

DIVORCE, SEPARATION, MENTAL HEALTH AND RISKY BEHAVIORS
AMONG FATHERS: WHAT ARE THE CONNECTIONS AND HOW DOES IT
AFFECT FAMILY HEALTH?

by

NICOLAS V. RESCINITI

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Thesis Chair: Michael J. Rovito, Ph.D., CHES

ABSTRACT

Due to the fact that approximately 50% of US first marriages ending in divorce, there is a growing need to identify and understand the causal mechanisms behind these separations and what effects this event has upon the family unit. This study employed secondary data analyses on the Fragile Families and Child Well-Being Study to identify the differences in the frequency of adverse health behaviors among fathers that are coupled with their partner and those who are divorced/separated. Trends of the fathers from the baseline survey to the five-year follow-up allowed us to observe the following: Differences in adverse health behaviors, self-reported mental health status, and the potential impact relationship dynamics have upon the family unit. A bio-behavioral marker was created to assist in identifying possible future effects of adverse health behaviors upon the family. Results show the non-married fathers participate in alcohol consumption, illegal substances, cigarette consumption and show more symptoms of depression at higher rates and more frequently than the married fathers. The non-married fathers put their children at the greatest risk of developing adverse health behaviors later in life.

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Background

Introduction

The effects of depression, alcohol abuse, cigarette use and substance abuse amongst married and non-married males have widely been used as a topic for research. When a father, for example, participates in these aforementioned maladaptive behaviors along with having depression, there tends to be a negative impact upon the child via the internalize/externalize process of decisions surrounding health behaviors later in life (Fals-Stewart et al., 2004; Hussong et al., 2008; Indredavik et al., 2007). Internalizing behaviors are negative behaviors and factors that children direct towards themselves and are defined by McFarlane et al. (2003) as behaviors such as anxiety/depression, somatic complaints and withdrawal. Externalizing behaviors are negative factors expressed outwardly toward other people or objects. McFarlane et al. (2003) defines externalizing behaviors as attention problems, rule-breaking actions, and aggressive behavior.

This paper explored the difference in fathers that are married and non-married to examine the conduct of each group as it pertains to engaging in maladaptive health behaviors and the presences of mental health conditions, specifically depression. The effect of the aforementioned variables upon the child was paramount to our a priori program theory.

Effects of Marriage upon Children

The United States has higher rates of divorce compared to other nations (Smith et al., 2012) with about 50% of marriages being affected (CDC, 2009). Knowing this, it is important to find the impact that separation has on the father, mother and child (ren).

Fathers that are married report less depression and decreased rates of alcohol consumption, compared to non-married fathers; further, non-married fathers are more likely to report higher rates of alcohol consumption (Cunningham & Konester, 2007). Liu & Umberson (2008) stated that fathers tend to self-report as being healthier than their unmarried counterparts. One factor could be because of maternal gatekeeping, where the father does not participate in certain behaviors because of the mother. Non-married fathers have shown an increase in the rates of depression, mortality, substance abuse and lack of social support (Felix, 2013). There is a clear divide in those fathers in the two fathering groups, married and non-married. These findings show us some of the impacts that marriage and separation have on the father.

Children who spend at least part of their life in a single parent home have poorer physical and emotional health compared to those children who live in a house with both of their biological parents (Langton and Berger 2011; Stewart and Manning, 2009). Disagreement and/or conflict between parents can have multiple effects on their child, such as increased fear, sadness, emotional complications and damages in cognitive functioning (El-Sheikh, 2005; Cummings & Davies, 2002; Cummings et al., 2006). One theory that could contribute to these negative effects from parents onto the child is called the spillover hypothesis. This concept states negative feelings and behaviors between the mother and father “spillover” to predict negative interactions with their children (Cox, Paley, & Harter, 2001).

Risky Behaviors of Fathers and the Effects on Their Children

Males tend to participate in risky behaviors more frequently, having seven times the risk of alcohol and drug use disorders than females (Jan-Llopis et al., 2011). Alison et al. (2009)

stated that non-married males had an increased chance of participating in substance abuse, alcohol consumption and/or cigarettes consumption. This is all in support of Leonard & Rothbard (1999) who theorized about a process called “marriage effect”. This process indicated the reduction of alcohol triggered by the transition to marriage, and increased consumption in response to the transition to divorce. Therefore these finding tie together the idea that separated males are at the greatest risk of participating in risky behaviors.

Further, fathers with alcohol use disorders are at significant risk to cause negative effects, such as emotional and behavioral problems on their children (Burstein et al., 2006; Hussong et al., 2007). Chassin et al. (1999), found that alcoholism was directly associated with a child’s depressive, internalizing, and externalizing symptoms. In addition to mental health problems, children of alcoholic fathers have a greater chance of being victims to physical violence as well. These children are at risk of having violence in the family (Lewis-O’Connor et al., 2006), which can lead to being beaten or neglected (Walsh et al., 2003; Wells, 2006).

