who noted that the time between initial contact and intake interview did not affect PT. Rodolfa, Rapaport and Lee's (1985) observation that a distinction between dropout and PT needs to be made may elucidate this finding. It is possible that certain individuals who are placed on a waiting list for an extended period of time may dropout prior to the initial intake interview, as opposed to dropping out because of this factor after a few therapy sessions have passed.

Despite research indicating that a school referral may result in families feeling coerced into therapy, the results of the current study indicate no relationship between this variable and PT (Greenspan & Kulish; 1985; Reis & Brown, 1999). However, the results from the CGC are in line with Armbruster and Fallon (1994), who state there to be no relationship between referral source and PT. A potential reason for this finding is that parents may have interpreted school referrals as positive, rather than coercive. In addition to

this, Greenspan and Kulish's (1985) study made use of a homogenous sample at a private clinic, whereas Armbruster and Fallon's (2004) sample was heterogeneous and obtained from a public-service clinic, and therefore may have been more similar to the more diverse sample obtained from the CGC. Those in a higher SES bracket may also be more sensitive to a sense of coercion than those in a more diverse low SES bracket (Armbruster & Fallon, 1994).

Family Factors

As was reported in previous international studies, certain family factors were identified as significant predictors of PT in child and family psychotherapy (Armbruster & Fallon, 1994; Kazdin et al., 1997, Kazdin & Mazurik, 1994; Reis & Brown, 1999). In agreement with international research, children from families with higher SES scores were found to be less likely to terminate therapy prematurely. Given the greater availability of financial resources, the presence of a high school education and current employment status which characterize those in the higher SES bracket, such individuals may be less likely to terminate therapy prematurely, as they may experience fewer additional life stressors that may create obstacles to continuation of therapy.

In keeping with previous international studies, family constitution was also found to be associated with an increase in PT. The findings at the CGC are in line with the trend identified by Cole and Magnussen (1967) and Kazdin et al. (1997), who indicated that children coming from families with high parental stress levels resulting from single parent homes are more likely to terminate therapy prematurely. Although the single parent home variable was no longer found to be significant when it was run simultaneously with the other significant variables, the data nevertheless displayed a trend toward children coming from single parent homes being at an increased risk for the PT of psychotherapy. Single parents may struggle to continue attending and bringing their children to therapy due to a lack of shared parental responsibilities and less practical support. The single parent variable may also be a proxy for one of the other predictor variables, and this bears further investigation.

Caregiver status, number of siblings and number of people living in the home were not found to be significantly associated with PT. When considering the descriptive data for

these variables, it is apparent that in most cases children are cared for by their biological parents, have one to two siblings and form part of a household of between three to five members.

In relation to parental psychopathology, maternal diagnosis was found to be significantly associated with PT in child and family psychotherapy. In various international studies a maternal diagnosis was found to be associated with a greater likelihood of PT, however, the current study found the opposite trend (Armbruster & Fallon, 1994; Kazdin et al., 1997; Kazdin and Mazurick, 1994). The CGC data indicated that mothers with a psychiatric diagnosis tend to be less likely to end therapy prematurely. The reason for this finding may be linked to the way the CGC operates. As was mentioned in the discussion of the CGC setting, therapeutic interventions at the CGC often include the whole family, and if children's mothers were concurrently receiving therapy they may be less likely to end the process prematurely for their children, as they may see value in the therapeutic process. If children's mothers were not concurrently receiving treatment, yet had at some point been in contact with mental health services, they may too be more invested in seeking treatment for their children.

The finding that certain family variables predict the outcome of PT is important, as children, especially those of a young age, are dependent on their parents to attend therapy. Improving retention of child and family psychotherapy cases clearly requires that family stressors be addressed early on in the therapeutic contract.

Diagnostic Factors

A number of child diagnoses were tested for potential relationships with PT. Of these, depression, anxiety disorders, adjustment disorders and ADHD were not found to relate to PT, whereas conduct disorder / oppositional defiant disorder were found to significantly predict PT. Although previous studies have indicated that ADHD may be associated with PT, the current study identified no such relationship (Johnson et al., 2008). In keeping with research by Johnson et al. (2008) and Kazdin et al. (1997), the child's diagnosis of conduct disorder / oppositional defiant disorder predicted an increase in the likelihood of PT. Given the noncompliant nature of these disorders, parents may struggle to

gain co-operation from their children to attend psychotherapy, and Johnson et al. (2008) also point out that the onset of conduct disorder is associated with an increase in parental stress, which may also contribute to the PT of child and family psychotherapy.

