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THE MISERY INDEX AND AN INDEX OF MISERY REVISITED

David Lester & Bijou Yang

Abstract: The correlations between the components of the Misery Index for the period 1950-2022 in the United States showed that the male suicide rate was positively correlated with the unemployment rate while the inflation rate was positively correlated with the female suicide rate.

The misery index (or the discomfort index) is commonly used to describe the sum of the inflation and unemployment rates. Golden, Orescovich and Ostafin (1987) asked whether the general public would prefer lower inflation or lower unemployment and suggested combining them into a misery index. Robert Barro is cited in *The Economist* (Anon, 2024) as suggesting augmenting the misery index with, for example, interest rates.

Yang and Lester (1992) explored whether the misery index is well named by examining its association with the suicide rate, a measure of misery in the society. They noted that, although suicide is an extreme behavior and, therefore, relatively rare, it is an act taken by desperately unhappy people and has been thought to be determined, in part, by economic factors (Hamermesh & Soss, 1974). Thus, it appears to be a sound measure of misery. Yang and Lester studied the period 1939-1986 and found that the Pearson correlation between unemployment rates and suicide rates over the 48 years was 0.79, between the inflation rate and suicide rates was 0.25, and between the misery index and suicide rates 0.77. Thus, unemployment was more predictive of suicide rates than was inflation.

The present study studied the post-World War 2 period of 1950-2022 and examined the associations for the total suicide rate and the male and female suicide rates separately. Following Yang and Lester, each of the three components of the new misery index was converted to z-scores and the three components summed. The three components did not show any significant trends during this period, whereas the male suicide rate (but not the female suicide rate) rose during the period.

The correlations are shown in Table 1. The misery index was significantly associated with the female suicide rate (Pearson $r=0.308$, $p<.01$) but not with the male suicide rate ($r = 0.122$). Looking at the three components of the misery index, the male suicide rate was marginally associated with the unemployment rate ($r=0.227$, $p<0.10$), the female suicide rate was significantly associated with

the inflation rate (r=0.437, p<.001) and neither suicide rate was associated with prime interest rate.

Table 1: Person correlations between the variables

	Suicide Rates		
	Overall	Male	Female
Year	0.65	0.62	-0.04
Misery index	0.269*	0.182	0.308**
Unemployment	0.226^	0.227^	0.099
Inflation	0.238*	0.082	0.437***
Prime interest rate	0.152	0.110	0.171

*** p<.001
** p<.01
**p<.05
^p<.10

The results show that the misery index has a larger association with female suicide rates than with male suicide rates. In addition, the two suicide rates respond differently to the components of the misery index in a manner that seems appropriate, men to unemployment and women to inflation. Neither suicide rate was associated with the prime interest rate.

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Appendix: Data sources

https://www.investopedia.com/historical-us-unemployment-rate-by-year-7495494
https://www.investopedia.com/inflation-rate-by-year-7253832
https://www.fedprimerate.com/wall_street_journal_prime_rate_history.htm
https://www.kff.org/other/state-indicator/suicide-rate-by-sex/?dataView=1&currentTimeframe=23&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

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SUICIDE RATES AFTER ROE V. WADE

DAVID LESTER

Abstract: The present study investigated changes in suicide rates after abortions were made easier after Roe v Wade passed in 1973. No consistent changes were found in female suicide rates by age.

Lester (1992) found that the passage of Roe versus Wade in the Unted States in 1973, which made it much easier to obtain abortions nationwide, resulted in a decrease in neonatal murder. The murder rate of newborns in the first hour of life declined from 1.41 per 100,000 per year to 0.44, and the murder rate in the first week declined from 2.07 to 0.86

Was there any impact on the suicide rate of women aged 15-44? The suicide rates by sex and age for the period 1968-1978 come from Lester and Yang (1998).

Table 1: Suicide rates by age and sex before and after Roe v. Wade passed in 1973

	Before (1968-1972) M (SD)	After (1974-1978) M (SD)	t (df=8)		%change
Men					
15-24	13.30 (1.81)	19.36 (1.76)	5.27***	increase	+45%
25-34	18.96 (1.43)	24.68 (1.37)	6.45***	increase	+30%
35-44	22.08 (0.24)	22.96 (0.71)	2.64*	increase	+4%
45-54	27.34 (0.55)	25.94 (1.65)	1.80	no change	-5%
55-64	32.78 (0.89)	29.38 (1.13)	5.30***	decrease	-10%
65-74	35.70 (0.85)	33.70 (0.78)	3.87**	decrease	-6%
75+	43.84 (1.58)	44.66 (1.97	0.73	no change	+2%
Women					
15-24	4.16 (0.57)	4.84 (0.27)	2.42*	increase	+16%
25-34	8,20 (0.68)	8.48 (0.29)	0.85	no change	+3%
35-44	11.70 (0.62)	10.66 (0.66)	2.57*	decrease	-9%
45-54	12.60 (0.45)	12.44 (0.71)	0.43	no change	-1%
55-64	11.46 (0.63)	10.52 (0.56)	2.48*	decrease	-8%
65-74	8.92 (0.84)	8.38 (0.43)	1.27	no change	-6%
75+	6.56 (0.40)	6.60 (0.39)	0.18	no change	-1%

Table 1 shows that, on the whole, the male suicide rate for those under the age of 54 was increasing during the early 1970s, whereas the female suicide for those under the age of 54 did not change greatly. From 1968 to 1978, the overall male suicide rate rose from 15.7 to 19.0 (+21%) while the overall female suicide rate rose from 5.6 to 6.3 (+12%).

By age, the female suicide rate for those aged 15-24 rose significantly after the passage of Roe v. Wade, whereas the female suicide rate for those aged 35-44 declined significantly after the passage of Roe v. Wade. The female suicide rates for those aged 25-34 and 45-54 did not change significantly.

It must be remembered that many socio-economic variables were changing during this period, and these also may impact the suicide rate. For example, Lester and Yang (1998) found that for the period 1950-1985, the American suicide rate was positively associated with divorce rate and negatively with the marriage and birth rates.[1]

The results of this analysis do not support the hypothesis of a significant and consistent change in the suicide rates of women after the passage of Roe v. Wade.

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[1] For men, only the marriage and divorce rates remained as significant predictors of the suicide rate while, for women, only birth rates remained as a significant predictor. Lester and Yang also documented the positive impact of unemployment rates on suicide rates during this period.

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ABORTION AND SUICIDE: AN ECOLOGICAL STUDY IN THE UNITED STATES

DAVID LESTER & STEVEN STACK

Abstract: The present study investigated predictors of abortion rates in the 48 American continental states in 2000. Surprisingly, the best predictors of state abortion rates were measures of the personality of the residents of the states.

The relationship between abortion and suicide can be studied at two levels: individual and societal. At the individual level, does having an abortion (or being prevented from having an abortion) have an impact on the woman's suicidal ideation and behavior? Does a pregnant woman's suicidality have an impact on her decision to have an abortion?

At the societal level, the question is different. Many societal variables are inter-correlated, and an association between two variables may be misleading. For example, Lester (1995) found that the divorce rate in the American states was positively associated with the overall suicide rate. In addition, Lester found that the divorce rate was associated with the suicide rate of the divorced, as expected, but also with the suicide rates of the single, married and widowed. Therefore, it is not divorce *per se* that is associated with the suicide rates but, rather, the divorce rate of the American states is a measure of a broader societal characteristic such as social disintegration, and this variable impacts suicide rates.

In a similar vein, in a study of the American states, Cutright and Fernquist (2004) found that male and female suicide rates were predicted by the divorce rate, church membership, approval of suicide, population density and in-migration. Lester (1994) has shown that these variables are inter-correlated, again suggesting the presence of a broader societal characteristic. Therefore, if we find that abortion rates in the American states are associated with suicide rates, is this a direct connection or are abortion rates one variable in a broad societal characteristic?

In a sample of 62 countries, Kim (2021) found that suicide rate was associated positively with the abortion rate and with alcohol consumption positively, and the fertility rate negatively (but not with the homicide rate or GDP per capita). No study has appeared using an ecological study of the American states. The present study explored correlates of abortion rates in the American states.

The Study

The present analysis used the 48 continental states, thereby excluding Alaska and Hawaii and Washington DC.[2] The variables included were suicide rates for men and women for 2000, the abortion rate for residents in 2000, birth rates in 2000, a measure of southernness, the percentage of black residents, estimates of the mean IQ of the residents of each state, and estimates of the personality of the residents of the states using the Big Five inventory (neuroticism, openness, conscientiousness, agreeableness and extraversion) for the period 1999-2005. The sources and websites used for these data are listed in the Appendix.

The predictor variables were subjected to Principal Components extraction and a Varimax rotation. The results of the factor analysis and correlations with abortion rates are shown in Table 1. Abortion rates were positively associated with a measure of openness in the states and negatively with measures of extraversion and agreeableness. Abortion rates were not significantly associated with the female suicide rate.

Three factors were identified from the factor analysis which, on the basis of the variables with the highest loadings on the factors, can be labelled: (1) southernness, (2) suicide rates and (3) extraversion. Surprisingly, scores on Factor 3 had the strongest correlation with the abortion rates of the states.

There are, of course many other variables that characterize the American states, and this study is limited by the choices made here. Nevertheless, the results are surprising in that the personality traits of the residents of the states were the better predictors of state abortion rates

Table 1: Factor analysis and correlations with abortion rates

	Correlation with abortion rates	Factor 1	2	3
Suicide rate males	-0.35*	+0.07	+0.88#	-0.11
Suicide rate females	-0.14	+0.26	+0.89#	+0.10
IQ	-0.14	-0.87#	-0.17	+0.04
Southernness	-0.05	+0.91#	+0.23	-0.04
% black	+0.25^	+0.82#	-0.40	+0.06
E	-0.35*	-0.11	-0.06	+0.87#
A	-0.45**	+0.13	+0.04	+0.83#
C	-0.24	+0.39	+0.49#	+0.58#
N	+0.17	+0.28	-0.73#	-0.31
O	+0.51***	+0.10	+0.03	-0.68#
Correlation with abortion rates		+0.12	-0.26	-0.46***
% variance		29.7%	24.4%	21.2%

*** <.001
** <.01
* <.05 # high loading

[2] For a discussion of the impact of such a decision, see Lester (2025). Lester has always preferred studying the 48 continental contiguous states and not including Alaska, Hawaii and Washington DC.

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Appendix: Data Sources

Suicide rates: 2000
https://www.kff.org/other/state-indicator/suicide-rate-by-sex/?dataView=1&currentTimeframe=22&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

Birth rates: 2000
Births: Final Data for 2000 by Joyce A. Martin, M.P.H.; Brady E. Hamilton, Ph.D.; Stephanie J. Ventura, M.A.; Fay Menacker, Dr. P.H.; and Melissa M. Park, M.P.H., Division of Vital Statistics National Vital Statistics Report. 50(5)

Big 5 personality traits: 1999-2005
Rentfrow, P. J., Gosling, S. D., & Potter, J. (2008). A theory of the emergence, persistence, and expression of geographic variation in psychological characteristics. *Perspectives on Psychological Science*, 3, 339-369.

Southernness
Gastil, R. D. (1971). Homicide and a regional culture of violence. *American Sociological Review, 36,* 412-427.

Abortion rates for residents 2000
Wm. Robert Johnson
https://www.johnstonsarchive.net/policy/abortion/index.html#US

% black residents 2000
US Census Bureau

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LONG-TERM EFFECTS OF ELIMINATING UNWANTED PREGNANCIES: ABORTION AND SUBSEQUENT YOUTH SUICIDE

David Lester & Steven Stack

Abstract: The aim of the present study was to explore whether states with high abortion rates had lower youth suicide rates some 15-20 years later. The data indicated that state abortion rates are stable over time and are negatively associated with the suicide rates of most age groups, suggesting that more broad social characteristics are involved in the negative association between abortion rates and youth suicide rates.

Lester (1992b) documented that the passage of Roe v Wade in 1973 led to a reduction in infanticide. From 1963-1972 to 1974-1983, the murder of babies in the first hour after birth declined from 1.44 per 100,00 per year to 0.44. The murder rates of babies in the first week of life declined from 2.07 to 0.86. During this period, the overall homicide rate in the United States rose from 7.00 to 9.03.

Looking more broadly at the total crime rate, Donohue and Levitt (2001) found that states with high abortion rates in the 1970s and 1980s experienced greater crime reductions in the 1990s. They suggested that reducing the number of unwanted children was the possible reason for this decline in crime. Later, Donohue and Levitt (2020) updated their data set and concluded that crime fell roughly 20% between 1997 and 2014 as a result of legalized abortion.

Previous research on abortions suggested, therefore, that a high abortion rate in a state might result in less behavioral pathology in the youths in the states, including a lower suicide rate. The present study was designed to examine this possibility, in particular, does a low rate of abortions result in a high suicide rate later of those aged 10-24, based on the hypothesis that unwanted children receive poorer parenting, resulting in worse mental health, and, in the extreme case, higher suicide rates.

Method

Data Sources

The data were limited by the data sources. For abortion rates by residents of the American states, it was decided to use the years 1990 and 2000. However, the best source for these data is the Johnston's Archive[3], and data for 1990 were missing for many states. Abortion rates were consistently present for 1991, and so abortion rates for 1991 were used along with those for 2000.

[3] https://www.johnstonsarchive.net/policy/abortion/index.html#US

The data for youth suicide rates by state and by age were obtained from Curtin (2020). However, Curtin's data are for the period 2000-2018 and are for youths aged 10-24. Suicide rates by year were missing for several states, but Curtin did present suicide rates for all states for 2007-2009 and for 2016-2018, and so these rates were used.

Results

Descriptive statistics for the variables for the 50 American states are shown in Table 1.

Table 1: Descriptive statistics

	Mean	SD
Abortion rate 1991	21.15	9.51
Abortion rate 2000	16.92	7.63
Suicide rate 2007-2009	8.81	3.94
Suicide rate 2016-2018	12.66	5.03
Abortion rate % change	-0.19	0.16
Suicide rate % change	+0.46	0.19

The Consistency of the Rates

The rates were very consistent over time. The correlation between the abortion rates in 1991 and 2000 was +0.87 (two-tailed $p<.001$), and for suicide rates in 2007-2009 and 2016-2018 the correlation was +0.95 ($p<.001$). Over a longer period of time, the association between abortion rates in 1974 and 2000 was 0.73 ($p<.001$). The abortion rate of the states is, therefore, an enduring characteristic as are many other social and economic variables.

The Correlation between Abortion Rates and Suicide Rates

Abortion rates were significantly and negatively correlated with suicide rates:

abortion rates 1991 and suicide rates 2007-2009 -0.41 ($p<.01$)
abortion rates 2000 and suicide rates 2016-2018 -0.49 ($p<.001$)

Since some researchers prefer to use only the 48 continental, contiguous states (see Lester [2025] for a discussion of this), the correlations for these 48 states were -0.51 $p<.001$) and -0.54 ($p<.001$), respectively.

Therefore, the higher the abortion rate for residents in a state, the lower the suicide rate for 10-24-year-olds eighteen years later. However, the consistency of

abortion rates and suicide rates over time indicates that, *in general*, the higher the abortion rate of residents in the American states, the lower the youth suicide rate.[4]

Between the two time periods, abortion rates declined while youth suicide rates increased, in line with the hypothesis guiding this study. However, the percentage change in these two variables was not statistically significant (r=0.03).

Confounding Variables

In a study of the suicide rates in the American states in 1980. Lester (1994) factor analyzed 37 socio-economic variables and identified seven clusters (factors) of variables. Scores for the second factor were associated with the suicide rates of the states. The variables on this cluster were: crime rate, divorce rate, interstate migration, % divorced, and alcohol consumption positively and % born in state, church attendance and gun control strictness negatively. This cluster was labelled social disintegration. Many of these variables are no longer measured consistently. For example, divorce rates are no longer available for some states.

The strongest correlate of the youth suicide rate was the percentage of African Americans in each state. For the year 2000, the correlation was -0.45 ($p<.001$). The correlation between abortion rates in 2000 and youth suicide rates in 2016-2018, controlling for the percentage of African American residents of the states using partial correlation coefficients, was -0.44 ($p<.01$), indicating that this control variable had little effect on the association between abortion rates and suicide rates.

What about the Associations for other Age Groups?

Suicide rates for 2018 by age were available from www.kff.org. However, for some states, rates were not available for all age groups. These omissions were frequent for suicide rates in those aged 0-17 but present occasionally in other age groups. The sample size (n) for each age group is noted by the correlations in Table 2.

Table 2: Abortions rates in 2000 and suicide rates in 2018

Age	n	Pearson r
0-17	32	+0.084
18-24	46	-0.442**
25-34	49	-0.644***
35-44	47	-0.506***
45-54	50	-0.506***
55+	50	-0.293*
Total suicide rate	50	-0.508***

** p<.01
*** p<.001

[4] The correlation between abortion rates in 1974 and suicide rates of youths in 2016-2018 was -0.41 ($p<.01$).

It can be seen in Table 2 that the abortion rate in 2000 was negatively associated with the suicide rates in all age groups, but the association was weaker for the suicide rates of those over the age of 55.

State Initiatives for Preventing Suicide

Lester (1992a) found that the increase in youth suicide rates in the American states from 1980 to 1987 was associated with state government initiatives for preventing youth suicides (for youths aged 15-19 years).

The data for Lester's study on 10 state initiatives for preventing youth suicide came from Kusserow (1986) for state initiatives present in 1986. The scores for the American states for how many of these activities were present in the states was entered into the data set. The mean number of activities ranged from 0 to 9, with a mean of 3.3 (SD = 2.1). A linear regression found that only the abortion rate in 1991 (beta = -0.352, p=.015) but not youth suicide prevention activities (beta = -0.172, p=.22) predicted youth suicide rates for those aged 10-24 in 2007-2009.

Discussion

The results of the present study indicated that states with higher abortion rates for residents had lower youth suicide rates 15-20 years later. However, the abortion rates were consistent over longer periods of time (1974 to 2000) and the abortion rates were associated with lower suicide rates in all age groups, suggesting that these variables are stable characteristics of the states, and that their association stems from broader social characteristics of the states.

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SUICIDE AND SOCIETY[5]

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Abstract*:* The impact of suicide on society is analyzed, focusing on the economic cost, the decrease in population longevity, and the political impact. The possible function of suicide for a society is discussed, and the question is raised of whether a society could ever have a zero suicide rate.

The relationship between suicide and society raises two issues, one of which is well-studied (the impact of society on suicide) and one of which has been ignored (the impact of suicide on society). This imbalance, of course, makes the issue of the impact of suicide on society more interesting, and so this essay will begin by examining some ways in which suicide might have an impact on society.

The Impact of Suicide on Society

The impact of suicide on the society has rarely, if ever, been considered by scholars, yet suicide must be presumed to have an impact on the society for suicide has been made illegal (as in the United Kingdom prior to 1961 and in Canada prior to 1972), condemned as immoral and sinful, and been the focus of strenuous prevention efforts. Perhaps in these three areas, respectively, suicide is viewed as a negative comment on the state, upon organized religion and on the competence of the mental health profession. In each case suicide undermines the power of the social system (political, religious and mental health).

Many communist nations in the past (including China, East Germany, Romania, and the USSR) refused to report suicide rates, possibly because they felt that suicide was an index of the misery experienced in those societies as a result of the communist dictatorships. Suicide also emphasizes the rights of the individual over those of the larger society, and many societies have asserted that the lives of its citizens belong to the state. Even the humanitarian trend in the Netherlands recently for providing a mechanism for citizens to apply for assisted suicide can also be seen as a way for the state to regain control over the decision of people to die by suicide.

Viewed as an index of misery, suicide serves to draw attention to the social ills affecting a group, whether it be the youth, native Americans and other aboriginal groups, or the elderly. In addition, suicide, like all deviant behaviors, serves to define normality for society.

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[5] Reprinted from Lester and Yang (1993).

There have been occasional suggestions by others for the impact of suicide on society, and these will be reviewed in the following sections.

Population Longevity

Waigandt and Phelps (1990) noted that 51,147 people died from suicide and homicide in the USA in 1980. They calculated that this reduced the life expectancy of men by 0.705 years and of women by 0.261 years. A total of 1,305,805 person-years per decade are irretrievably lost from suicide and homicide. Waigandt and Phelps did not calculate these figures separately for suicide.

The CDC (1984) calculated that suicide accounted for 645,680 years of potential life lost in 1984, with seventy one percent of the total attributable to suicide among white males. Homicide accounted for an additional 609,678 years of potential life lost.

The Economic Impact

Epidemiological studies suggest that major depressive illness affects about two percent of the population of the USA, and there are about 30,000 suicides each year. What economic cost do these behaviors involve for the nation? Stoudemire, et al. (1986) made an effort to estimate this cost.

For those suffering from a major depressive illness, there are both direct costs and indirect costs. The direct costs include the cost of treatment (such as physician visits, hospitalization, pharmaceuticals and travel costs when seeking care) while the indirect costs accrue from the loss of productivity of those who have a major depressive disorder. For those who die by suicide, the costs are mainly indirect.

Using data from studies conducted under the auspices of the National Institute of Mental Health, Stoudemire estimated that the number of cases of major depressive illness in a six-month period in 1980 was 4.8 million.

From other epidemiological studies, Stoudemire estimated that affective disorders accounted for about half a million hospital admissions in 1980, 7.4 million hospital days, and 13.3 million physician visits.

For inpatient care, the total cost came to 1.3 billion dollars. For outpatient care, the cost was 0.6 billion dollars. Other costs (including medication) came to 0.2 billion dollars, giving a grand total of 2.1 billion dollars.

The indirect costs of major depressive illnesses were based on an estimate of 5.7 million treated cases and 2.8 million untreated cases in 1980. Stoudemire estimated that these cases led to 127 million days lost involving treatment and 92

million days lost over and above the treatment days. Using data on the proportion of men and women in the labor force, Stoudemire estimated a loss of 10.0 billion dollars in earnings.

Many persons with depressive illness die by suicide. Stoudemire estimated that about 60 percent of all suicides have a major depressive illness. In 1980, there were 26,869 suicides, and Stoudemire estimated that the suicides of those with major depressive illness (using sex-specific estimates of discounted lifetime earnings) involved an indirect cost of 4.2 billion dollars.

Thus, the total cost of major depressive illness in 1980 was estimated to be 2.1 billion dollars for direct costs, 10 billion dollars due to lost productivity, and 4.2 billion dollars due to mortality from suicide. These costs add up to 16.3 billion dollars.

It should be noted that the suicides of those with major depressive disorders eliminate the need for treatment for these individuals in future years and so results in savings in direct costs. Thus, the direct costs for treatment might be higher, for example, in 1980, if some of those suffering from a major depressive disorder in earlier years had not died by suicide.

Stoudemire's estimate for the indirect cost as a result of the suicides of those with a major depressive illness was 4.2 billion dollars. This was based on an estimate of 60 percent of suicides having a major depressive illness. From this, we can estimate that the indirect costs of all of the suicides through lost lifetime earnings would be 7 billion dollars.

In addition, suicides also involve medical and legal costs in the efforts to revive suicides and to certify the deaths. These costs, however, are probably dwarfed by the social costs of economic production.

In addition to the behavior of suicide in which the person dies, there are many attempts at suicide each year where the individual survives. It is difficult to count the number of attempts at suicide each year because many attempters do not require medical attention and so do not come to the attention of the authorities. However, it has been estimated by Shneidman and Farberow (1961) that there at least eight suicide attempts for every completed suicide. Thus, if there are 30,000 suicides in one year, there may be upwards of 240,000 attempted suicides.

Many attempted suicides require medical care, and a good proportion of them receive psychological and psychiatric treatment. These attempters will be lost to the labor force during this period, incurring additional economic costs. It can be seen that the economic costs of suicide are considerable.

Looking just at suicides by those aged 15-24, Weinstein and Saturno (1989) estimated that each youth suicide results in the loss of 53 years of human

life and $432,000 of economic productivity. The national cost of youth suicide in the USA in 1980 came to 276,000 years of life lost, 217,000 years of productive life lost (before the age of 65) and economic costs of $2.26 billion. Adding in the costs of nonfatal suicidal acts, the cost rose to $3.19 billion.

Suicide and Political Protest

Occasional suicides have an impact on society because of the political motivation behind the death. For example, the Buddhist monk, Thich Quang Duc, immolated himself in Saigon on June 11, 1963, as a protest against the regime of Ngo Dinh Diem in South Vietnam, following which other people immolated themselves in Vietnam, the USA and elsewhere to protest the political situation in Vietnam (Coleman, 1987). It is difficult to assess the impact of such acts, and they are quite rare.

Societal Approval of Suicide

Schelling (1978), an economist, has noted that people's behavior often depends upon how many other people are behaving in the same way. An activity becomes self-sustaining (and may increase in incidence) once the frequency of that activity increases beyond a certain level. If this idea is applied to national suicide rates, it can be hypothesized that a given suicide rate creates a certain amount of publicity about suicide and a particular likelihood that a person in the society knows someone who has died by suicide. Once the suicide rate reaches a critical level, the publicity and probability of knowing suicides increase to such an extent that the effect of suggestion (or imitation) makes the behavior self-sustaining and perhaps accelerates it and may also increase the society's tolerance for and approval of suicide.

Lester (1989) had conducted several tests of this hypothesis and shown that, both for nations of the world and for the states of America, those regions in 1970 with higher suicide rates experienced greater absolute increases in the suicide rate by 1980.

Celebrity Suicides Leading to Further Suicides

Related to this last point, Phillips (1974) and Stack (1990) have documented that suicides reported by the media, especially of celebrities, are followed in the next week by an increase in the suicide rate, especially among those similar in age and sex to the celebrity suicide. The existence of suicide clusters (Coleman, 1987) illustrates a similar suggestion effect. Thus, it appears that a suicide stimulates, and perhaps creates, more suicides.

What is the Function of Suicide for Society?

In his discussion of crime, Durkheim (1982) argued that crime was necessary. It was linked to the basic conditions of social life. If one form of crime

disappeared, other forms would develop to fill the void. If serious crimes were to be viewed sternly by society, they may be reduced in frequency. But the stern values would then lead people to view the hitherto minor crimes more seriously, making them now major crimes.

Durkheim also noted that not everyone in a society shares the same moral values, and so some people will always offend against the moral and legal rules of the society. Furthermore, some behaviors which were once labelled as criminal later prove to be important for the society. Today's traitors may be tomorrow's heroes, today's terrorists may be tomorrow's rulers.

What then might the social function of suicide be? To date, this question has not been addressed. Lester (1988b) has explored this question at the biological level, suggesting that suicide may function to remove the genes of defective people (those who are psychiatrically disturbed, for example) and those past child-bearing age from the society and may also serve to reduce the size of the population. DeCatanzaro (1981), looking at suicide from a sociobiological perspective, similarly suggested that suicide may be altruistic by benefiting others who share our genes. But we have little to suggest for the social function of suicide.

Is There a Natural Suicide Rate?

Durkheim (1982) noted that crime was normal in the sense that it was completely impossible for any society to be entirely free from crime. Crime served a function for society and could never not-occur. This raises the question of whether suicide is normal in the sense that it is impossible for a society to be free from suicide.

Yang (1989; Lester & Yang, 1997) mathematically analyzed theories of the relationship between economic conditions (x) and the suicide rate (y) and concluded that all theories predict that the curve has a positive intercept on the y-axis during normal economic conditions and that, therefore, there is an inevitable non-zero suicide rate for every society, the "natural" suicide rate of the society.

Durkheim's (1897) theory of suicide implies a non-zero suicide rate for societies since he argued that suicide was more likely at both high and low levels of social integration and social regulation. A moderate level of social integration and social regulation would not necessarily result in an absence of suicide. Maris (1981) also suggested that no society could be free from suicide because of the inherent harshness of the human condition.

Yang and Lester (1991) tested this idea by examining several multiple regression analyses in which the suicide rates of the states of America in 1980 were regressed on several sets of socioeconomic variables. Setting the socioeconomic variables to zero (that is, for example, a zero divorce rate and a zero unemployment rate) still left the suicide rate as non-zero and positive. They

concluded that if social conditions were made ideal from the point of view of producing a low suicide rate, the suicide rate of Americans would still be non-zero and positive.

What is the Impact of Society on Suicide?

This is a less interesting question since it is the most well-studied. Many studies have appeared which document an association between societal characteristics and the suicide rates of societies (Lester, 1992). However, several issues are worth noting here.

Concrete versus Abstract Social Characteristics

Recently, two critiques of the sociological approach to the study of suicide have appeared (Taylor, 1990; Moksony, 1990) which are remarkably congruent. They both suggest that sociologists have failed to demonstrate the influence of the society on suicide. Taylor (1990) argued that Durkheim (1897), in his book on suicide, demonstrated associations between social variables (such as religious affiliation and marriage) and societal suicide rates. According to Taylor, Durkheim did not, however, mean to suggest that religious affiliation or marriage in themselves caused the differences in suicide rates. Rather, Durkheim used these associations to reveal a common underlying cause of suicide, which was the extent to which people are integrated and regulated by the society. Durkheim was searching for underlying and unobservable mechanisms and causal processes.