Substance abuse is directly related to irresponsible fathering and family functioning, and makes it difficult to establish family norms and rules, participate in poor communication, and problems with emotional expression (McMahon et al., 2008). Fathers with a record of alcohol consumption and substance abuse report having worse interactions with their child, maltreatment, and increased stress in comparison to those who do not have alcohol or substance abuse issues (Blackson et al, 1999).

Although there are many over lapping negative effects to risky behaviors in fathers, internalizing and externalizing of the child behaviors is consistent throughout the literature. Fathers who have alcoholism predicted greater internalizing symptoms among their children

(Hussong et al., 2008). While adolescents whose fathers participated in cigarettes consumption broke more rules, show more aggression, externalizing, and internalizing behaviors (Indredavik et al., 2007). Internalizing and externalizing behaviors have been found in children of drug dependent families more than any other type of family (Fals-Stewart et al., 2004)

Mental Health of Parents: Internalizing and Externalizing Behaviors among Children

Fathers showing an increase in depression show more negative interactions with their child, which causes hostility and/or withdrawal from integrating with their child (Wilson & Durbin, 2010). As found by Kane & Garber (2004), paternal depression was significantly related to children internalizing and externalizing their behaviors.

Internalizing behaviors are taken onto oneself, instead of acting outwardly. The individuals that display these types of behaviors tend to harm themselves with symptoms such as somatic complaints, depression, anxiety and withdrawal (Perle et al., 2013). Symptoms start to manifest in children as early as three years of age, for somatic complaints (Liu et al., 2011), and continue to manifest as early as seven and a half for anxiety (Perle et al., 2013). These internal behaviors can affect psychological environments, instead of the external environment (Liu, 2004). Liu (2004) also stated that although internalizing behaviors is directed within the individual, it could affect others, such as the child parents, relatives, classmates and friends. Externalizing behavior is the “opposite” of internalizing behaviors, such as acting negatively on the external environment, instead of inwardly. Symptoms of these outward behaviors are aggressive, disruptive and criminal behaviors (Liu, 2004). Symptoms of externalization of behaviors can begin as early as four years of age (Mackler et al., 2015). While the child is mainly expressing their behaviors outwardly, they also experience internal behavioral issues, such as

depression and anxiety (Liu, 2004). Although internalizing and externalizing are “opposite” behaviors they seem to be intertwined and have overlapping behaviors. As stated previously, fathers who have depression and participate in substance abuse, alcohol abuse and cigarette consumption increase the chance of causing their child to internalize and externalize their behaviors later on in life. With the children exhibiting internalizing symptoms as early as three years and externalizing symptoms as early as four years, it is important to develop programs to educate the father about these potential maladaptive behaviors as early as before the child’s birth.

The evidence provided has shown that those fathers who have higher rates of alcohol consumption, substance abuse, cigarette use, and have depression leads to negative effects of their child, specifically it leads to the internalize/externalize later in their life. This paper has established this effect as a “Bio-Behavioral Marker”. While conducting a literature review for this paper we found that all of the maladaptive behaviors, alcohol consumption, substance abuse, cigarette use, and depression, had something in common, which is the bio-behavioral marker. This marker took the effects that alcohol consumption, substance abuse, cigarette use, and depression had on the child from the father, which was the internalizing and/or externalizing effect, and stated that those fathers that participate in these behaviors at the highest frequencies and the longest duration will have the greatest chance of negatively impacting their child. This study will look at the Fragile Family and Child Wellbeing Study (FFCWS), examining the fathers that are married at baseline and follow them up to the five-year follow-up and comparing the aforementioned maladaptive behaviors to see the differences in married and unmarried fathers. Although the fathers that are participating in these maladaptive behaviors and have depression are harming themselves, it is also negatively impacting the child. The father has a

choice and can control what can happen to them, but the children do not. That is why it is important to study the impact that these father can and will have on their child, via the father's actions. With the child acting as a sponge, and absorbing everything, these negative behaviors are learned and impact family, school and social interactions.

Methods

Data Source

This study analyzed data from the Fragile Family and Child Wellbeing Study. There were 4,897 mothers, and in most cases the fathers, selected via stratified random sampling techniques from seventy-five within twenty U.S. metropolitan areas of a population size at least 200,000 between 1998 and 2000. The mothers were asked to complete an in-hospital interview within 48 hours of their child's birth. If the fathers were not available for the in-hospital interview, they were contacted by telephone. In some cases when the father couldn't be contacted, the mother provided some information. Goldberg (2014) stated that 3,710 of births, approximately 75%, were born to unwed parents.

The study continued to follow-up both the mothers and fathers at one-year, three-years, five-years, and nine-years after the birth of their child. Of mothers and fathers who completed the baseline survey, 89% of mothers and 69% of fathers were available for the first-year follow-up, 86% of mothers and 65% of fathers for the three-year follow-up, 85% of mothers and 64% of fathers for the five-year follow-up, and 72% of mothers and 54% of fathers for the nine-year follow-up.

The FFCWS primarily looked at these key questions of interest to researchers: *"What are the conditions and capabilities of unmarried parents, especially fathers?"*, *"What is the nature of the relationships between unmarried parents?"*, *"How do children born into these families fare?"*, and *"How do policies and environmental conditions affect families and children?"* (Reichman, Teitler, Garfinkel & McLanhan, 2001) with particular emphases on parental relationships and how said relationship affected the child (-ren).

