



***Research on risk factors
associated with victimisation***

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Collaborator:

- ***Baltimore City Department of Social Services, Child Protective Services***

Presentation Objectives:

- *To provide brief review of child maltreatment recurrence literature.*
- *To provide brief overview of recurrence related studies in Baltimore.*
- *To consider implications of findings for practice.*

Why is this important?

- ***There is a public perception that children reported to agencies for child maltreatment are subjected to repeated maltreatment, injury, and death.***
- ***Very little research has examined what happens to families once a child maltreatment report is confirmed.***

Literature review – recurrence rates

- *Vary from 85% for families followed up to 10 years to a low of less than 1% for “low risk” cases.*
- *Rates dependent on definitions of index incident, definitions of recurrence (reports, substantiated, by child or family, by specific type or any type of maltreatment), and by length of follow-up.*
- *With the exception of “low risk” cases, many agencies are serving the same families over and over again.*

Literature review - Patterns

- *Fewer studies have looked at patterns.*
- *Available studies suggest a leveling off period after some period of time when the likelihood of recurrence is highest.*
- *Most multiple confirmed recurrences result in placement however some families may have as many as 25 unconfirmed reports within five years.*

Literature review - correlates

- *Categorized (example) correlates in eight domains:*
 - *Child vulnerability*
 - *Childhood history of primary caregivers*
 - *Caregiver personal resources*
 - *Parenting attitudes and skill*
 - *Stress and social support*
 - *Family structure and functioning*
 - *Characteristics of maltreatment*
 - *Intervention characteristics*

Child vulnerability (examples)

- *Age and ability of child*
- *Developmental problems*
- *Socio-emotional problems*
- *Health problems*

(NOTE: Except for age, these factors are all enduring factors, rather than situational. Thus, they can present ongoing stress and conflict, particularly if children have not received treatment.)

Adult Caregiver Childhood History

- *Caregiver abused as a child*
- *Caregiver neglected as a child*
- *Perpetrator neglected as a child*
- *Amount of time maternal caregiver lived with biological father during 1st six years of life (less time increased risk)*
- *Quality of maternal caregiver's relationship with her own childhood caregivers*
- *Repetition of long term life style.*

(NOTE: the relationship these variables have with recurrence is an indirect one.)

Caregiver personal resources

- *Low self esteem*
- *Feelings of apathy and hopelessness*
- *Emotional stability*
- *Ability to control impulses*
- *Intellectual/reasoning capacity*
- *Drug or alcohol abuse problem*
- *History of depression*
- *Criminal history*
- *Personality factors such as problem solving ability, whether outgoing, and reactions to emotional stimuli*

Parenting attitude and skills

- *Maternal expectations of child*
- *No desire to raise children differently than the way mother was raised.*
- *View of personal qualities important for children*
- *Type of parent satisfaction*
- *Problems of parenting factor score*
- *Domineering parenting type*
- *Parent-child interaction factor score*
- *Maternal parental skill*

Family structure and functioning

- *Young maternal age*
- *Single parenting*
- *Large numbers of closely spaced children*
- *Larger family size or number of children in home or number of adults in home*
- *Biological father in home*

Stress and social support

- *Stress due to pregnancy*
- *Stress due to break up of family*
- *Income related stressors*
- *Stress due to environmental problems such as housing problems*
- *Neighborhood problems (e.g. crowding)*
- *Number of stressful events*
- *Conflict in relationships*
- *Socially isolated/withdrawn*
- *Frequency of seeing confidante*
- *Frequency of participating in church or social activities*

Prior & Index Maltreatment

- *Prior reports of maltreatment*
- *Number of children involved in incident*
- *Amount of time child spends with abusing adult*
- *Number of maltreatment types*
- *Type of maltreatment (neglect increases)*
- *Severity of harm (index)*
- *Protection of child by mother*

Intervention factors

- *Prior CPS case or foster care case*
- *Prior inpatient treatment*
- *Length of CPS (longer decreases)*
- *Level of training of workers*
- *Number of in-person visits (more decreased risk)*
- *Number of concrete services provided (positive relationship with recurrences)*
- *Adult client received group, education or skills development, support services – decrease*
- *Child receiving medical services – increase*
- *Motivation of caregiver/perpetrator, cooperation with agency*
- *Negative attitude with agency*
- *Family ability/willingness to use resources*

Baltimore study objectives

- *To describe the pattern of recurrences over time*
- *To identify correlates of recurrence during CPS intervention*
- *To describe the pattern of multiple recurrences*

Baltimore research methods

- *Non-concurrent prospective design following 1167 CPS families over 5 years.*
- *Archival data collection – coding manual, 2 coders, discrepancies resolved by project director*
- *Survival Analysis – Life table, Kaplan Meier*
- *Logistic regression*
- *Cox proportional regression model*
- *Comparison of means*

Definitions:

- ***SUBSTANTIATED CASE*** - determined as “*indicated*” by the CPS worker.
- ***INDEX INCIDENT*** - A substantiated report of physical abuse and/or neglect in 1988 that also met the research definitions.
- ***RECURRENCE INCIDENT*** - Any substantiated report of physical abuse, neglect, and/or sexual abuse within the family following the index incident.

Research definition – physical abuse

- *Excessive and inappropriate use of physical force by a parent, parent substitute, or temporary caregiver rated at a minimum severity level of 1*

Severity Levels – physical abuse

- 1. No injury-unacceptable physical discipline or aggression (i.e., hitting with a fist, kicking, choking, holder under water, etc) that endangered well-being but did not result in physical injury.*
- 2. Mild injuries-welts, cuts, abrasions, bruises*
- 3. Moderate injuries-mild concussions, broken teeth, cuts/gashes requiring sutures, second degree burns, fractures of small bones.*
- 4. Serious injuries-3rd degree burns, fractures of bones other than fingers or toes, severe concussions, internal injuries.*

Adapted from Magura and Moses (1986)

Research definition – child neglect

- *Fourteen types of omissions in care by the child's primary caregiver that either (1) placed a child at risk for obvious immediate or near immediate negative consequences or (2) actually resulted in negative consequences.*
- *At least 1 type of neglect for at least 1 child needed to be confirmed in the case record in order for neglect to be considered present.*

Subtypes of neglect

- 1. Physical health care*
- 2. Mental health care*
- 3. Household sanitary conditions*
- 4. Household safety*
- 5. Inadequate supervision*
- 6. Inappropriate substitute caregiver*
- 7. Personal hygiene*

Subtypes of neglect

8. *Nutrition/diet*
9. *Diagnosed failure to thrive*
10. *Instability of living arrangements*
11. *Abandonment*
12. *Expulsion*
13. *Shuttling*
14. *Educational neglect*

Sampling Methodology

- *Stratification of 2902 confirmed reports in 1988 by 12 monthly groups*
- *Random 60% proportional selection from each monthly strata*
- *Screening of each case against inclusion criteria and exclusion criteria*
- *Final cohort of 1167 families (pattern of recurrences)*

Inclusion Criteria

- *Substantiated index report was consistent with study definitions of physical abuse or neglect*
- *Family resided in Baltimore at time of index report*
- *Biological mother was primary caregiver*