Later sociologists have forsaken the task of searching for invisible but real forces acting upon individuals in a society and have pursued instead a more empirical study of the relationships between observable social phenomena and suicide. They then view suicide as caused by these external social factors.

Moksony (1990) critiqued recent ecological studies of suicide, particularly the spatial differences in suicide rate over the different areas of cities. The early studies of this by Cavan (1928) and Schmid (1928) attributed the spatial pattern of suicide in cities to their location in the ecological structure of the city. For example, those areas of the city with higher suicide rates tended to have an increased turnover in their population which Cavan saw as impeding the development of both a coherent system of norms and values governing behavior and stable social relationships.

Moksony argued that recent studies, such as Maris's (1969), use aggregate data to describe relationships between various characteristics of the population in each area of the city to the suicide rate. These studies tend to explore the effects of the composition of the population in an area on the suicide rate rather than the area as an environment. For example, if areas have high numbers of migrants, then the suicide rate is predicted to be high because migrants have higher suicide rates. Cavan and Schmid, according to Moksony, would instead have treated the high proportion of migrants as a characteristic of the area and sought to show that

this characteristic of the area impeded the development of a stable social life for everyone in the area, newcomers and old-timers alike.

Moksony felt that his characterization of modern ecological studies was correct because the investigators often cast their studies as a preliminary step leading to a study in which the individuals would be directly observed. For example, if areas with many socially deviant individuals have higher suicide rates, the next step is usually to study suicidal behavior in the socially deviant and non-deviant people without regard to where they live (McCulloch & Philip, 1972).

Both Taylor and Moksony have made the point, then, that sociologists have not studied the effect of society qua society on suicide rates. Rather, sociologists have studied the impact of social variables as causal agents in themselves on the suicide rate of individuals in the society. Is there any research which might satisfy Taylor and Moksony?

Lester (1988a) suggested that social variables could be subjected to a factor analysis in order to identify factors, or clusters, of related variables. The factor scores can then be correlated with the suicide rates. Lester found that a cluster of variables including divorce rates, rates of interstate migration, and church attendance correlated most strongly with the suicide rates of the states of the USA. Lester's study does not imply that any of these three variables is more important than the other two in this association. It also does not imply that these three social variables cause the state suicide rates. Rather the study implies that there is a broader social characteristic, manifested perhaps in the states' divorce rates, migrant composition and religious patterns, which is associated with suicide rates. This higher order characteristic, whatever it may be called (though low social integration seems a good possibility) seems close to satisfying Taylor's and Moksony's requirement for a societal or area effect.

More detailed analysis of the data in the study above (Lester, 1994) has shown that the higher order characteristic (perhaps indicating low social integration) is associated with the suicide rate of males and females, whites and blacks, those of all ages, and those of all marital statuses. Thus, the association has generality and, in particular, despite the fact that one of the variables loading on the factor is the divorce rate, is found for those of each marital status.

Angyal (1941, 1965), a personality theorist, argued for a holistic position both for the consideration of the individual mind and for the society in which the individual lives. For the person, he discussed possibilities for the system principle, the pattern that organizes all of the component process of the person's mind. Similarly, for society, he argued that the individual valences and demand qualities present in the society that impact upon the individual are organized into axiomatic values, which are themselves organized into systems of axioms. These systems of axioms then form a system principle for society. Although he gave no examples of possible societal system principles, the distinction between

democracy and totalitarianism can be seen as referring to a societal system principle, as might a conservative versus a liberal government.

In Parsons' (1966) analysis of societies, he distinguished between primitive, archaic, advanced intermediate, and modern societies. These distinctions are really definitions of the system principles of different types of society as they developed over the centuries (Lester, 1984).

If we could classify a sample of modern societies according to such high-level system principles and then compare the suicide rates of the nations so classified, again we would have come close to satisfying the requirements of Taylor and Moksony of demonstrating a possible societal effect on suicide rates.

There is the suspicion that the issue raised by Taylor and Moksony may be a special case of the holistic/atomistic debate. Holistic theorists like to view the system (be it an individual mind or a society) as a whole, and they dislike analyzing the parts. However, a holistic analysis raises the question of the cause of the association. If we found, for example, that some broad characteristic of societies was associated with the suicide rate of those societies, then we would likely wonder how this association came about. The answer to such a question typically demands a non-holistic approach. From social integration, for example, we tend to move toward an examination of the various social customs that might affect social integration and eventually move to an examination of the impact of these customs on the individual. Then we will have laid ourselves open to the Taylor and Moksony criticisms.

For example, if we consider Eastern and Western European nations, which differ in democratic versus communist governments, it is hard not to consider specific differences in some features of society, such as the freedom of the press, and difficult not to consider the impact of these characteristics on specific subgroups, such as the young and the old. However, even if research and theorizing often moves toward an atomistic analysis, it would be intellectually satisfying if we could first demonstrate a societal or areal effect.

The Impact on the Society versus the Individual

Lester and Yang (1991) noted that the social context of suicide can be examined from both the interpersonal and the cultural perspectives. An analogy here is economics where microeconomics is concerned with the behavior of individual economic units and macroeconomics with the economy as a whole. Lester and Yang suggested parallel terms for sociology, with macrosocionomics examining the imapct of the culture on the members of the society while microsocionomics examines the impact of individuals on one another.

They explored the impact of divorce on suicide. In the microsocionomic perspective, divorce has a dramatic impact on the individuals involved. A person who was living with a spouse is now without that partner. The loss often leads

divorced people to attach themselves impulsively to other, often inappropriate, individuals. Divorced people sometimes find that former friends have taken the side of their ex-spouse, and they often feel lonely. Divorced people typically feel angry, depressed and anxious, and they are preoccupied with thoughts about the past and the future. From Durkheim's (1897) perspective, divorced people are less well socially integrated than those who are married.

To illustrate a macrosocionomic perspective, Lester and Yang compared those who get divorced in Ireland (where the divorce rate is very low) versus the USA (where the divorce rate is very high). How might the macrosocionomic variable of the divorce rate of the society affect the individual?

In Ireland where divorce is rare, the divorced person may feel stigma, and for a person to get divorced in such a society implies a low degree of social regulation. In contrast, in the USA where divorce is common, there is less stigma to being divorced, and divorce does not imply less social regulation in those divorcing.

Furthermore, as we noted in the previous section, the divorce rate of the society may also be an indicator of a more abstract characteristic of the society, a characteristic which may affect all members of the society. For example, societies with low levels of social integration, indicated by a high divorce rate among other variables, may have a high suicide rate in all groups of the society. Lester and Yang showed that, in the USA in 1980, states with high divorce rates had high suicide rates in the single, married and widowed as well as in the divorced.

Time Series versus Regional Studies

It has been noted that societal variables which are associated with, and may therefore cause, societal suicide rates appear to differ for regional studies of suicide rates and for time-series studies of suicide rates. For example, while unemployment rates appear to be associated with the suicide rate in the USA over time (Yang & Lester, 1990), they do not appear to be associated with the suicide rates of the states (Lester, 1988a). This raises the possibility that different sociological theories may be required to account for the results of the two types of studies.

Predicting the Smoothed Trend in the Suicide Rate versus Deviations

In time-series studies of the societal suicide rate, the departure from the smoothed trend in the suicide rate is often viewed as "random noise" in the data. Thus, it of interest to ask whether theories which account for the smoothed trend in the societal suicide rate over time might also account for these fluctuations. Yang and Lester (1990) found in the USA that the unemployment rate predicted both the smoothed trend in the suicide rate and the fluctuations from this trend. In contrast, the divorce rate predicted only the smoothed trend. Again, different sociological theories may be required to account for these two phenomena.

Summary

In this brief essay, we have tried first to identify some ways in which suicide might impact upon a society. We noted the economic costs of suicide and the impact of suicide on life-expectancy, and we also mentioned the possible impact of political suicides on society.

In discussing the effect of society on suicide, we have focused on several issues which merit thought and research in the future. Can we identify and show the impact of broad societal characteristics on suicide? Are different theories required for the regional variation in suicide rates and for the variation of societal suicide rates over time. And in time-series studies, are different theories required for predicting the smoothed trend and for predicting fluctuations from this trend?

Finally, we asked two questions which we hope will stimulate sociologists and social psychiatrists. What is the social function of suicide for society and could there be a natural (non-zero) suicide rate for societies?

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SUICIDES AND FUNERALS

David Lester

Abstract: The limited research on the funerals of suicides is reviewed, hopefully suggesting issues for future research. Research suggests that the funerals of suicides cost less than those dying of other deaths and that suicides may have preferences for their funeral which they sometimes convey in their suicide notes.

Funerals in General

The function of a funeral is obvious. it is to dispose of the body of the dead person with dignity and in accordance with customs. The function of a funeral is also to console and comfort the family of the deceased, to aid the spirit of the deceased into the afterlife by means of a religious ceremony, and to commemorate the achievements of the deceased (Friedl, 1976). However, we may distinguish between the manifest functions (those which are obvious) and the latent functions (those which may not be conscious to the participants).

The latent functions may include exhibiting wealth and status and creating an impression by the family of the deceased in their community (Friedl, 1976). Another latent function may be to provide a "time-out," like a party or holiday, and this is clearly seen in the Irish custom of the wake. Funerals bring the dispersed family and community together and so reinforces their solidarity. The funeral also promotes a new, living person to the role that the deceased formerly had. The former "head of the family" is now replaced by a new head. Finally, perhaps the funeral serves the latent function of alleviating our fear of death, partly by reinforcing our religious and spiritual values and by reminding ourselves that we will eventually be treated in the same way after our death.

Americans have increasingly turned to cremation rather than burial, rising to about 20 percent by 1993 (Banks, 1998). This was low compared to Canada (35 percent) and Great Britain (70 percent). The use of cremation varied greatly over the regions of America, from 4 percent in the South Central states to 44 percent in the Pacific states. Cremation has become more popular in recent years, and according to recent data, in 2020, the cremation rate in the United States was around 56%,

The Traditions

There are traditions in funerary observances which have, of course, changed over time. Richardson (1996) compared these observances in London

(England) in 1800 and 1900 and projected for 2000. In 1800, the bodies were handled at home, but by 1900, much of this was handled by the undertaker, although some people continued to lay out the body at home themselves. By 2000, most deaths occurred in hospitals, hospices and old people homes where the staff handle the bodies, and the undertaker handles almost all funerals.

In 1800 and 1900, viewing the dead was customary, but already by 1900 some families were foregoing this. It began to be confined to close relatives and friends, and the custom declined still further by 2000. Touching and kissing the corpse also declined during these 200 years, and Richardson attributed these changes to our fear of the dead. Practices such as darkening windows and covering mirrors and paying respects as the funeral procession passed in the street, which were common in 1800, have disappeared today. Other customs, such as the funeral feast, have continued. New customs have also appeared, such as a separate celebration of the dead person's life apart from the burial.

Factors Affecting the Choice of Disposal

Why do some people choose burial while others choose cremation? Weiss (2001) reported the results of a survey that offers some hints. About one-third of Americans surveyed chose cremation over burial, but trends indicate that it may become the preferred method soon. Cremation is much more popular in the west of the United States than in the east. Nevada has the most cremations, some 60 percent of all funerals, but the states that are frozen in the Winter, such as Alaska, also have a high proportion of cremations.

Those who prefer cremation are better educated, wealthier, and support such positions as legalizing marijuana and physician-assisted suicide. They are more likely to support gay rights, enjoy New Age music, watch the History Channel, golf, own Apple computers, take vitamins and drink domestic white wine. Only about 0.4 percent wanted their bodies frozen for later revival, and these tended to live more often in southern college towns!

The Cost of Funerals

The first study of the cost of funerals was reported by Pine and Phillips (1970). They studied 351 funerals in one small town and found that the percentage purchasing a funeral costing more than the average price for the sample was higher in females purchasing the funeral than in men, in those over the age of 50 than those younger, in spouses than in other relatives, in the higher social classes than in the lower social classes, and for those dying unexpectedly than in those whose deaths were expected.

They speculated upon the reasons for these results. They thought that the sex difference was because females had less accurate knowledge about the cost of funerals, were more likely to get a sizable insurance benefit, were more emotionally responsive, and emphasized conspicuous consumption more. The age

difference was perhaps because the older purchasers were more wealthy and were more influenced by community norms, and the same factors influenced the social class difference. For the unexpected deaths, Pine and Phillips suggested that unexpected deaths left the survivors with more guilt since they had no time to complete their obligations to the deceased and, in addition, the expected deaths were probably the result of chronic illnesses which may have used up available cash reserves.

Bern-Klug, et al. (2000) examined 163 funerals in Kansas City in 1995 for those aged 50 and older. The cost was lower for cremations than for burials and also for those for which the families had a preneed arrangement than for those which did not. The average cost of the funerals was $6,423 for burial and $2,287 for cremation.

The Funerals of Suicides

Funeral directors report that the atmosphere at the funerals of suicides is different from that at other funerals. There seems to be more shame and embarrassment (Calhoun, et al., 1988-1989). Are these funerals different in style or cost?

Lester and Ferguson (1992) studied a small sample of funerals in New Jersey (average cost $4,041) and found that the cost was related to the sex of the deceased, but cremations cost less than burials and the funerals of older people cost more than those of younger people. Funerals for cancer and heart failure deaths cost the same. The cost of the funerals for suicides was less than that for others (matched for sex, age and cremation/burial).

A later study (Duggan, et al.,1999), also in New Jersey, found that the cost of funerals increased over time (of course), was higher for burials ($4,837) than for cremation ($1,835), but did not vary with sex or age. There was a tendency for the funerals of suicides to cost less and the accidental deaths to cost more than those for natural causes. In both of these studies, the number of suicides was small, and so the results are unreliable until replicated on larger samples. But the evidence suggests that the funerals of suicides are less lavish than other funerals.

Collins and Rhine (2003) found that memorials occasionally were where suicides or murders had taken place, although the majority were for car crash sites. The memorial is typically exactly where the person died, and the kin often view the ground as sacred. County workers who maybe expected to remove the memorials often do not and take care not to disturbed them when they mow. They tend to begin spontaneously, within a few days of the death, and over time their contents tend to become more durable and substantial.

Holding a memorial service after the funeral is a common custom in religious families. There are many memorials now in cyberspace. Roberts and Vidal (1999-2000) looked at three such sites (e.g., World Wide Cemetery) and

found that those remembered in these sites tended to be young, more often men (and the male memorials were longer), and more often from accidents and suicide than might be expected. About a third were addressed to the dead person, and two-thirds to the community at large, and three main themes were identified: standard obituary, grief-oriented and, most commonly, story-telling usually celebrating the life of the deceased person. As the number and variety of such websites grows, more descriptive research is appearing on their content, looking at the effect of the cause of death (such as AIDS) and the sex and the age of the deceased on the content (e.g., de Vries & Rutherford, 2004).

Some memorials are specific, such as www.suicidewall.com which commemorates those who served in the Vietnam War and died by suicide (Lester, 2005).

What do the Suicides Want for their Funeral?

Li, et al. (2023) suicide notes in China and found that suicides preferred non-traditional funerals, which were simple and speedy rather than grand and costly. Li, et al. hypothesized that these choices suggested that suicides feared stigmatization and discrimination. Some suicides felt negatively about suicide and wished their families to dispose of the cursed bodily remains as swiftly as possible.

Discussion

As can be seen, research on the funerals of suicides is rare. It should be noted, in conclusion, that attendance at the funeral of a suicide can be therapeutic. In one case, Markowitz, (1990) noted that attending the funeral of one of his patients (a paranoid schizophrenic) seemed to be therapeutic for both the family and the therapist, and the ritual enabled Markowitz to lay to rest both the patient and guilty retrospection about treatment.

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TESTING ONE THEORY OF SUICIDE VERSUS ALSO TESTING RIVAL THEORIES: MORE ON METHODOLOGY

David Lester

Abstract. – Theories of the irrational thinking in suicidal individual are reviewed, and a battery of inventories was given to a non-clinical sample of students to explore whether there is a general tendency to think irrationally on all measures. The scores on all tests of irrational thinking were associated with suicidal ideation and depression. It is argued that researchers should not test only their preferred theory of suicide but, rather, should test competing theories.

Almost all suicide research that seeks to test a theory of suicide chooses one theory and tests that. If a researcher likes the defeat-entrapment theory of suicide, then scales to measure defeat and entrapment are administered to a sample of individuals along with a suicidal ideation questionnaire or questions about prior attempts at suicide. The same occurs if the researcher likes Thomas Joiner's Interpersonal Theory of Suicide or Zhang Jie's Strain Theory of Suicide. Rarely does a researcher compare and contrast two or more theories of suicide. What would happen if we did?

Cognitive theories of psychologically disturbed behavior, which became very popular in the 1980s, are based on the notion that our negative emotions and disturbing behaviors are not a result of the unpleasant events which we experience, but rather result from our thoughts about the events. The first noteworthy system, called Rational-Emotive Therapy, was devised by Albert Ellis (1962). Antecedent events (A) lead to beliefs (B) which result in consequences (C). If the beliefs are irrational, then the consequences are severe. If the beliefs are rational, then the consequences are mild.

What irrational thoughts might be specific to suicidal individuals? There have been several suggestions for the irrational thoughts that characterize suicide individuals. The cognitive process most central to Beck's theory of suicide is hopelessness (Wenzel & Beck, 2008). Hopelessness was defined by Beck, et al. (1974) as negative expectations for the future. Beck suggested that trait hopelessness was not relevant to all suicides but only for those who engage in premeditated suicidal actions

Gilbert and Allan (1988), arguing from an ethological perspective, proposed that depression results when individuals experience defeat and perceive themselves to be trapped with no escape possible. Joiner (2005) has proposed a

theory of suicide, known as the *interpersonal-psychological theory of suicide*. The theory focuses on two dispositional traits, one of which is perceived burdensomeness.

Other irrational thoughts include the impostor phenomenon in which people who are competent believe that they are really incompetent, and they often live in fear of being identified as frauds. Self-esteem can have a cognitive element.

The question then arises as to whether suicidal individuals think irrationally in only one of these ways (that is, they have a *specific deficit*) or whether their thinking is generally irrational and, therefore, they would obtain high scores on all of these measures of irrational thinking (that is, they have a *general deficit*). Lester (2013) gave a number of tests of irrational thinking that have been proposed as characteristic of suicidal individuals and explored whether individuals who score high on one type of irrational thinking also score high on the other types of irrational thinking (that is, is their irrational thinking a generalized trait). Lester gave a battery of tests to 152 college students:

1. The Perseverative Thinking Questionnaire (PTQ: Ehring, et al., 2011)
2. A rumination scale (Treynor, et al., 2003)
3. A scale to measure hopelessness and helplessness (Lester, 2001)
4. The Perceived Burdensomeness scale (Van Orden, et al., 2008)
5. The defeat and entrapment scales (Gilbert & Allan, 1998)
6. The impostor scale (Harvey & Katz, 1985)
7. The self-esteem scale (Janis, 1954) modified by replacing the word "feel" with the word "think"
8. The manic-depressive experiences scale (Thalbourne, et al., 1994).

Table 1: Principal components analysis and correlations with suicidal ideation and depression

	PC analysis unrotated factor loadings	correlations with past suicidal ideation (point-biserial correlations)	depression (Pearson correlations)	partial correlations controlling for sex and age past suicidal ideation	depression
Burdensomeness	.82	.36**	.43**	.36**	.43**
Defeat	.91	.42**	.51**	.42**	.51**
Internal entrapment	.92	.44**	.52**	.44**	.51**
External entrapment	.85	.39**	.49**	.40**	.49**
Impostor	.74	.20*	.42**	.21*	.41**
Perseverative thought	.81	.38**	.54**	.37**	.53**
Rumination	.68	.37**	.49**	.38**	.48**
Self-esteem	.86	.36**	.43**	.37**	.42**
Helplessness	.82	.27**	.41**	.28**	.40**
Hopelessness	.81	.23*	.29**	.23*	.29**
% of variance	67.9%				
eigenvalue	6.79				

* two-tailed $p < .02$
** two-tailed $p < .001$

The scores were subjected to a principal component analysis (Table 1). Only one factor with an eigenvalue greater than one was identified, indicating that scores on all of the measures of specific irrational thoughts were positively associated and measuring the same trait. All the cognitive variable scores correlated positively with depression scores and past suicidal ideation (Table 1), even after controls for the sex and age of the respondents using partial correlation coefficients.

It can be seen quite clearly that this data set supported all the theories of suicide that were tested, in addition to replicating previous research on variables such as the impostor syndrome.

Discussion

This result has important implications. As Braginsky, Braginsky and Ring (1969) pointed out many years ago in their discussion of cognitive deficits in schizophrenia, researchers wishing to test a specific theory of cognitive impairment for schizophrenia not only must show that their predicted cognitive impairment is found in schizophrenic patients, but also that other cognitive impairments are *not* found. In research on irrational thinking in suicidal individuals, researchers have, in the past, shown that their proposed irrational thinking is present, but they have ***never*** shown that other types of irrational thinking are not present.

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AN ANALYSIS OF THE NUANCED AND COMPLEX RISK FACTORS FOR SUICIDAL BEHAVIORS IN A YOUNG REFUGEE POPULATION[6]

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Abstract: A mixed methodology, sequential explanatory design (Creswell, et al., 2003) was used to analyse a database sample population of 257 young refugees enrolled for service at the Queensland Program of Assistance for Survivors of Torture and Trauma (QPASTT). Quantitative analyses were used to examine risk factors for the younger-young (12 to 17 years) and older-young (aged 18-24 years), during the period July 2016 to June 2017. Additionally, three relevant cases of young refugees demonstrating suicidality (suicidal ideation, behaviours and key suicide risk factors) were identified from the larger cohort sample and thematically analysed based on the identified literature and their quantitative findings, to more deeply characterise the risk factors evident in this sample. The results of this study confirm that the risk factors associated with suicidal behaviours in a young refugee cohort are complex and varied. Traumatic experience, migration stress, social isolation and relationship issues were shown to influence their suicidal behaviours. Those below the age of 18 years (younger-young) were more likely to experience severe anxiety symptoms and interpersonal difficulties. Those aged 18 to 24 years (older-young) were more likely to experience severe symptoms of traumatic grief, anxiety and family dysfunction or difficulties. Suggestions are made regarding an appropriate and ideal modality for understanding, intervening and preventing suicide in age-appropriate ways in young refugee populations.

Introduction

The United Nations High Commission for Refugees (2016) reports that the world is currently experiencing the greatest amount of displacement since World War II with 65.3 million people displaced by conflict or persecution. Several significant risk factors for suicidal behaviours are exacerbatedby the experience of forced migration (Balis & Postolache, 2008; Lien, Bahadur-Thapa, et al., 2010; Vijayakumar, 2016; Wilkinson, 2002). Suicide is a complex and multifaceted malaise, which is influenced by a variety of factors including mental health, social connectedness and identity (Shneidman, 1985), all of which can be

[6] This article is based on a thesis submitted to the Australian Institute for Suicide Research and Prevention (AISRAP) Griffith University in partial fulfilment of the requirements of the degree of Master of Suicidology. English spelling has been used rather than American spelling. angie.hoskin@postgrad.otago.ac.nz. linkedin.com/in/angie-hoskin-socialwork-suicidologist-phdstudent

influenced by forced migration. The term suicidal behaviour refers to the broad range of behaviours including thoughts, actions and intentions that surround a suicidal experience (Dhingra, et al., 2015).

Risk factors for suicidal behaviours include both distal and proximal factors. Distal risk factors refer to foundational vulnerability for suicidal behaviour (Moscicki, 2001). The existence of distal risk factors indirectly increases the risk for suicidal behaviour, but when viewed in isolation is not a reliable indicator of suicide risk (Roy, 2006). Distal risk factors are the pre-disposing elements that contribute to risk for suicidal behaviour and include factors relating to lifespan development, personality and family history (Li, et al., 2010).

Proximal risk factors for suicidal behaviours refer to events that surround the suicidal event (Moscicki, 2001). Proximal risk factors can include stressful life events or acute episodes of mental illness (Roy, 2006, 2010). Proximal risk factors differ for individuals depending on a range of variables including age, gender, ethnicity and culture (Moscicki, 2001). Proximal risk factors for suicidal behaviours also change throughout the lifespan and are useful in determining the immediacy of the risk (Poor & Poirrier, 2001; Moscicki, 2001).

Limited research exists regarding the specific vulnerability of young refugee populations in relation to their physical and psychological health and wellbeing. There is especially limited focus on developing an understanding of the distal risk factors for suicidal behaviours within the cohort. The information that exists currently is mostly research focused on adult populations. The few studies specifically focused on refugee children discovered that exposure to violence is a major precipitating, or distal risk factor, for poor mental health outcomes (Fazel, et al., 2012; Reed, et al., 2012).

Common refugee experiences, such as exposure to traumatic events, migration stress and acculturation pressures are all believed to influence poor mental health, contributing to an accumulative likelihood for suicidal behaviour. Poor mental health and wellbeing within the cohort could also be considered a distal risk factor for suicidal behaviour in its own right. However, there is a significant dearth of literature devoted to understanding the specific factors that contribute to suicidal behaviours. This lack of detailed information could result from a lack of reliable death and mortality data, limited access to official sources of information, or an overall underreporting of suicidal behaviours in this population (Vijayakumar, 2016). Developing an understanding of the specific factors associated with suicidal behaviour within this growing population will aid in addressing the significant gaps in local and global knowledge, as well as informing more targeted and tailored suicide prevention and intervention responses.

Background Literature

Several research papers focuses on the mental health factors and acculturation processes associated with a refugee experience. Very little of these findings focus either on the suicidal risk factors associated with the refugee experience or the effects of the refugee experience in a youth cohort. The relevant background literature discussed in this study is concentrated on combining both of these gaps to further understand the effects of the refugee experience upon the suicidal behaviours of a youth cohort.

The following overview of the literature is divided into seven parts that reflect the key areas impacting young refugee experiences and distress. One may hypothesise that these key areas impact likewise, or are in some way related to, suicidality in a young refugee cohort. The key identified areas are; traumatic experience, migration stress, cultural understandings of mental health, family, school, social connectedness and isolation, and acculturation.

Searches were conducted using the following databases: CINAHL, Social Services Abstracts, ProQuest, Scopus and PsychInfo for the years 1990 to the present. Search terms used included: *Refugee*, OR *Asylum Seeker*, OR *Migrant*, AND *Adolescent*, OR *Youth*, AND *Suic**, AND *Self-harm*, OR *Self Harm*. Peer reviewed journals in the English language only were used for this review.

For comparison purposes articles focusing specifically on adolescent suicide, even in the general population, were included. Literature with reference to Australia and its refugee policies was preferred but, because of a significant lack of literature, global sources were also consulted. Suicidal behaviours of refugees were referenced in a wide variety of articles, but there is a global lack of specific and specialised knowledge of suicidal behaviours in this specific population group (Oostrum, et al., 2011).

Traumatic Experience

Traumatic experience is strongly associated with the refugee experience. It is widely expected that refugees have experienced multiple losses and compounded traumatic events (Barenbaum, et al., 2004; Vijayakumar, 2016). Commonly reported traumatic experiences for a refugee cohort include, but are not limited to, significant loss, violence, physical abuse, torture, imprisonment, sexual assault, active combat, and displacement (Barenbaum, et al., 2004; Vijayakumar, 2016). Thabed, et al. (2004) conducted assessments of 403 Palestinian children between the ages of 9 and 15 living across four separate refugee camps. They found that the traumatic experiences for a young refugee population were multiple, recurring and interrelated experiential phenomena that are difficult to detangle.

Most of the research about the effects of traumatic experiences has focused on white populations in the United States of America, Australia, New Zealand and Western Europe (Brewin & Holmes, 2003; Gulsen, et al., 2010; Ozer, et al.,

2003). There is a significant lack of adequate empirical evidence exploring the psychological problems experienced by ethnic minority groups following traumatic experiences (Gulsen, et al., 2010).

Limited knowledge exists of the trauma of the refugee experience and the subsequent effect on suicidal behaviours in an adolescent population. Through existing research into non-refugee adult populations, it is believed that post traumatic stress disorder (PTSD), depressive disorders and exposure to traumatic experience increase the likelihood for suicidal behaviour (Brewin & Holmes, 2003; Gulsen, et al., 2010). However, further research is required to validate this for refugee populations.

It is also clear in the research focused on non-refugee populations that significant and multiple traumatic events in childhood increase risk for suicidal behaviour (Borges, et al., 2007; Dube, et al., 2001; Johnson, et al., 2002). These suicidal behaviours in young people are believed to be in response to the ongoing effects of traumatic experience, which can induce complex psychological experiences, including intolerable thoughts and feelings, flashbacks, a sense of isolation and emotional numbness (Borges, et al., 2007; Nock & Prinstein, 2004).