This study examined the fathers that were married at baseline to determine possible differences in health outcomes and performance of risky behaviors between married and not married at the five-year follow-up. A bio-behavioral marker was developed, stating that those fathers who participate in the maladaptive behaviors long enough and who have depressive symptoms will negatively impact the children.

Sample Selection

This study looked at baseline and five-year data of eligible fathers to assess differences in family health outcomes. At baseline, 1068 fathers were excluded from the original 4898 due to not being interviewed. Further, 2754 were excluded because they *answered "No, not married to mother"* to question B2. The 1076 eligible fathers were followed up to the five-year follow-up and separated into two categories, *married* and not *non-married*. Married was defined as answering married to question A4 that inquired about status of relationship to the mother of the child. Not married was defined as answering separated, divorced, just friends, or not in any kind of relationship. After matching baseline fathers to the five-year follow-up, there were 714 fathers that qualified for the married group and 51 separated, 44 divorced, 14 just friends, and 8 in no relationship, for a total of 117 in the non-married group.

Measures

This study compared fathers that were married and not married to find if there were any significant differences in family health outcomes. Specifically, mental health outcomes and maladaptive health behaviors among fathers were measured and assessed for differences.

Maladaptive health behaviors were operationalized from three primary variables: *alcohol abuse*, *cigarette consumption*, and *substance abuse*.

Question J19 (“*How many packs per day do you usually smoke?*”) was used to operationalize and categorize cigarette consumption into: *less than a half a pack*, *one pack*, *one and a half of a pack*, *about two packs*, and *more than 2 packs*. Questions J20 (“*What is the largest number of drinks you had in any single day?*”) and J20A (“*In the past twelve months, how often did you have four or more drinks in one day? Was it . . .*”) were used to measure alcohol consumption. Since these questions could not determine if the participant was alcohol dependent, we categorized them as ‘alcohol users’.

Alcohol users were categorized by if the father had four or more drinks in one day in the last year (J20A). Frequencies about how often questions J20A were grouped based off answering: *less than once a month*, *about once a month*, *a few times a month*, *a few times a week*, and *every day or almost every day*. Frequencies on J20 were further categorized into: *none*, *1-3*, *4-10*, *11-20*, and *more than 20 drinks in a single day*.

For substance abuse, questions J22J (“*Did respondent use one or more drugs in J22A-J22I?*”) and J22K (“*In the past twelve months, how often did you use ([DRUG]/any of those drugs)? Was it . . .*”) were used to categorize participant fathers into user and non-users. The questions prevent us from determining if they were drug dependent, instead they are called “drug user”. Drug users were categorized by if they used drugs in the last year (J22J). Frequencies on J22K were specifically categorized into: *less than once a month*, *about once a month*, *a few times a month*, *a few times a week*, and *every day or almost every day*.

Depression was operationalized based off a built in scale to the primary questionnaire. Diagnosis criteria from the Composite International Diagnostic Interview Short Form (CIDI – SF; Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998) was used to assess the depressive symptoms of the fathers. Scoring of the CIDI – SF follows DSM-IV-TR diagnostic criteria for major depressive episodes and presence of generalized anxiety disorder (American Psychiatric Association, 1994). Respondents were asked if they had feelings of depression and/or if they lost what was usually pleasurable and if it lasted for two weeks in the past year. If they responded yes to the aforementioned questions, they were asked more specific questions. They were asked 1) losing interest, 2) feeling tired, 3) change in weight, 4) trouble sleeping, 5) trouble concentrating, 6) feeling worthless, and 7) thinking about death. Based off the participant's answers, the score then was summed up and they could have fallen into a range of 0-8 where a score of 0 meant the participant did not answer yes to any of the questions and 8 being they answered yes to every possible question.

Results

Univariate Analysis

A series of descriptive statistics were calculated on our participant sample.

Approximately 55% participants self-identified as White, 26% as Black/African-American, 5% as Asian/Pacific Islander, 1.7% as American Indian/Eskimo, and 10% as Other.

Table 1 Aggregate Race/Ethnicity

Race/Ethnicity	Total Number	Percentage
White	458	55.1%
Black, AA	219	26.4%
A/PI	43	5.2%
AI/Eskimo/Aleut	14	1.7%
Other	86	10.3%
Missing/Don't Know/Refuse	11	1.3%
Total	831	100%

Table 2 indicates that 14.7% received some high school or less, 22% received a high school/GED, 23.3% had some college experience, 6.4% have technical or trade training, 17% have a BA/BS, and 16.5% have a graduate or professional degrees.