Exclusion criteria

- *All children in family placed within 90 days of index report and remained in care for 5 years*
- *All children 18 or over within 90 days of the index report*
- *Family was known to move out of Maryland for full five years of follow-up*

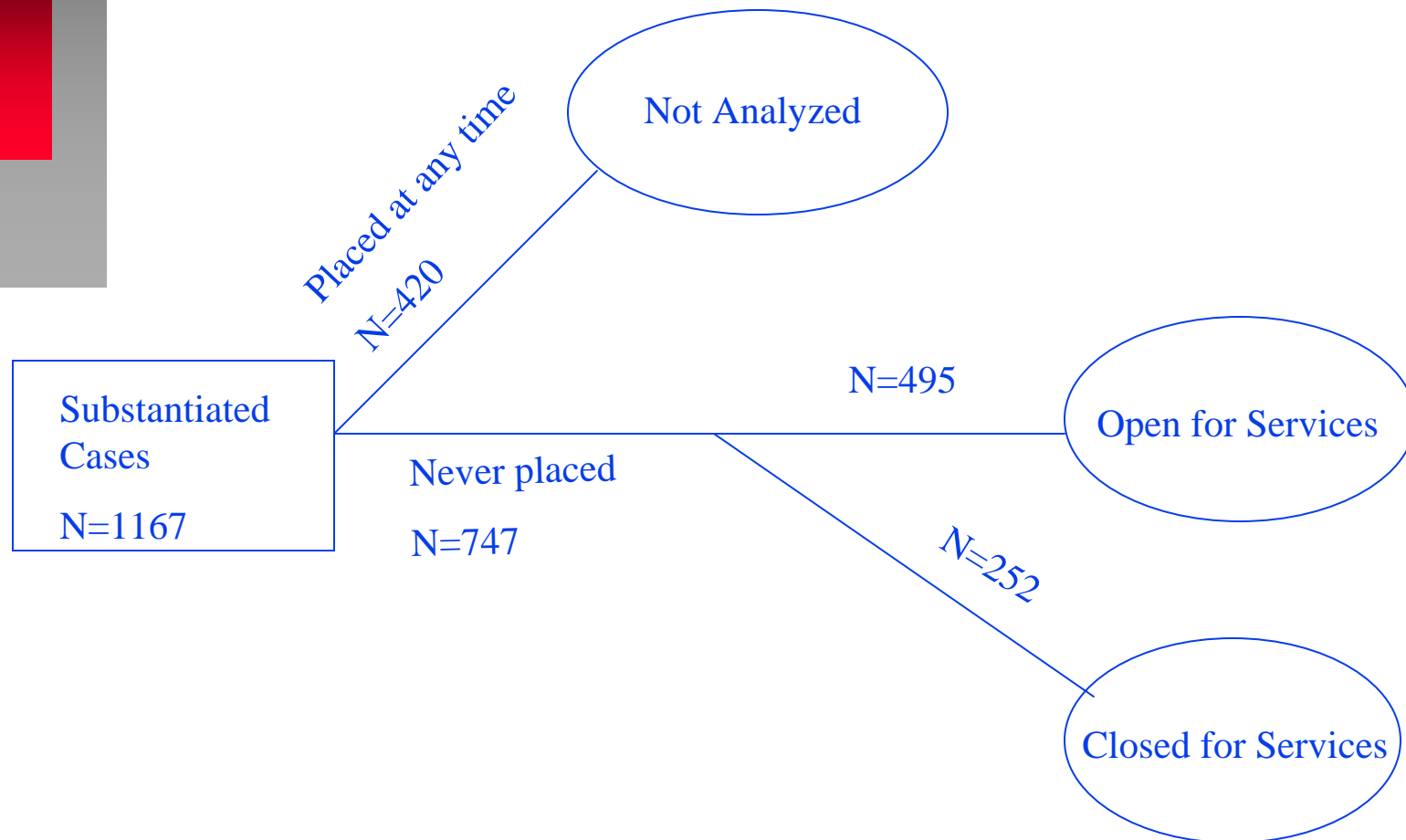
Sample Characteristics - n=1167

- *Urban population*
- *79% of mothers were African American*
- *Mothers were an average of 28 years at the index incident*
- *84% were on AFDC at the time of the index and/or within the year prior to the incident.*

Sampling to examine differences between opened and closed cases

- ***Cohort of 1167 families with at least one substantiated report***
- ***Removal of cases that involved any placements - final sample of 747***
 - ***495 cases opened for services***
 - ***252 cases not offered continuing services***

Figure 1. Sample selection to compare CPS substantiated cases that were opened for services versus closed at intake without continuing services.



Sampling for examining correlates

- *Random sample from cohort (of 1167), over sample for white and teen mothers – 654 families*
- *Excluded families who were closed in Intake or who had experienced multiple types of maltreatment at the index incident – 446 families*

Sampling – recurrence group

- *497 families (from the 1167 families) who experienced at least one recurrence were used to examine questions regarding frequency of recurrences*

Recurrence Characteristics - cohort of 1167

<i>Recurrences in 5 years</i>	<i>None 57.4%</i>	<i>At least 1 42.5%</i>
<i>While CPS open</i>	<i>73.2%</i>	<i>26.8%</i>
<i>After CPS closed</i>	<i>84.5%</i>	<i>15.5%</i>

Types of recurrences

- *Most recurrences were classified as neglect (64%)*
- *Next prevalent type was physical abuse (27.4%)*
- *Sexual abuse recurrences were less frequent (8.7%)*