The effects of traumatic experience on individuals can differ depending on a range of factors present at the time of the trauma (Perrin, et al., 2000). In the general population, the impact of traumatic events can be influenced by the individual's emotional or physical proximity to the event, pre-morbid personality issues or any pre-existing psychopathology (Perrin, et al., 2000; Schnur, et al., 1993). It is generally accepted that children present a heightened vulnerability for increased symptomatology in response to traumatic events in comparison to that of adults (Barenbaum, et al., 2004). A number of studies have reported that the effects of adversities and negative experiences at a formative age can result in long-term consequences (Barenbaum, et al., 2004; Sack, et al., 1993; Vijayakumar, 2016). Childhood trauma is contributes to a lasting impact upon cognitive, moral and personality development and can also negatively impact abilities to form safe interpersonal relationships and the development of strong coping capabilities.

Young refugees present a high risk of suffering from PTSD and other depressive conditions (Barenbaum, et al., 2004; Borges, et al., 2007; Thabet, et al., 2004; Vijayakumar, 2016). This heightened vulnerability has also been linked to a heightened risk for suicidal behaviours.

Borges, et al. (2007) undertook a large representative multistage probability study, in which household survey data was analysed, focusing on adolescents aged 12-17, living in private housing units in Mexico City. Borgesm et al. found that, in the final sample of 3005 respondents, those with a history of traumatic events more often reported suicidal behaviours and attempts than respondents with no such history. Further, with an increase in traumatic experience came a higher prevalence for suicidal ideation, planning and

attempting behaviours. Traumatic events were common throughout the lives of those studied by Borges et al., with 69% of respondents reporting at least one traumatic event in their lifetime. The evidence generated by this survey is limited by the exclusion of those who were either homeless or institutionalised. Both these groups present with heightened risk profiles for suicidal behaviour and would offer valuable data to the results generated by the Borges et al. study. Additionally, survey work includes recall errors, a potential underrepresentation of traumatic events, and an unwillingness for participants to disclose sensitive information, all providing limitations to the study.

In a study of the general population Mazza (2000) found that PTSD was uniquely related to suicidal behaviours in adolescents. Mazza examined, 54 female and 52 male adolescents from a culturally and ethnically diverse community with a mean age of 15.6. Through examining the participant's self-reports of trauma related symptomatology, it was discovered that adolescents who display higher levels of PTSD symptomatology were more likely to be currently experiencing suicidal ideation or had previously made suicide attempts. This study is subject to the inherent validity and reliability issues associated with self-reporting surveys, including participant bias at the time of survey completion and the issues associated with recall errors and unwillingness to disclose sensitive information.

Mazza (2000) and Borges, et al. (2007) provide valuable insight into the correlation between an adolescent experience of trauma, subsequent PTSD and a heightened likelihood for suicidal behaviours. Given the heightened likelihood for PTSD in a young refugee population, further research is required into the specific influence of traumatic experience on suicidality within this cohort.

Migration Stress

Cultural Understandings of Mental Health and Mental Health Services

Culture is believed to influence every stage of help seeking behaviours (Cauce, et al., 2002). Formalised mental health services can also be conceptualised in a variety of different ways depending upon the cultural lens used to view them. Difficulties can arise with help seeking behaviours due to an unwillingness or inability to identify any problem (Goldston, et al., 2008). Behaviour such as suicide attempts are viewed, labelled or accepted differently within different cultural groups (Cauce, et al., 2002).

Interpretation of suicidal behaviours is informed by religion, spirituality, cultural idioms of distress, and a community held perception of the appropriate responses to trauma, distress, or significant life stressors. Even if behaviours are identified as problematic, there may also be substantial resistance to seeking the assistance of structured mental health services (Goldston, et al., 2008).

A systematic literature review conducted by Colucci, et al. (2014) focused on the utilisation of mental health service specifically by children and young

people from a refugee background. Their review reports that despite, the widely accepted vulnerability for young refugees to experience mental health issues, they utilise mental health services substantially less than anticipated. Their review discovered that the utilisation of mental health services by young refugees is an under researched area, finding a total of only 11 studies focused on the issue. There are several barriers that can inhibit young refugees from accessing mental health services including low priority on mental health, reluctance to seek support outside of family and friends, and distrust of mental health systems.

Stigma can be another major influential factor which limits access to mental health services by some cultural groups. Stigma surrounding the mental health service itself, or by accessing support for distress, can hold negative associations (Colucci, et al., 2014; Goldston, et al., 2008). Especially in the case of refugees, an aversion to seeking mental health support could originate from a historic abuse of power from positions of authority or a lack of awareness of the systems. Negative associations of mental health services could also arise from previous access with a service or health professional that exhibited culturally incompetent practice (Goldston, et al., 2008).

It is a commonly held concept in Western countries that suicidal behaviours are associated with an experience of mental illness (Belfer, 2004). In other cultures, however, suicidal behaviours can be conceptualised as an expression of overwhelming hopelessness or helplessness or an attempt to escape current circumstances with no such association with mental illness (Belfer, 2004). For these reasons, culturally competent practice can lead to more positive mental health outcomes for refugee communities (Bhugra, 2005). Culturally competent practice includes an awareness of how illness is defined by differing cultural groups, an understanding of cultural values and beliefs, and an openness to explore such elements (Balis & Postolache, 2008; Bhugra, 2005).

Family

A growing body of evidence suggests that a strong family unit can assist the young person to develop a strong sense of security, connectedness, support and belonging (Luthar, 2006; Rayner & Montague, 2000). Regardless of cultural background, the support and involvement of families in the development of young people is crucial (Goldston, et al., 2008). Strong bonds with primary care givers can protect young people from a range of vulnerabilities through the rapid growth period of adolescence (Vassallo, et al., 2009).

Young refugees are faced with the unique challenge of assimilating into a new culture, while undertaking significant physical, emotional and developmental change (Bursztein-Lipsicas & Henrik-Makinen, 2010; McMichael, et al., 2011). The traumatic experiences inherent in the process of forced migration can create a destabilising effect on the functioning and structure of families.

A longitudinal study of 120 young refugees resettled in Melbourne, Australia revealed family instability was a core feature of the early settlement period (McMichael, et al., 2011). This study was developed in connection with The Good Starts Study (Gifford, et al., 2009), which takes a broader view of the settlement process and wellbeing on adolescents. The study focused on the broad ranging effects of the settlement process on the family unit. The participants in the study were between the ages of 11 and 19 with the median age 15, with a gender split of 46% female and 54% male. Participants came from 12 different nations and all participants entered Australia on Humanitarian Visas. As there is a significant lack of longitudinal studies of resettled refugee youth, this study offered some interesting evidence. However, as the sample was not random, the results may not be generalisable across the newly settled refugee cohort. Further research is required into the ongoing effects of the settlement process on a young refugee cohort and the subsequent influences on suicidal behaviours within the cohort.

Strong family bonds can assist in alleviating the stress felt by the young person at this period in their lives (Vassallo, et al., 2009; Bursztein-Lipsicas & Henrik-Makinen, 2010). Issues within a young person's family can provide a profound impact upon their vulnerability for suicidal behaviour. The consequences of poor parental health can greatly impact upon a developing young person (Wilkinson, 2002), as do the impacts of ongoing family stress and conflict. McMichael, et al. (2011) found that family conflicts often revolved around discipline, alcohol use, initiation of sexual relationships, discordant values, and a lack of trust from parents. Additionally, young people are more likely to acculturate at a faster pace than their parents, creating a compounding effect on family instability and conflict (Bursztein-Lipsicas & Henrik-Makinen, 2010; McMichael, et al., 2011).

Family involvement is crucial in the development of achievable suicide interventions (Goldston, et al., 2008). Family units can help ensure a safe environment inthe home, monitor the suicidal individual and can potentially mitigate the stressors associated with suicidal behaviour. Further inquiry into the influence of family on the suicidal behaviours of young refugees is required in order to better design and tailor effective interventions.

School and the School Environment

The role of formalised education can provide a sense of stability, normality and community cohesion within the daily lives of a young refugee population (Kos & Derviskadic-Jovanovic, 1998). Classroom settings can provide predictable routines with clear expectations and consistent rules (Barenbaum, et al., 2004). This regularity can provide a protective and safe environment for young refugees to regulate their responses throughout the acculturation and assimilation process. Interactions with teachers and peers can also provide opportunities for a previously displaced young person to begin the development of community links, formulate reciprocal affection, attachment and emotional

security (Laor & Wolmer, 2002; Barenbaum, et al., 2004). Schools can also serve a monitoring role of a young person's functioning and provide referral to specialised services when a decline in regular functioning is noticed (Yule, 2002).

Success in the school environment can provide opportunities to build upon self- esteem and improve coping abilities, while countering tenancies of isolation and withdrawal (Laor & Wolmer, 2002). Conversely, within a refugee population it is possible that unrealistic pressure from within the family unit to achieve at school can have a negative impact upon a young person's well-being. Participants in the McMichael, et al. (2011) study noted their parental expectations for high academic success were difficult to meet, given the young person's disrupted schooling history and the added pressure of learning the English language. These pressures led to feelings of mistrustand conflict between participants and their parents.

The Good Starts Study conducted by Gifford, et al. (2009) is one of the very few longitudinal studies focused on the effects of the settlement processes on a young refugee cohort. This study took place in Melbourne, Australia between the years of 2004 and 2008, investigating the experiences of 120 recently arrived young refugees. They found that gaining a good education was the single most important goal held by this cohort. Within the first year of settlement, participants attended a specialised English Language School and, except for an experience of bullying, noted an overall positive experience.

However, it was noted that, as the young person transitioned away from specialised schooling into the mainstream system, there was an obvious decrease in sense of belonging and safety, along with a rise in an experience of discrimination. As a sense of belonging and safety can act as protective factors against suicidal behaviours, these results warrant further specific investigation into the role of schools in the suicidal presentations of young refugees.

Social Connectedness and Isolation

Brough, et al. (2003) conducted a purposive sampling study based on the data gathered by a larger study completed by Selvamanickam, et al. (2001). Brough et al. conducted 76 interviews with young refugees settled in Australia in order to gain a deeper understanding of the issues associated with their social and emotional wellbeing. This study found that the young participants were more likely to conceptualise their lives in relation to their connectedness with family, ethnic community, friends and the society at large, than in terms of illness related boundaries. This study found that the connection between community and young people is of critical importance to the young person's social and emotional wellbeing. Supportive communities also provide a safe transformational opportunity for traumatised adolescent populations to reconstruct healthy and adaptive identities (Barenbaum, et al., 2004).

Disconnection from significant attachments is a common refugee experience (Vijayakumar, 2016). The severing of significant ties can have a compounding and destabilising effect on wellbeing. The acculturation and settlement process can create withdrawal and isolation from communities and social situations (Hovey, 2000). Limited community engagement and poor access to meaningful social activities can impact upon a sense of wellbeing and can influence an increase in vulnerability for suicidal behaviour (Procter, et al., 2011). Loneliness and boredom have also been linked to depression and anxiety heightening the likelihood for suicidal behaviours in a refugee cohort (Silove, et al., 1997).

Young refugees face the insurmountable task of locating themselves within a new social, cultural and geographical environment, while simultaneously attempting to access the known security of their own families and ethnic communities (Brough, et al.,2003). Developmental transition into adulthood encapsulates some, but not all, of the disconnection within refugee families (McMichael, et al., 2011). The compounding stressors that effect the social connectedness of a refugee population, can include lack of affordable housing, language barriers, shifting roles and responsibilitiesin the family unit, discrimination, and racism.

Due to the lack of reliable data, further research is required into the specific effects of social connectedness and isolation on a young refugee populations experience of suicidal behaviours.

Acculturation

The impact and process of acculturation features prominently in the literature associated with the wellbeing of both migrants and refugees. In a field lacking in empirical research, investigations into acculturative stress is well represented.

Acculturation refers to the process in which migrating individuals interface with the new host culture and nation. Acculturation can be a useful framework to understand the impact of migration, particularly upon refugees. Acculturation is a process in and of itself and is influenced by the psychological and societal process that occur before, during and after migration and as immigrants adapt to new norms, values, rituals, and lifestyles (Bursztein-Lipsicas, & Henrik-Makinen, 2010). Acculturating individuals can face discrimination, language inadequacy, financial strain, employment barriers, and a sense of insecurity in the host environment (Hovey, 2000). Tension is likely in the acculturation process between traditional norms, roles, and values and those of the new environment.

Acculturation is a beneficial framework for informing and examining the findings of this study. By utilising an acculturation framework the present study is able to consider all elements of the migration process and its all-encompassing effectson an individual. An acculturation framework includes a focus on both

social and psychological forces which impact any acculturating individual (Bhugra, 2005; Rogers-Sirin, Ryce, & Sirin, 2014). Persistent problems associated with acculturation leave individuals at higher risk for long-term mental health concerns. The present study will utilise this acculturation framework to take a look at known acculturation stressors, including interpersonal difficulties, family dysfunction, social isolation and mental health concerns and the suicidal behaviours evident in a young refugee population.

Due to an inherent social disadvantage, issues associated with rapid cultural adaptation and the ongoing demands of the migration experience, it is evident in the literature that refugees are considered more vulnerable to mental ill health during the acculturation process (Gulsen, et al., 2010). Acculturating individuals are faced with significant, and at times radical, changes in social roles and status alongside the other stressful elements associated with acculturation (Berry, 2002; Bursztein-Lipsicas & Henrik-Makinen, 2010). Acculturation can be a protracted and at times laborious process where migrants must adjust to another language, set of cultural norms, processes, and expectations (Gulsen, et al., 2010). Throughout this process social networks suffer strain and can cease to exist, which often results in a perceived and actual lack of social support (Gulsen, et al., 2010; Hondius, et al., 2000; Knipscheer & Kleber, 2006; Miller, et al., 2002; Nicholson, 1997).

Social marginalisation and isolation are also frequently discussed elements associated with the process of acculturation, which can lead to further stress placed on the acculturating individual. The effects of this are compounded when the migration was not chosen, but forced (Gulsen, et al., 2010).

Issues associated with acculturation into a new society have been linked with a higher prevalence of mental health issues (Bhugra, 2005). Some authors have suggested a positive correlation between immigration in general and suicide **(**Hovey & King, 1997; Sorenson & Shen, 1996). Elevated levels of acculturative stress have been significantly associated with elevated levels of depression and suicidal ideation (Hovey,2000). In linkage with the previously discussed post-migration issues, acculturation stress is also associated with the development of anxiety disorders, somatisation disorders and depressive illnesses (Kivling-Boden & Sundbom, 2002; Knipscheer & Kleber, 2006; Vijayakumar, 2016). Alarmingly, poorly acculturating individuals are less likely to utilise mental health services to assist with any psychological issues they may be facing (Goldston, et al., 2008).

According to Brough, et al. (2003), young people from refugee backgrounds face enormous challenges in the acculturation and settlement processes in Australia. Acculturation stress is understood to have a significant influence on young people attempting to assimilate into a new environment. The school can provide an environment in which the child is able to access the new culture in a way that is different from that of their older family members (Hovey, 2000). This, while providing strong opportunities for language acquisition and cultural exchange, can in turn prove to be a source of conflict at home. Role

reversals are a common experience within acculturating families as young people adapt, assimilate and acquire language at a faster rate than that of their older caregivers (Rogers-Sirin, et al., 2014; Wilkinson, 2002).

Interestingly, Brough, et al. (2003) noted an element of controversy in the acculturation literature. They noted that much of the research surrounding the effects of acculturation stress is based on a heavily conservative understanding of how an individual manages change. They further argue that the distress normally associated with the process of acculturation could also be explained by the political and economic structures which can serve to oppress an individual and inhibit their ability to construct meaningful engagements within a new community.

Nonetheless, the literature surrounding acculturation highlights the importance of utilising culturally competent methods when interacting with a depressed and potentially suicidal acculturating population group (Hovey, 2000). As elevated levels of acculturative stress are significantly linked with heightened risk for suicidal behaviours, a young refugee population should be considered particularly vulnerable. As acculturation is not the only stressor upon a young refugee cohort, further research is required to fully understand the influential factors on a suicidal experience.

It is the aim of the present study to analyse the complex and nuanced risk factors for suicidal behaviour within a young refugee cohort. The mixed methods sequential explanatory design of this study will incorporate the above literature to explore the concepts of suicidality within a young refugee cohort.

Methods

Participants

The population sample for this study consisted of 257 young refugees aged between 12 and 24 who were enrolled for service at the Queensland Program of Assistance for Survivors of Torture and Trauma (QPASTT). QPASTT provides a range of counselling and psychosocial support activities for refugees across the life span and has a specialised team devoted to service of the youth cohort. All of those engaged for service at QPASTT had been identified as survivors of torture and trauma. While rare, it is not impossible that this sample may include second-generation Australian refugees as service users of QPASTT, especially within the youth cohort. The quantitative data analysis was conducted across all active enrolments within the time frame of July 2016 to June 2017. This time frame was selected to provide the most recent snapshot of young people presenting at QPASTT for support.

The population analysed was split into two groups: those above 18 (older-young)and those below the age of 18 (younger-young). This was done to identify the different factors influencing suicidal behaviours in children and young adults (Kõlves, 2010; Soole, et al, 2015). There is a growing body of evidence

suggesting a distinction between risk factors for suicidal behaviours within the child and adolescent population groups (Beautrais, 2001; Soole, et al., 2015). This split in population was utilised when examining the clinical presentation data. The group sizes were n = 143 for the 12 to 17 year olds (younger-young) and n = 114 for the 18 to 24 year olds (older-young).

A convenience sample of three case examples was selected for thematic analysis from within the -sample. These three cases were selected to best represent the majority of the sample. Due to confidentiality reasons, QPASTT selected 3 cases that were identified as recent examples of pronounced suicidal behaviours from within the youth cohort. QPASTT was considered best placed to assess how representative the selected case examples were of the -sample population.

The selection criteria for inclusion in this thematic analysis included recent suicidal behaviours, representation across the entire cohort, and strong engagement with the agency. Each of the three cases was chosen based on recent expression of suicidal behaviours. All three of the cases were on Permanent Resident Visas, which is the most common visa for young people at QPASTT, with 82% of enrolments on this visa pathway. All three of the cases were strongly engaged with QPASTT. Suicidal behaviours evident within the three cases include, but are not limited to, self-harm by scratching and burning, jumping from a height, and intentional overdose of prescription medications.

The dates for the case files analysed corresponded with the quantitative data examined between July 2016 to June 2017. Case notes are recorded from each interaction between QPASTT staff and the young person. Any communications relevant to the young person with outside agencies, stakeholders or other persons of interest are included in these case notes. The development of any safety plans, rational for any risk assessments, and notes of liaison are also present within the case files. These case notes were then de-identified by QPASTT and provided to the research team. While no specific analysis of the influential factors of ethnicity and cultural idioms of distress on refugee youth suicidality were specifically addressed in this study, cases were selected with an attempt to represent the majority of enrolments of young people at QPSATT.

Procedure

This study followed a mixed methodology, sequential explanatory design, which involved analysing quantitative data from an existing database, and then analysing qualitative data, in two consecutive phases (Creswell, et al., 2003). The mixed methods initially took the shape of a quantitative analysis of the enrolments of young people at QPASTT. The qualitative section thematically analysed three select case examples within the sample population. As there is very little established knowledge in this field, this sequential explanatory design enabled this study to contribute to this developing conversation.

QPASTT is engaged in service delivery with a cohort that, due to a range of factors including traumatic experience, migration stress, and acculturation difficulties, routinely displays an elevated risk profile for suicidal behaviour. This study utilised existing data collected by clinicians at QPASTT throughout their regular practice to further analyse the factors driving suicidal action within this cohort.

Quantitative Data Analysis

In light of the absence of specific and specialised information on the risk factors likely to be evident within this sample, a descriptive examination using quantitative data was deemed most appropriate. Socio-demographic sample characteristics were examined, followed by an examination of the clinical characteristics associated with risk factors relating to suicidal behaviours.

The data was collected by the clinicians engaged in the care of the young refugees, whereby they conducted clinical assessments against QPASTT's formalised National Minimum Data Set (NMDS). These assessments resulted in clinicians rating the young refugees along a four-point scale: absent, mild, moderate, and severe for their experience of a particular variable. Those variables include traumatic stress, traumatic grief, symptoms of depression, symptoms of anxiety, family dysfunction / difficulty, interpersonal difficulties, and social isolation.

A z-test of skewness indicated that for most of the symptomatic presentations there were departures from normality. In the case of traumatic stress symptoms, family dysfunction/difficulties and interpersonal difficulties this departure was severe, according to the criterion proposed by Tabachnick and Fidell (1996), with a z greater than 3. Therefore, the results in these three cases should be interpreted cautiously. Equal variance was tested using Levene's test and, in the case of unequalvariances, Welch's t-test was used. This was the case for traumatic grief, symptoms of depression and symptoms of anxiety.

Qualitative data analysis

Three selected case examples were examined using thematic analysis of de-identified case files provided to the research team. Codes for the thematic analysis of the data were identified within the case files by noting any issues, topics, concepts, or ideas that were evident (Hennink, et al., 2011). This analysis identified patterns within and across the data using inductive or data driven coding (Clarke & Braun, 2017).

The results of this analysis were subsequently compared against commonly utilised mental health assessment and outcome measure tools, the Kessler Psychological Distress Scale (K10) (Andrews & Slade, 2010; Kessler, et al., 2002) and the Strengths and Difficulties Questionnaire (SDQ) (Achenbach, et al., 2008; Derluyn & Broekaert, 2007). These two validated instruments are two of

the assessment measures used by QPASST to assess mental health and to inform the care and support provided to young refugees of the service.

It was the purpose of this component of analysis to examine these instruments in terms of their purpose, items, and content validity against the qualitative thematic outcomes and the quantitative outcomes in order to determine the appropriateness of such instruments to identify nuanced risk factors in this refugee sample.

Ethical Approval

This study was granted ethical approval from Griffith University Human Research Ethics Committee (GU Ref No: 2017/563) and an internal agency ethics review conducted by QPASTT management. Each case file was de-identified by QPASTT before being provided to the research team for analysis. The reporting of this sensitive case file data was further de-identified in the reporting in this study. This was completed by the purposeful exclusion of any noted individual characteristics and by removing any gender identifiers. This precaution was taken by this study to ensure the anonymity of those who participated in this study, who are deemed significantly vulnerable.

Given the highly sensitive nature of the material and the vulnerability of the population group, significant effort, energy, and resources were dedicated to the informed consent process. QPASTT staff and the research team collaborated closely to ensure this process was conducted with the utmost care and thoroughness. For the case studies, informed consent was sought directly from the individuals involved, with QPASTT staff facilitating detailed explanations of the research purpose, methods, and intended use of direct quotations. This careful approach underscored the commitment to safeguarding the dignity, rights, and well-being of participants, ensuring that their engagement was fully informed and voluntary.

Results

Quantitative Data Analysis

The presentation of this statistical data is set out below in two phases and representsbiographical data and symptomatic presentation data respectively. The results of the t- test were applied to the 12-17 and 18-24 age groups and their experiences of the following clinical presentation data.

Biographical Data

The total population analysed was 257and the gender of participants was 128 males and 129 females. The age of participants ranged from 12 to 24 (see *Figure 1*). The mean age of a young person enrolled at QPASTT for support is 17.2. There is a significant drop-off in enrolments after the age of 23, with 24-year-olds

being the least represented amongst the group at only 5 (1.9%). This could reflect the transition of these young people into adult services. Thirteen years was the most common age of the clients with a total of 33 refugees in the total sample (12%).

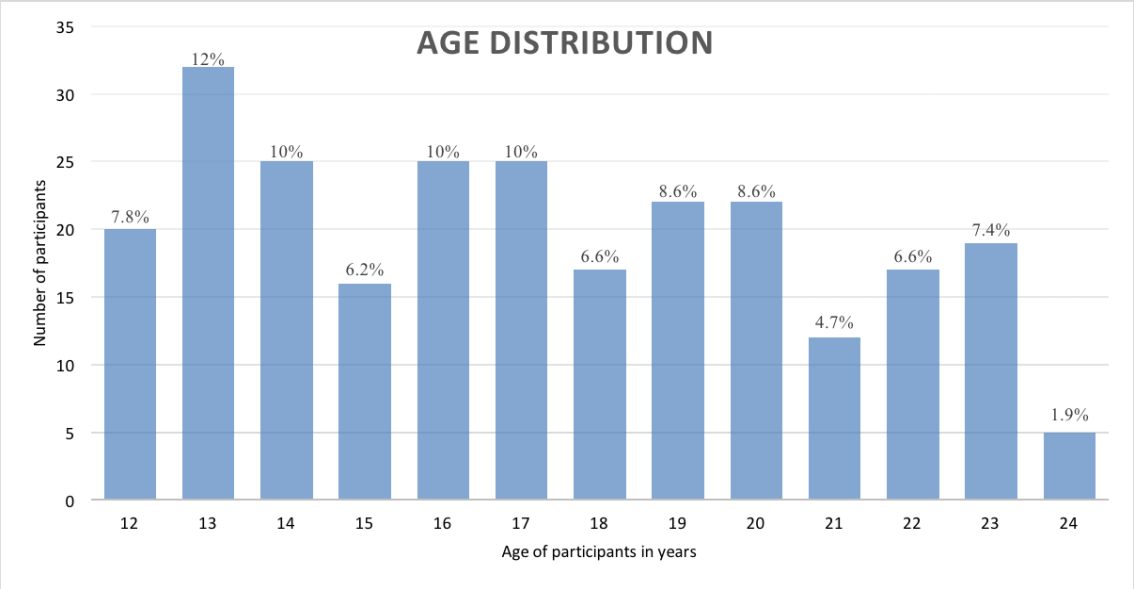

Figure 1. Age distribution of participants enrolled for service at QPASTT, recordedbetween July 2016 and June 2017.

For a range of cultural and situational reasons, the reported age of a refugee cohort may not exactly match the chronological age of the individual. The reasons for this can include potential lack of formalised birth paperwork, issues relating to displacement, and cultural perceptions of chronological age (Feltz, 2015; Smith & Brownless, 2011).Therefore, it is useful to consider the numerical age of the individual alongside the emotional, social and psychological age of the individual (Smith & Brownless, 2011).

The year 2016 was the most common year of arrival, with 76 (30%) active enrolments at QPASTT arriving in Australia (see *Figure 2*). The earliest year of arrival stretches back 17 years to 2000 and is represented by one client (0.4%). 2013 was the second largest arrival year amongst the cohort with 43 (17%) arrivals.

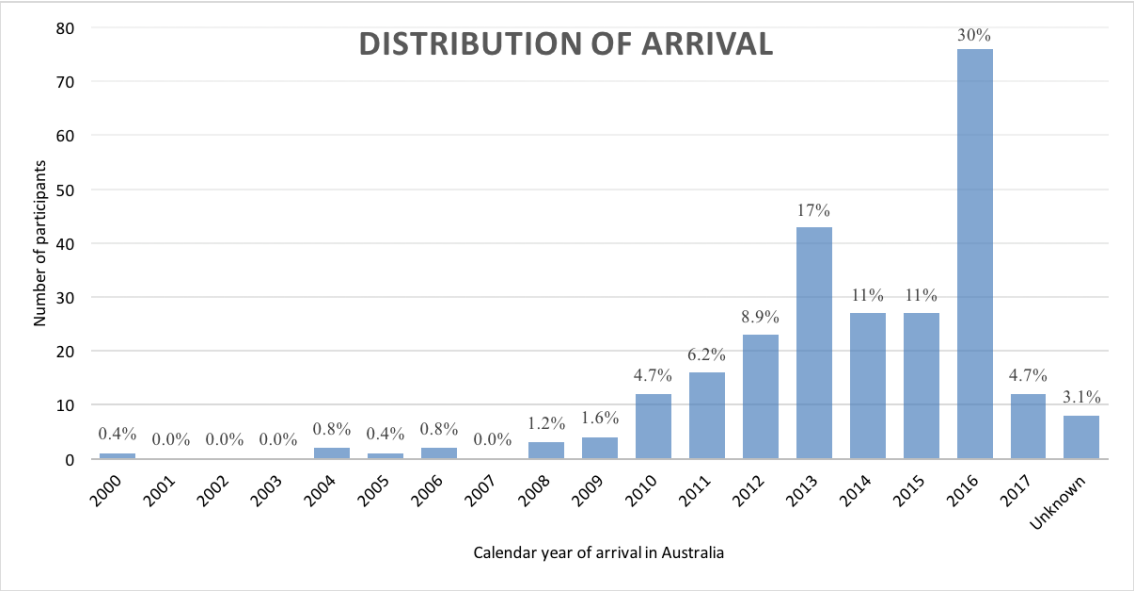

Figure 2. Distribution of arrival (calendar year) in Australia for young people aged 12to 24 and enrolled at QPASTT for service, recorded between July 2016 and June 2017.

Afghanistan was the most common country within the cohort with 46 (18%) individuals identifying it as their country of origin, followed closely by Syria with 32 (12%) and The Democratic Republic of Congo at 25 (10%). *Table 1* lists all countries of origin represented in this analysis and the associated percentages of participants represented bythat nation.