Table 2 Aggregate Education Level

Education Level	Total Number	Percentage
No formal schooling	3	0.4%
8 th grade or less	30	3.6%
Some high school	89	10.7%
High school diploma	156	18.8%
GED	27	3.2%
Some college	194	23.3%
Technical or trade school	53	6.4%
BA/BS	141	17.0%
Graduate or prof. school	137	16.5%
Refuse/Missing	1	0.1%

Non-married fathers had higher self-reported cigarette (41.88% v. 19.05%), alcohol (33.6% v. 32.5%), and substance abuse (13.68% v. 4.62%) than married fathers at the five-year follow-up assessment. Although similar percentages of married and non-married fathers indicated having drunk 4 or more alcoholic drinks, non-married fathers reported drinking 4 or more drinks more frequently. Specifically, 3.5% of non-married fathers reported drinking everyday versus 1% of married fathers reported it and 10.3% of non-married fathers reported a few times a week compared to 3.1% of married fathers. An alpha value of .05 was employed for the threshold for statistical significance on all analytical tests.

Bivariate/Multivariate Analyses

Cigarette Consumption

Baseline

A higher percentage of non-married fathers identified as being a “cigarette smoker” compared the married fathers (35.7% vs 16.8%, respectively). The non-married fathers had higher percentages of cigarette consumption at every increment (Table 3). [χ^2 (4, $N=831$) = 31.92, $p<.001$].

Five-year Follow-up

Approximately 19% of the married fathers and 42% of the non-married fathers were identified as “cigarette smokers” (Table 4). The percentage of cigarette consumption was significantly higher, for the non-married fathers compared to married [χ^2 (6, $N=831$) = 38.43, $p<.001$]. There is an association between the relationship with the father and how many packs per day they smoke. Phi and Cramer’s V computed they had a strength of association of .215.

Table 3 Cigarette Consumption -Married and Non-Married

Marital Status * In the past 3 months, how many cigarettes did you smoke a day? Crosstabulation								
			In the past 3 months, how many cigarettes did you smoke a day?					Total
			Refuse	2+pk/d	1<pk<2	<1pk/d	None	
Marital Status	Married	Count	0	4	27	89	596	716
		% within Marital Status	0.0%	0.6%	3.8%	12.4%	83.2%	100.0%
	Non-Married	Count	1	3	11	27	73	115
		% within Marital Status	0.9%	2.6%	9.6%	23.5%	63.5%	100.0%
Total		Count	1	7	38	116	669	831
		% within Marital Status	0.1%	0.8%	4.6%	14.0%	80.5%	100.0%

Table 4 Packs Per Day Smoked - Married and Non-Married

What is your relationship with mother now? * How many packs per day do you usually smoke? Crosstabulation										
			How many packs per day do you usually smoke?						Total	
			Skip	Refuse	Less half	1 pack	1.5 packs	About 2		More than 2
Marital Status	Married	Count	578	1	94	33	4	4	0	714
		% within Marital Status	81.0%	0.1%	13.2%	4.6%	0.6%	0.6%	0.0%	100.0%
	Non-married	Count	68	0	32	14	2	0	1	117
		% within Marital Status	58.1%	0.0%	27.4%	12.0%	1.7%	0.0%	0.9%	100.0%
Total		Count	646	1	126	47	6	4	1	831
		% within Marital Status	77.7%	0.1%	15.2%	5.7%	0.7%	0.5%	0.1%	100.0%

Alcohol Consumption

Baseline

A higher percentage of non-married fathers reported drinking more (74.7% vs. 67.9%) and more frequently compared to married fathers. [$\chi^2 (5, N=831) = 12.29, p= .031$].

Table 5 Alcohol Consumption Frequency - Married and Non-Married

Marital Status * In the past 3 months, how often did you drink alcohol? Crosstabulation									
		In the past 3 months, how often did you drink alcohol?							Total
		Refuse	E day	Svl/w k	Svl/m n	<1X/mn	Never		
Marital Status	Married	Count	0	19	74	203	190	230	716
		% within Marital Status	0.0%	2.7%	10.3%	28.4%	26.5%	32.1%	100.0%
	Non- Married	Count	1	6	13	29	38	28	115
		% within Marital Status	0.9%	5.2%	11.3%	25.2%	33.0%	24.3%	100.0%
Total		Count	1	25	87	232	228	258	831
		% within Marital Status	0.1%	3.0%	10.5%	27.9%	27.4%	31.0%	100.0%

Five-year Follow-up

Both the married and non-married group is similar in regards to being an “alcohol user”, 33.6% and 32.5% respectively (Table 6). There is an increase in the amount of times the non-married group consumed these four or more drinks. The non-married group had significantly higher percentages of self-report alcohol consumption compared to married fathers [$\chi^2 (5, N= 831) = 26.34, p < .001$]. Table 7 shows consistent responses comparable to table 6. That being, the non-married fathers and married fathers group being similar in answering similarly to drinking rates, but the non-married group reported to have drunken higher quantities, 11-19 and 20 drinks in one day. [$\chi^2 (6, N= 831) = 13.59, p= .035$].