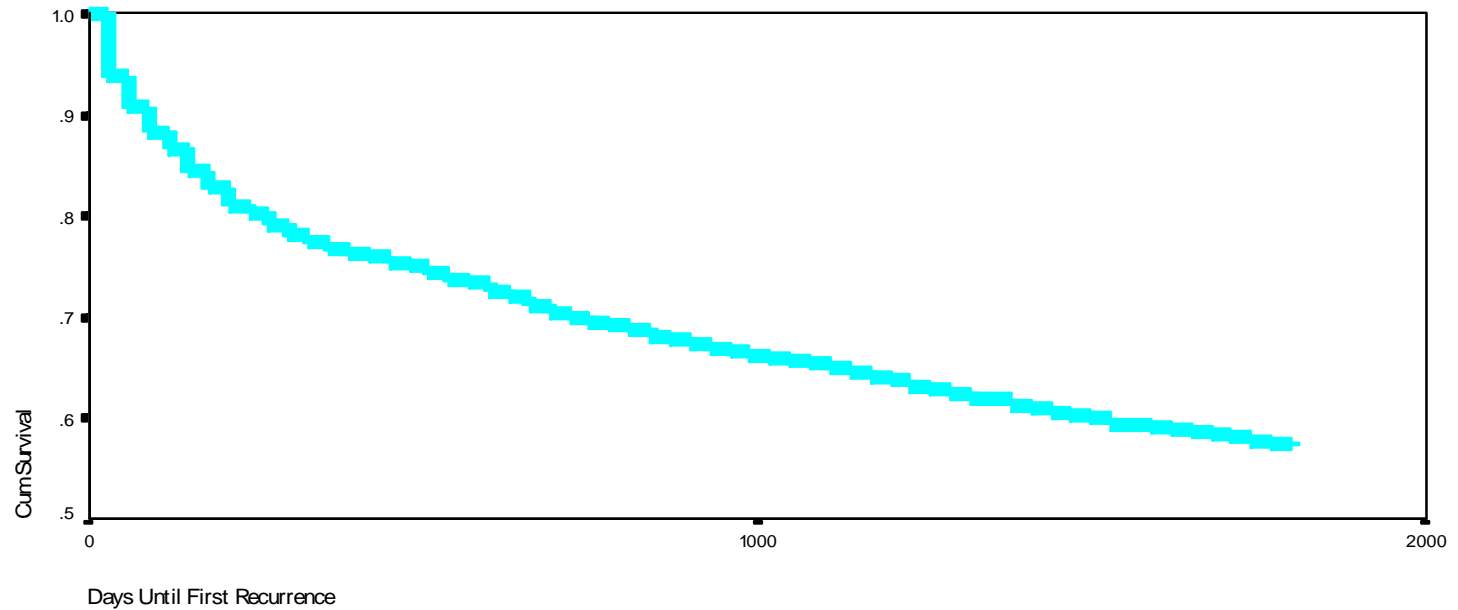
Pattern of Recurrences - Cohort

- *Risk declined with time for five years & while CPS was active*
- *Risk remained constant for two years following CPS*
- *Risk varied for different groups:*
 - *Closed versus Opened at Intake*
 - *Abuse versus Neglect*

Survival -without Recurrence over five years - n =1167

Figure 8. Survival (Without Recurrence)

Over Five Years



Days Until First Recurrence

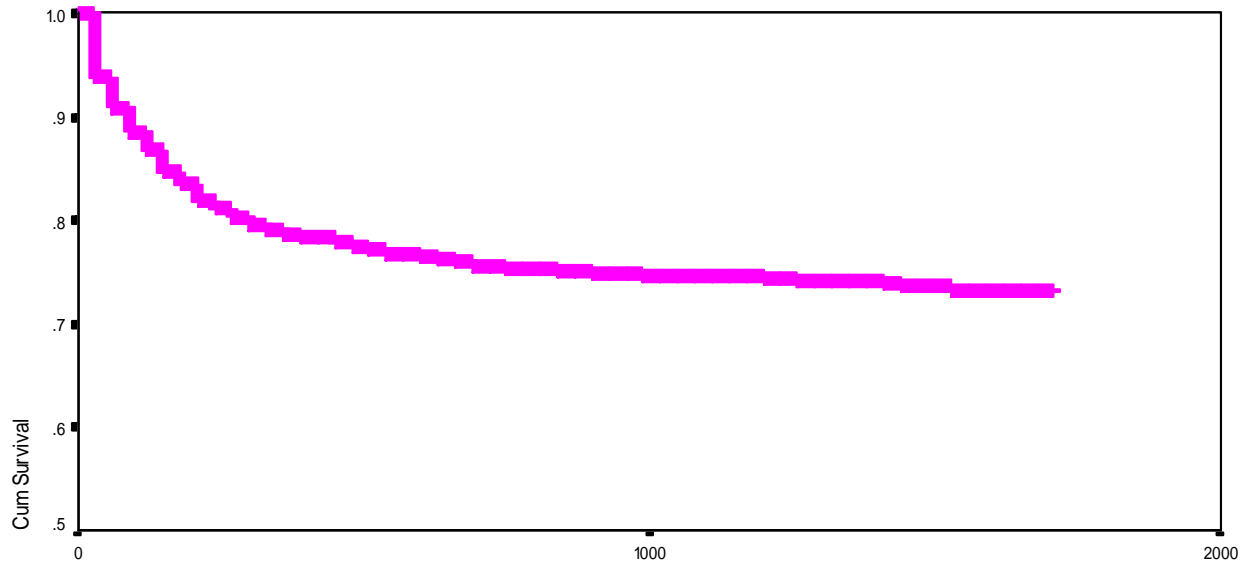
DePanfilis, D. (1995). Epidemiology of Child Maltreatment Recurrences.

Doctoral Dissertation, University of Maryland at Baltimore.

Survival (without recurrence) while case active in CPS

Figure 9. Survival (Without Recurrence)

While Active in CPS



Days Until First Recurrence

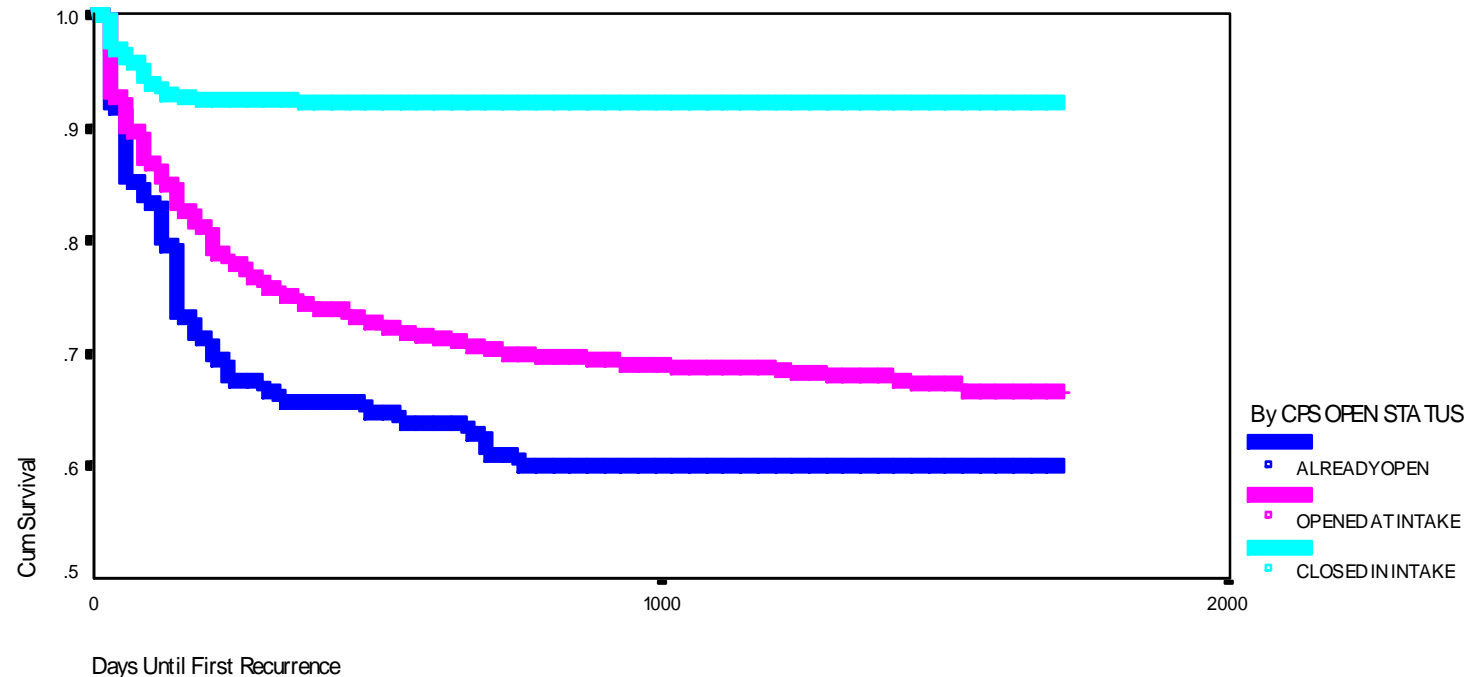
DePanfilis, D. (1995). Epidemiology of Child Maltreatment Recurrences.