The visa status of participants of this analysis is overwhelmingly represented by the Permanent Resident class of Visa at 210 (82%) individuals (see Figure 3). Those clients on asylum seeking pathways under the Asylum Seeker, Temporary Humanitarian Visa and Other Temporary Visa categories make up a total of 16%. Australian Citizens make up just 2% (or 6) of individuals involved in this analysis. The visa status of the individual provides valuable insight into the potential acculturation stressors likely to be experienced, due to the range of boundaries to assimilation that restrictive visas can present. The more restrictive visas, such as those relevant to asylum seeker cohorts, can prohibit work rights and other services. This can result in a specific set of acculturation stressors due to financial strain or lack of social support. Those on permanent resident pathways are more likely to be experiencing differing elements of acculturation stress asthey attempt to assimilate into their new life in Australia.

Country of origin	Clients	Country of origin	Clients
Afghanistan	46 (18%)	Pakistan	3 (1.2%)
Syria	32 (12%)	South Sudan	3 (1.2%)
Democratic Republic of Congo	25 (10%)	Armenia	2 (0.8%)
Somalia	23 (8.9%)	Bosnia and Herzegovina	2 (0.8%)
Iran	18 (7.0%)	Guinea	2 (0.8%)
Iraq	18 (7.0%)	Australia	1 (0.4%)
Sri Lanka	13 (5.1%)	Bangladesh	1 (0.4%)
Eritrea	11 (4.3%)	China (excl. SARs and Taiwan)	1 (0.4%)
Burma (Republic of the Union of Myanmar)	9 (3.5%)	Djibouti	1 (0.4%)
Burundi	9 (3.5%)	Liberia	1 (0.4%)
Ethiopia	9 (3.5%)	Malaysia	1 (0.4%)
Sudan	7 (2.7%)	Tanzania	1 (0.4%)
Rwanda	4 (1.6%)	Tibet	1 (0.4%)
Thailand	4 (1.6%)	Unknown	1 (0.4%)
Cote d'Ivoire	3 (1.2%)	Yemen	1 (0.4%)
Kenya	3 (1.2%)	Zimbabwe	1 (0.4%)

Table 1. Distribution of country of origin of young refugees enrolled for support services at QPASTT, recorded between July 2016 and June 2017.

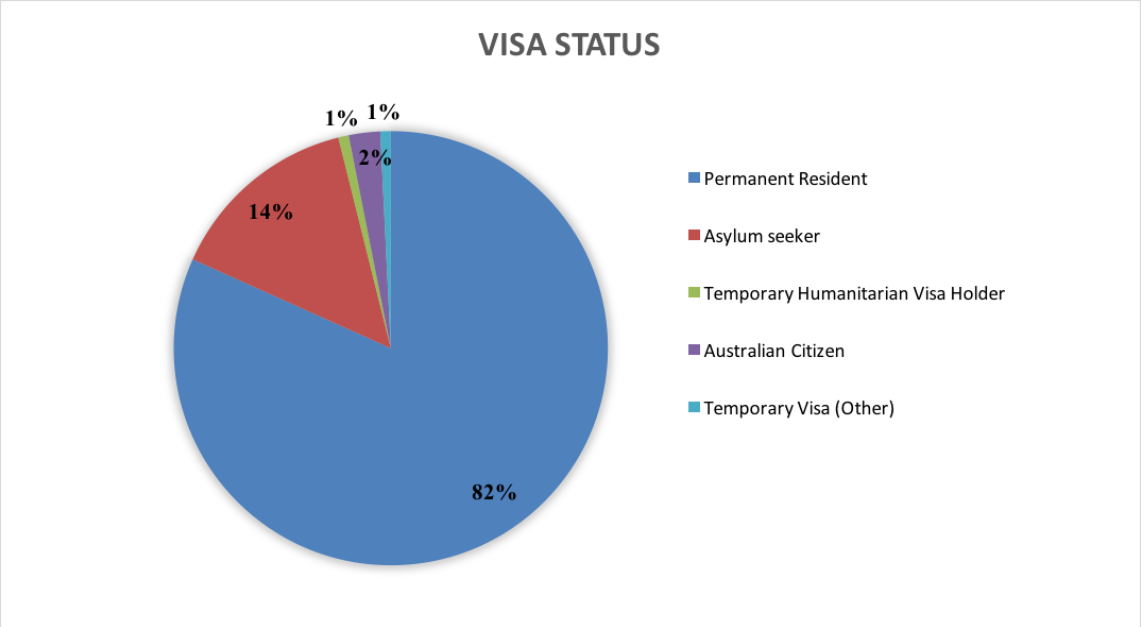

Figure 3. Visa status of participants of this study who are enrolled at QPASTT, recordedbetween July 2016 and June 2017.

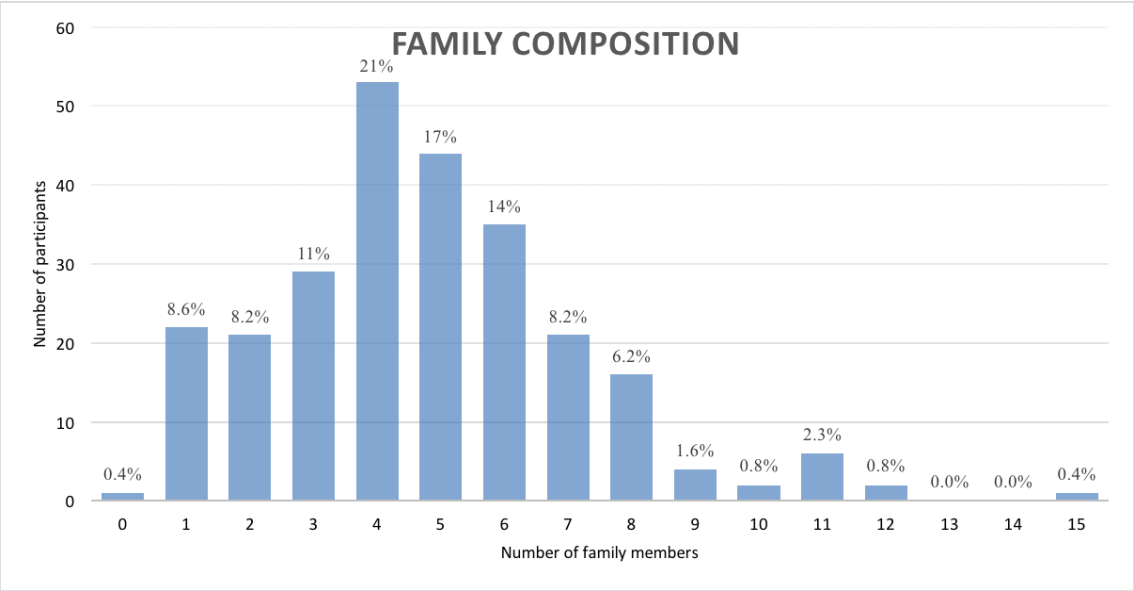

Figure 4. Family composition of participants enrolled for service at QPASTT, recordedbetween July 2016 and June 2017.

Family composition amongst a refugee population may not conform to Western norms, with refugee families often including those family members outside of what is considered immediate family in the West. This can mean that aunties, cousins or even second cousins are counted by the client to be included within their immediate family. The most common count of family members in a unit of those analysed in this study was 4 (21%), followed closely by 5 (17%) and 6 (14%) family members, with the largest family counting 15 (0.4%) family members (see *Figure 4*).

Phase Two: Clinical Data

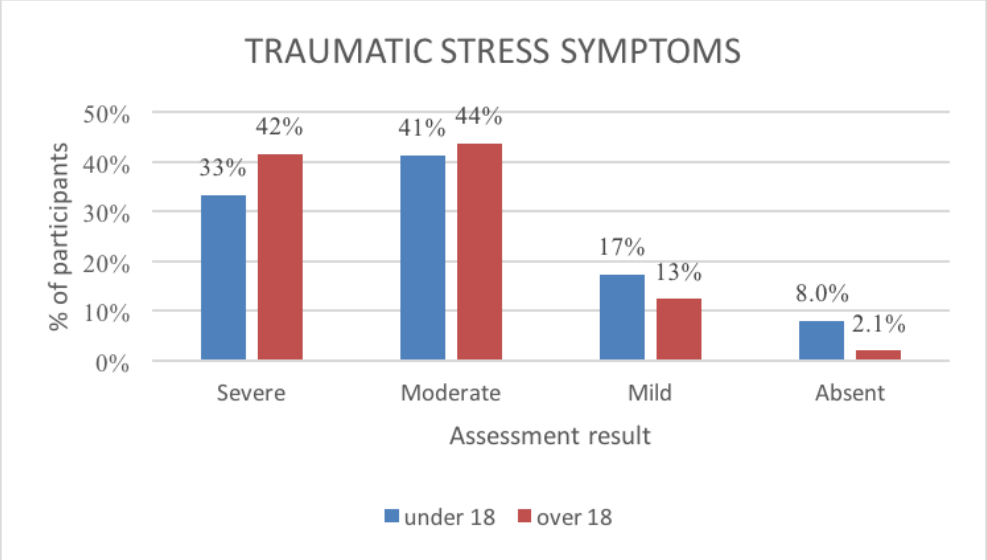

Figure 5. Traumatic stress symptoms, measured by QPASTT's NMDS, observed in participants who were engaged for service at QPASTT, data recorded between July 2016and June 2017.

The database accessed for this study contained outcomes of clinical assessments. Symptoms of traumatic stress can include, but are not limited to, an

experience of hyper-arousal, re-experiencing phenomena, issues with sleep, memory issues and avoidance. Those participants over the age of 18 were most likely to be ranked as exhibiting a moderate experience of traumatic stress, with 44% (see *Figure 5*). Those under the age of 18 were not far behind, at 41% clinically noted as moderate. Both those above and below 18 were more likely to present with either a moderate or severe presentation of traumatic stress symptoms. This data is in line with the literature explored in this study, which recounts the overwhelming likelihood for refugees to have suffered some form of traumatic experience.

From the independent-samples t-test it can be concluded that those within the 18 to 24 year old group had experienced a statically significant more severe experience of traumatic stress than those in the 12 to 17 year old group. However, due to the severity of the skewness in the distribution of the data, these results should be interpreted with some caution (see *Table 2*).

Table 2. Mean, standard deviation, skewness, Levene's test and independent-sample t-test results of the clinical presentation data for participants who were engaged for service at QPASTT, split in two age groups, 12 to 17 and 18 to 24, data recorded between July 2016 and June 2017.

	Mean		Standard deviation		Z-score (skewness)		Levene's test		T-test		
	Under 18	18 and over	Under 18	18 and over	Under 18	18 and over	*F*	*p*	*t*	df	*p*
Traumatic stress symptoms	2.01	2.26	0.908	0.741	2.21	3.05	0.480	.489	-2.434	255	.016
Traumatic grief	1.73	1.98	1.127	1.030	1.53	1.92	5.001	.026	-1.892	250	.060
Depression symptoms	1.31	1.96	1.003	0.763	1.31	2.57	23.931	< .001	-5.900	254	< .001
Anxiety symptoms	2.03	2.38	0.945	0.696	2.15	3.41	5.139	.024	-3.340	254	.001
Family dysfunction / difficulties	1.90	2.05	0.914	0.976	2.08	2.10	0.847	.358	-1.273	255	.204
Interpersonal difficulties	2.10	1.70	0.955	1.013	2.20	1.68	2.622	.107	3.274	255	.001
Social isolation	1.57	1.73	1.045	0.943	1.51	1.83	2.597	.108	-1.230	255	.220

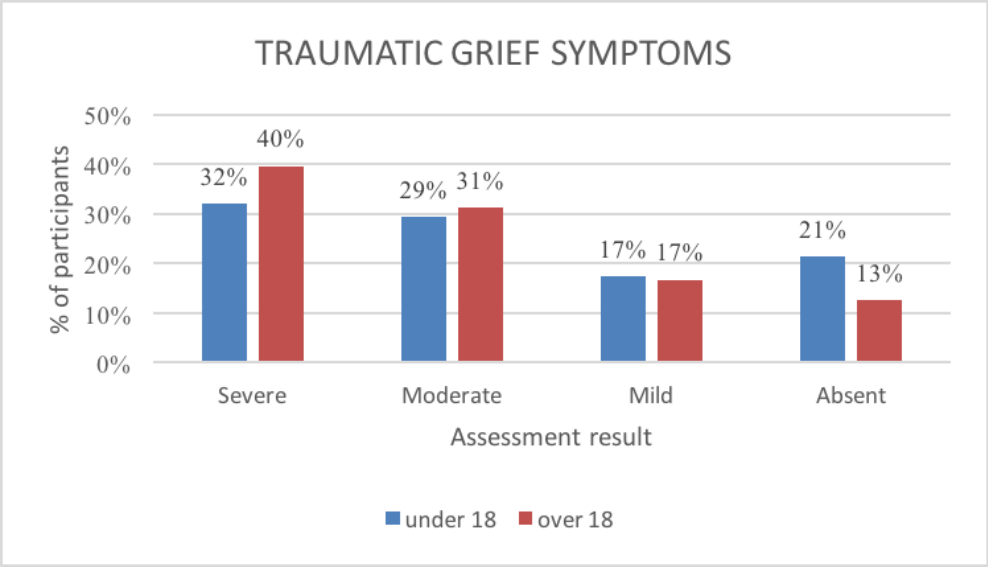

Figure 6. Traumatic grief symptoms, measured by QPASTT's NMDS, observed in participants who were engaged for service at QPASTT, data recorded between July 2016and June 2017.

Traumatic grief refers to the compounding nature of the sudden and traumatic losses commonly experienced by the refugee population. This can include the loss of a family member, a homeland or even an identity or social standing. The compounding nature of an accumulative experience of grief can have a significant influence on an individual's ability to construct meaning within their reality. Those over 18 years old within the population group studied were most likely to be categorised as exhibiting a severe experience of traumatic grief, with 40% falling within this category (see *Figure 6*). Those under 18 years old were most likely to be assessed as severe or moderate with 61% falling between these two categories.

The independent-samples t-test indicated that the experience of traumatic grief displayed by the two groups was not significantly different (See *Table 2*). An acute experience of traumatic symptomatology, including both traumatic stress and traumatic grief, is believed to increase the likelihood for elevated distress levels andsuicidal behaviours, especially within a young and otherwise vulnerable population group.

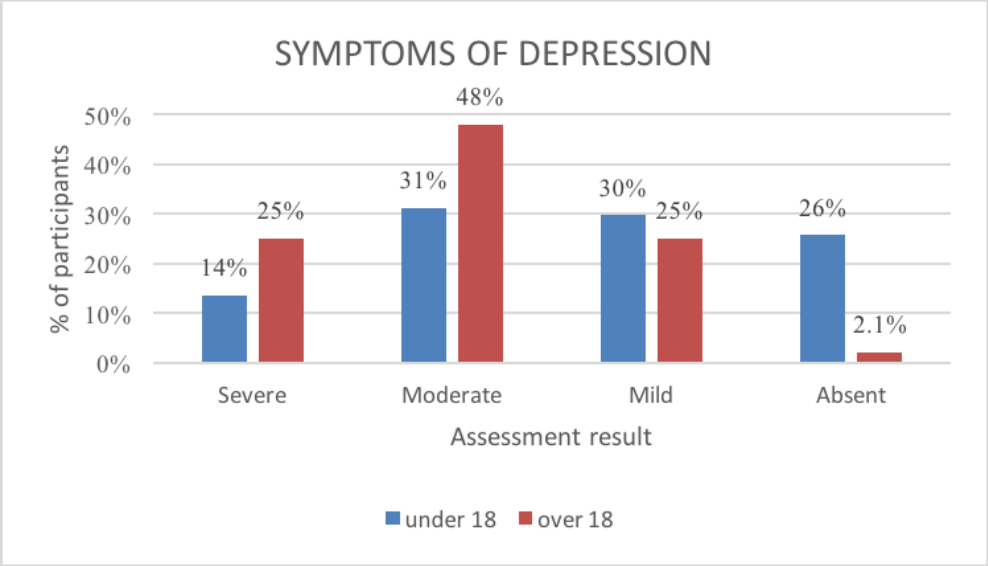

Figure 7. Symptoms of depression, measured by QPASTT's NMDS, observed in participants who were engaged for service at QPASTT, data recorded between July 2016and June 2017.

A symptomatic experience of depression can include, but is not limited to, a sense of hopelessness or helplessness, loss of appetite, lack of energy, irritability, and restlessness. Within the sample population, those over 18 years of age were most likely (48%) to display a clinically moderate expression of depression symptoms (see *Figure 7*). Moderate and mild displays of symptoms relating to depression were evenly represented amongst the under 18 cohort at 31% and 30% respectively with a severe experience represented within 14% of the population.

The independent-samples t-test concluded that symptoms of depression were significantly different between the two groups, with he 18 to 24 year old group experiencing a more severe response than the 12 to 17 year old group (see *Table 2*).

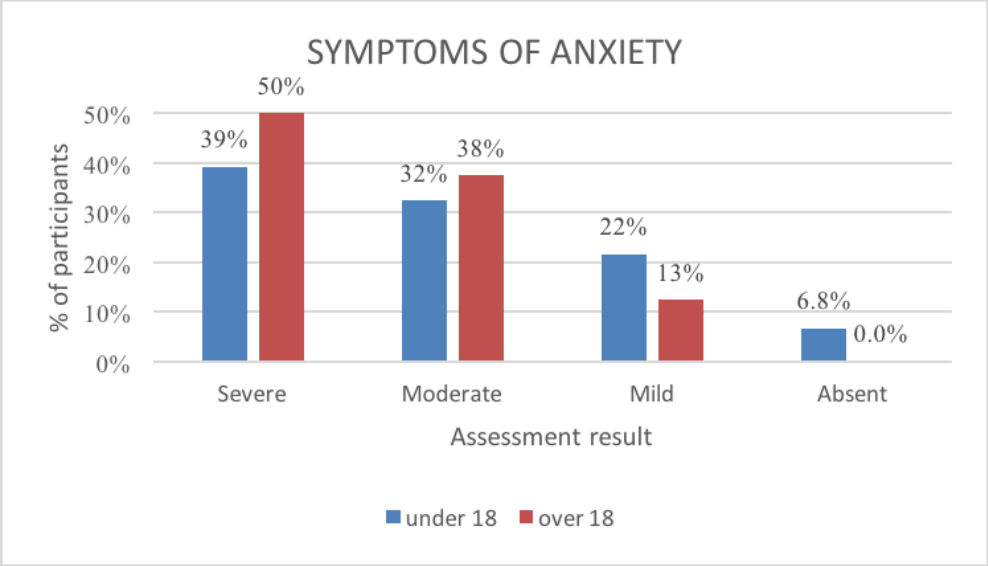

Figure 8. Symptoms of anxiety, measured by QPASTT's NMDS, observed in participants who were engaged for service at QPASTT, data recorded between July 2016 and June 2017.

Anxiety can be described as a state of uneasiness or apprehension and is known to include symptoms of fear, numbness, dizziness, shortness of breath, and headaches. The majority (50%) of young refugees over the age of 18 displayed severe anxiety symptoms. Those under the age of 18 were also likely to have severe anxiety (39%), followed closely by moderate at 32% (see *Figure 8*). The 18 to 24 year old group displayed significantly more severe anxiety than those in the 12 to 17 year old group (see *Table 2*). The clinical assessments of young refugees' propensity to exhibit either severe or moderate symptoms of depression or anxiety, significantly heightened this cohort's risk profile for engaging in suicidal behaviours.

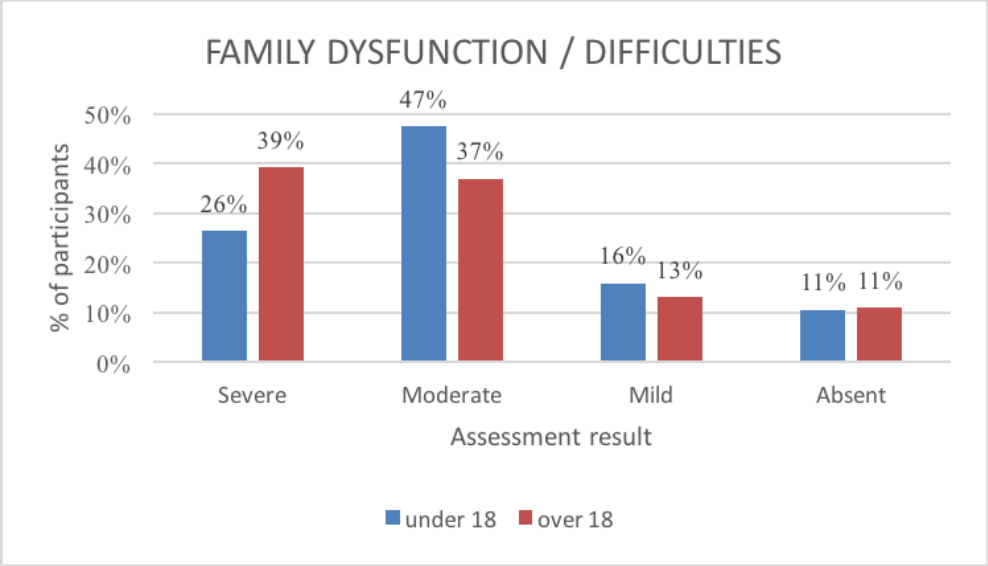

Figure 9. Family dysfunction / difficulties, measured by QPASTT's NMDS, observed in participants who were engaged for service at QPASTT, data recorded between July 2016and June 2017.

The most common experience of family difficulty or dysfunction for those over the age of 18 years was classified as severe, with 39% of participants rated as such (see *Figure 9*). Additionally, nearly 50% of the participants under the age of 18 years showed a moderate level of family dysfunction. The difference in experience of family dysfunction/difficulty within the two groups was not statically significant (see*Table 2*). High rates of family dysfunction can contribute to the distress levels and potential suicidality of a young person.

The rates of interpersonal difficulties were again different for the groups above andbelow the ages of 18 years (see *Figure 10*). Those over the age of 18 years were more likely to be rated as moderate when considering their rate of interpersonal difficulties (34%). Those under the age of 18 were most commonly rated with severe interpersonal difficulties (42%), a difference that was statistically significant (see *Table 2*). These high rates of interpersonal difficulties among the sample population could produce significant barriers to an uncomplicated acculturation process into Australia, potentially resulting in raised distress levels.

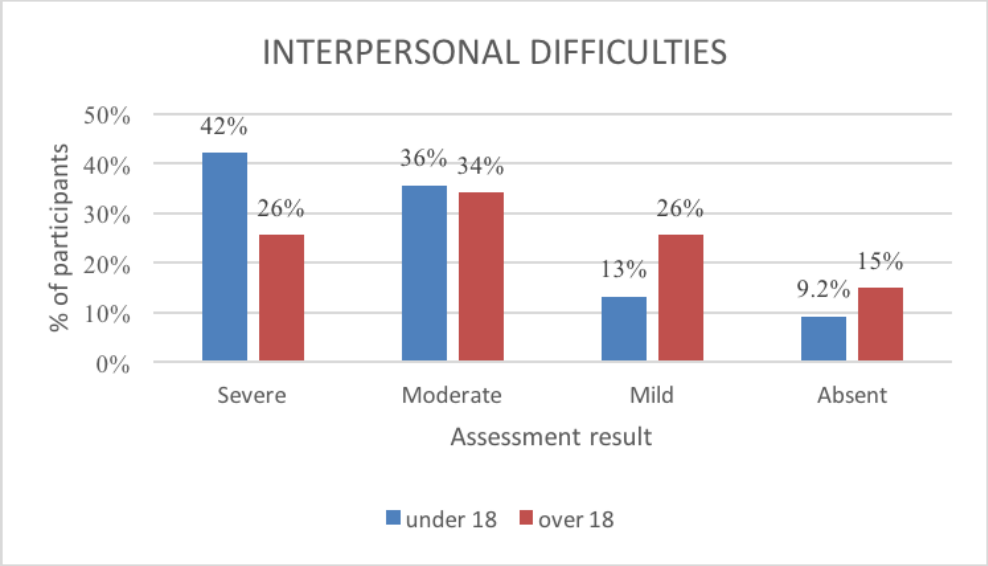

Figure 10. Interpersonal difficulties, measured by QPASTT's NMDS, observed in participants who were engaged for service at QPASTT, data recorded between July 2016and June 2017.

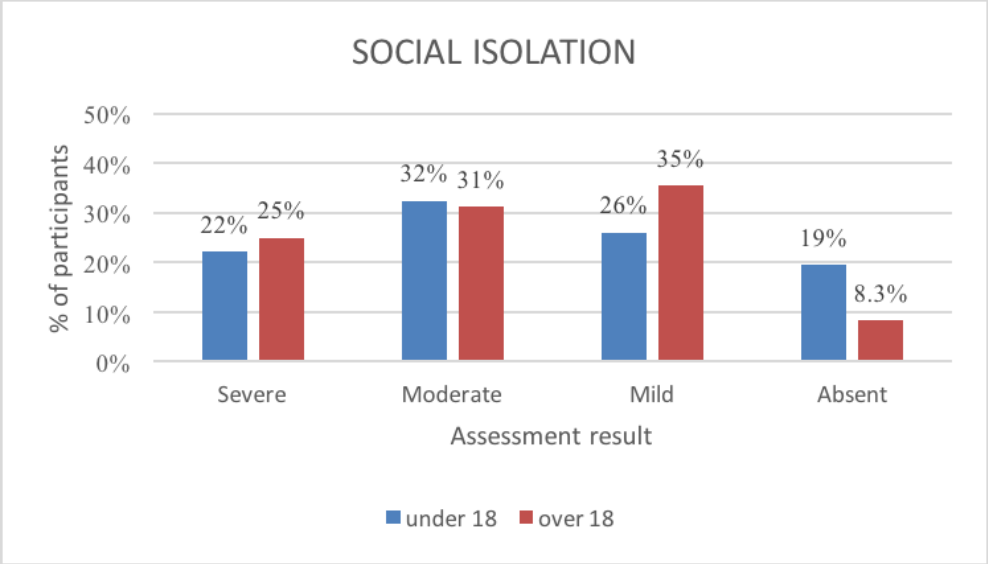

Figure 11. Social isolation, measured by QPASTT's NMDS, observed in participantswho were engaged for service at QPASTT, data recorded between July 2016 and June2017.

The young refugees above the age of 18 years were relatively evenly split with a moderate and mild experience of social isolation at 31% and 35%

respectively (see *Figure 11*). Those under the age of 18 years were most likely to have a moderate experience of social isolation with 32% falling into this category. This difference was not statistically significant. Social isolation is an important risk factor for suicidal behaviours and, as noted inthe literature, is commonly linked with issues relating to acculturation and migration

In summary, the results across all variables indicate there is a difference in the potential distal risk factors for suicidal behaviours between those under the age of 18 years and those above the age of 18 years. The age group of 12 to 17 years had more severe experience of interpersonal issues, while those between the ages of 18 and 24 had a more severe experience of traumatic stress, anxiety and depression. The cohorts experience of traumatic grief, social isolation, and family difficulty/dysfunction did not differ.

Qualitative Data Analysis: Case Examples[7]

Comparing and Contrasting the Cases

The living situations of all three participants had both similarities and differences.The element that was similar was a lack of stability. Two ofthe cases examined had been removed from the care of their parents and placed into the care of the state, sometimes in a residential facility and other times in foster care. The other case was living in a violent relationship which affectedthe stability of the home environment. As will be demonstrated below, each case reflected the impact that lack of stability had on their home life and on their psychological health.

All three cases had active suicidal behaviours that resulted in medical intervention. Outside of the events that led to hospitalisation, all three cases involved management of ongoing self-harm and suicidal ideation. Schooling and relationships were primary concerns for all three cases analysed.

All three cases received support from QPASTT and reached out for extra support in times of need. All three cases also displayed an ability to reflect on their feelings of suicide when not in crisis and a willingness to engage in protective behaviours where necessary. Based on the significant life stress experienced by the young people and their ability to reframe their situations and seek assistance when

[7] Plural pronouns are used to hide the person's sex as required by QPASTT.

required, they all displayed a strong ability to withstand distress which points towards an enduring sense of resilience.

Thematic Analysis of the Three Cases

The following analysis is based on the case files and not on interviews with the individuals. The goal was to identify the themes and subthemes evident which were potential factors influencing the young refugee's suicidal experience. The thematic analysis followed the 6-phase guidance described by Braun and Clarke (2006) which are: data familiarisation, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and reporting the themes discovered.

Upon analysis of the data, several themes became evident across all three case files.These themes could be broken down into the categories, themes and subthemes listed in *Table 3*. Three main categories are: mental health factors and symptomatology; psychosocial factors; and suicide-specific factors, factors which were interrelated.

Table 3. Codes identified from the analysis.

Categories	***Themes / Subthemes***
Mental health factors and symptomatology	Depression and low moodAnxiety Trauma symptomatology Culture and mental health

Psychosocial factors	School Engagement with peers Engagement with teachers • Engagement with the process Relationships Domestic violence / abuse / neglect Social isolation • ConnectednessHome Lack of stability • Safety and securityIdentity Independence Culture Sexuality
Suicide specific factors	Suicide and self-harm Suicidal presentations Crisis management

Mental Health Factors and Symptomatology

Theme: Depression and Low Mood

In all three cases, an experience of low mood was noted both before and after the appearance of suicidal behaviours. However, isolated experiences of low mood and depression were also noted throughout the case files with no evidence of suicidal behaviours.