Limitations and Recommendations for Future Research

The exclusive use of quantitative methodology results in a lack of the rich and in-depth descriptions and nuances that qualitative data provide (Babbie & Mouton, 2006). Prospective research designs often allow for the use of both qualitative and quantitative methodology, wherein statistical data and family interviews are combined, in order to provide a more layered account of PT, whereas retrospective studies often restrict researchers to quantitative methods. Given that the current study was retrospective, it was not possible to concurrently interview families to further establish what factors may influence PT. There are various variables that may have been more wholly understood, had a qualitative analysis simultaneously been conducted, such as a more thorough investigation of SES and single parent families as predictors of PT in child and family psychotherapy.

In relation to the sample, the selection process was not random, and it is thus difficult to generalize the research results beyond the CGC context. There is a need for the replication of the current study in different clinical settings in order to build a more comprehensive understanding of PT in South Africa.

Future research could attempt to gain a more in-depth understanding of the reasons that parents attribute to the PT phenomenon. Qualitative interviews could be conducted with parents who are, with or without their children, currently receiving treatment at the CGC in order to better describe the processes that result in PT.

Further areas of exploration could also include a quantitative exploration of the waitlist variable, by distinguishing between dropout and PT, and noting whether or not an extended wait increases the rate of dropout prior to the commencement of therapy at the CGC.

Summary and Conclusion

This research has investigated the effect of multiple factors on premature termination in child and family psychotherapy at a South African public service clinic. The findings from this study have aided in identifying of factors that predict whether or not children are more or less likely to terminate therapy prematurely in this setting.

These findings might make it possible for researchers and clinical practitioners to detect children who are likely PT candidates before therapy is prematurely terminated. If likely PT candidates can be identified early, there is the possibility that various measures can be out in place to prevent this. If PT is reduced, research findings in the clinical setting might become more valid, clients could continue receiving treatment that is considered necessary by therapists, and fewer resources, such as time, would be wasted.

Although the study may not initiate the immediate development of an early warning system, it opens the door for future South African research on PT in child and family therapy.

References

- Aubuchon-Endsley, N. L., & Callahan, J. L. (2009). The hour of departure: Predicting attrition in the training clinic from role expectancies. *Training and Education of Professional Psychology, 3*, 120-126.
- Armbruster, P., & Fallon, T. (1994). Clinical, sociodemographic, and systems risk factors for attrition in a children's mental health clinic. *American Journal of Orthopedic Psychiatry, 64*, 557-585.
- Armbruster, P., & Kazdin, A. E. (1994). Attrition in child psychotherapy. In T. H. Ollendick & R. J. Prinz (Eds.), *Advances in clinical psychology* (Vol. 16, pp. 81-108). New York: Plenum.
- Babbie, E., & Mouton, J. (2006). *The practice of social research*. Cape Town: Oxford University Press.
- Baekeland, F., & Lundwall, L. (1975). Dropping out of treatment: A critical review. *Psychological Bulletin, 82*, 738-783.
- Campbell, V. A., Baker, D. B., & Bratton, S. (2000). Why do children drop-out from play therapy? *Clinical Child Psychology and Psychiatry, 5*, 133-138
- Cartwright, R., Lloyd, S., & Wicklund, J. (1980). Identifying early dropouts from psychotherapy. *Psychotherapy: Theory, Research and Practice, 17*, 263-267.
- Cole, J. K., & Magnussen, M. G. (1967). Family situation factors related to remainers and terminators of treatment. *Psychotherapy: Theory, Research and Practice, 4*, 107-109.

- Field, A. (2009). *Discovering Statistics Using SPSS*. London: Sage.
- Greenspan, M., & Kulish, N. M. (1985). Factors in premature termination in long-term psychotherapy. *Psychotherapy, 22*, 75-86.
- Howell, D. C. *Fundamental statistics for the behavioral sciences*. USA: Thomas Wadsworth.
- Hunsley, J., Aubry, T. D., Verstervelt, C. M., & Vito, D. (1999). Comparing therapist and client perspectives on reasons for psychotherapy termination. *Psychotherapy, 36*, 380-391.
- Johnson, E., Mellor, D., & Brann, P. (2008). Differences in dropout between diagnoses in child and adolescent mental health services. *Clinical Child Psychology and Psychiatry, 13*, 515-530.
- Kazdin, A. E., Holland, L., & Cowley, M. (1997). Family experiences of barriers to treatment and premature termination from child therapy. *Journal of Consulting and Clinical Psychology, 65*, 453-463.
- Kazdin, A. E., & Mazurick, J. L. (1994). Dropping out of child psychotherapy: Distinguishing early and late dropouts over the course of treatment. *Journal of Consulting and Clinical Psychology, 62*, 1069-1074.
- Melville, A. (2000). *The UCT Child Guidance Clinic: changing client profile and policies in the 1990's*. University of Cape Town: Unpublished text.
- Pekarik, G., & Stephenson, L. A. (1988). Adult and child client differences in therapy dropout research. *Journal of Clinical Child and Adolescent Psychology, 17*, 316-321.