Doctoral Dissertation. University of Maryland at Baltimore.

Comparison of survival without recurrences between cases already opened, cases opened at intake, and cases closed in intake. - n=1167

Figure 10. Survival (Without Recurrence)

While Active in CPS



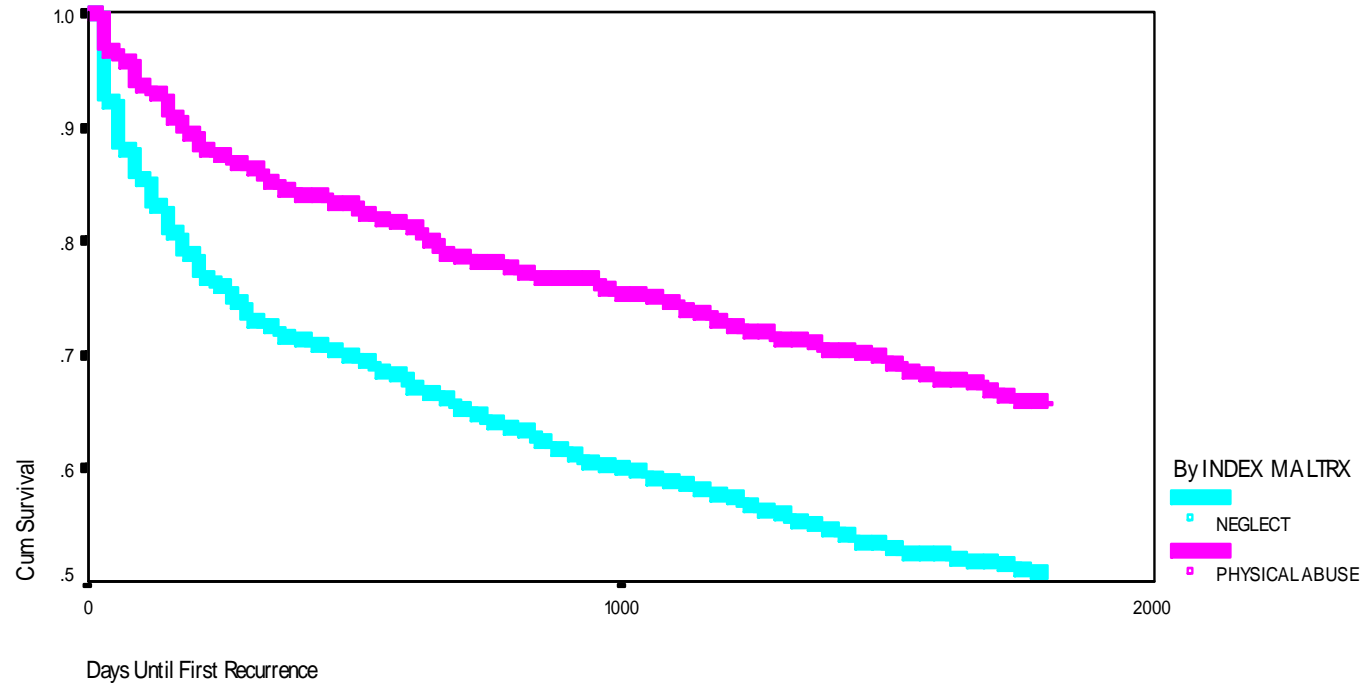
DePanfilis, D. (1995). Epidemiology of Child Maltreatment Recurrences

Doctoral Dissertation, University of Maryland at Baltimore.

Comparison of survival over 5 years between neglect and physical abuse cases - n = 1167

Figure 17. Survival (Without Recurrence)

Over Five Years



Days Until First Recurrence

DePanfilis, D. (1995). Epidemiology of Child Maltreatment Recurrences.

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Comparison between Abuse Only and Neglect Only

■ *Substantiated for physical abuse ONLY 408/35%*

- *34.3% recurrence in 5 years*
- *Hazard rate starting at .0011*
- *16% recurrence in Year 1*

■ *Substantiated for neglect ONLY 689/59%*

- *49.2% recurrence in 5 years*
- *Hazard rate starting at .0027*
- *29% recurrence in Year 1*

What factors are related to opening the case? Examined the following:

- *Race*
- *Age of children*
- *Age of mother at index*
- *Number of children*
- *Maternal drug/alcohol problem*
- *Type of maltreatment*
- *Prior substantiated reports*

All but race were significantly related at bivariate level

Predicting case opening status

Table 1. Logistic Regression Model for Case Opening Status (n=700)

	Chi-Square	df	p
Model Chi-Square	34.931	7	.0000
Improvement	34.931	7	.0000

Classification for Open Status

Observed	Closed in Intake	Opened at Intake	Percent Correct
Closed in Intake	32	203	13.62%
Opened at Intake	26	439	94.41%
		Overall	67.29%

- 2 Log Likelihood 858.481, Goodness of Fit 703.072

Logistic regression (continued)

Variables in the Equation

Variable	B	Stan Error	Wald	Sig	R	Exp (B)
African American 0 = no 1 = yes	.0818	.1012	.6533	.4189	.0000	1.0853
Priors Dichotomous 0 = no prior 1 = prior	-.2451	.1222	4.0265	.0448	-.0476	.7826
Age at Index	-.0251	.0141	3.1576	.0756	-.0360	.9752
Alcohol or Drug problem 0 = no, 1 = yes	-.1926	.1108	3.0226	.0821	-.0338	.8248
Index type 0 = abuse 1 = neglect	-.2213	.0883	6.2795	.0122	-.0692	.8015
Kids under 6 0 = no 1 = yes	-.0822	.1026	.6418	.4230	.0000	.9211
3 or more kids 0 = no, 1 = yes	-.1513	.0861	3.0856	.0790	-.0349	.8596
Constant	1.6902	.4631	13.3233	.0003		

Are there differences in recurrences between the groups?