One individual attended counselling sessions in periods of low mood with apparent neglect of the usual personal grooming and self-care practices. Lack of motivation and energy are well-known symptoms of depression, which can interrupt the usual processes of important life events. Another individual experienced significant periods of low mood. It was commented in the case file that the young person "…felt sad and depressed in the morning and did not have much energy to attend [the] Job Seeker appointment".

Social withdrawal is another common symptom of low mood or depression. Throughout periods of low mood, one young person was noted to "…lock [themselves] in [their] room, leaving for no more than half an hour, is crying all the time".

Feelings of powerlessness and hopelessness are associated with the effects of the multiple losses associated with the refugee experience. These feelings of hopelessness and powerlessness are also linked with an experience of low mood or depression. An experience of hopelessness and/or powerlessness was evident in all three individuals. For one, it was noted that the young person felt they "…had done bad things and was going to hell. It was for this reason [the young person] didn't deserve happiness". Another young person was noted to "feel very bad, very bad for [the young person's] life, [the person feels] trapped and has no future". This young person also experienced high levels of hopelessness and powerlessness about the decisions made concerning the direction of their life.

Theme: Anxiety

All three individuals displayed an ongoing experience of anxiety. This experience of anxiety was clear in the events surrounding the suicidal experiences. However, as with symptoms of depression, anxiety was also noted in the absence of any evident suicidal behaviour. For one individual, anxiety was related to the direction of the young person's life. The young person "…has been very anxious lately, wondering what to do with [their] life". The other cases exhibited typical anxiety symptoms of heart palpitations, breathlessness and racing thoughts. The clinicians reported the practice of guided mindfulness and breathing exercises to manage symptoms of anxiety if they presented during the session.

Theme: Trauma Symptoms

An experience of traumatic events is strongly associated with the refugee experience. It is widely accepted that, through the forced migration process, refugees are influenced by multiple losses and traumatic events. For each of the three individuals, experience of past trauma was noted, and a current experience of symptomatology related to traumatic experience was evident. For one individual, an ongoing and regular experience of nightmares was noted. The young person reported "…having difficulty falling asleep and that the nightmares are frequent, every second or third night". In another, the young person "…has been affected by the recent bombing in [city redacted] having persistent memories of the bombing". These young people were also influenced by the traumatic experiences of their families. For one individual, the clinician explained to the young person that their "…father is suffering from his experience in the war which has impacted on his ability to care for [the young person], but that he loves [you]".

Theme: Culture and Mental Health

Cultural understandings of mental health and wellbeing was a theme evident for all three individuals. One experience, the hallucination or vision of a ghost, could be conceptualised differently depending on the culture of the person examining the information. It was noted that the client stated that they "…had been seeing the ghost again [and] wondered if it was there to tell [the young person] that someone was going to die". While in Western societies visions such as these can contribute to a medical diagnosis requiring medical intervention, in many communities throughout the world visits from spirits or ghosts can provide guidance, comfort, herald warnings or provide spiritual insight.

Another dissonance between ethnocentric cultural norms and an experience of mental ill health evident was the impact of shame and being ostracised on their wellbeing. For one individual, it was evident that the clinician performed an educational role to the mental health provider to explain the degree to which particular events of cultural shame can impact upon an individual's mental health. When liaising with the mental health treating team, it was noted that the clinician "…stressed the massive cultural impact on [the clients] well-being […] and how at risk [the young person] is to external factors, how the risk extends not only to [the clients] personal wellbeing, but those of […] family members who were affected".

Psychosocial Factors

Theme: School

School was a predominant theme for all three individuals. The theme of school and its impacts on the individual were split into three subthemes: engagement with peers, engagement with teachers, and engagement with the process.

Subtheme: Engagement with Peers

The level of engagement that the individuals felt with their peers in the school environment appeared to influence their perception of the school. For example, one individual "…didn't like school due to […] classmates being 'drug addicted dickheads'" and, at another point, the young person "…struggled to make friends and doesn't think [they] will go back". Another individual, when discussing

the possibilities of changing schools, noted feeling that they were "…just beginning to make friends…despite having difficulties with friends at other schools, [the young person] subsequently missed them when [changing] schools".

Subtheme: Engagement with Teachers

The levels to which the individuals felt engaged with the teaching staff also appeared to influence their opinions of school in general. One individual noted displeasure at the schooling environmentby stating, "…the teachers have 'shit attitudes'". About another particular incident, an experience was noted whereby "…the teacher didn't believe [the young person] and so […] had gotten agitated and swore at [the teacher]".

Subtheme: Engagement with the Process

The process of schooling can provide a predictable and socially engaged environment in which young people can develop. Engagement in the schooling process was important for all three individuals. The above subthemes also appeared to influence the individual's ability to feel engaged or integrated into the school environment. One individual was "…thinking about starting school again but was also feeling anxious about it". Another young person was unsure if they could "…do it". One young person felt "…too far behind and dumb…" to engage successfully in the school process.

Theme: Relationships

Relationships were also predominant for the three individuals. The theme of relationships was split into three subthemes: domestic violence/abuse/neglect, social isolation, and connectedness.

Subtheme: Domestic Violence Abuse/Neglect

All three individuals made references to abuse, neglect or domestic violence experienced. One individual noted that an experience of domestic violence affected the young person by "…chipping away at […] feelings of self-worth and independence". Another individual felt as though a member of their family did not like them "…because [the young person] is different". Another individual detailed how they felt their father was acting "…crazy at the moment," and this young person had subsequently limited their contact.

Subtheme: Social Isolation

An experience of social isolation was a key theme. It was noted frequently that discussions between the young person and the clinician focused on an experience of loneliness, rejection or isolation and the effects this was having upon the young person. One case noted that one young person "…worried about being alone, and maybe feeling lonely". Other examples of social isolation included "…feelings of loneliness and missing having a friendship with someone [their] own age", "…feeling lonely/alone and with no friends or family to rely on", and "[the young person] didn't think anyone cared about [them] and that no one would go to [their] funeral".

Subtheme: Connectedness

The young people frequently reflected on the areas of their lives in which they felt a sense of connectedness. This experience differed depending on the individual and the context oftheir current experience but was noted to be a sense of connection to family, friends, new intimate relationships, and structured supports like their QPASTT clinicians. One example of connectedness and its implications was evident for one young person who had recently "...shared a part of [their] story […] to [the person's] surprise a lot of people showed care and concern […] this made [the client] feel strong as [the young person] did not expect to be supported".

Theme: Home

The theme of home was discussed by all three individuals. Home as a concept did not necessarily relate to the country of origin, but to aplace that provided a secure base for the young person. Two of the three young people were living in out-of-home residential care. In the third case, the young person was living in a domestic violence relationship. The concept of home could be split into two subthemes: lack of stability, and safety and security.

Subtheme: Lack of Stability

Life in out-of-home residential care can result in a significant lack of stability for the young person. This can be a result of several subsequent placements, or it can mean that those they live with are constantly changing,along

with those who are working to support the young people in the environment. This was evident within the individuals here, with the clinicians noting that the young people were "…feeling unloved and uncared for at the residence" and feelings that the "…house manager did not understand or like [the young person]". With reference to changing placements, one young person noted that the previous placement had moved home, and the young person was not invited to join. The same young person describing another placement breakdown stated, "[They] did not like me and terminated the placement".

Subtheme: Safety and Security

The ongoing effects of forced migration affect a young person's desire for safety and security within their home life. The individual involving domestic violence frequently spoke of craving safety and security within the home that was currently unavailable. Other examples of a desire for safety and security within home life include a young person exploring that an ideal family would be "…kind, would love and never leave…" the young person. Another young person spoke of feelings of "…high levels of anxiety and hopelessness […] that it is inevitable…" if the young person will be kicked out of current residential placement.

Theme: Identity

The concept of identity is broad reaching and evolves with the young person's development through adolescence. The theme of identity was explored throughout the case notes extensively and can be split into three subthemes: independence, culture, and sexuality.

Subtheme: Independence

Independence is a prominent theme in a young person's life. Adolescence is the time for financial and relational independence, which evident within each of the three young people. In reference to the challenges faced by adolescence and a desire for greater independence, one individual noted a young person's "…frustration at being treated like a child". Other experiences relating to newfound independence were in newly acquired jobs. One young person had been "…very busy with […] work, which is good for [the young person] as it stops [them] thinking of bad things", and another young person was "…enjoying work and making money". One young person liked the independence after securing independent accommodation, with the young person stating they were "…pleased

not to have youth workers 'telling me what to do'" and that they showed off their new home with pride and stated they were "…working hard to keep it clean and tidy".

Subtheme: Culture

A challenge for any migrant adolescent in the development of their identity is the development of their cultural identity. Conversation and reflections of the impact of culture on their growing identities were evident for all three individuals. Notes centred on important cultural events, such as Eid (an important religious holiday celebrated by Muslims) and their lack of representation in the wider Australian culture. These discussions provide culturally sensitive workers with the opportunity to show what life in a culture outside their own can mean for their identity. One clinician took the opportunity to advocate on behalf of the young person to celebrate Eid in their residential facility. This advocacy resulted in a positive exploration of the young person's culture and cultural identity as a young refugee living in Australia.

Subtheme: Sexuality

The development of a sexual identity is a crucial part of adolescence. However, the appropriateness of sexual contact at a certain age can depend heavily on culture. Refugee adolescents can find themselves placed within the conservative viewpoints of their culture of origin juxtaposed against a more liberal understanding of sexual development in the host culture. The exploration of their sexual identity was evident in each individual. Some evidence that the sexual identity development was in its beginning stages as the young person was noted to "…explore sex/sexuality, becoming giggly and evasive before moving the subject on".

Suicide Specific Factors

Theme: Suicide And self-Harm

This theme could be split into two main subthemes: suicidal presentations and crisis management.

Subtheme: Suicidal Presentations

All three individuals had recently engaged in suicidal behaviours. These events of a suicidal nature were not limited to one attempt for each of the individuals, and these varied in degree and severity. These behaviours led each of the three clinicians to document, not only the behaviours, but also the events surrounding them. All three young refugees spoke of intent in reference to suicidal behaviours. One young person spoke of "…constant thoughts of self-harm…" and another young person reported "Suicidal ideation comes in waves […] currently not feeling unsafe but knows it can change anytime". In reference to suicidal thoughts, one young person reported a preference for life in their country of origin as "at least they would kill you in one day, rather than slowly everyday".

Suicidal behaviours included self-harm by cutting and burning, intentional overdose of available medications, and attempts to jump from a height. The intent for action varied depending on the context of the event. One young person was noted to be feeling "…so pissed off…" that they saw no other option but to engage in suicidal behaviour. Another individual, however, reported that they "…did not want to die, [… they are] just so tired of it all that the intention was to sleep for a long, long time".

For all three individuals, opportunities were taken by each of the clinicians outside times of crisis to explore the reflections of the young people on their previous suicidal states. One young person was noted reflecting "…it was scary, and unpredictable not knowing when those feelings would present again".

Subtheme: Crisis Management

Presentations of a suicidal nature are believed to be amongst the most stressful events for a clinician to manage. The s unpredictability of suicidal behaviours makes the process of assessment fraught with self-doubt for clinicians. The individuals were in an agency that is not a crisis service but would support an active client through a crisis.

The three clinicians assessed the current risk factors believed to be present, summarised the protective elements in the young person's presentation and involved the appropriate agencies and individuals to support the young person through this time. Ongoing communications between the clinician and the support network of the young person were documented in the case notes, as too were the

ongoing conversations and reflections that clinicians were having with the young people.

Safety planning was regularly engaged in. Safety plans appeared to be collaboratively formulated between the young person, the clinician and the relevant supporting stakeholders. One young person "…looked at the safety plan which [was] placed on the fridge. [The young person] said it helped [to] focus and remember the positive things we talk about…thismade [the client] feel better".

Discussion

Refugees are believed to be of elevated risk of experiencing mental health problems and suicidal behaviour (Colucci, et al., 2014). The evidence suggests that refugee status is an extremely stressful experience, leading to an increased risk for suicidal behaviours (Vijayakumar, 2016). Elements accompanying the refugee experience, such as acculturation stress, social disadvantage and traumatic experience, all significantly heighten the risk for suicidal behaviours (Hovey, 2000). Despite the heightened risk factors, this population group continues to underutilise mental health services (Colucci et al., 2014).

Refugee suicide, and especially young refugee suicide, requires further research in order to adequately understand the phenomena and design effective interventions and prevention activities.

The present study aimed to fill a gap in the current literature concerning young refugee suicidality and to examine the complex and nuanced risk factors associated with suicidal behaviours in a young refugee population enrolled for service at the Queensland Program of Assistance to Survivors of Torture and Trauma (QPASTT). By utilising mixed methods and a sequential explanatory design, this study analysed a population of 257 young refugees between the ages of 12 and 24 years. In addition, three young people from this population were thematically analysed to gain a more in-depth understanding of the risk factors that influence suicidal behaviours.

Finally, the outcomes derived from the quantitative and qualitative data analyses wereused as a background against which to examine the usefulness of existing QPASST instruments (K10 and SDQ) for appropriately assessing suicidality and other problemswithin this young refugee population.

The background literature explored in this study revealed key areas of influence over a young refugee's suicidal behaviours. Those key areas were identified as traumatic experience, migration stress, cultural understanding of mental health, family, school, and social connectedness. Additionally, the background literature discussed the large body of evidence associated with acculturation and how this evidence may assist in understanding suicidal behaviours in young refugees. Taken together with the quantitative and qualitative methods employed in this study, a more meaningful understanding of these issues and their impacts on refugee suicidality was possible. This study focused on exploring the potential descriptive differences in suicidal presentations of a young refugee population above and below the age of 18, with results confirming the hypothesis that the risk factors for suicidal behaviours in a young refugee cohort are indeed complex, varied and nuanced

Quantitative Data Analysis

Phase one of the quantitative data analysis of this study focused on the biographical data of the 257-person sample population. This analysis revealed an even gender split within the sample population of 128 males and 129 females. The majority of the participants of this study were from Afghanistan, on a Permanent Residence Visa pathway, and arrived in Australia in 2016, with four members to their families and a mean age of 17.2 years. This quantitative data analysis was designed to provide a snapshot of the population analysed in this study.

Phase two of the quantitative data analysis involved a more in-depth examination of the symptomatic presentations observed and recorded assessments made by clinicians working with the refugees. The database included clinician entries of the results of outcome measures of traumatic stress, traumatic grief, symptoms of depression and anxiety, family dysfunction/difficulty, interpersonal difficulties, and social isolation. This analysis revealed that the young refugees were most likely to experience high levels of traumatic stress and traumatic grief. They were also highly likely to present with severe levels of anxiety or depression. As reflected in the literature discussed in this study, experiences of traumatic symptomatology, depression and anxiety increase the likelihood for suicidal behaviours in this already vulnerable cohort.

When explored in greater depth and over the lifespan of child to young adulthood, the findings revealed differences between below 18 years (younger-young) and above 18 years (older-young) age groups. This evidence suggests

implications for suicide prevention, especially when engaging in intervention activities with a young refugee cohort. The t-test findings suggest some differences in the risk factors for suicidal behaviour for the two age groups. The results support the growing body of evidence that suggests a distinction in risk factors for suicidal behaviours for children and young adults (Beautrais, 2001; Soole, et al., 2015).

The results of the quantitative analysis offer implications for the design, implementation and efficacy of suicide prevention and intervention activities with a young refugee cohort. The information explored in this section of the analyses could be built upon and utilised to inform policies for this vulnerable population. An ongoing awareness of the issues raised in this section of the analyses could also help QPASTT and other refugee specialist agencies in the ongoing development of tailored, empirically valid, and culturally competent interventions.

Qualitative Data Analysis

The thematic analysis of three young refugees provided a clinical context to the data analysed in this study. The themes evident in the analyses fell into three categories: mental health factors and symptomatology, psychosocial factors, and suicide specific factors. Despite the interrelation evident between these themes, further investigation into these themes could offer useful insight into the suicidal experiences of young refugees.

No direct or specific analysis of the effect of culture on the generation of themes took place. Such evidence could produce valuable knowledge regarding the specific cultural idioms of distress which could influence suicidal behaviours of refugees. The exploration of gender and its influence on the suicidal behaviours of a young refugee cohort was also not explored by this study. The differing experiences of the genders, particularly including an analysis of culture, would offer important insight into the risk factors for suicidal behaviour.

In a study mentioned earlier, Brough, et al. (2003) found that young refugees conceptualised their lives in relation to their perceived levels of connectedness to family, ethnic community, friends, and society at large rather than against illness related boundaries. The results of this thematic analysis appear to confirm this as the young refugees were y focused on school, relationships, and their perceived levels of connectedness and isolation.

The fluctuating nature of the suicidal experience was evident in the thematic analysis of this study. These results reflect the findings of the Bertolote, et al. (2005) study in which community surveys were conducted to examine suicidal ideation, plans and attempts across a range of cultures and nations. Bertolote, et al. found that the notion that suicidality is a fluid progression of suicidal ideation into plan and finally action, required further investigation and may in fact be culturally specific. The findings of the thematic analysis of this study exemplified the fluctuating and potentially omnipresent nature of the suicidal experience.

The protective factors and behaviours of the young refugees were made evident in the thematic analysis of the three young refugees. The ongoing, diligent work of identifying, acknowledging and bolstering protective factors in a population high risk for suicidal behaviours is essential.

Clinical Context

To further place the data analysed in this study into clinical context, the qualitative data throw doubt on the usefulness of the K10 and SDQ which are assessment tools used by QPASST. Important areas of the refugee experience (and risk factors for suicidality) can be potentially overlooked by the application of broad mental health assessment tools such as the K10 and SDQ.

Issues of language and culture may complicate the application of psychological assessment tools, such as the K10 and the SDQ, when applied to a refugee population (Stolk, et al., 2014). For this reason, issues relating to validity are often raised when exploring the efficacy of transcultural epidemiology, as are the problems associated with accurately describing the psychopathology in a refugee population group (Vijayakumar, 2016). Ferrada-Noli and Sundbom (1996) report that cultural factors have the potential to alter suicidal behaviour in a variety of ways including the stating of intent, the way the symptoms are reported, and any acknowledgement of an issue at all. They further report the importance of understanding the impact of trauma on the individual and the inherent coping mechanisms when assessing suicide.

Merging of the Findings

This section provides a merging of the findings of the quantitative and qualitative analysis with reference to the background literature explored in the Introduction. This study's findings line up closely with the seven key themes,

believed to effect suicidality in the cohort and outlined by the background literature (traumatic experience, migration stress, cultural understandings of mental health, family, school, social connectedness / isolation, and acculturation).

All three young refugees presented with significantly raised risk profiles for suicidal behaviours. The countries represented by them have experienced significant turmoil over a period of many years, which applies also to the entire cohort analysed in the quantitative analysis. It is quite unlikely that any participant of this study has known a life free of war-related trauma.

Pre- and post-migration factors appear to be relevant when formulating risk profiles for these young people. An experience of significant loss, violence, and displacement are evident within each of the three young refugees and are associated with the trauma symptomatology of the whole cohort. A heightened experience of trauma appears to coincide with a heightened likelihood for suicidal behaviours and should be included in any risk assessment of these young people. Additionally, the relevant cultural understandings associated with the young refugee's experience of metal ill health should be explored with each young refugee by clinicians to truly understand the presenting symptomatology and potential risk factors.

Post-migration stressors, including acculturation, could also influence the experience of suicidality. The complex process of acculturation includes a range of psychosocial activities and stressors. The young refugees of this study are early in their acculturation journey and, as migration and acculturation are considered to be stressful life events, these factors remain critically important to suicide risk assessment. Acculturating individuals can face discrimination, financial pressure, employment barriers and a general sense of insecurity, all of which are experiences that were also noted for the three young refugees who were thematically analysed.

All three young refugees lived with an experience of a turbulent home life. This was also reflected in the whole cohort, as the majority of the cohort analysed were noted to experience either severe or moderate levels of family dysfunction. This appears to be a significant risk factor for suicidal behaviour in refugee populations that cannot go unacknowledged. Physical violence at the hands of primary carertakers or an intimate partner and the removal from the home environment causes significant disruption in a young person's life. An escalation in trauma-related symptomatology is likely to increase as a result of the destabilisation in their home life.

Behaviours evident in the three young refugees, such as the re- experiencing of past trauma, including disassociation and flashbacks, coupled with engaging in self-harming and suicidal behaviours, further elevate their risk status. The presence of past suicidal ideation and action, in addition to current experience of suicidality, places each of these young people in a high-risk category for future suicidal behaviour.

The evidence presented in this study exemplified the importance of relationships and a sense of connectedness in a young refugee's life. For each of the three young refugees examined, relationships were a strong key theme. The young refugees often noted the effects of feelings associated with a sense of social disconnection and isolation. The quantitative analyses of the cohort reinforced these qualitative findings, with the majority of young refugees categorised as either severe or moderate in their experience of both social isolation and interpersonal difficulties. It appears that this experience could influence any suicidal behaviours experienced by the cohort. Further examination of the influence of relationships, social connectedness and social isolation in a young refugee's experience of suicidality is required.

It is clear from this study that clinical work with a complex cohort such as refugee youth demands a complex and nuanced risk assessment procedure. Insufficient is the naïve application of any psychological assessment tool without an embedded understanding of the complexity and subtlety of the risk factors present. Suicide, especially refugee suicide, is nuanced and multifaceted, and for risk factors to be effectively mitigated, responses are also required to be multifaceted.

Wider Implications of the Findings

The findings of this study offer valuable information for policy and program development with a young refugee population that is experiencing suicidality, especially in developing targeted age-appropriate initiatives.

The generation of effective suicide prevention activities should be based on sound empirical findings. The findings of this study offer a beginning phase in which to explore the complex and nuanced risk factors for suicidal behaviours in a young refugee cohort. This information could be used in the generation of effective suicidal prevention activities designed for the cohort.

Schools who have refugees among their students could also garner beneficial information from this study. The school environment offers a unique opportunity to identify risk factors and bolter protective factors for suicidal behaviour if the staff are appropriately trained and supported to do so.

Those agencies specifically engaged in the provision of service to a young refugee population could be guided by the information generated in this study, as would those services that interact with a young refugee population only occasionally or when the refugee is in crisis (for example, general mental health services, GP's, etc.). The findings of the study could assist in the identification of the specific, complex and subtle risk factors for suicidal behaviours. Training programs for staff in order to ensure sufficient awareness of the nuances associated with the refugee experience and its implication for mental health and suicidality could also be informed by this study.

Where to Next

There is a ack of information in the literature about suicide in refugees, in particular, the age-appropriate risk factors for suicidal behaviours. This study identified a potential difference in the experience and the influential factors for suicidal behaviour in the above 18-year-olds (older-young) and the below 18-year-olds (younger-young). The difference in these risk factors requires further robust investigation. Further insight into the driving forces behind refugee youth suicide would provide improved opportunities for the effective engagement with sucidal refugees. Refugees experience a range of stressful life events over their life span and are widely expected to be of heightened risk for engaging suicidal behaviours. A nuanced and specific understanding of these behaviours in this sgroup would assist in developing clear, consistent and reliable interventions, assessments and prevention activities.

Additionally, any prevention or intervention programs to reduce suicidal behaviours in refugees have not been reported in the literature (Vijayakumar, 2016). There is a widely accepted and evidenced link between psychological disorders and suicidal behaviours, but there is a lack of specific investigations into this link in a refugee population group (Vijayakumar, 2016). Most existing research on the suicidal behaviours of culturally diverse youth does not differentiate immigrants from refugees, despite the significant difference in

experience (Langhinrichsen-Rohling, et al., 2009; Bursztein-Lipsicas & Henrik-Makinen, 2010).

Throughout this study, aside from an experience of suicide, it became evident that school and relationships were the two predominate themes. The role of schooling and the relationships experienced by young refugees influence their functioning and the subsequent construction of their matured identity. Understanding the influence of these themes upon young refugee's experience of suicidality could offeruseful insight into how to provide relevant and appropriate interventions when working with young refugees.

Further academic insight into the reliability and validity of a range of psychological assessment tools utilised with a young refugee population is required, as is the development of rigorous multicultural comparison studies in the field.

The evidence developed by this study is best understood through the lens of acculturation. Utilising an acculturation framework to view the experiences of a young refugee population will allow a better understanding of the complexities of the refugee experience. The most effective intervention with refugees is informed by acculturation and is responsive to the range of psychological and social stressors experienced by them. An informed understanding of pre- and post-migration stress, trauma and culture is likely to produce assessments, interventions and programs that are better tailored to address the complexities associated with a young refugee population.

There are a range of factors prohibiting the production of useful evidence in this field. Some of these factors include, but are not limited to, a lack of reliable data, limited access to the refugees, ethical challenges associated with research with vulnerable population groups, and an underreporting of suicidal behaviour. Also, as the nature of services provided to refugees can be a politically sensitive issue, permission to study suicidal behaviour amongst this group is frequently denied (Vijayakumar, 2016). It is difficult to engage and formulate effective prevention strategies with such a complex population group without sound supportive evidence. Researched opinion on the potential risk factors for suicidal behaviours and the inherent protective factors will aid in the development of appropriate screening tools, risk assessments and prevention programs (Lerner, et al., 2016).

Limitations of this Study

This study is not without its limitations. It used retrospective case file analysis rather than interviews with the refugees. However, the opinions of the clinicians were valuable.

There is a potential source of bias from the data itself. Clinical case notes reflect the interaction written by the clinician, and there is room for misinterpretation, cultural miscommunication and for events, thoughts and feelings themselves to be misrepresented. There is also possible potential bias in the selection of refugees provided to the research team for thematic analysis.

There is also a limitation in the nature of the thematic analysis design, coupled with the small research team. As codes were developed and reported upon by the author, in consultation with one other, a larger research team could provide more diverse set of themes.

Another limitation of this study is the small population size of cases thematically analysed. While the majority of young refugees within the 257 population sample were from Afghanistan (18%) with such a small sample size it is difficult to generalise the results. Also, gender was not specifically addressed or catered for in this study. A more robust analysis building upon the findings of this study is required to further identify the age, gender and culturally appropriate risk factors for suicidal behaviours in refugees.

Finally, the findings of this study may not be 78eneralizable across all young refugees, but is perhaps an accurate representation of those who are survivors of torture and trauma.

Conclusion

This study offers a contribution to the developing conversation and understanding of the driving factors behind a young refugee suicidal experience. The thematic analysis approach, coupled with the sequential explanatory design, allows for the opportunity forthis study to gain a better understanding of the complex nuances of a suicidal experience. This study provides valuable clinical information relating to the subtle, multifaceted, arrangement of risk factors that contribute to the experience of suicidality within a young refugee cohort.

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Copyright Statement

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SUICIDE, MASS MURDERERS AND SERIAL KILLERS: A PRELIMINARY STUDY

David Lester

Abstract: In a small sample of mass murderers and serial killers, clues were looked for in the childhoods of these men that might indicate differences between these two types of murderers and, for the mass murderers, the outcome (death by suicide, shot by police or captured). The data suggest that those mass murderers who were captured had the most disturbed childhoods and adolescent years than those who died by suicide. No differences were apparent between the mass murderers and the serial killers.

A high proportion of mass murderers die by suicide, a much higher proportion than serial killers. Lester (2010) found that 34.7% of a sample of mass murderers died by suicide compared to 4.4% of serial killers. The present preliminary study compares the childhoods of mass murderers who died by suicide with the childhoods of other mass murderers and with the childhoods of serial killers.

One problem here is that many accounts of mass murderers and serial killers focus on the details of the murders and give very little attention to the childhoods of the murderers. Fifteen mass murderers were located with information available about the first 20 years of their lives, six of whom died by suicide, three of whom were shot by police officers (perhaps suicides-by-cop) and six who were executed or died in prison. My essays on the childhoods of these 15 men are presented in an Appendix. Similarly, xx serial killers were located with available data on their childhoods, and these are also presented in the Appendix.

Of course, much may have happened in the lives of these men after the age of 20, but I am interested in clues that might be found in their childhoods. In addition, the mass murderers serial killers differ in their victims. Some killed family members, some in the workplace, while others killed strangers, and this factor may be associated with differences in their childhoods.