Table 6 Times Four or More Drinks Consumed - Married and Non-Married

What is your relationship with mother now? * In the past 12 months, how often did you have four or more drinks in one day? Crosstabulation									
			In the past 12 months, how often did you have four or more drinks in one day?						Total
			Skip	Every day	Few week	Few month	About once	Less once	
Marital Status	Married	Count	474	7	22	51	44	116	714
		% within Marital Status	66.4%	1.0%	3.1%	7.1%	6.2%	16.2%	100.0%
	Non-married	Count	79	4	12	11	4	7	117
		% within Marital Status	67.5%	3.4%	10.3%	9.4%	3.4%	6.0%	100.0%
Total		Count	553	11	34	62	48	123	831
		% within Marital Status	66.5%	1.3%	4.1%	7.5%	5.8%	14.8%	100.0%

Table 7 Large Drinks Single Day - Married and Non-Married

What is your relationship with mother now? * What is largest number drinks you had in single day during past years?										
Crosstabulation										
			What is largest number drinks you had in single day during past years?							Total
			Don't know	Refuse	None	1-3	4-10	11-20	More than 20	
Marital Status	Married	Count	1	3	209	261	207	30	3	714
		% within Marital Status	0.1%	0.4%	29.3%	36.6%	29.0%	4.2%	0.4%	100.0%
	Non-married	Count	0	1	32	46	27	7	4	117
		% within Marital Status	0.0%	0.9%	27.4%	39.3%	23.1%	6.0%	3.4%	100.0%
Total		Count	1	4	241	307	234	37	7	831
		% within Marital Status	0.1%	0.5%	29.0%	36.9%	28.2%	4.5%	0.8%	100.0%

Substance Abuse

Baseline

9.6% of the non-married fathers reported substance use compared to the 3.7% of the married fathers. [$\chi^2 (5, N= 831) = 23.41, p < .001$].

Table 8 Substance Usage - Married and Non-Married

Marital Status * In the past 3 months, how often did you use drugs? Crosstabulation									
			In the past 3 months, how often did you use drugs?						Total
			Refuse	E day	Svl/wk	Svl/mn	<1X/mn	Never	
Marital Status	Married	Count	0	4	2	3	17	690	716
		% within Marital Status	0.0%	0.6%	0.3%	0.4%	2.4%	96.4%	100.0%
	Non-Married	Count	1	0	0	4	7	103	115
		% within Marital Status	0.9%	0.0%	0.0%	3.5%	6.1%	89.6%	100.0%
Total		Count	1	4	2	7	24	793	831
		% within Marital Status	0.1%	0.5%	0.2%	0.8%	2.9%	95.4%	100.0%

Five-year Follow-up

Non-married father had a significantly higher percentage of self-reported substance abuse than married fathers, specifically, 14.5% v.4.6% (Table 17). [$\chi^2 (1, N= 831) = 17.45, p < .001$]. Table 9 reveals that the non-married group shows an increased percent of drug usage at every time increment. There is a significance of $\chi^2 (5, N= 831) = 23.33, p < .001$, we can state that there is an association between the status with the mother and substance abuse.

Table 9 Substance Abuse - Married and Non-Married

What is your relationship with mother now? * In the past 12 months, how often did you use any of those drugs?									
Crosstabulation									
		In the past 12 months, how often did you use any of those drugs?							Total
		Skip	Every day	Few week	Few month	About once	Less once		
Marital Status	Married	Count	681	3	5	11	1	13	714
		% within Marital Status	95.4%	0.4%	0.7%	1.5%	0.1%	1.8%	100.0%
	Non-married	Count	100	3	1	3	1	9	117
		% within Marital Status	85.5%	2.6%	0.9%	2.6%	0.9%	7.7%	100.0%
Total		Count	781	6	6	14	2	22	831
		% within Marital Status	94.0%	0.7%	0.7%	1.7%	0.2%	2.6%	100.0%

Table 10 Substance Abuse - Married and Non-Married

What is your relationship with mother now? * DID RESPONDENT USE ONE OR MORE DRUGS? Crosstabulation					
			DID RESPONDENT USE ONE OR MORE DRUGS?		Total
			Yes	No	
Marital Status	Married	Count	33	681	714
		% within Marital Status	4.6%	95.4%	100.0%
	Non-married	Count	17	100	117
		% within Marital Status	14.5%	85.5%	100.0%
Total		Count	50	781	831
		% within Marital Status	6.0%	94.0%	100.0%

Depression

Table 11 presents the aggregate levels on the depression scale, with most participants showing no signs of depression. When looking at it broken down by relationship status, table 12, it

shows a more in depth analysis of this scale. Table 12 reveals that 33.3% of non-married fathers and 12.6% of married fathers, a difference of 20.7%, answered yes to at least one question in the depression scale. Further, there is an increase in percentage at each level of the depression scale, except for category 8 where there was only one respondent, for the non-married group. There is a significance of $\chi^2(8, N= 829) = 49.35, p < .001$. There was a significant difference in fathers that are non-married, these fathers reported having more depressive symptoms ($M=1.17, SD=1.99$) than did the married fathers ($M=.34, SD=1.10$), $t(831) = -6.616, p < .001$.