Table 2. Kaplan-Meier Survival Analysis

Service Status	Survival Time (mean days)	Standard Error	95% Confidence Interval
Closed in Intake	1748.36	22.90	1703.47 - 1793.25
Opened at Intake	1422.79	31.93	1360.22 - 1485.37

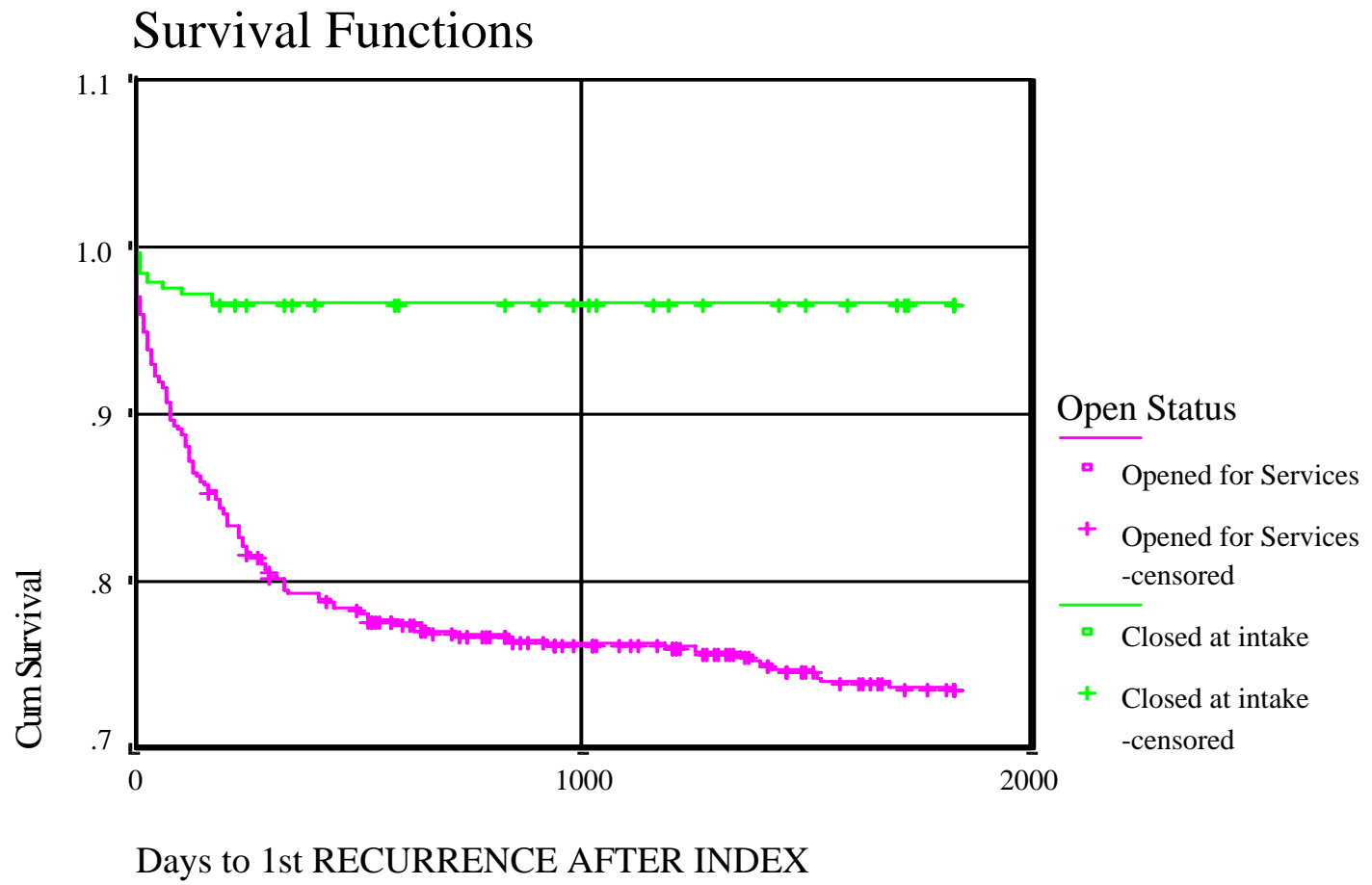
Are there differences in recurrences between the groups?

Table 3. Comparison of Survival Experience (no recurrences) by Service Status

Service Status	Total N (n=747)	Recurrences (Uncensored) (n=138)	No Recurrence (Censored) (n=609)	Percent no Recurrence (Censored)	Mean Score
Closed in Intake	252	11	241	95.63	1748.36
Open for Services	495	127	368	74.34	1422.79

Overall comparison statistic Log Rank = 47.86, D.F.=1, p=. 0000

Comparison of survival experience



Model - Constructs

- *Nature & extent of maltreatment*
- *Vulnerability of children*
- *Personal problems of mother*
- *Family conflict*
- *Family stress*
- *Survival stress*
- *Social support deficits*

Measures – Maltreatment Index

- *# of prior confirmed reports**
- *Severity of index maltreatment**
- *Type of maltreatment abuse versus neglect**

**bivariate relationship with recurrence*

Measures-Child Vulnerability

- *Children under age 6**
- *Child mental health problems**
- *Developmental problems**
- *School problems*
- *Health problems*
- *Mental retardation*
- *Other child problems*

**bivariate relationship with recurrence*

Child Vulnerability Index

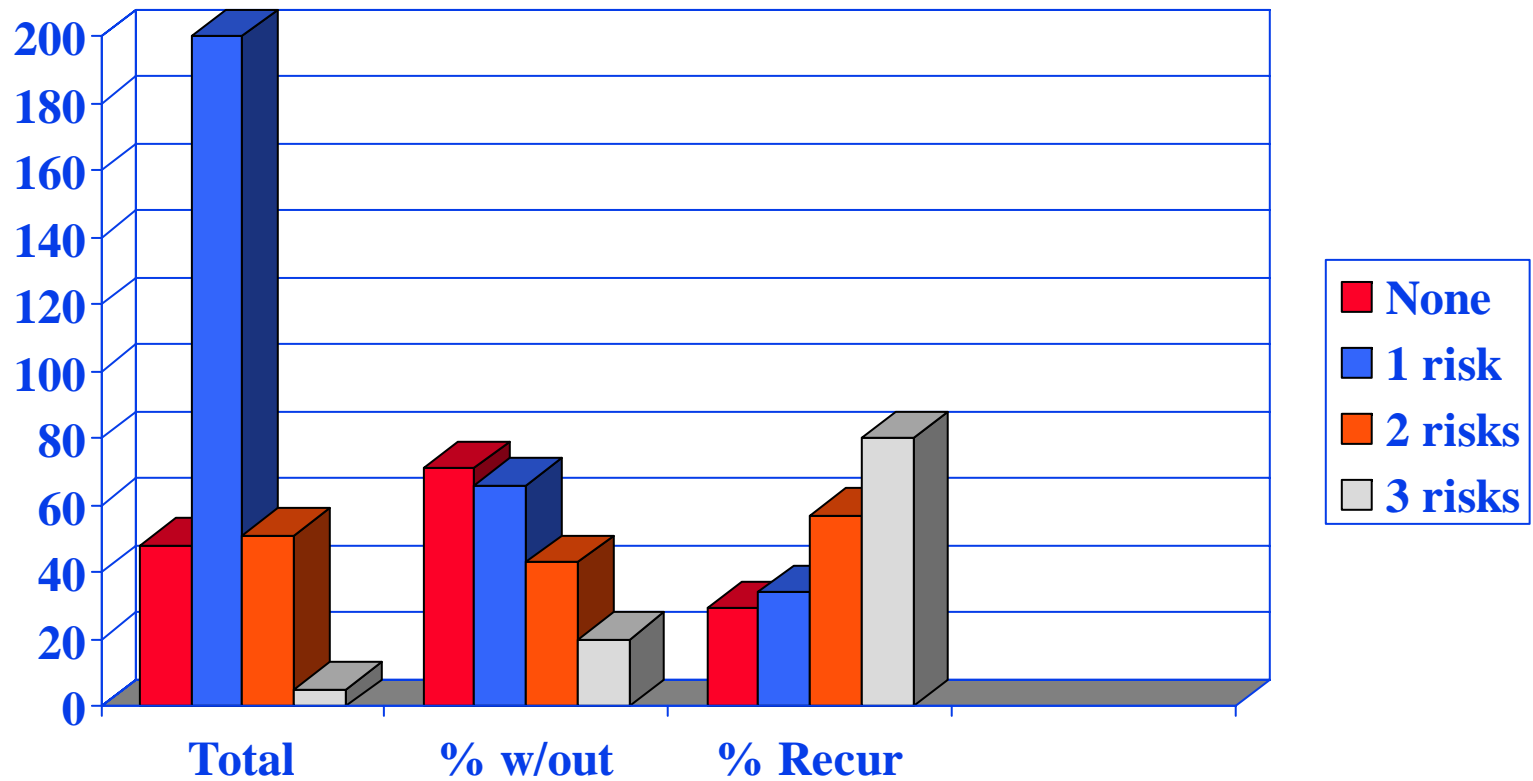
# Deficits	Total N	% No Recurrence	Mean Days
0	90	74.4	1340
1	283	67.8	1254
2	68	45.5	894
3	5	20	505