The ratings used are:

0 none
1 mild
2 moderate
3 severe

Mass Murderers and Serial Killers and Ratings of their Childhoods

Table 1: Ratings of the childhoods of the murderers

	Family dysfunction	External stress	Disruptive behavior	Criminal behavior	Psychiatric issues
Mass Murderers					
Suicides					
Mark Barton	0	1	1	3	3
Marc Lépine	3	1	0	0	0
Gang Lu	0	2	1	0	0
Harvey McLeod	1	1	2	2	1
Michael Ryan	1	1	0	0	0
Joseph Wesbecker	3	0	1	2	0
Killed by police					
Mark Essex	0	2	0	0	0
James Huberty	1	2	0	0	0
Charles Whitman	3	0	1	1	0
Captured					
Ronnie DeFeo	2	1	3	2	2
John Graham	3	0	3	2	1
Ernest Ingenito	3	3	0	3	0
John List	1	1	0	0	1
Timothy McVeigh	1	1	0	0	0
Richard Speck	3	1	3	3	3
Serial Killers					
Ted Bundy	3	1	0	2	0
Andrei Chikatilo	3	1	0	0	0
John Collins	3	0	2	2	0
Juan Corona	0	1	0	0	3
Jeffrey Dahmer	1	0	3	1	1
Albert DeSalvo	3	0	2	2	0
William Heirens	0	2	3	2	2
Joseph Kallinger	3	3	2	0	2
Charles Schmid	0	2	0	1	0
Arthur Shawcross	2	2	3	3	2
Charles Starkweather	0	2	2	1	1

Discussion

The sample sizes are very small and, therefore, significant differences are unlikely. The mass murderers who died by suicide or who were killed by police (and so potentially suicides-by-cop) did not differ from those arrested. However, looking at the total obtained for the five categories of ratings, the suicides tended to

have lower mean scores (M=4.44, SD=2.19) than those arrested (M=7.67, SD=4.27: t=1.94, df=13, two-tailed p=.075).

A comparison of the mass murderers with the serial killers identified no significant differences or trends.

You can read these biographies (and the sources) and make your own judgments, but the majority of these men had difficult, abusive and disruptive childhoods. The mass murderers who were caught seemed to have worse childhoods than those who died by suicide or who were killed by police officers. It is noteworthy that bullying, family dysfunction (resulting in anger at one or both parents), minor criminal behavior and drug use were common in the childhoods of these men. However, there is very little evidence of risk factors for suicide in their childhoods, although bullying and family dysfunction have been reported in the backgrounds of suicides. Personality disorders rather than Axis I psychiatric disorders seem more common in the men.

This study is, of course, preliminary. A larger sample would be better, and the categories of mass murderers and serial killers can be made more complex. For example, some mass murderers murder strangers, some murder family members while others murder in the workplace. Many years ago, there were several mass murders by postal workers in their workplace, and *going postal* became a common term for losing control. The problem, of course, is that very few mass murderers and serial killers have articles, chapters or books written about them, and often details of their childhoods are minimal.

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APPENDIX: BRIEF BIOGRAPHIES IN ALPHABETICAL ORDER

MASS MURDERERS

Mark Barton

July 29, 1999
12 killed; 12 wounded in a shooting spree at day-trading companies in Atlanta, GA
Died by suicide

Barton was a military brat. Born in 1955, the only son of Truman and Gladys Barton grew up on military bases first in Germany and then in Sumter, South Carolina, where Gladys put in twenty years as a church secretary for the St. James Lutheran Church, and Truman worked for the Air Force.

"He didn't like his father," said Milton Grisham, a psychologist who knew Mark Barton since his sophomore year in high school. "His dad was very stern and strict." The red brick house at the end of Wren Street, in one of the nicer suburban areas of Sumter, was home to an inconspicuous boy who was a bit of a nerd. Beth Edwards, who helped organize the 25th reunion for the Class of 1973, didn't even remember him. The math whiz peering out from behind horn-rimmed glasses in a yearbook photo didn't socialize much. He didn't have a girlfriend, and although the gangling teen would eventually grow to a sturdy 6'4" and 205 pounds, he was never much for sports. "If someone didn't fit into a group and find an identity, they could just slide through unnoticed," said J. Grady Locklear, one of Barton's English teachers. "Mark is one of those."

His high school yearbooks didn't even get his name right. Listed as "Jack Barton" in 1971, and mislabeled again in 1972 as "Mack Barton," his picture is missing altogether in his senior year, and while they did get his name right in the 1973 book, he is identified only as a "Merit Scholars Semi Finalist. Cindy Haley, who attended Sunday school with Barton at St. John's United Methodist Church, remembered him as "highly intelligent, much, much more intelligent than most people," but also as "very quiet, kind of a loner." Haley could not remember Barton having any friends. He was just another nobody. "He was angry about not fitting in," said Grisham. "He figured, 'I'm an outcast. Why should I participate?'"

Perhaps that's one reason the clever misfit turned to petty crime early, and returned often, refining his larcenous techniques over the years. He confided in his pal Grisham that, whenever he went anywhere, he would be sizing up how to break

in, where the money was kept, what he could steal, and how he could get away with it. At 14, he got caught breaking into a drugstore. "He fancied himself a mastermind criminal," Grisham said, "but he was such a screw-up, he'd just pretty much botch it."

Grisham noticed Barton's tendency towards dissociation in adolescence, although he had been unable to interpret the contradictory behavior he observed until he became a psychologist years later. Characterizing Barton as "caring, ebullient, personable," Grisham noted that significantly, at times he could also be cold and distant, and "he was always a schemer."

When he was 16, Barton's lifelong interest in better living through chemistry led to experimentation with psychedelic drugs. He extracted a potent hallucinogen from morning glory seeds, and after tripping on it, was never quite the same. "He ingested a great deal of it. Then he really overdosed. He had hallucinations and had to go to the emergency room," said Grisham, who has worked with rapists and killers. "It did something very bad to him." Grisham speculated that the toxic effects of the ingestion might have been complicated by the chemicals Barton had used in the extraction process.

After the acute phase of the induced psychosis passed, Barton remained out of touch with reality. Frightened by visions of demons shooting up through the floor, he lost the ability to read for several weeks and had to learn it all over again. At a time when the length of one's locks carried powerful symbolism, the socially awkward teen abruptly cut off all his hair and took up the Bible, even bringing it along when he showed up at Grisham's house for a game of chess, babbling on excitedly about finding "The Answer to All Questions." "He didn't make any sense," said Grisham. "1 kind of lost touch with him, he became so strange. The drugs blew him away."

Although Barton was demonstrably bright, he never reached the level of achievement expected of a boy from a good, stable, Christian home, who scored so well on aptitude tests. Grisham observed that impaired functioning of the intellect is consistent with early abuse in the home. Although Barton might complain about the home environment in general terms, the details remained shrouded in secrecy.

Barton attended Clemson University for one semester, but after another psychotic break, was hospitalized, withdrew from school and remained on antipsychotic drug therapy under the treatment of a psychiatrist throughout the rest

of that school year. Barton entered the University of South Carolina the following year, and it was there that he learned to synthesize methamphetamine. He was soon making it, selling it, and inevitably using it. At the age of 20, he was caught again trying to burglarize a drug store and placed on probation.

Ronnie DeFeo

November 12, 1974
Killed mother, father and four younger siblings (aged 7-18)
Died in prison

Ronnie DeFeo was born on September 26, 1951, in Brooklyn. His father was a 20-year-old, a textile worker, and his mother 19. The family, Italian Americans, moved to Long Island when he was thirteen. Ronnie's father was a powerful man with a hot-temper, and may have been physically violent toward his wife, and perhaps began abusing Ronnie when he was only two. Ronnie said that his father had told him, when he was about twelve years old, that he was not his real father and that his mother had been pregnant with Ronnie when they met.

At age fifteen, Ronnie was overweight (he weighed as much as 250 pounds), though he later got down to 160 pounds with the help of amphetamines. He was spoiled and had trouble at the parochial schools he attended. He quit high school at the age of sixteen, with passing grades in only physical education. He was inept at sports, unskilled, and was fired (mostly for absenteeism) or quit most of the menial jobs he had. As the delivery boy for his uncle's pharmacy, he overcharged the customers and quit once he was caught. In 1969, he tried factory and construction jobs and was finally hired by his grandfather for $20 a week plus generous handouts from his father. His father bought him a $4,000 boat when he was fourteen and a car when he was seventeen. His father may have paid $5,000 to keep Ronnie out of the military. In 1973 he was arrested for possession of a stolen outboard motor and given one year probation. His girlfriend told authorities that Ronnie was using drugs, and so urine testing was added to his probation.

By his late teens, Ronnie was smoking cigarettes heavily and had a stomach ulcer. He owned several firearms (and had once shot at a friend on purpose, though missing him), and had planned and carried out a burglary of his grandfather's car dealership, where his father and he both worked, two weeks before the murder. He expressed negative feelings toward his mother and his siblings.

He was involved in assaults with friends, and he had made threats to kill others, including a police officer (and the officer's daughter) who had discovered his marijuana plant garden. When his girlfriend was fired from her job as a barmaid, Ronnie fired his gun outside of the bar and threatened to hurt the owner if she was not rehired.

Ronnie's mother may have had extramarital affairs, and Ronnie may have blackmailed her over them. Ronnie was a heavy gambler on cards, dice and horses. He was also a drug user, including marijuana, methedrine, acid, cocaine and eventually heroin (when he was in his early 20s), drug use which started soon after he quit high school. He was especially violent when he tried to get off drugs, and at one point he was put on Thorazine by the family physician. On speed, he was violent to both property and other people. Heroin kept him calmer.

In 1968, after his mother nagged him, Ronnie went to attack her, screaming that he wanted to kill her, but his friends wrestled him to the ground and prevented him from doing so. Ronnie had always been in conflict with his father and may have hated him. They certainly had verbal and physical fights, and they had a major fight just four days before the murder. His father was thinking of throwing Ronnie out of the house. The day before the murder, Ronnie's father had gone home to confront Ronnie about the burglary of his grandfather's car dealership.

He was lavishing money on his current girlfriend and planned to steal money, probably from his father and run off with her. His father probably discovered him in the act of the theft, and Ronnie shot him. He then systematically shot the remainder of his family.

Ronnie was seen by a psychiatrist from March 1966 to March 1967. Ronnie was a withdrawn, passive-aggressive, fourteen-year-old who bought protection from bullies. The psychiatrist saw Ronnie as acting-out a script written for him by his maladjusted family, the role of the bewildering bad boy. His father wanted him to be more aggressive, and yet the message was mixed - be aggressive, but don't be aggressive.

The prosecution psychiatrist noted that Ronnie was raised in violence and had developed an explosive temper, which at first was inhibited toward his father. Yet he was also indulged, and he developed a short fuse, afraid of his own violence. He tried to run away from home and used drugs as ways of coping, but

unsuccessfully. Eventually, he developed paranoid thoughts, believing that others were after him, thereby turning his anger away from his father. The psychiatrist diagnosed Ronnie as an antisocial personality disorder.

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Mark Essex

December 31, 1972 & January 7, 1973
9 killed and 12 wounded in two spree attacks
Killed by police

Mark Essex, an African American, was born in Emporia, Kansas, on August12th, 1949. Emporia was a small town of 20,000 people, with few blacks (only about 500), but a history of racial tolerance. Thus, Mark did not encounter much racism at all growing up.

He was the second of five children, and his father was a foreman at a local meat-packing plant. His mother counseled preschoolers in a program for disadvantaged children. His parents were kind people, good parents and citizens. Mark was remembered by a teacher as a smiling and friendly boy. He joined the Cub Scouts, played the saxophone in the high-school band, and liked to hunt and fish.

He was popular in high school, dating both black and white girls. He wanted to be a minister, and he was good at technical subjects. He was small and wiry. Police records showed only three traffic violations. After high school, he drifted for a while, went to college briefly (at Labette Community Junior College and Kansas State College) but quit in the Fall of 1968, worked at the meat-packing plant, and then decided to join the Navy. He enlisted in January 1969 at the age of 19. He was assigned to Imperial Beach, California, and apprenticed as a dental technician. His boss found him friendly and helpful - an all-American boy.

For the first time, Mark encountered racism and discrimination. Blacks were second-class citizens in the Navy. He was questioned and searched every time he entered or left the base, whereas the white sailors were waved through. His bitterness grew, and he had some involvement with a fellow sailor, Rodney Frank,

a militant who later became a black Muslim. Eventually, he got into a physical fight with a white petty officer, after which the harassment grew. Mark went AWOL in October 1970.

Back in Emporia with his parents, he was moody, withdrawn and bitter about the Navy. But his parents persuaded him to return. His boss stood up for him, and the judge gave him a lenient punishment - 30 days and a fine of $90. He was an early discharge in February 1971, for having “unsuitable character and behavior."

Reference

Foreman, L. (Ed.) (1992). *Mass murderers*. Alexandria, VA: Time-Life Books.

Lu Gang

November 1, 1991
Graduate student: murdered three professors, one post-doctoral student, one staff member
Died by suicide

Gang was born in 1963 in Beijing. His mother worked in a hospital clinic and his father was a clerk in an automobile supplies shop. He had two older sisters who doted on him. The family shared a tiny apartment in the residential compound of a military hospital known as 262.

Gang was rebellious from childhood on. In kindergarten, he called Lenin a "bold ass." In junior high school, he objected to visiting Chairman Mao's memorial in Tiananmen Square because he wanted to study for exams. He had to deliver a self-criticism speech before his class, and he was stripped of his positions (vice leader of the class and the physics representative).

While no sissy, he wasn't athletic and typically watched the others play from the sidelines. He wasn't very sociable. When guests visited, he went to the vegetable shed to read by candlelight.

He was always better than average as a student, but at middle school he began to excel. In high school he won several awards and was admitted to Beijing University where he again excelled. In 1984, he took a battery of exams and was allowed to go to the USA to study for his doctorate. However, he did very poorly

on the English exams but, given his outstanding physics scores, his professors let him slide past. His problems with the English language plagued him throughout his time in America.

He came to the University of Iowa in 1985. Instead of being happy at the opportunity, Gang was upset. He had decided that a career in physics was not a good idea. He saw many businesses developing in China while the job market for scientists was declining, and he wanted to switch to business and get an MBA.'

At the University of Iowa, Gang was viewed as a brilliant scholar, but his style was somewhat haughty, he was uncoordinated physically and a little flabby, he struggled with English and was plagued by social awkwardness. When he tried to switch fields at the University of Iowa, he was told that it was not possible under the regulations for foreign students.

Despite his efforts to assimilate, he remained a pathetic loner, sulking and storing grievances. He kept to himself, spoke only when spoken to, and avoided the gaze of others, looking as if lost in thought but usually raging over a real or imagined slight. Both the Chinese and the Americans found him to be a difficult colleague.

Reference

Chen, E. (1995). *Deadly scholarship*. New York: Birch Lane.

John Graham

November 1, 1955
44 killed when plane exploded; aimed at mother on plane
Executed

John was born in 1932. His mother had a daughter by a previous marriage. His father left the family when John was eighteen months old, and his mother went to live with her mother and returned to work. She was generous to her children but spent little time with them. She was unaffectionate, quick-tempered, and domineering. John felt rejected by her as a child.

As a child, John was a bed-wetter and set fires (once to a garage). He was also cruel to animals. His grandmother died when he was six, and he was sent to a home for fatherless boys for five years. He stopped bed-wetting there. His

adjustment at the home was not good. His mother remarried when he was nine, but she refused to take him out of the home. He ran away to his mother's house several times, but he was always sent back. He was caught stealing at the home when he was eleven, and the home then insisted that his mother take him back.

At fourteen he left school to work on his step-father's ranch. At sixteen he enlisted in the coast guard, for which his mother helped him falsify his age. After six months he went absent-without-leave and was discharged. He claimed that when the coast guard examined him, they hospitalized him, and he was given electroconvulsive therapy. Records did not confirm this, and the examiners judged him to be immature, dependent on his mother and to have poor frustration tolerance. While in the coast guard, he slept on duty, stole food, and returned to work drunk.

In the following two years he held some 25 jobs, usually in construction work and driving trucks. In 1951, he forged checks worth about $4500 and, after fleeing, was arrested. He was sentenced to five years probation on condition he repaid some of the money. (His step-father paid the rest.)

He married a woman in 1953 whom he met while taking courses at the University of Denver, and they had two children.

Reference

Galvin, J. A. V., & McDonald, J. M. (1959). Psychiatric study of a mass murderer. *American Journal of Psychiatry, 11*5, 1057-1061.

James Huberty

July 18, 1984
21 killed and 19 wounded at a McDonalds
Killed by police

Huberty was born on October 11, 1942, in Canton, Ohio. His father was a quality inspector at a factory. When he was three, Huberty contracted polio, after which he had to wear leather and metal braces on his legs for a while. After the braces were removed, he walked with an odd rolling gait, for which the other kids at school used to tease him. When Huberty was seven, his father quit his job and bought a 155-acre farm, 20 miles outside Canton. His mother refused to move and

abandoned the family, heading west to serve as a missionary on Indian reservations.

The father moved the two children, Huberty and an older sister, out to the farm and got his own mother to come and help with the family. Huberty was greatly upset over the loss of his mother. The farm was in a region settled by Amish and Mennonite farmers who didn't like outsiders, and Huberty was also harassed by the kids over his broken home. He was a lonely kid, sullen with anger, but attached to his dog, Shep.

He began to be interested in guns, practiced all the time and became a good shot. He tried out for basketball at school, but didn't make the team. He played chess a little, graduated 51st out a class of 77 and was one of only two students who didn't have a picture in the 1960 yearbook.

He became an amateur gunsmith, improving his weapons and making his own ammunition. He went off to Malone College, a Quaker college in Canton where he majored in sociology and met his future wife.

Reference

Foreman, L. (Ed.) (1992). *Mass murderers*. Alexandria, VA: Time-Life Books.

Ernest Ingenito

November 1950
Killed five of his estranged wife's relatives
Died of natural causes in prison

Ingenito was born in 1924, a "blue baby" thought to be dead on delivery. His father, an undertaker, carried on his business in the basement of the house, and, when he was six, Ingenito began to sneak down with his older brother to watch his father and uncle embalm the bodies. At school, he was smaller than the other boys and stuttered, and he was teased and tormented by his peers. They took his books, hit him, and printed words on the back of his coats. He never fought back for fear of hurting them, he said, so the boys called him a sissy as well. His father often beat him, once rendering him unconscious for six hours. Not surprisingly, he felt unloved and unwanted.

Things did not improve. His stuttering made him embarrassed when teachers asked him to speak in class. The other kids laughed at him, and on one occasion he ran out of the classroom and was truant for several days. His truancy became chronic, and he was sent to a reform school from which he graduated with a tendency to steal and burglarize homes. He was caught and sent to prison for a couple of years. He was then inducted into the army where he was incarcerated again, this time for striking an officer. While in the service he married his first wife. When he returned to civilian life after the war, he found that she had given birth to a child by another man, and so he divorced her.

Reference

Banay, R. S. (1956). Psychology of a mass murderer. *Journal of Forensic Sciences, 1*(1), 1-6.

Marc Lépine

December 6, 1989
14 killed women and wounded 14 (ten women and four men) at the École Polytechnique de Montréal
Died by suicide

Monique Lépine was a 26-year-old nurse when she met a 30-year-old Algerian businessman, Rachid Gharbi in Montreal. She was Catholic, and he was Muslim. They married in 1963, and their first child, Gamil, was born on October 26, 1964, followed by a daughter. Gharbi was prosperous, a millionaire, selling mutual funds for Bernie Cornfield. Gharbi moved to Puerto Rico, Costa Rica and then back to Montreal. He bought a house in town and rented a retreat in a mountain village north of Montreal.

In 1970, Cornfield's empire collapsed, and Bernie Cornfield went to jail. Gharbi, whose wealth was mainly invested in the funds, lost most of his money. Gharbi kept several mistresses and fathered several illegitimate children, picking up women in front of his wife. He was a wife beater and brutal to Monique. He forced her to work as his secretary, even though she had no training in that field, and beat her if she made mistakes.

The children saw this and were often beaten themselves, and Gamil suffered more than his sister. The welts would stay visible for days, and his mother was forbidden to comfort him. Gharbi also liked to humiliate his family. When friends

came over to play bridge, he would sometimes make the children stand to attention against the wall.

The first time Monique tried to leave Gharbi with the children, he followed them and beat her, but she left for good in 1971, filed for divorce in 1974 and was granted a divorce in 1978. Although Gharbi tried to win custody of the children, the judge gave them to Monique.

In 1971, Gamil was seven. He was withdrawn and prone to bleak moods that grew worse as he aged. He hated his father and loved his mother, but he also saw that his father had power while his mother was helpless. It seems that Gamil began to identify with his hated father.

At first, Gharbi paid support, but this soon stopped. In 1973, the family had to leave the Montreal house and rent an apartment. Monique returned to nursing for income and was busy. Gamil saw less of his mother, often only on weekends. During the week, he and his sister were left with relatives and friends, and he spent some time with an uncle who lived on a farm who taught him how to use a gun.

Monique was appointed director of nursing at a hospital, and she went with the children to a psychiatric clinic for treatment. When he was 12, Monique bought the family a house in the suburbs. Gamil found a good friend there, Jean, and for six years they were inseparable.

When he was 13, Gamil decided to change his name since he hated his father so much. He chose Marc and took his mother's name, Lépine. His sister taunted him all the time by calling him Gamil. Marc was not at all wild, disapproving of drinking, drugs, and even rock concerts. He refused to date, even after Jean began to do so, and never went to parties or school dances. If he wasn't with Jean and Jean's girlfriend, Marc stayed home. His mother paid him to take care of the house.

He liked to tinker with electronic equipment, radios and telephones, and he planned to become an electronic engineer. At school, he wasn't good at English or French, but he excelled in science. His mother worried about his social backwardness, and she enrolled him in a big brother program. Marc's big brother, Ralph, helped Marc with electronics and introduced him to photography, motorcycles and movies, but then disappeared from his life after it was discovered that he was homosexual.

Marc tried to enlist in the Canadian armed services at the age of 17 but was rejected. His mother then moved the family to an apartment nearer her hospital, and so Marc lost his friend, Jean. Marc grew more reclusive, spending most of his time in his room, reading, and tinkering with his electronics gear and computer. He entered a junior college, finished in 1983, and then enrolled in a 3-year program in vocational training. He quit after a semester. He was then rejected by the engineering school of the University of Montreal.

Reference

Foreman, L. (Ed.) (1992). *Mass murderers*. Alexandria, VA: Time-Life Books.

John List

November 9, 1971
Murdered his wife, mother, 3 children
Died in prison

John List was born September 17, 1925, to John (JF) List (aged 60) and Alma List (aged 39) in Bay City, Michigan, a community with a high proportion of German-Americans. JF had married Anna Marie Hubinger and had a son with her. As she was dying from cancer in 1923, they sent for Alma, a cousin, to help take care of her. Anna died on June 22, 1923, and JF and Alma began to court. They married on November 27, 1924. She was soon pregnant, and gave birth to John, their only child together. The father left the child-rearing to Alma and put in long hours at his Dry Goods and Men's Furnishing Store.

Alma was an overprotective mother, doting on John's every need. She hated to let John out of her sight. The family weathered the depression, and John's father retired in 1933, though he continued to sell crackers and cookies from his car, working long hours. John saw little of his father, who called him "the boy," indicative of the distance between them. The only limited male contact John had was with the family across the street, whose father had John help wash cars and do other chores. Nonetheless, John was called a sissy and Mommy's boy by his peers.

Alma kept John at home most of the time. While other kids were playing, John sat on the porch, reading or playing by himself. His social life was with relatives, most of whom were much older than him. The neighbors called Alma Mumma and saw that John was much more important to her than her husband. She

worried about colds and dressed him warmly even when other kids were wearing fewer clothes.

Once John could read, he would read the Bible daily with his parents who were devout Lutherans. He was taught the strict Lutheran doctrine, but even the local pastor thought that John was too correct. He was so obedient that he recalled being spanked only twice - once for being unruly in church and once for running about the house too vigorously. At family gatherings, John would hardly move without permission from his mother.

At five he went to the local parochial school where the strict teachers reinforced Alma's training. During his eight years there, John followed the rules. Though teased by his peers, he never showed his anger, just as his mother had taught him. He studied hard and was known as a "brain" by his peers. He seemed preoccupied and different - a loner. The theological system slowly mastered him, until he believed that he had to maintain the strict Lutheran system and that everyone else he cared about had to fit into the system. The authors of the biography speculated that John developed a harsh conscience and followed rules obsessively. His compulsive religious devotions and Bible readings were ways of controlling his age and sexual impulses.

In eighth grade, John was confirmed, and at his confirmation party he was the only child. He left the party early to practice the violin which Alma had encouraged him to take up. He continued to spend his spare time at home, reading, helping his mother and thinking alone in his room. Neighbors noticed that he began to walk and talk like his mother. John was even kept in on Halloween. No one ever could recall John showing any anger.

In 1939, the Second World War began. John went to junior high school and then to high school. He remained distant from his classmates, took math and science and tested at 139 IQ, making the honor roll every semester. He played in the orchestra, but never hunted or fished as most of the boys in Bay City did. He did not even join in the activities organized by the Lutheran churches. His parents warned about the "dangers" of dancing, and he never dated. At home, no shouting, arguing or vocal emotion was allowed. J. F. did not drink, and Alma did not keep any alcohol in the house. John graduated from high school in 1943, after which he enlisted in the Army. He began training in December 1943. JF died in August 1944, after which John went off to war, while Alma did private nursing. John's unit was shipped to Germany in February 1945, and then to the Pacific theater in June

1945. On his discharge in April 1946, John was awarded medals for infantry service in Europe and the Pacific. His spotless Army record earned him a Good Conduct medal.

Reference

Benford, T. B., & Johnson, J. P. (1991). *Righteous carnage*. New York: Charles Scribner's Sons.

Harvey McLeod

Memorial Day, 1972
5 killed, shot at random in shopping center
Died by suicide

McLeod, a black male, was born in 1950, the eldest of three siblings, with two younger sisters. He seemed to get on well with his parents and sisters. His mother was hospitalized twice for psychiatric problems, when McLeod was about sixteen and eighteen years old, each time for several weeks. Fourteen years before his son was born, McLeod's father had murdered two men in a night club and been sentenced to prison. After release, McLeod's father worked as a state hospital employee.

McLeod described his birth and childhood as healthy and unremarkable and denied any educational difficulties. However, his mother reported that he developed slowly and learned less well than his peers. He was a disciplinary problem at school and failed fourth grade. His peers often picked on him, and he was in frequent fights. At home, he was also a problem - inattentive, complaining of hearing difficulties and preoccupied with his own activities.

At the age of thirteen, a teacher insisted he be examined because he had 'blackouts', but no abnormalities were found. His mother reported that he had dizzy spells, with hyperactivity and an inability to see, which lasted for five to ten minutes.

He was charged with assault at the age of fifteen but not given a prison sentence. He was also charged with stabbing a white youth during a basketball game when he was about twenty. He was given a six-month prison sentence which he considered unfair and which he attributed to the victim and the judge being white.

He completed high school, but in the lower part of his class. His IQ was about 85. He was 6'4" tall, played on the school basketball team, but dated rarely. About this time, McLeod began to be interested in black Muslim philosophy, and he showed distrust and almost paranoia toward whites.

He married at age twenty, denying any sexual activity prior to marriage. He abstained from sex, as well as tobacco and alcohol, because of his mother's admonitions. He seemed devoted to his wife, and they stayed home a good deal since he did not like to socialize. He had several jobs, which he found easy to get but difficult to keep. He was a quiet but good worker. In one job, his employer noted that he wore earplugs despite the quiet surroundings. His employer had his hearing tested, and it proved normal.

His wife miscarried several months after the marriage, and McLeod thought that having sex during her pregnancy might have been a contributing cause.

Reference

Gallemore, J. L., & Panton, J. A. (1976). "Motiveless" public assassins. *Bulletin of the American Academy of Psychiatry & the Law, 4*, 51-57.

Timothy McVeigh

April 19, 1995
168 killed and 509 injured, blew up a truck filled with explosives
Executed

McVeigh's father, Bill, was a second-generation worker at the Harrison Radiator factory in Lockport, New York, which made parts for General Motor cars. Bill met his future wife, Mickey Hill, at a bowling league. She wanted to pursue a career and, while he served in the military in 1963, she began training as an airline stewardess. But he proposed to her on Christmas Day, 1964, and she accepted. They married in August 1965. Mickey settled for a family and worked as a travel agent. Their first child, Patricia, arrived in August 1966, and Timothy was the second, born on April 23rd, 1968. A third child, Jennifer, came in March 1974. They moved into a three-bedroom rancher in Lockport, close to both sets of grandparents (although Bill's mother died in 1972)’

Mickey kept a log of the events in McVeigh's life. It was not that exceptional. He seemed to have more than the average number of bumps and bruises, with frequent visits to the local emergency room -- four stitches over his eye when he was one, three stitches on his cheek four months later, a fractured wrist two months after that, pneumonia at four (which required a week in the hospital) and scarlet fever a year later. In his early years, he had a good friend, Todd, living next door and later, after a move to a bigger house in 1978, two good friends across the street. There was nothing remarkable for a psychologist to seize upon as significant events. At ten, McVeigh was playing Little League baseball when a bully grabbed his hat and punched him. McVeigh ran to his father's car and cried. He developed a hatred of bullies as a result. He had another run in with bullies in seventh grade when some high school students tried to plunge his head into a toilet. Always skinny, he was called "Noodle McVeigh."

There were marital problems. Bill was shy, Mickey was boisterous. He liked to stay home; she wanted to travel. Eventually she became bored with Bill. His friends claimed she had affairs, but Mickey has denied doing so. In 1979, she decided to leave him. McVeigh stayed with his father, while Mickey took the girls off to Florida.