- Reis, B. F., & Brown, G. L. (1999). Reducing psychotherapy dropouts: Maximizing perspective convergence in the psychotherapy dyad. *Psychotherapy, 36*, 123-136.
- Reitzel, L. R., Stellrecht, N. E., Gordon, K. H., Lima, E. N., Wingate, L. R., Brown, J. S., et al. (2006). Does time between application and case assignment predict therapy attendance or premature termination in outpatients? *Psychological Services, 3*, 51-60.
- Rodolfa, E. R., Rapaport, R., & Lee, V. E. (1985). Variables related to premature termination in a university counseling service: A reply to Saltzman's (1984) comment. *Journal of Counseling Psychology, 32*, 469-471.
- Sherman, M. L., Barnum, D. D., Nyberg, E., & Buhman-Wiggs, A. (2008). Predictors of preintake attrition in a rural community mental health center. *Psychological Services, 5*, 332-340.
- Wierzbicki, M., & Pekarik, G. (1993). A meta-analysis of psychotherapy dropout. *Professional Psychology, 24*, 190-195.

APPENDIX A

CODING SCHEDULE

**FOR ALL BINARY DATA: 0 = NO, 1 = YES
? FOR MISSING DATA/OR NOT REPORTED
*NON-BINARY DATA**

FILE NO.	ON TAB ATTACHED TO YELLOW FOLDER
MMR	YELLOW POST-IT
BIF	ORANGE POST-IT
SLD	GREEN POST-IT
PT (PREMATURE TERMINATION)	PINK POST-IT
*YEAR SEEN AT CLINIC	ON TAB ATTACHED TO YELLOW FOLDER
GENDER	IDENTIFYING INFO SHEET
MALE = 0	
FEMALE = 1	
*BIRTH MONTH	IDENTIFYING INFO SHEET
e.g. 01, 02, 12	
*CHILD'S AGE	IDENTIFYING INFO SHEET
*MOTHER'S AGE	CLINICAL HISTORY
*MO AGE AT CHILD'S BIRTH	MATERNAL AGE – CHILD AGE CLINICAL HISTORY (DEVELOPMENTAL HX)
SCHOOL-REFERRED-	REFERRAL CARD OR FRONT COVER ('C'=SCHL REF)
DATE OF FIRST CONTACT REFERRAL CARD	DATE OF FIRST PHONE CALL ON
23/11/1987	RECORD AS dd/mm/yyyy eg:
DATE OF INTAKE-	DATE OF FIRST INTAKE SESSION ON CONTACT SHEET OR FEE SUMMARY
	RECORD AS dd/mm/yyyy eg:
	23/11/1987
*DAYS ON WAITING LIST	WILL BE CALCULATED AT LATER STAGE
	CALCULATE FROM DATE OF FIRST PHONE CALL ON REFERRAL CARD AND DATE OF FIRST INTAKE SESSION ON CONTACT SHEET OR FEE SUMMARY
ADHD / ADD	FRONT OF YELLOW FOLDER,
AXIS I	