Table 11 Depression Scale

Depression_Scale					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	702	84.5	84.5	84.5
	1.00	52	6.3	6.3	90.7
	2.00	11	1.3	1.3	92.1
	3.00	10	1.2	1.2	93.3
	4.00	21	2.5	2.5	95.8
	5.00	21	2.5	2.5	98.3
	6.00	13	1.6	1.6	99.9
	7.00	1	.1	.1	100.0
	Total	831	100.0	100.0	

Table 12 Depression Scale - Married and Non-Married

What is your relationship with mother now? * Depression_Scale Crosstabulation												
			Depression_Scale									Total
			.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	
Marital Status	Married	Count	624	40	9	3	16	7	8	6	1	714
		% within Marital Status	87.4%	5.6%	1.3%	0.4%	2.2%	1.0%	1.1%	0.8%	0.1%	100.0%
	Non-married	Count	78	11	3	1	6	8	8	2	0	117
		% within Marital Status	66.7%	9.4%	2.6%	0.9%	5.1%	6.8%	6.8%	1.7%	0.0%	100.0%
Total		Count	702	51	12	4	22	15	16	8	1	831
		% within Marital Status	84.5%	6.1%	1.4%	0.5%	2.6%	1.8%	1.9%	1.0%	0.1%	100.0%

Table 13 Means of Depression Scale

Group Statistics					
	What is your relationship with mother now?	N	Mean	Std. Deviation	Std. Error Mean
Depression_Scale	Married	714	.3375	1.10059	.04119
	Non-married	117	1.1709	1.98829	.18382

Table 14 T-Test Depression Scale

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Depression_Scale	Equal variances assumed	108.037	.000	-6.616	829	.000	-.83341	.12596	-1.08064	-.58617
	Equal variances not assumed			-4.424	127.888	.000	-.83341	.18838	-1.20614	-.46067

Discussion

This secondary data analysis of the Fragile Families and Child Wellbeing data aimed to examine the differences in substance abuse, alcohol consumption, cigarette consumption, and depression between fathers that are married and non-married. The purpose of said analysis was to determine if marital dissolution was associated with the adoption of maladaptive health behaviors over time.

At the five-year follow-up the findings were conclusive, that being the non-married fathers had higher reported rates of alcohol consumption, cigarette consumption, substance abuse, and depressive symptoms more than the married fathers. The data revealed that “cigarette smokers” are 19% for married and 42% for non-married fathers, “alcohol users” are 33.6% for married and 32.5% for non-married fathers, and “drug users” are 4.6% for married and 14.5% for non-married fathers. Approximately 12.6% of married and 33.3% of non-married fathers answered yes to at least one of the questions on the depression scale, meaning they demonstrate some sort of depression, based from the built in Composite International Diagnostic Interview Short Form (CIDI-SF). Non-married fathers had higher percentages at every level of the depression scale, except the highest level, which only encompassed one total participant. Our data is consistent with prior research, that being, non-married fathers show an increase in alcohol consumption, substance abuse, and smoking cigarettes, as well higher rates of depression symptoms (Eng et al., 2005; Felix, 2013; Moore et al., 2009).

A second goal of this study was to state that fathers who participate in behaviors such as alcohol consumption, cigarette use, substance abuse, and depression long enough will negatively impact their child causing them to internalize and externalize behaviors later in life (Fals-Stewart

et al., 2004; Kane & Garber, 2004; Indredavik et al., 2007; Hussong et al., 2008). Internalizing behaviors are defined as a child directing behaviors towards themselves, leading to anxiety/depression, somatic complaints, and withdrawal (McFarlane et al., 2003). Externalizing behaviors are defined as a child expressing their behaviors outwards such as attention problems, rule-breaking actions, and aggressive behaviors (McFarlane et al., 2003). It was found that all of these maladaptive behaviors, including depression, led to an increased chance of the child demonstrating internalizing and externalizing behaviors. Children show symptoms of internalizing behaviors as early as three years (Liu et al., 2011) and as early as four years for externalizing behaviors (Mackler et al., 2015).

The internalizing and externalizing process was used to establish our theoretical bio-behavioral marker. This states that those fathers who participate at higher rates and more frequently in maladaptive behaviors and have depression provide an increased chance of causing the child to develop internalizing and or externalizing behaviors later on it life. Since both groups participated in these risky and negative behaviors, both groups are at risk for causing their child to experience internalization and externalization of their behaviors. Although, the non-married fathers are at greatest risk to negatively impact their children, due to them participating more frequently in cigarette use, substance abuse, and have higher rates of depression, and also at higher increments in alcohol consumption, cigarette use, illegal drugs, and depressive symptoms. This is important because the father can control, or at least manage, whether he has depression, consumes cigarettes, consumes alcohol, and participates in substance abuse, but the child cannot control the spillover effects. These spillover effects are a preventable problem that causes harm to the child, whether that harm is at the exact moment or later in life.

Since this data is self reported, there is bias with underreported results. The five-year follow-up of the FFCW study does not have any way of measuring alcohol and drug dependency; they qualify the user as being a “drug user” and “alcohol user”. Also, since we only examined these participants at base line and five-year follow-up we do not know the exact date of dissolution. This study did not compare to race/ethnicity, education level, or earning. When operationalizing and categorizing our groups we expanded our non-married group to include divorced, separated, just friends, and not in any kind of relationship because our original group, being only divorced, had an insufficient number of participants. The baseline data suggests that the non-married group had higher rates of cigarette use, alcohol consumption, and substance use before the five-year follow-up. Since we didn’t primarily observe or collect the data, it is unknown if these maladaptive behaviors caused the marital dissolution or if the poor relationship caused the fathers to participate in these maladaptive behaviors.