After a few weeks, Timothy got sick, and Mickey drove back to take care of him, and she decided to give the marriage a second try. But Bill and Mickey argued a lot, sometimes furiously. They split up, reunited, and then split up finally in 1984. Mickey left again with her daughters. McVeigh had never felt close to either of his parents. He wasn't sure he loved them. Later in life, he would denounce two-income families where both parents worked, where there was no "Mom" at home when the kids came home from school.3

As he entered adolescence, McVeigh got very close to his grandfather, Ed McVeigh. Ed took McVeigh target shooting, and they tinkered with gadgets together. Ed taught McVeigh domestic chores, such as counting and rolling loose change and washing dishes. As a teenager, friends and neighbors saw McVeigh as an ideal teenager, helping out at the parish picnics, playing with kids younger than himself, and getting along with his schoolteachers. He developed a passion for superhero comics and science fiction.

In junior high school, McVeigh's grades fell, but he played basketball and tried wrestling for a brief time. He fell off his bike and had a concussion. When Mickey left in 1984, McVeigh was 16, and Bill switched to the graveyard shift at

the factory so as to be home during the day. They ate dinner together, and Bill could be there when McVeigh had friends over.

McVeigh bought himself an old car when he was 17, a 1978 Dodge Monaco, he got a job at Burger King, and he was confirmed in May 1985 at the local Catholic church. He got interested in computers, and he and his friends managed to hack into several computers around the nation, including the Defense Department's system at the White Sands Missile Site in New Mexico. In his senior year, McVeigh was recognized as an excellent programmer, but his grades were still poor, for which McVeigh blamed the teachers' boring style. In 1983, he was initiated into sex by a married woman ten years his senior, and then he got a girlfriend. This girlfriend noticed that McVeigh was angry at his mother, and she described him as "lost." Later, when talking to a friend at work, he referred to his mother as a whore and a bitch and blamed her for breaking up the family.

He graduated from high school, and both parents, his grandparents and his younger sister Jennifer came to the ceremony. That summer, though, McVeigh gave up his jobs, sold his computers, and laid around the house doing nothing. He read a lot and decided to become a survivalist, learning how to survive catastrophes if they ever occurred. Bill persuaded him to try a two-year business college, but he soon quit and went back to work at Burger King. He did not find the courses stimulating, and he was concerned that it was costing Bill too much, given the tiny scholarship he had qualified for.

He read gun magazines and Soldier of Fortune, and he came across a novel by a former American Nazi Party official, *The Turner Diaries*, which tells the story of a man who reacts to the tightening of gun laws by making a truck bomb to destroy the FBI headquarters in Washington, DC. McVeigh started investing in guns, and he got a job as an armed security guard with the Burke Armored Car service in the fall of 1987. This job took McVeigh into poor neighborhoods, often where African Americans lived, and he developed a resentment toward them for, to him, they appeared to be lazy, simply waiting for their welfare checks each week.

But at this time, he was extremely law-abiding. For example, he hesitated to shoot a deer that he came across which had been seriously injured by a car crash because it was illegal to fire a gun in a no-discharge zone. And then in May 1988, McVeigh decided to join the Army.

McVeigh went to Fort Denning, Georgia, for basic training in May 1988. He wanted to qualify for Special Forces, but he was assigned instead to a program that organized the men into small teams, and he stayed in that program for the next three years. McVeigh quickly developed into an outstanding soldier and an excellent marksman.

Michael Ryan

August 19, 1987
15 killed (including mother); 15 wounded; a spree killing of random strangers
Died by suicide

Michael Ryan was born on May 18, 1960, in a picturesque town 50 miles west of London (England) to a working-class family. He was an only child. His father was a building inspector for the local government and was 55 years old when Ryan was born. He was rather stern and gloomy and a perfectionist. He was domineering at home as well as at work. Ryan's mother was twenty years younger than her husband and more easy-going and sociable.

When Michael was young, his mother worked serving meals at the local primary school. Ryan went to that school between the ages of 7 and 11. In 1973, his mother then became a waitress at a hotel.

Ryan was a quiet boy in his early years - some thought he was quiet but happy, others that he was sullen and standoffish. He spurned schoolmates who tried to get him to join in their games, preferring to watch the others from the sidelines. He was teased and bullied a lot, but he never fought back, verbally or physically. At the next school, his grades were poor, and he was often assigned remedial work. He often skipped school to ride a motorbike with his friend.

In 1976, at the age of 16, Ryan quit school and enrolled at a technical college to become a building contractor, but he dropped out of the program and got a job as a gardener and handyman at a girl's school.

Ryan's mother doted on him, bought him whatever he wanted (toys, stylish clothes, motorbikes, cars), and gave him a credit card. He got his first gun when he was 10 and at age 18 got a license to own a shotgun, and he soon acquired a collection of firearms.

Reference

Foreman, L. (Ed.) (1992). *Mass murderers*. Alexandria

Richard Speck

Killed eight nurses in their residence
July 13-14, 1966
Died in prison

Speck was born on December 6, 1941, the day before the Japanese bombed Pearl Harbor. His father was a potter in Kirkwood, Illinois, and Speck was the seventh of eight children. His sister described him as an ordinary kid, a little sickly, and the apple of his father's eye whom he also seemed to idolize in return. He had pneumonia at age 3 months and was in on oxygen at the hospital. The doctor there warned of possible brain damage.

He had frequent concussions in childhood, accompanied by loss of consciousness. When he was five, he knocked himself out with a hammer; on another occasion he fell out of a tree and lost consciousness - his sister found him twitching and foaming at the mouth; he also walked into a steel pole at the age of 15 and lost consciousness.

Speck's father died in December 1947 when Speck was five. Speck was very close to his father, and his father adored him. His mother took him and his younger sister to Dallas, Texas, where they lived in a tough dreary neighborhood. Neighbors reported that his mother and sister spoiled Speck, ignoring, forgiving and covering up his bad behavior.

His mother remarried, and the stepfather, an insurance man, drank a lot and disappeared occasionally. Speck hated him, not simply for who he was but because he couldn't compare with his beloved father. The step-father hated Speck. In his teens, Speck became a loner. His teacher saw him as "lost," a loner without friends. He was undisciplined, not very bright and did poorly at school. He read comic books, not textbooks. He was not liked by the other students and got into lots of fights. His teachers never saw him smile, and he seemed to be in a fog and sulky. He went to a technical high school but dropped out in the ninth grade at the age of 16.

He had started drinking at the age of 12, was drinking heavily by age 15 and taking drugs by age 18 (such as sodium amytal). He was in barroom brawls and

billy-clubbed by police called to break up the fights. He suffered from headaches so bad that he reeled dizzily from the pain. He was arrested for trespassing when he was 13. He drove while drunk and carried a knife. He constantly played with knives, threw them into the floor, cleaned his nails with them, and even caught and skinned a cat once in front of friends. He beat his mother when he was 18 (for which he felt guilt) and his step-father. His violence was worse when he was drunk, and he talked dirty and was prone to beat up girlfriends. At age 19 he got a tattoo which said "Born to raise hell."

By the time he was 21, he had been picked up by the police some 36 times (for offenses such as drunkenness, criminal trespass and burglary). He was jailed once for burglary. He had brief jobs as a laborer, garbage collector, truck driver and carpenter. He was fired from his job as a driver for a meat company because he caused so much damage with his truck.

Despite all of this, a fifteen-year-old found him attractive, and they married when he was 20. They moved into his mother's house, where his sister and her husband also lived, but from which the step-father was now gone. He had a series of jobs - park department, construction laborer, baker's helper, and trucker's helper, but none lasted. The family was chronically down-and-out, owing money to the local stores. Reports are that he hit his step-father, his wife, and on one occasion his mother when she came to drive him home from a juvenile home when he was 18.

Reference

Foreman, L. (Ed.) (1992). *Mass murderers*. Alexandria, VA: Time-Life Books.

Joseph Wesbecker

September 14, 1989
Killed 8, injured 12 (at work)
Died by suicide

Wesbecker was born in Louisville on April 27, 1942. His mother, Martha (Montgomery) was 16, married the previous year to Tommy Wesbecker, a former Golden Gloves boxer. Tommy's family was Catholic, and his mother, Murrell, had a history of depression and suicide attempts. Martha's family was also Catholic and had farmed in Washington State for two generations.

When Wesbecker was one year old, his father fell off the roof of the Catholic church which he was mending and died. Martha took Wesbecker to live with her own parents and nine other siblings. Martha went to secretarial school leaving Wesbecker in the care of her mother, Nancy Montgomery.

When he was two, his grandfather (aged 38) died when a train ran him over. Nancy supported the whole family (her youngest was only five months old) by working as a seamstress at a hospital and at home. Wesbecker was looked after by his uncles and aunts, and the family rumor was that his uncle John used to whip Wesbecker quite a bit. When Wesbecker was five, his mother went with him to Kentucky to live with his maternal great-grandmother, Cora Smith, in order to take care of Cora who was senile. While there Wesbecker shot his mother in the leg with an air gun.

Martha was back in Louisville the following year, living in an apartment. Her mother-in-law, Murrell Wesbecker stayed for six months to take care of Wesbecker until she was taken away to a home because of a psychiatric illness.

Martha moved back in with her mother and went to work at a cigarette factory. She became depressed and eventually was given ECT. Wesbecker attended the local Catholic school, where he got poor grades and a reputation for misbehavior. He cut school and got into fights. At the age of 9, he changed schools. When he was ten, the head teacher recommended that Wesbecker be put into an orphanage, and he stayed there a year. His grandmother opposed this and visited him every Friday, making the two-hour journey by bus and on foot to bring him home for the weekend.

In 1953, Wesbecker was back with his mother in an apartment, but there was conflict between Martha and Nancy over how to raise Wesbecker, and Martha attempted suicide with rat poison.

At age fourteen, Wesbecker had a good friend, Joe Ball, who remembered Wesbecker as a "cool guy" who protected his friends. He bought his first car at age 16 from Uncle John and hung out at a local billiards hall. He seemed to always have money, drove recklessly and got into occasional fights. He seemed not to like people and found it hard to make friends. He was neat and his car immaculate. He dropped out of high school in his freshman year and spent a lot of time with his grandmother. He was arrested several times for disorderly conduct and fighting -

once for siphoning gas from a truck. He used to carry a starter gun in his car and point it at people to scare them.

In November 1958, he was arrested for holding the gun on two girls while his friends raped them - he was sentenced to six months but released after several days. Wesbecker's friends said that Wesbecker had not held the gun on the girls but had stayed in the car. In 1959, he was living with his grandmother. Wesbecker met Sue White in 1959 - she was still in high school. They began dating, and he went to work for a printing company to earn his journeyman's card. He saved, traded in his red convertible for a Volkswagen and married Sue in 1961. Their first son was born in 1963. The couple liked to go dancing and vacationed each year in Florida.

Reference

Cornwell, J. (1996). *The power to harm*. New York: Viking.

Charles Whitman

August 1, 1966
Killed mother, wife, and 13 strangers and wounded 31 from the tower on the University of Texas campus.
Killed by police

Whitman was born June 24, 1941, the oldest child, followed by two younger brothers. His mother was a devout Catholic married to a Protestant. He had the usual childhood illnesses, and the family moved eight times during his first six years, settling in Lake Worth, Florida, in the summer of 1947. Whitman entered the local Catholic grade school, began piano lessons a year later and joined the scouts at the age of11 (earning the rank of Eagle Scout at the age of 12 - the youngest in the world).

Whitman's father was a plumbing and septic-tank contractor, a scout master, and past president of the PTA and the Chamber of Commerce. He was also a wife beater. He was a fanatic about guns (and kept many in the house), and he took Whitman hunting. He put pressure on all of his sons to excel. Whitman excelled at music and joined his cousin's dance band when he was a teenager. However, his father objected to the band and made Whitman quit. Whitman also excelled at scouting.

Whitman's father was a severe disciplinarian to his children. They called him sir, and he often punished them physically with a paddle or with his fist. Yet he claimed that he was generous with them, giving them everything money could buy. When he was 18, Whitman came home drunk, and his father beat him and threw him into the family swimming pool where he almost drowned. Whitman thereupon abandoned his plan to go to college and joined the Marines instead, in July 1959. He was assigned to Guantanamo Bay in Cuba for 18 months. He applied for a scholarship program with the intention of becoming an officer. He took refresher courses and entered the University of Texas to study mechanical engineering, later switching to architectural engineering.

His classmates thought that Whitman was obsessed with money. He gambled and was good at poker. On the other hand, he sometimes paid his gambling debts with checks that bounced, even with friends. He somehow obtained some pornography and tried to market it. In 1961, he and two fellow students poached a deer. He was caught, but the police officers found him so "nice" that they only fined him $100.

He liked practical jokes. After a car crash one night, he pretended to his friends that his passenger had been killed - even the friend's girlfriend was told this He would hang from his sixth-floor balcony with one hand and wave to his girlfriend. He showed some capacity for violence, throwing a foreign student out of a classroom just because he had sat in what Whitman considered to be his chair. His grades in his freshman year ranged from F to A in the first semester and settled down to Cs in his second semester. He married his girlfriend, the daughter of a rice farmer, just after his twenty-first birthday.

Reference

Foreman, L. (Ed.) (1992). *Mass murderers*. Alexandria, VA: Time-Life Books.

SERIAL KILLERS

Ted Bundy

1970s
30+ murders

Ted's mother was 22 and a "good girl", from a deeply religious family living in northwest Philadelphia. She became pregnant by a sailor, and her family

rallied round. She went off to a home for unmarried mothers in Vermont where she gave birth on November 24 1946 to Theodore Cowell. She left Ted there for three months while she agonized what to do. Finally, she brought him home.

She brought Ted back home to Philadelphia where her mother, Ted's grandmother, pretended that Ted was her son and that Ted's mother was Ted's sister. Ted adored his father (=grandfather) and respected him, clung to him and identified with him. Yet, most of the relatives (and neighbors) knew the truth, and Ted seemed to realize that he had been lied to. It was decided that Ted and his mother should move to Tacoma, WA, after changing Ted's name to Ted Nelson, to live with cousins in early 1951. Ted missed his father tremendously.

Ted's mother joined the Methodist church where she met Johnnie Bundy (a cook), shy but solid, and they married in May 1951. whereupon Ted became Ted Bundy. Ted's mother worked as a secretary, and soon had four children, two girls and two boys, and Ted was pressed into baby-sitting chores which he didn't seem to mind. Ted and his step-father never grew close, but both made a grudging effort. They often worked together picking beans for farmers for $5 a day between them. Ted also had a paper route (with 78 customers), and Johnnie helped him with that. Although Johnnie was a scout leader, Ted usually begged off the camping trips. He was bright, and his mother urged him to start saving for college when he was 13.

At junior high school, he was slender and turned out for track (the low hurdles). He had a B average and was a serious student. He was teased by his peers: he liked to shower in private, and they would pour cold water over him. He graduated from high school in 1965. He was popular but not in with the top crowd - attractive well-dressed, well-mannered. He dated and went to the dances. He was shy and introverted. He had some good friends with whom he skied. He was a good student and was awarded a scholarship to the University of Puget Sound.

He had been picked up twice for suspicion of auto theft and burglary. His name was known to the juvenile case workers, but there is no record that he was ever confined. Later, when he was examined by a psychiatrist, she reported that Ted's father (=grandfather) was volatile and maniacal, a workaholic who terrorized his family with temper tantrums. He shouted, ranted and raved. His own brothers feared him and his sister thought he was crazy. He was a bigot and hated blacks, Italians, Catholics and Jews. He was cruel to the family pets, swinging the cat by its tail and kicking the dogs. He kept pornography in his greenhouse, which Ted and a cousin may have snuck in to look at. Ted's mother (=grandmother) was timid

and obedient, sometimes put in the hospital for ECT for depression. She stayed home with agoraphobia, afraid to leave home. Ted's real mother was the eldest of three daughters.

One story is that, when Ted was 3, his aunt (aged 15) was sleeping at his home, and she woke up to find that Ted had placed knives all around her as she slept.

Reference

Rule, A. (2000). *The stranger beside me*. New York: W. W. Norton.

Andrei Chikatilo

1978-1990
52 children and young adults

Chikatilo was born October 16, 1936, in the village of Yablochnoye, Akhtyrsky region, Sumskaya province, Ukraine, USSR. After his arrest, he wrote an autobiography, from which many of the following details are taken. In 1993, an older brother was killed by starving people and eaten during the terrible famine of the early 1930s; Chikatilo was warned to not leave the house on his own or else he might meet the same fate. Investigators tried to check on the validity of this memory but were unable to prove or disprove it. No records existed of a brother, and people from the region did not recall when asked in the 1990s.

Chikatilo's family was often starving, and he remembered being continually hungry until he was twelve years old when he ate bread for the first time. From 1941 to 1944, the family suffered through the war; they hid in cellars and open pits from the bombs and were brutalized by the Nazis. After the war, the famine continued, and Chikatilo remembered his sister and him eating grass and leaves, with bellies swollen from hunger. He was dressed in rags and often passed out from hunger at school.

He was shy and timid, often teased by the other kids, but he forced himself to study. He reported having headaches often at school, and he had trouble reading the blackboard - it was later diagnosed as congenital myopia - but he was too shy to ask what was written on the board. He studied hard at home and became even more withdrawn, solitary and reclusive.

His father returned from the war in 1949, sick with tuberculosis and unable to help the family by working. Chikatilo completed seventh grade in 1951, after editing the school newspaper and participating in literary and musical events. After graduation, he went to work on a collective farm but was rejected by a vocational school because of ill health. Former classmates recalled him as being very strong - indeed his nickname was Andrei the Strong.

When eighth grade was initiated, Chikatilo went back to school. He became an avid reader of Pravda and a fervent communist. In summers, he worked on farms - he was injured one summer when a wall fell on him, and during another a horse dragged him, resulting in a concussion.

He finished tenth grade in 1954. His classmates remember him as shy and withdrawn. At this time, he had his first sexual experience, wrestling with a thirteen-year-old girl and having an ejaculation. After this he resolved to inhibit his sexual desires until he married.

He continued to read and to be a good student and was fascinated by his father's partisan past in the war against the Germans. After graduation, Chikatilo left for Moscow where he tried to study law at Moscow State University, a top-rate institution. He was rejected, he claimed, because of his father's past - disgraced under Stalin for working for the Nazis after his capture in the war. He returned home and enrolled in a local technical school for communications.

In 1955, he dated a friend of his sister for a year and a half but, when they tried to have sex, he could not perform - a humiliating experience for him. He graduated with high grades and, rather than going to work locally, headed for the Urals, 800 miles east of Moscow, to work on a large construction project. He took correspondence courses from the Moscow Electromechanical Institute for two years, after which he was called up for military service. He continued to have sexual problems with women and so satisfied himself by masturbating.

Reference

Krivich, M., & Ol'gin, O. (1993). *Comrade Chikatilo*. Fort Lee, NJ: Barricade Books.

John Collins

1960s

7+ college women

John Collins was born to a mother of French-Canadian stock who was raised in Ontario. As a teenager during World War Two, John's mother had married and had three children, a boy, a girl and then John. A year after John's birth, his father ran off with another woman, never to be seen again. John's mother soon married again, but that marriage broke up after a year and the kids barely remembered that step-father's name. John's mother then took the kids (now aged eight, seven and five) to Michigan, where she eventually married a man ten years her senior who had a good job as an auto mechanic. He adopted the children, they took his name, and they became American citizens. They bought a modest house in Center Line.

This third husband turned out to be an alcoholic and an abuser, physically assaulting both her and the children, and this marriage ended in divorce in 1956. John's mother worked mainly as a waitress to make ends meet, brought the children up as Roman Catholics (even though she herself had been excommunicated), and sent them to parochial schools. Although John's mother was too busy to spare much time for her children, they seemed to grow up well. The family, and particularly, John, also grew close to the family of her younger sister who had married a state police officer.

When John's sister was sixteen, she turned wild, skipped school, and became pregnant at the age of eighteen. Her mother pressured her into marrying the father of her child. Soon after the birth of the baby, John (now aged eighteen) came upon his sister with a strange man and beat his sister and the man so severely that his sister had to be hospitalized. At this point John began to disengage himself from his mother and get closer to his aunt, visiting her almost every weekend in Flint. He grew quiet at any mention of his family, especially of his sister, whom he referred to as a "bitch." His aunt worried that John disapproved of his mother's new relationship with a man who helped support her and the family. After his aunt moved to Ypsilanti in 1967, John was like a member of her family.' John now seemed completely detached from his family, hardly going home at all.

At high school, John was remembered as an all-American boy, popular, a leader and a great athlete at St. Clements High School (where he played both offensive end and defensive safety for the football team, as well as basketball and baseball), and an honor student. He first went to Central Michigan University at Mt. Pleasant but, after a year, there switched to Eastern Michigan University in

Ypsilanti in 1966 as a sophomore. Initially he was better than average, but in the second semester of his sophomore year his grades worsened. He was supposed to graduate in the Spring of 1969 but was twenty-four credits short. He majored in education and was supposed to take summer courses to make up credits (but he failed to register), expecting to graduate in January 1970.

He had been a member of the Theta Chi fraternity (and lived there) but, in his junior year, he was expelled for stealing from the entertainment fund. John had committed many other thefts. In June 1969, for example, he and a friend rented a camper under a false name, went to California, and never returned the camper. He had worked during his college years at the Motor Wheel Corporation (which made auto brake drums), advancing to the position of assembly line inspector. There he developed a friendship with Tony Monte, and they both found rooms in the same apartment building. Monte confessed that he and John began burglarizing houses in the early part of 1969. John's roommate also told the police that John stole most of the motor bikes (and parts for them) that he owned. John seemed to burglarize houses not for the money, but more for the thrill - stealing for its own sake.

He was described as wiry but muscular, quite handsome, six feet tall, with clear-cut features and neatly trimmed dark hair. He had a slight lisp. He was not a big party guy, nor did he drink a lot. One girlfriend reported that he had an extremely strong negative reaction to her when she was having her period.

Reference

Keyes, E. (1976). *The Michigan murders*. New York: Reader's Digest Press.

Juan Corona

1970s
25 farm workers

Juan Corona was born in Autlán, about one hundred and twenty miles south of Guadalajara, Mexico, probably in 1934. His mother bore her second husband ten children after his first wife died, but Juan was her favorite.

Juan first came to California when he was sixteen in 1950 illegally, working as a migrant farm worker. He picked carrots and melons in the Imperial Valley, cherries in Stockton and grapes in Lodi. In 1951, he came back and stayed with his older half-brother, Natividad. In 1952, Juan worked as laborer on the Folsom Dam,

making enough to send money home to his family. In January 1953, he met a girl from Sacramento, whom he felt forced to marry under pressure from her parents.

They married in Reno and moved near to Juan's work on the dam, but the girl was unhappy and forced Juan to quit his job and move with her back to Sacramento. She got a typing job, while Juan worked as a laborer. After three months, they decided to separate, and the marriage was annulled. Juan went to live with Natividad for the next two and a half years. Natividad worked as a farm labor contractor and Juan managed a second crew. Every winter they went back to Mexico to visit Autlán. They bought a truck in the winter of 1955 ready for their trip back to Autlán when the rains came. On December 24th, the Yuba and Feather rivers broke the levees and flooded the area. Thirty-eight people drowned. Nineteen days later, Natividad had his twenty-two-year-old brother committed to a state mental hospital. Juan was under the delusion that everyone he met on the street was dead since everyone had died in the flood. He was diagnosed as schizophrenic and given twenty three electroshock treatments. He was released in April 1956 after three months and deported to Mexico. He returned to the United States legally late in 1956 and remained here as an immigrant and a citizen of Mexico.[8]

References

Cray, E. (1973). *Burden of proof*. New York: Macmillan.
Kidder, T. (1974). *The road to Yuba City*. Garden City, NY: Doubleday.

Jeffrey Dahmer

1980s
17 males, mainly black

Dahmer's father, Lionel Dahmer, was a chemist. Dahmer was born May 21, 1960, in Milwaukee, but he grew up in the affluent suburb of Bath, Ohio, just outside Akron. Dahmer appears to have been a boy who felt alone, rejected by a world that he did not fit into. In first grade, at elementary school, his teacher wrote on his report that he seemed to feel neglected. His younger brother was born, around this time, on December 18, 1966.

[8] Kidder reports that Juan's IQ was about 130.

A psychiatrist who interviewed Dahmer gave evidence in the trial that Dahmer had had a double hernia operation at the age of four, and Dahmer remembered having extreme pain in his groin and thinking that his genitals had been cut off. There were reports in the media that Dahmer had been sexually abused by a neighbor at this time, but both Dahmer and his father deny that this ever happened. The family moved to Bath in 1968, into a large ranch-style house on 1.7 wooded acres. Although the family did not attend church, Dahmer said that he was raised as a Protestant, though he later became an atheist.

The psychiatrist uncovered several incidents from Dahmer's childhood. He gave a favorite teacher some tadpoles, but the teacher then gave them to another boy. Feeling felt rejected by the teacher, Dahmer went over to the boy's house and killed the tadpoles with motor oil. He was fascinated when his father took him fishing and cut open the fish that they caught, showing Dahmer how to clean it. At age five he told a friend to put his hand in a wasp's nest, telling the friend that it was full of ladybugs; the friend got stung, of course.

While at elementary school, Dahmer's father gave him a chemistry set, and Dahmer was very interested in it. He experimented with the chemicals and, in particular, tried them out on insects and small animals. He started collecting insects preserved in jars, but later began a collection of dead animals, typically retrieved after they had been run over by cars but occasionally run over by Dahmer or his friend. Neighbors recalled animal heads impaled on sticks and dried-out animal skins in Dahmer's backyard.

Friends recalled that he liked to dissect animals to see how their insides worked, and he would hold his head against his friends' chests to hear their heartbeats. One friend remembered Dahmer as wanting to please adults, trying to anticipate what adults expected of him and trying to do the right thing.

Dahmer went to Revere High School in 1974, played clarinet in the high school band his freshman year, played intramural tennis and worked on the school newspaper. His grades were average. But his peers there remembered him as a loner, not fitting in, and with a fascination for dead animals. He also began to abuse alcohol at this time. He would sit in class at 8 a.m. with a Styrofoam cup filled with scotch.

He held seances at his home, trying to get in touch with Lucifer. At his prom, his date recalled that he did not dance with her or try to kiss her. Yet he also

tried to be the class clown (for example, trying to get his picture in the yearbook for a club he didn't belong to), but he was never a discipline problem.

During his high school years, Dahmer began to be interested in men, masturbating daily with thoughts of other boys, even of killing them and having sex with them. By at age eighteen, Dahmer was having homosexual sex with pick-ups, for example, a hitchhiker.

When he was eighteen, his parents had a bitter divorce and fought over the custody of Dahmer's younger brother, David, then twelve. Dahmer recalled that the home was filled with tension, with his parents continually at each other's throats. He said that he felt guilty about his parents' marital problems because his mother had told him that she had a severe postpartum depression and a nervous breakdown after giving birth to him. Lionel sued for divorce alleging neglect of duty and extreme cruelty, and then his wife, Joyce, countersued on the same grounds. She was awarded custody of David. The divorce was granted on July 24, 1978, and Joyce then fled to Wisconsin leaving Dahmer at home alone. Lionel was then awarded custody of David.

Dahmer entered Ohio State University as a business major, but his mounting alcohol abuse interfered severely with his studies. He was questioned in connection with the theft of a watch, radio and money from the dormitory, but never charged. He quit the university soon after that.

Meanwhile, Lionel remarried (on December 24, 1978), and five days later Dahmer enlisted in the U.S. Army. He reported for duty at Fort McClellan in Alabama on January 12, 1979. He hoped to become a military policeman, but he was assigned to Fort Sam Houston in Texas as a medical specialist. He was sent to West Germany in July 1979 as a combat medic. He did not fare well in the role because, he told officers, he couldn't stand the sight of blood.

His peers in the army remember that he drank excessively and passed out most weekends while listening to Black Sabbath tapes on his headphones. Private First Class Dahmer never heard from his parents, nor did he write to them. He never bothered anyone, though he did get belligerent when drunk, particular at "niggers."

He was discharged on March 24, 1981, just nine months before the end of his three-year enlistment was alcohol and drug abuse. He moved to Miami for a year where he worked in a sandwich shop

Reference

Schwartz, A. E. (1992). *The man who could not kill enough*. New York: Birch Lane Press.

Albert DeSalvo

1960s
13 women

Albert DeSalvo was born September 3, 1931, in Chelsea, Massachusetts, the third of six children. His father, Frank, abandoned the family when Albert was eight, but came back at intervals drunk whereupon he would tear up the house and beat his wife and sons. He was in court eighteen times, five times for nonsupport, five times for assault and battery on his wife (including once with a revolver), and for breaking and entering and other crimes. Frank DeSalvo served time in prison in 1943 and 1944. Charlotte DeSalvo divorced Frank in 1944 and remarried the next year. Frank DeSalvo disappeared until 1956 when he was arrested in Chelsea for default of child support. The family was often on relief (the mother took in sowing to earn some money), there was often not enough to eat and very little heat in the winter. When his father beat him, Albert would sometimes run away and live for days under the wharves in East Boston. Albert recalled his father beating his mother on many occasions, one time knocking her teeth out and breaking her fingers.