L.R. 35

df=3

p=.0000

Kaplan Meier - Child Index



L.R.=19.35, p=.0002

Measures-Maternal Personal Problems

- *Drug problem**
- *Alcohol problem**
- *Problem solving deficit**
- *Mental health problem*
- *Mental retardation*
- *Physical health problem*
- *Criminal involvement*

**bivariate relationship with recurrence*

Maternal Problem Index

# Deficits	Total N	% No Recurrence	Mean Days
0	65	73.8	1364
1	252	69.8	1262
2	100	49	980
3	29	62	1183

L.R. 35

df=3

p=.0000

Measures-Family Conflict

- *Partner abuse**
- *Parent/child conflict*
- *Partner conflict*
- *Communication problems*

**bivariate relationship with recurrence*

Measures-Family Stress

- *Number of children**
- *Mother 18 or less at 1st birth**
- *Mother 18 at index**
- *Child bearing years**

**bivariate relationship with recurrence*

Family Stress Index

# Stress Items	Total N	% No Recurrence	Mean Days
1	97	77.32	1383
2	128	71.88	1306
3	140	57.14	1078
4	81	54.32	1068

L.R. 16 df=3 p=.0005

Measures-Survival Stress

- ***Lack basic resources****
- ***Lack basic shelter*, Frequent moves****
- ***Housing in poor repair****
- ***Crowded housing****
- ***Poor health care****
- ***Lack utilities, lack income, crime in neighborhood***

**bivariate relationship with recurrence*

Survival Index

# Stress Items	Total N	% No Recurrence	Mean Days
0	184	73.37	1352
1	133	61.65	1160
2	84	65.48	1151
3	33	45.45	906
4	12	33.33	774

L.R. 21 df=4 p=.0003

Measures-Social Support Deficits

- *Lack support from extended family**
- *Lack support from friends**
- *Ineffective use of informal support**
- *Conflict with extended family*

**bivariate relationship with recurrence*

Social Support Deficit Index

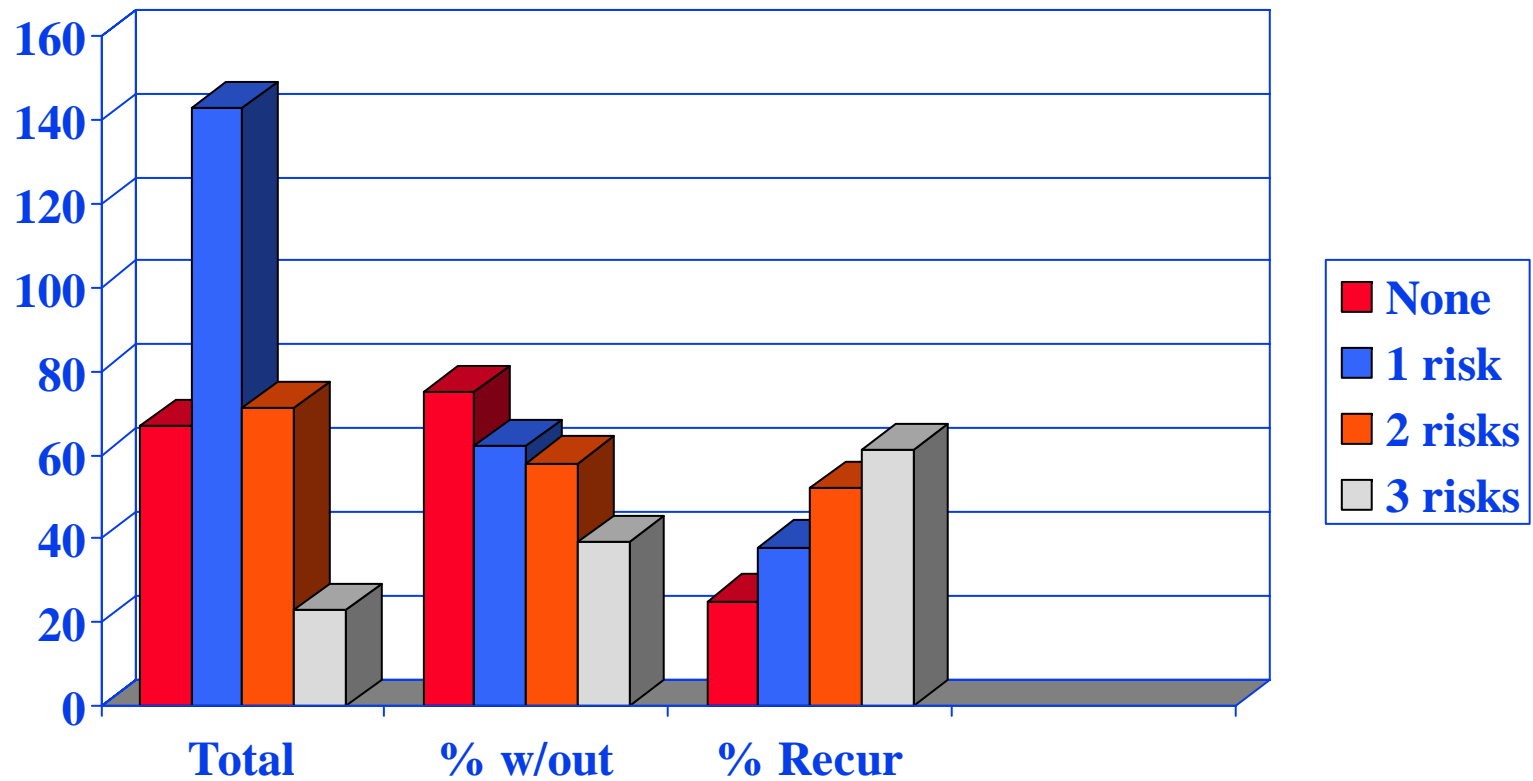
<i># Deficits</i>	<i>Total N</i>	<i>% No Recurrence</i>	<i>Mean Days</i>
<i>0</i>	<i>128</i>	<i>78.91</i>	<i>1431</i>
<i>1</i>	<i>191</i>	<i>65.45</i>	<i>1219</i>
<i>2</i>	<i>96</i>	<i>56.25</i>	<i>1045</i>
<i>3</i>	<i>31</i>	<i>35.48</i>	<i>727</i>