DEPRESSION	FRONT OF YELLOW FOLDER,
AXIS I	
CONDUCT DISORDER OR	
OPPOSITIONAL DEFIANT	
DISORDER	FRONT OF YELLOW FOLDER,
AXIS I	
ANXIETY DISORDER	FRONT OF YELLOW FOLDER,
AXIS I	
ADJUSTMENT DISORDER	FRONT OF YELLOW FOLDER,
AXIS I	
INCOME R0-R2000	FEE STRUCTURE SHEET
INCOME R2000-R4000	FEE STRUCTURE SHEET
INCOME R4000-6000	FEE STRUCTURE SHEET
INCOME R6000-R8000	FEE STRUCTURE SHEET
INCOME R8000+	FEE STRUCTURE SHEET
SUBSTANCE USE IN PREGNANCY	CLINICAL HISTORY (DEVELOPMENTAL HX)
PERINATAL ASPHYXIA	- CLINICAL HISTORY (DEVELOPMENTAL HX)
<i>(Deprivation of oxygen long enough to cause harm = poor colour, cord around neck, poor responsiveness, poor muscle tone, respiratory difficulties)</i>	
LOW BIRTHWEIGHT (LESS THAN 2.5KG) -	CLINICAL HISTORY DEVELOPMENTAL HX)
PREMATURE BIRTH	CLINICAL HISTORY (DEVELOPMENTAL HX) Less than 37 weeks/or 5 weeks early
MOTHER COMPLETED HIGH SCHOOL	CLINICAL HISTORY (PARENTS)
FATHER COMPLETED HIGH SCHOOL	CLINICAL HISTORY (PARENTS)
BIRTH ORDER	1, 2, 3, 4, 5 ETC. CLINICAL HISTORY / GENOGRAM
ATTENDED PRE-SCHOOL	CLINICAL HISTORY (DEVELOPMENTAL HISTORY)
SINGLE PARENT AT BIRTH	CLINICAL HISTORY (DEVELOPMENTAL HISTORY)
SINGLE PARENT HOUSEHOLD CURRENT	CLINICAL HISTORY (PARENTS/FAMILY FUNCTIONING)
MULTIPLE FATHERED HOME	CLINICAL HISTORY (PARENTS/FAMILY FUNCTIONING) & GENOGRAM
DIFFERENT HOME/SCHOOL LANGUAGE	CLINICAL HISTORY
MOTHER UNEMPLOYED	CLINICAL HISTORY

FATHER UNEMPLOYED	(PARENTS/FAMILY FUNCTIONING) CLINICAL HISTORY (PARENTS/FAMILY FUNCTIONING)
BOTH PARENTS UNEMPLOYED	PUT <u>NA</u> IF FATHER IS ABSENT
CHILD TRAUMA EXPOSURE	CLINICAL HISTORY (TRAUMATIC CIRCUMSTANCES) & ETIOLOGICAL FORMULATION
MOTHER TRAUMA EXPOSURE	CLINICAL HISTORY (TRAUMATIC CIRCUMSTANCES) & ETIOLOGICAL FORMULATION
FATHER TRAUMA EXPOSURE	CLINICAL HISTORY (TRAUMATIC CIRCUMSTANCES) & ETIOLOGICAL FORMULATION
MATERNAL DIAGNOSIS	CLINICAL HISTORY (PARENTS / FAMILY PSYCHIATRIC HISTORY) & ETIOLOGICAL FORMULATION (IF YES, NOTE TYPE OF DIAGNOSIS IN NEXT COLUMN)
PATERNAL DIAGNOSIS	CLINICAL HISTORY (PARENTS / FAMILY PSYCHIATRIC HISTORY) & ETIOLOGICAL FORMULATION (IF YES, NOTE TYPE OF DIAGNOSIS IN NEXT COLUMN)
MATERNAL DRUG/ALCOHOL ABUSE CURRENT	CLINICAL HISTORY (PARENTS / FAMILY FUNCTIONING) & ETIOLOGICAL FORMULATION
PATERNAL DRUG/ALCOHOL ABUSE CURRENT	CLINICAL HISTORY (PARENTS / FAMILY FUNCTIONING & ETIOLOGICAL FORMULATION
CAREGIVER IS NON-BIOLOGICAL PARENT	CLINICAL HISTORY (PARENTS / FAMILY FUNCTIONING) & ETIOLOGICAL FORMULATION
*NUMBER OF PEOPLE IN HOUSEHOLD	CLINICAL HISTORY (FAMILY FUNCTIONING/ COMPOSITION OF HOUSEHOLD)

***NUMBER OF BIOLOGICAL SIBLINGS
LIVING AT HOME**

***TOTAL NUMBER OF RISK FACTORS**

CLINICAL HISTORY (FAMILY
FUNCTIONING/ COMPOSITION OF
HOUSEHOLD) & GENOGRAM
TO BE CALCULATED AT THE END
OF DATA COLLECTION

PLAGIARISM

This means that you present substantial portions or elements of another's work, ideas or data as your own, even if the original author is cited occasionally.

PLAGIARISM DECLARATION

1. I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.

2. I have used the APA convention for citation and referencing. Each significant contribution to, and quotation in, this assignment from the work(s) of other people has been attributed, and has been cited and referenced.

3. This assignment is my own work.

4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

Signature _____