Future research can be done with the FFCW study, the one-year and three- year follow-up have the Composite International Diagnostic Interview – Short Form (CIDI-SF) built in to measure of dependency on alcohol and drugs. This measurement over time can also test to see if there are any changes in the father’s usage of alcohol, cigarettes, drugs, and depression. Also, with examining other follow-ups we can find out when the dissolution occurred. Future programs need to be developed and implemented to inform fathers about the impact the maladaptive behaviors and have depression have on their family. These programs need to focus on informing the father before birth of the child, since research has shown that the impacts of these behaviors can begin as early as three to four years of age. Future research can be dedicated to establishing a range of use, of the maladaptive behavior and depression, which must negatively impact the

family. Also, the effects that the behaviors have on the child at the initial impact and later on in life should be studied.

Resources

American Psychiatric Association (1994). Diagnostic and statistical manual of mental disorders, Fourth Edition. Washington, DC: American Psychiatric Association.

Blackson T. C., Butler T., Belsky J., Ammerman R. T., Shaw D. S., Tarter R. E. Individual traits and family contexts predict sons' externalizing behavior and preliminary relative risk ratios for conduct disorder and substance use disorder outcomes. *Drug Alcohol Depend* 1999; 56: 115-31

Burstein, M., Stanger, C., Kamon, J., & Dumenci, L. (2006). Parent psychopathology, parent and child internalizing problems in substance-abusing families. *Psychology of Addictive Behaviors*, 20, 97-106

Centers for Disease Control Prevention : Births, Marriages, Divorces, and Deaths: Provisional Data for 2009. *Nat Vital Stat Rep* 2010; 58: pp. 1-6

Chassin, L., Pitts, S. C., DeLucia, C., & Todd, M. (1999). A longitudinal study of children of alcoholics: Predicting young adult substance use disorders, anxiety, and depression. *Journal of Abnormal Psychology*, 108, 106–119.

Cox, M. J., Paley, B., & Harter, K. (2001). Interparental conflict and parent–child relationships. In J. H. Grych & F. D. Fincham (Eds.), *Interparental conflict and child development: Theory,*

research, and application (pp. 249– 272). New York, NY: Cambridge University Press. doi: 10.1017/CBO9780511527838.011

Cummings, E. M., & Davies, P. T. (2002). Effects of marital conflict on children: recent advances and emerging themes in process-oriented research. *Journal Of Child Psychology & Psychiatry & Allied Disciplines*, 43(1), 31.

Cummings, E. M., Schermerhorn, A. C., Davies, P. T., Goeke-Morey, M. C., & Cummings, J. S. (2006). Interparental discord and child adjustment: Prospective investigations of emotional security as an explanatory mechanism. *Child Development*, 77, 132– 152. doi: 10.1111/j.1467-8624.2006.00861.x

Cunningham, A. M., and C. Knoester. 2007. Marital status, gender, and parents' psychological well-being. *Sociol Inq* 77:264–87.

El-Sheikh, M. (2005). The role of emotional responses and physiological reactivity in the marital conflict–child functioning link. *Journal Of Child Psychology & Psychiatry*, 46(11), 1191-1199. doi:10.1111/j.1469-7610.2005.00418.x

Fals-Stewart, W., Kelley, M. L., Fincham, F. D., Golden, J., & Logsdon, T. (2004). Emotional and Behavioral Problems of Children Living With Drug-Abusing Fathers: Comparisons With

Children Living With Alcohol-Abusing and Non-Substance-Abusing Fathers. *Journal Of Family Psychology*, 18(2), 319-330. doi:10.1037/0893-3200.18.2.319

Eng, P. M., Kawachi, I., Filzmaurice, G., & Rimm, E. B. (2005). Effects of marital transitions on changes in dietary and other health behaviours in US male health Professionals. *Journal Of Epidemiology & Community Health*, 59(1), 56-62. doi:10.1136/jech.2004.020073

Felix, D. S., Robinson, W. D., & Jarzynka, K. J. (2013). The influence of divorce on men's health. *Journal Of Men's Health*, 10(1), 3-7.

Hussong, A. M., Wirth, R. J., Edwards, M. C., Curran, P. J., Chassin, L. A., & Zucker, R. A. (2007). Externalizing symptoms among children of alcoholic parents: Entry points for an antisocial pathway to alcoholism. *Journal of Abnormal Psychology*, 116, 529-542

Hussong, A. M., Cai, L., Curran, P. J., Flora, D. B., Chassin, L. A., & Zucker, R. A. (2008). Disaggregating the Distal, Proximal, and Time-Varying Effects of Parent Alcoholism on Children's Internalizing Symptoms. *Journal Of Abnormal Child Psychology*, 36(3), 335-346.