L.R. 35

df=3

p=.0000

Kaplan Meier - Social Support Deficit Index



L.R.=14.72, p=.0021

Findings – Model 1

- *Indicators from 4 constructs predicted risk*
 - *Child vulnerability*
 - *Family conflict (partner abuse)*
 - *Family stress*
 - *Social Support*
- *Maltreatment variables did NOT predict risk*
- *Interaction between Stress & Social Support*

Proportional Hazards Model

Variable	Wald Chi-Sq	Risk Ratio
<i>FSTRINDX*SOCINDX*</i>	3.913	.8377
<i>Priors</i>	.2296	1.0324
<i>Index Type</i>	.9938	.9014
<i>Severity</i>	.0531	1.0207
<i>Child Index*</i>	7.1335	1.4225
<i>Mom index</i>	.2233	1.0547
<i>Partner Abuse*</i>	3.8033	1.4675
<i>Family Stress*</i>	8.6922	1.5332
<i>Survival Stress</i>	1.3343	1.1002
<i>Soc Sup Deficit*</i>	10.6565	2.3435

Child Vulnerability

- *Every point on a child index increased the hazard rate of recurrence 1.4 times (controlling for other variables in the model). If a family had a child under the age of 6, a child with a mental health problem, and/or a child with a developmental problem the hazard rate was greater.*

Partner Abuse

- *The hazard rate was 1.5 times higher for families with partner abuse (controlling for other variables in the model).*

Family Stress

- *Every point on a family stress index increased the hazard rate of recurrence 1.2 times (controlling for other variables in the model). The hazard rate was greater for families with more than 2 children, with mothers who gave birth during their teen years, and/or who bore children over 6 or more years.*

Social Support Deficits

- *Every point on a social support deficit index increased the hazard rate of recurrence 1.4 times (controlling for other variables in the model). The hazard rate was greater for families without support from extended family, friends, and/or other informal systems.*

Family Stress/Social Support

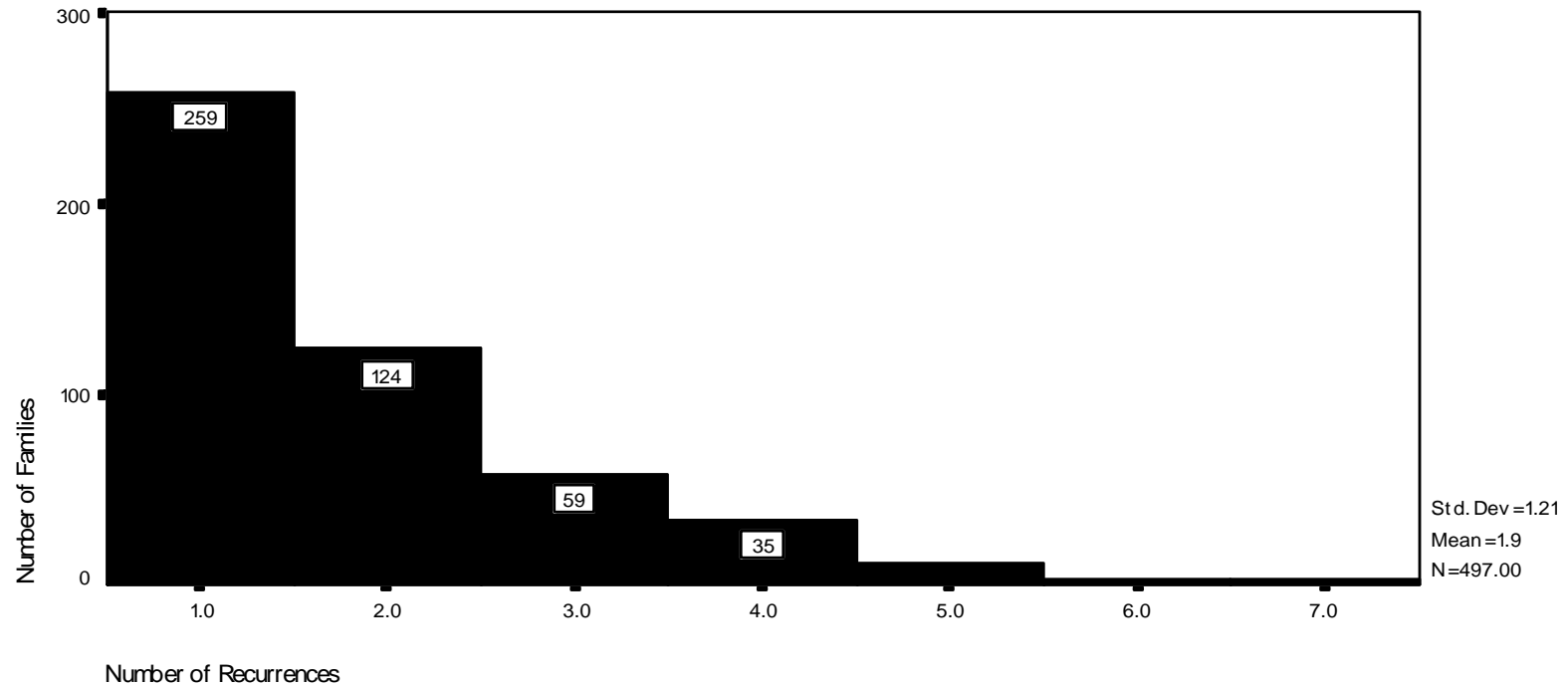
- *The effect of family stress on the hazard rate was dependent on the level of social support deficits.*

Findings – Frequency of Recurrences

- *Most (52.1%) recurrence families experienced only 1 recurrence; 24.9% had 2; 11.9% had 3; and 11.1% had 4 or more*
- *When multiple recurrences occurred, they tended to cluster, rather than spread out over the complete risk period.*

Histogram of Number of Recurrences

Figure 20. Histogram of Number of Recurrences
Over Five Years

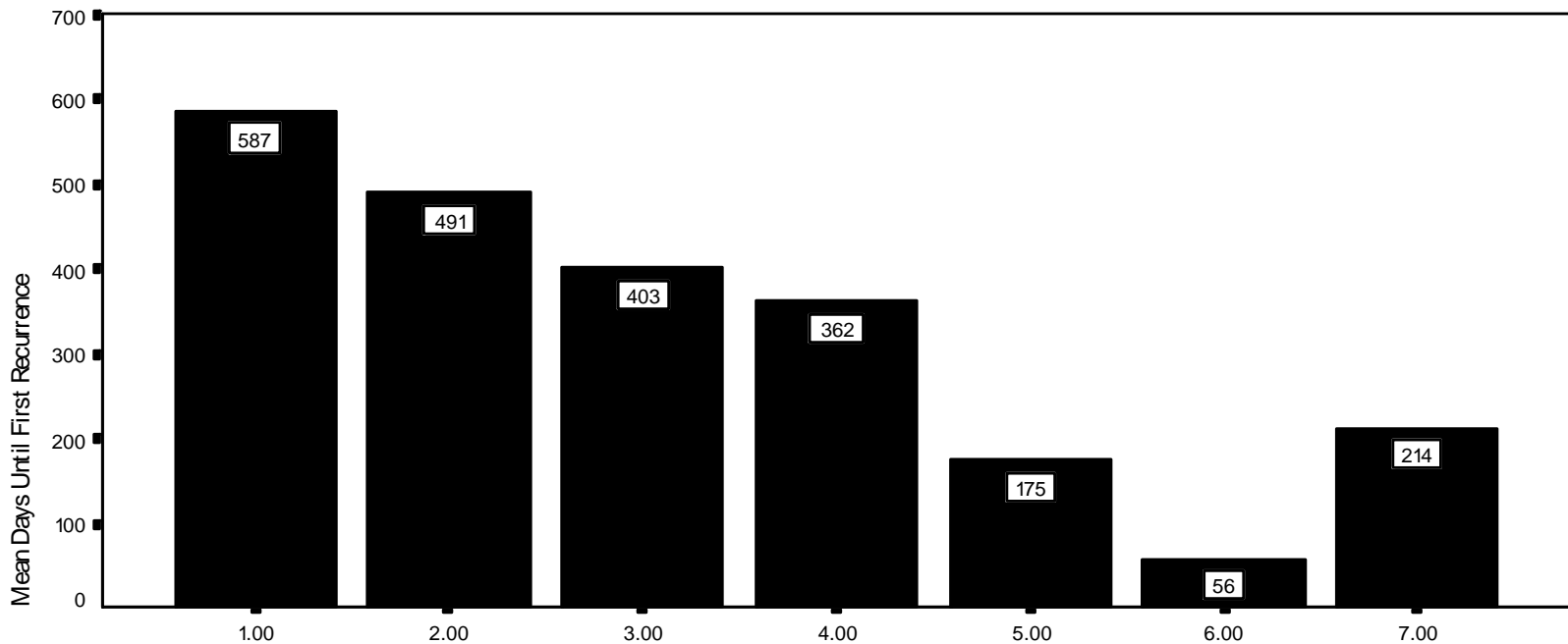


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Time until 1st recurrence by total number of recurrences

Figure 21. Days Until First Recurrence after Index
By Total Number of Recurrences per Family



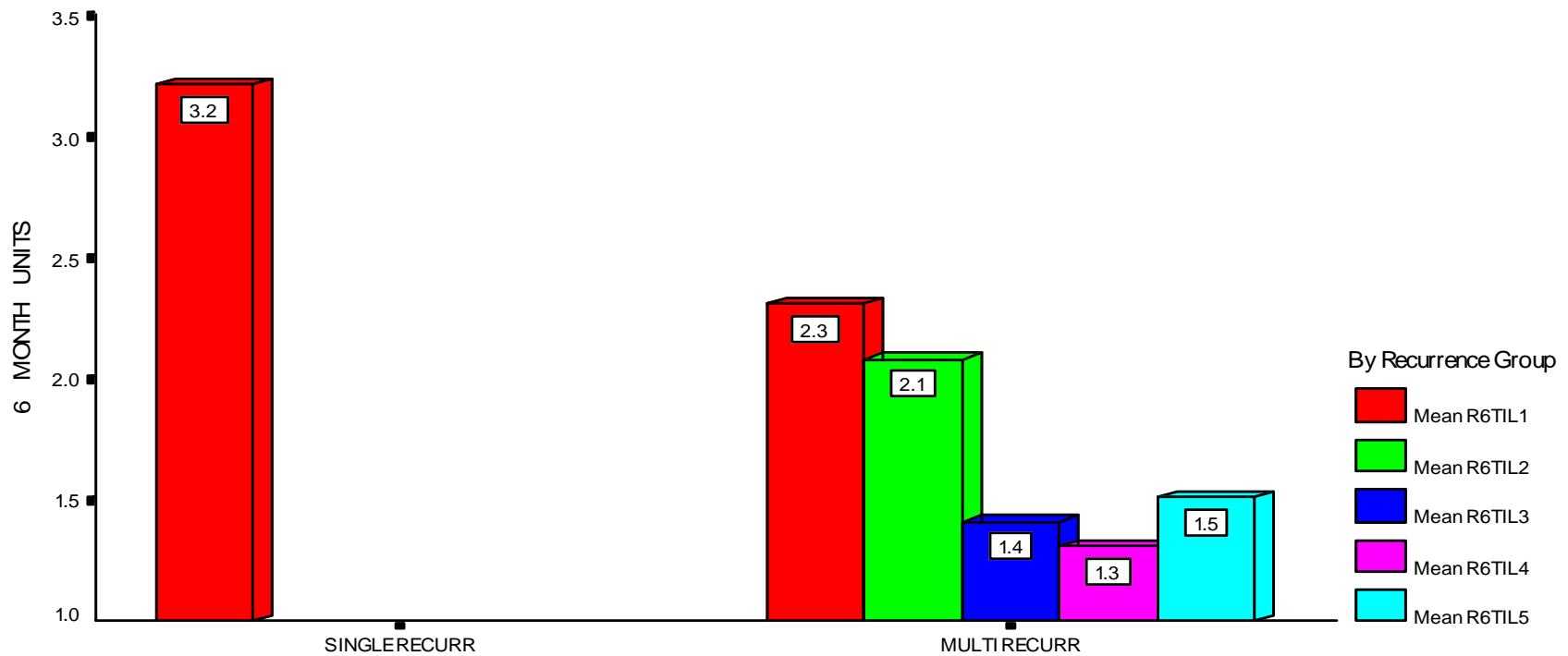
Number of Recurrences per Family

DePanfilis, D. (1995). Epidemiology of Child Maltreatment Recurrences.

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Mean days until recurrence by recurrence group

Figure 23. Mean Days Until Each Recurrence
In Six Month Units



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Doctoral Dissertation. University of Maryland at Baltimore.

Design Enhancements

- *Sufficient statistical power*
- *Reliability of measures*
- *Construction of indices*
- *Control for variability in risk period*
- *Statistical procedures*
- *Control for intervention*

Limitations

- *Measurement*
- *Construct Validity*
- *Single Sample*
- *External Validity*

Implications

- *If risk declines with time, CPS intervention may be effective*
- *Cases closed at intake have lower risk of recurrence following closure*
- *Risk of neglect may be greater, yet may not have sufficient CPS response*

Implications (continued)

- *Increasing social support may reduce risk*
- *Need for collaboration between CPS & community agencies regarding woman abuse*
- *Need for treatment for child mental health and developmental problems*
- *Need for better case recording that clearly documents risk reduction*

Recommendations for Future Research

- *Prospective longitudinal research*
- *Attempt to monitor potential surveillance bias*
- *Replication of study in other jurisdictions, both urban and rural*