Indredavik, M. S., Brubakk, A., Romundstad, P., & Vik, T. (2007). Prenatal smoking exposure and psychiatric symptoms in adolescence. *Acta Paediatrica*, 96(3), 377-382. doi:10.1111/j.1651-2227.2006.00148.x

Jan-Llopis, E., Anderson, P., Stewart-Brown, S., Weare, K., Wahlbeck, K., McDaid, D., & ... Litchfield, P. (2011). Reducing the silent burden of impaired mental health. *Journal Of Health Communication, 16*59-74.

Kane, P., & Garber, J. (2004). The relations among depression in fathers, children's psychopathology, and father-child conflict: A meta-analysis. *Clinical Psychology Review, 24*339-360. doi:10.1016/j.cpr.2004.03.004

Kessler, R.C., Andrews, G., Mroczek, D., Ustun, T.B., & Wittchen, H.U. (1998). The World Health Organization Composite International Diagnostic Interview ShortForm (CIDI-SF). *International Journal of Methods in Psychiatric Research, 7*, 171-185.

Langton, Callie E., and Lawrence M. Berger. 2011. "Family Structure and Adolescent Physical Health, Behavior, and Emotional Well-Being." *Social Service Review 85* (3): 323-57.

Leonard K. E., Rothbard J. C. Alcohol and the marriage effect. *J Stud Alcohol Suppl 1999*; 13: 139-46

Lewis-O'Connor, A., Sharps, P. W., & Humphreys, J. (2006). Children exposed to intimate partner violence (pp. 3-28). In M.

Liu, J. (2004). Childhood externalizing behavior: theory and implications. *Journal Of Child & Adolescent Psychiatric Nursing, 17*(3), 93-103.

Liu, J., Chen, X., & Lewis, G. (2011). Childhood internalizing behaviour: analysis and implications. *Journal Of Psychiatric & Mental Health Nursing, 18*(10), 884-894.
doi:10.1111/j.1365-2850.2011.01743.x

Liu, H., & Umberson, D. (2008). The times they are a changin': Marital status and health differentials from 1972 to 2003. *Journal of Health and Social Behavior, 49*, 239– 253. doi: 10.1177/002214650804900301

Mackler, J. S., Kelleher, R. T., Shanahan, L., Calkins, S. D., Keane, S. P., & O'Brien, M. (2015). Parenting stress, parental reactions, and externalizing behavior from ages 4 to 10. *Journal Of Marriage And Family, 77*(2), 388-406. doi:10.1111/jomf.12163

McFarlane, J. M., Groff, J. Y., O'Brien, J. A., & Watson, K. (2003). Behaviors of Children Who Are Exposed and Not Exposed to Intimate Partner Violence: An Analysis of 330 Black, White, and Hispanic Children. *Pediatrics, 112*(3), e202-e207.

Moore, A. A., Karno, M. P., Grella, C. E., Lin, J. C., Warda, U., Liao, D. H., & Hu, P. (2009). Alcohol, Tobacco, and Nonmedical Drug Use in Older U.S. Adults: Data from the 2001/02

National Epidemiologic Survey of Alcohol and Related Conditions. *Journal Of The American Geriatrics Society*, 57(12), 2275-2281. doi:10.1111/j.1532-5415.2009.02554.x

Perle, J. G., Levine, A. B., Odland, A. P., Ketterer, J. L., Cannon, M. A., & Marker, C. D. (2013). The Association between Internalizing Symptomology and Risky Behaviors. *Journal Of Child & Adolescent Substance Abuse*, 22(1), 1-24.

Reichman N.E., Teitler J.O., Garfinkel I., and McLanahan S.S.: Fragile families: Sample and design. *Children & Youth Services Review* 2001; 23: pp. 303-326

Smith PH, Homish GG, Leonard KE, Cornelius JR: Women ending marriage to a problem drinking partner decrease their own risk for problem drinking. *Addiction (Abingdon, England)* 2012, 107(8):1453-1461.

Stewart, Susan D., and Chadwick L. Menning. 2009. "Family Structure, Nonresident Father Involvement, and Adolescent Eating Patterns." *Journal of Adolescent Health* 45 (2): 193–201.

McMahon T. J., Winkel J. D., and Rounsaville B. J., "Drug abuse and responsible fathering: a comparative study of men enrolled in methadone maintenance treatment," *Addiction*, vol. 103, no. 2, pp. 269–283, 2008.

Walsh, C., MacMillan, H. L., & Jamieson, E. (2003). The relationship between parental substance abuse and child maltreatment: Findings from the Ontario Health Supplement. *Child Abuse & Neglect*, 27, 1409-1425.

Wells, K. M. (2006). Substance abuse and child maltreatment. In C. R. Brittain (Ed.), *Understanding the medical diagnosis of childmaltreatment: A guide for nonmedical professionals* (3rd ed., pp. 179-189). New York: Oxford University Press

Wilson, S., & Durbin, C. E. (2010). Effects of paternal depression on fathers' parenting behaviors: A meta-analytic review. *Clinical Psychology Review*, 30, 167– 180. doi: 10.1016/j.cpr.2009.10.007