The father brought prostitutes around the house, along with his drunken friends. Albert recalls that intercourse was visible all day long, in the bedrooms and up on the roof. He recalled being beaten, along with his brother, every night in fourth and fifth grade with a big belt, whether they had done wrong or not. His sisters frequently had black eyes, and a younger brother was "smashed against the wall." The father once sold Albert and his two sisters to a farmer in Maine, and it took six months for his mother to find them.

As a child, Albert was taught to shoplift by his father when he was five. He snatched purses and in November 1943, along with a friend, robbed a newsboy of almost three dollars. He was found guilty, adjudged delinquent and given a

suspended sentence. Five weeks later, Albert and his friend broke into a house and stole jewelry. He was committed to the Lyman School for Boys (where his older brother Joseph had also been) for ten months, until paroled.'

Albert was examined by a psychiatrist when he was thirteen. His IQ was 93. He had had tonsillitis and mumps, began school at age six, failed second grade and put in a special class in fifth grade. At school he was not a problem. He earned pocket money by doing chores for local old ladies. It was thought at the time that he needed better social supervision and redirection of his interests into groups such as the YMCA and Scouts. A social worker recommended placement in a reasonable environment, but nothing was done. Albert graduated from the Williams School (a junior high school) in 1948, aged sixteen. The teachers had no outstanding memory of him. That summer, he worked as a dishwasher in Cape Cod.

Three months after graduation, at the age of seventeen, Albert enlisted in the Army. He was sent overseas in January 1949 to Germany and assigned to the Military Police. After two years, he was court-martialed for refusing to obey an order but soon promoted to sergeant. He was the Army middleweight champion of Europe, married a German woman, Irmgard, on December 5, 1953, returned to America in 1954 and received an honorable discharge in 1956. His daughter was born in 1955 with physical deformities and a son later.

Albert never smoked or drank and described himself as a coward as a kid. He was five foot, eight and a half inches. He liked school and described himself as a teacher's pet, running errands for them. He liked sports, swimming and horse riding. He was fascinated with bows and arrows at one point, and he and a friend would shoot cats with the arrows. He remembered his first sexual experience (fellatio with a girl) at about the age of nine and intercourse with a married woman at age fifteen. He liked to "peep" as a sources of stimulation for his masturbation. He soon found that he was sexually inexhaustible, driven to seek sexual satisfaction almost without rest. (He later pestered his wife for intercourse four or five times a day.)

Reference

Frank, G. (1967). *The Boston strangler*. New York: New American Library.

William Heirens

1940s
3+ women

William was born in 1929 in Evanston, Illinois, to Roman Catholic, native-born parents of Luxembourg descent. The father owned a flower store, and the family lived in an apartment over the store, until the business failed during the Depression. The father eventually found work on the security force of a steel company and worked in the evenings on the local police department. William's mother also worked in a variety of jobs, including a bakery and clothes-making.

William was the older of two boys. Labor was long (62 hours), delivery difficult and forceps were used. Breast feeding was inadequate and painful and was supplemented with bottles from the beginning. Breast-feeding ended after a month. William vomited after almost every feeding and was sickly and underweight for his first three months. He was toilet-trained by his first birthday.

William fell on his head at seven months (a twelve-foot fall onto concrete), broke his arm in a fall at age eight, and fell down stairs at age twelve. He had a tonsillectomy with severe hemorrhaging at age eight, had chicken pox and measles and complained of severe headaches in 1942 and 1946. He rarely cried when hurt and seemed to endure physical pain well.

William was solitary as a child, sensitive and difficult to know. He had no close or confidential relationships, nor was he close to his parents. By 7th and 8th grade he seemed to daydream a lot. He liked to repair equipment and build radios, and he collected coins. He got jobs after-school from the age of twelve on and was frugal with his money, splurging only to buy his family presents.

In 1942, at the age of 13, he was caught breaking into a basement storeroom. He then admitted to nine earlier burglaries. He was sent to a school for delinquent boys for a year. He ran away after three weeks but thereafter was a conforming well-behaved resident. Two months after his release he was again arrested for burglary but was put on probation. William entered the University of Chicago in 1945 where he attended classes until his arrest for murder in 1946.

In the psychiatric examination, he appeared to be impervious to pain, suggesting a hysterical personality. His EEG was normal. He admitted first stealing women's underclothing at the age of nine and masturbating with them. He did not use his mother's underwear for this purpose, however. At the age of twelve, he

began breaking into homes to obtain women's underwear but also stealing other items. Eventually, his sexual excitement was aroused by breaking and entering rather than women's underwear. He would usually ejaculate as he entered the house, and both urinate and defecate, sometimes in the house and sometimes in his clothes. If startled during the burglary by a resident, he would kill the person.

He felt guilty about masturbation and ashamed of his fleeting sexual contacts with girls. He struggled against his urge to go out and seek excitement by breaking and entering, but his headaches would get too strong, and he would leave.

Reference

Kennedy, F., Hoffman, H. R., & Haines, W. H. (1947). A study of William Heirens. *American Journal of Psychiatry, 104*, 113-121.

Joseph Kallinger

1970s
3 murders

Joseph's biological mother was a Jewish Canadian of Austrian and English ancestry, born in Montreal, Canada. She came to the United States when she was three. She married at age nineteen, had a daughter, and left her husband after sixteen months. While separated, she got pregnant. She gave birth to Joseph on December 11, 1936, in Philadelphia.

Although she had arranged to give him up for adoption, she changed her mind after his birth. After four weeks, she placed Joseph in a private boarding home and went back to work, visiting him once a week. However, realizing that she could not keep him because her ex-husband might gain custody of her daughter if he found out about Joseph and because her mother was too ill to take of a baby, she arranged for a Catholic orphanage to take him. (She had already had Joseph circumcised in a Jewish ceremony.) Joseph was three months and nine days old. At first, she refused to let Joseph be adopted, but eventually she permitted this. Stephen and Anna Kallinger took him home in October 1938, after nineteen months in the orphanage. Joseph was twenty-two months and fourteen days old.

The Kallingers were both Catholic, German-speaking immigrants from Europe, Stephen forty and Anna forty-one. Stephen repaired shoes and longed for a son who could take over the family business, but he was sterile. Anna wanted a

daughter (and often reproached Joseph for being a boy) but gave in to Stephen. There were problems with the formal adoption because Joseph's mother changed her mind. She visited the store, saw Joseph and offered $500 to get him back. The Kallingers refused, and eventually Joseph's mother gave up. The court approved the adoption on January 9, 1940.

The Kallingers were brutal parents. They did not kiss, hug or play with Joseph. They touched him only to lead him by the hand or to hit him. They kept him at home and in the shop and did not permit him to play with other kids. Every time he misbehaved they threatened to send him back to the orphanage. For punishment, Stephen whipped him with a cat-of-nine-tails made out of leather and rawhide laces.

The Kallingers provided for material needs. They fed Joseph. They saved money for him, buying war bonds for example. They were proud of his school successes. But they also continually reminded him of how much they were doing for him and how much he owed them. Yet they never bought him a birthday present.

As a child he began to weave fantasies. At the Kallinger's country cottage, he used to pretend that the butterflies were his people and that he had been one before being born. He also pretended that he had a guardian angel, a woman with small breasts and wings.

When he was six, a girl kicked him in the groin, for which his parents punished Joseph, and he needed a hernia operation. He was frightened by the surgery, and the Kallingers, worried about Joseph's growing sexual curiosity, told him afterwards that the surgeon had fixed his penis so that it would never grow hard.

The Kallingers continued to abuse Joseph. He asked them to buy him a missal for Church, but they refused. He stole one from the Church and for this they made him kneel for an hour each night for a week on coarse sandpaper. For begging to go to the zoo, Anna hit him on the head with a hammer until the blood flowed. He was allowed to go to the movies by himself on Saturday, but he always went alone. To have company, he stole money from his parents so he could buy tickets for other kids who would then sit with him. When his parents found out, they held his hands in the gas burner on the stove. Despite this punishment, Joseph stole again. He had his hands burned six times; He was made to work in the shop

after school and on weekends until, by the time he was teenager, Joseph had learned the trade and was a good shoe repairman, preferred by some customers over his father.

When he was eight, Joseph came upon three boys were who masturbating one another. One grabbed Joseph, held a knife to his throat while another sucked his penis. This sexual experienced combined with a knife, the object that had so much significance in his life (the surgeon's knife, his father's knives) had a huge impact on Joseph. Knives began to play a role in his life and his fantasies. One day he slashed the coats hanging in the closet belonging to some of the children in school. Joseph cut a hole in his bedroom wall with a knife from the shop and masturbated into the hole. He looked at pictures of naked men and women as he did so, and eventually he began to stab the breasts and stomachs of the women and the penises of the man in the photographs as he masturbated. When he was twelve, he forced a boy to take his pants off with the intent of cutting the boy's penis. But he fled instead. He did this to three other kids, fleeing the next two times and biting the penis of the fourth kid. However, at this point the violence stopped for twenty years.

When he was thirteen, he played Scrooge in a play at the YMCA to great acclaim, and the play's director tried to persuade the Kallingers to let Joseph study acting. They refused. When he was fifteen, in 1950, he met a thin, flat-chested girl, Hilda, at the movie theater and invited her to have a soda. They began dating and became lovers in September 1951. However, to have sex, Joseph had to visualize violent fantasies involving knives, though not involving Hilda. He was at junior high school and working part-time .in his father's shop for which he was paid, though he had to give some of the money back to the Kallingers for rent.

Joseph now began to show strange behaviors - twisting and turning movements in his body, a jerking of the head, and a wild uncontrolable laugh. One day while working on the shoes, he "saw" God who commanded him heal himself and heal mankind through shoes. As a result, Joseph tried all kinds of orthopedic experiments with shoes in the following years. The Kallingers grew scared of Joseph and placed a lock on their bedroom door and a baseball bat by their bed for protection. They let Joseph move out into a rented room nearby, though he continued to go to school and work for Stephen.

As soon as he reached the age of sixteen, Joseph dropped out of school. He decided to marry Hilda, but the Kallingers went to court to have him ruled

"incorrigible." Their petition was thrown out. Joseph married Hilda, and they moved first into an apartment and then into a house which the Kallingers bought and for which Joseph paid them mortgage payments. In August 1955, Hilda gave birth to a baby girl and in January 1956 a boy, but Hilda had no interest in being a wife or mother and left Joseph in September 1956. During their rows, she told Joseph that sex with him was no good because his penis was too small. Joseph now began to visualize Hilda as he masturbated.

Joseph filed for divorce, sold the house and moved back in with his parents. He paid for the children to stay at a boarding home in the suburbs where he visited them on weekends. Deeply depressed, he could not sleep, hardly ate and stopped smoking. He had severe headaches. He was hospitalized for fear he had a cerebral lesion, but none was found. His diagnosis was "psychopathological nervous disorder, anxiety state."

On his trips to visit his children, Joseph had met a young girl, Betty, who also traveled on the train. They soon became friends and got engaged and, three months after his divorce was final, in April 1958 they married, enabling Joseph to get his two children back.

Reference

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Charles Schmid

1960s
3-4 murders

Charles Schmid was born July 8, 1942, in Tucson, Arizona, and adopted the next day. As an adolescent, he pretended that his real name was Angel Rodriguez and that his father was Mexican and his mother a famous lawyer. Having pretended that he was adopted, it was a shock to find out he really was adopted. It is guessed that he learned this as he entered high school and that the knowledge was very upsetting to him.

As a kid, his best friend was Paul Ginn, born about the same time. They hunted together with a BB gun, joined the Scouts for a couple of years, but drifted apart in junior high school. (Ginn shot a man to death when he was fifteen and went off to prison.) In high school, Charles took up gymnastics and was very

successful, becoming the state champion. However, academically most of his grades were Ds with occasional Cs and Bs. A teacher in the school remembered him as average and likeable, but a little cocky.

He stole some sweatpants and jacket once and then some welding equipment. Rather than being conciliatory, he was belligerent and thrown out of school. However, after his suspension, Charles hung around the school and the places where the kids socialized. He was popular with girls, especially those from broken homes and in poverty. To them Charles became a folk hero. Despite the fact that he talked about and read about sex a great deal, some of his friends were not sure that he wanted a sexual relationship with the girls (though he did sleep with at least a couple), but that he wanted girls around to idolize him. Rumors, however, abounded, such as that he supplied girls to the local Mafia and to fraternity parties at the University of Arizona.

How did Charles manage his life? His parents paid all of his bills, gave him $300 a month, and bought him a nice 1960 red Chevy. They let him live in a cottage near a convalescent home which they ran, in return for which he was supposed to help out around the home. This gave him lots of free time to hang out with his friends and buy Cokes and cigarettes for everyone.

Charles lied about himself a great deal. For example, he said he was anemic and had leukemia with only a few years to live. He was only five-foot three and 130 pounds. He dyed his reddish hair black, bronzed his skin with make-up, stuffed crushed tin cans in his shoes to make himself taller and tried to impress people with his vocabulary. Yet he also learned to assume polite manners when with the parents of his friends, and he was nice to his friends when they were in crisis.

Reference

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Arthur Shawcross

1980s
prostitutes

In June 1943, Arthur Roy Shawcross, a marine resting in Australia from the war, married Thelma Yea and had a son. He returned to America and in Watertown, New York, married Betty Yerakes in November 1944. Shawcross and Betty had a son, Arthur John, born June 6 1945. Arthur was logged in as an eight-month pregnancy, but his mother later claimed he was two months premature and weighed five pounds.

Arthur's mother later claimed that Arthur was a normal child and had a normal childhood. Relatives and friends remembered differently. Even as baby, Arthur had a blank look. He rarely cried and, when he did so, only one eye watered. Years later, psychologists and police officers remarked on his lack of affect and blank look. According to his mother, Arthur was breast fed for two months, spoke his first word at nine months, walked at fifteen months and weaned at eighteen months. Since their living quarters were cramped, he spent most of his time in a crib. His father built a larger house for the family in a spot where three other Shawcross families eventually built houses, and a brother and two sisters followed.

Arthur began to behave oddly in kindergarten. He still used baby talk (and did so throughout his life at times), had nightmares and wet the bed. In kindergarten, records show that he missed thirty-three days. He also began a pattern of running away from home. The first time, he hid under the house porch and watched the search for the missing boy. The feeling among his relatives was that he craved attention and that he felt ignored and unloved after his siblings arrived. His mother did not seem to love Arthur.

Although in later years, Arthur was judged to be of low intelligence and even borderline retarded, his grades at first were quite good. However, he was mean to other kids (he brought an iron bar on the school bus one day to hit the other kids), including his siblings, and he used to fantasize having sex with one of his sisters (he later claimed). It was felt that he hated girls more than boys. He was made fun of and teased by his classmates (they nicknamed him "Oddie"), and he tried to buy their friendship with money and candy. He had two imaginary playmates, and at school he often wandered from class and was found daydreaming. Throughout his school years, there were frequent reports on his behavior from the school nurses, teachers and principals. His first mental health evaluation was one month before his eighth birthday, and it confirmed his own feeling that both parents favored the other children. His grades began to decline in third grade, and he had to repeat fourth grade. His teachers saw his strange

behavior as a way of seeking attention. He spoke baby talk and screamed uwahhhhhhh when upset, an imitation of crying. He still wet the bed.

When he was nine, a letter arrived from Australia revealing his father's earlier marriage. Although the American marriage continued, Betty now assumed control in the home, and Shawcross was meek. Betty had jealous rages if any other woman was near her husband, and Arthur began to stay away from home as much as he could. He tried to please his mother, always buying her gifts on anniversaries, but he never seemed to be able to please her. He began to spend more time at the neighboring house of his paternal grandmother who was nice to him.

Soon he began to steal - sodas from the grocer, a radio from a home. His anger intensified, and he got into more fights. Fellow students recalled that he wouldn't stop fighting and had to be pulled off his victims. He began to isolate himself more, wandering in the woods and threatening to shoot trespassers on his territory with his .22.

At nine his legs seemed paralyzed, and he was hospitalized for a week. Most relatives thought that he feigned this illness because he feigned illnesses and mishaps frequently in later years. At school, he was considered learning-disabled or brain-damaged by some teachers and lazy and contemptuous by others. His IQ tested in the 86 to 92 range. He flunked fifth grade, squeaked through sixth and seventh, and flunked eighth grade. He was now three years older than his classmates and even more of an outcast.

In his mid-teens, Arthur still had nightmares and wet the bed, and he still ran away from home occasionally. He developed a laugh like a cackle, chanted as he walked (relatives thought he chanted "Die, die, die..."), overswung his arms when he walked and walked in a straight line, never deviating for any obstacle. He began to set fires and was occasionally violent at school. He beat one boy with a block of ice and bit the testicles of another. He continued to steal. He tormented animals, snaring and snapping the necks of rabbits, putting bats in people's cars, tied cats together, pounded chipmunks and squirrels, threw darts at frogs nailed to his dart board, scraped the feathers from birds and drowned kittens.

In eighth grade, he began to show an interest in athletics. However, in wrestling, he would not follow the rules, and he would not stop fighting. He turned track and field into a contact sport. He complained that his parents never came to watch him play. He also began to suffer accidents - he passed out when he hit the

crossbar while pole vaulting, fractured his skull when hit by a discus, was rendered unconscious by an electric shock, and was knocked out by a sledge-hammer, a fall from a ladder and when hit by a truck. His violent behavior continued at school. He challenged a teacher who slammed Arthur into a wall. Although he was passed into ninth grade, Arthur soon dropped out. He was seventeen.

His thieving escalated - breaking and entering homes, looting summer cottages, shoplifting, etc. He began to "peep", even drilling holes in the walls so he could watch his parents. He later claimed to have had a variety of sexual experiences, but those who knew him in those years considered him sexually naive.

In December 1963, he broke into the Sears, Roebuck store and was arrested. He was sentenced to eighteen months probation. He found a steady girlfriend, Sarah, and they married in September 1964. Arthur seemed uninterested in his wife. After work, he would eat out, and he confided to a relative a few weeks after the wedding that he had not yet had sex with his wife. He had a succession of menial jobs, sometimes quitting, sometimes getting fired. He learned about workmen's compensation and often faked injuries to collect. He held one job longer than others - cutting up animals in a butcher's shop.

Arthur and Sarah had a son in June 1965, and then he was arrested, technically for second degree burglary, but really for an assault on a kid. He was sentenced to six months more probation and given a psychiatric evaluation which found him "emotionally unstable." After this, Sarah divorced him. She was tired of his pattern of working and his infidelities. After the divorce, he continued to drift from job to job until he was drafted in April 1967. He was trained at Fort Denning, Georgia. His intelligence when tested varied from subnormal to slightly above normal. He soon had two minor disciplinary charges but thereafter got mostly good ratings. Before being sent to Vietnam, he returned home to marry his latest girlfriend, Linda.

Reference

Olsen, J. (1993). *The misbegotten son*. New York: Delacorte Press.

Charles Starkweather

1950s
11 murders

The first Starkweather sailed to America from the Isle of Man in the Irish Sea in 1640. The Lincoln, Nebraska, branch was poor and uneducated, but hardworking. Charlie was born November 24, 1938, to Guy and Helen Starkweather, both native Nebraskans. He was the third child (and boy) in a family of seven boys and one girl. Though poor, there was always enough to eat. The family was close and the children well-behaved. Guy was a carpenter and jack-of-all-trades. His weak back and arthritis led him to not work regularly, and Helen supplemented the family income by working as a waitress.

Charlie's first day at school was a disaster. He had a slight speech impediment, and the class laughed at him. His hair was red and he was bow-legged, and the other kids made fun of him. On the second day, he got into his first fight. Although later testing showed him to be of average intelligence, he was considered dull normal at school and placed in slow learner groups. He quickly stopped studying seriously. In 1954, when he was fifteen, his vision was found to be 20-200 and he was fitted with glasses, but his vision problems had been overlooked by his teachers and parents.

He was good in gymnastics, and he was made a student gym assistant, one of his few triumphs. By the time he was in ninth grade, he was fighting daily, and his peers avoided him whenever he was in a depressed mood when he could be vicious.

For ninth grade, he went to Everett Junior High where he encountered another tough kid, Bob Von Busch. After their fight, they became good friends. Bob later recalled that Charlie was fun to be around, but that he could be mean and cruel too. They double-dated and went to an auto track where Charlie raced a hot-rod. They would drive to Kansas to buy 3.2 beer to sell back in Lincoln, steal cars for joy rides and for stripping down to sell. Charlie idolized James Dean and modeled himself on him.

In 1956, Bob started dating Barbara Fugate, and Charlie eventually hooked up with her younger sister, Caril, who was just thirteen. Caril went out with another guy, and Charlie threatened to kill him if he touched Caril again. From that time on, Charlie and Caril were together. Their relationship was not very sexual, but it appears that they did have intercourse occasionally at least, and that Charlie liked anal sex. Caril was spunky, behaved confidently and acted in some ways like

an adult, but she was also quite ignorant and backward. (She had failed a grade and was considered a slow learner.)

Charlie had seen life as bleak and hopeless, and Caril was the only good thing that had happened to him. He had few interpersonal skills, was considered retarded by many (Charlie could not punctuate or spell properly), and he had a bad temper. He had some artistic ability but lacked the motivation to develop it. But Caril adored him, and her regard almost made him stop hating himself.

Since his early teens, Charlie had helped his older brother collecting garbage part-time. After he dropped out of school at sixteen, he worked full-time at the Western Newspaper Union warehouse unloading trucks and baling paper. He never advanced and seldom was given a raise. He often fell asleep on the job, and he got caught charging hot rod parts to the company.

One day, the handle on the baling machine hit him on the head and knocked him out briefly. He had headaches and depressions after that several times a week for the rest of his life, and he ate aspirin constantly though he said it didn't help much.

When Charlie was sixteen, Charlie's father threw him out after Charlie let Caril drive a car that his father co-owned with him (and had lent him $150 to buy) -- Caril had a crash. Charlie let Caril drive the car again in front of his father, and they came to blows. Charlie moved in for a while with Bob, who had married Barbara Fugate. Soon after, on October 14, 1957, Charlie and Caril opened a joint savings account at the bank. Charlie then quit his job.

He started work collecting garbage again so that he could be free by three to pick up Caril from school. Forty-two dollars a week was not enough to buy Caril the things she wanted, and he had trouble paying his rent at the rooming house. His landlady would lock him out if he was too far behind in the rent, and he would sleep at the local gas station.

Reference

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A REVIEW OF RESEARCH ON SUICIDE IN 2005

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From 1897 (the date of the publication of Durkheim's book on suicide) until 1997, I read every article in English on suicidal behavior. I had many boxes of 3x5 index cards, one for each article, chapter and book. I used every abstracting service available to locate these scholarly works. I reviewed the research in four books called *Why People Kill Themselves*, published by Charles Thomas. [9]

At that point, the volume of scholarly work on suicidal behavior was too great. Locating and reviewing the articles was taking up too much of my time (I did have a full-time job as a professor), and so I stopped. One hundred years seemed like a great achievement.

No-one took up this task. Of course, reviews of selected topics appeared, but no comprehensive review. I am now retired, and hence this is an attempt to do a reasonably thorough review, although it will not be comprehensive. I do not have access to all the abstracting services that existed in the 20th century. Furthermore, articles in the predatory journals (those that developed to help scholars publish their work for a fee) are not typically included in the abstracting services. Therefore, many, possibly important, ideas are difficult to locate.

My goal is to see whether there have been important research and theoretical findings in the more recent literature. I have not usually included reviews of the literature in this essay but, of course, those reviews of the literature on specific topics may be valuable to researchers. (I have started to mention reviews of physiological research because the articles typically have no meaning for me.) I have also not cited qualitative reports. These may throw light on suicides in certain people or in specific instances, but qualitative reports are difficult to incorporate into an essay such as the present one.[10]

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[9] I keep this standard Introduction so that each review can stand as an independent article.
[10] My positive opinion of qualitative essays is illustrated by the essays I have written on more than 75 famous suicides (www.drdavidlester.net).

The reviews of scholarly research published in 1998-2004 are published (Lester, 2024a, 2014b, 2024c, 2024d, 2024e, 2024f, 2024g). This is the review for 2005. To indicate where I searched, here is a list of abstracting services used and the number of abstracts on suicide.

Source	1998	1999	2000	2001	2002	2003	2004	2005
Sociological Abstracts	93	106	55	56	67	62	64	107
Criminology Abstracts	78	94	80	98	67	73	63	95
Psychological Abstracts	401	460	388	425	441	510	541	592

There are some decisions to be made for the future. In my opinion, the physiological research has no bearing on why people die by suicide, although it may help researchers develop new medications for suicidal behavior. The research on suicidal ideation is also of minimal use. I have argued that only studies of attempted suicides offer the potential to learn about completed suicide, although hardly any researchers seem to have noted my suggestion as to how this may be done (Lester, 2025). Therefore, I have to decide whether to include research on these two areas in the review for 2006.

Studies of Suicide Rates and Suicidality

Methodological Issues

Salib and Agnew (2005) looked at deaths by drowning in England and Wales. They found that 62% and 38% of all death by drowning received an open verdict and suicide, respectively. Drownings by the elderly attracted more verdicts of suicide as did drownings by women. Thus, official English suicide rates may be inaccurate as has long been known (Lester, 2002). Salib (2005) also studied deaths by drowning in England and Wales. Elderly people drowning were more often labeled as suicides rather than as open verdicts than were young people drowning and women more than men, especially elderly women.

Pritchard and Hansen (2005) looked at certification of suicide and undetermined death in 8 countries for children, adolescents and youths. The rates of undetermined deaths varied greatly, ranging from 68 per million in England and Wales to 9 per million for Japan and Spain, casting doubt on the accuracy of suicide rate for children and adolescents.

As noted below, in a study of American counties, Gibbons, et al. (2005) found that the prescription rate of SSRIs and new-generation non-SSRI antidepressants was associated with lower suicide rates. This variable (or related variables such as the availability of methods for suicide) have never been controlled for in sociological studies of suicide.

Regional Studies

Voracek (2005a), in a sample of 48 Eurasian countries, found that national estimates of IQ predicted the male and female suicide rates of the elderly, even after controls for national GDP, rates of adult literacy, urbanization and the percentage of Roman Catholics. In addition, the male minus the female suicide rate (as well as the male/female ratio of the rates) was also positively associated with the national IQ.

In a sample of 34 European countries, Sher (2005) found that there was a negative correlation between suicide rates in 15-24-year-old males and per capita consumption of wine (and a trend for females), but there was no correlation between suicide rates and per capita consumption beer or spirits.

In a study of 21 countries, Bridges (2005) found that suicide rates were not associated with membership in Alcoholics Anonymous, cirrhosis mortality or alcohol consumption, nor with changes in these variables.

Lester (2005b) used a regression equation to predict the suicide rate in 17 industrialized nations using birth rate, divorce rate, percent of the elderly (65+), alcohol consumption and percent type O blood. This regression equation was found to be quite accurate in predicting the relative suicide rates of other European nations (that were not in the original sample) but not of non-European nations. Blood type was the strongest predictor of national suicide rates.

Vijayakumar, et al. (2005) studied 32 developing countries (with middling score on the Human Development Index). Their suicide rates were positively associated with telephone density and cigarette consumption and negatively with the Gini ratio of inequality.

In a sample of 18 industrialized countries, Lester (2005d) found that national estimates of scores for the Big Five personality traits were not significantly associated with national suicide rates.

In a sample of 19 countries, Lester (2005f) found that suicide rates were not associated with national estimates of work locus of control, job satisfaction, psychological well-being, physical well-being, or individualism.

Regions within a Country

Bridges and Harrell (2005) found that state laws on suicide in the American states were not associated with state suicide rates.

In a study of American counties, Gibbons, et al. (2005) found that the prescription rate of SSRIs and new-generation non-SSRI antidepressants was associated with lower suicide rates, but the prescription rate of tricyclic antidepressants was positively associated with the suicide rate. Higher suicide rates in rural areas were associated with fewer antidepressant prescriptions, lower income, and higher prescriptions for TCAs.

In the United States, Abel and Kruger (2005b) found that suicide rates of the states were negatively associated with the percentage of college graduates, but not with the median household income or the percentage of households below the national poverty level.

In a study of Dutch municipalities, van Tubergen, et al. (2005) found that the suicide rates by religion (Catholic, orthodox Protestants, liberal Protestants and non-church members) were lower the greater the percentage of religious people in the municipality. This association decreased from 1936-1973, perhaps as the Netherlands became more secularized. Liberal Protestants had the highest suicide rate of all groups. The authors felt that their results did not support a social network theory of suicide but, rather, a more general protective impact from religious communities.

In a poorly presented paper of suicide rates in the local authority regions in England, Rezaeian, et al. (2005) apparently found that deprivation indices (e.g., income and employment) was associated with the suicide of males (all age groups) and with the middle-aged female suicide rate.

In Scotland, Levin and Leyland (2005) found the highest suicide rates in seen in remote rural areas for men relative to urban areas but there were lower female suicide rates in accessible rural areas.

In a poorly presented paper, Taylor, et al. (2005a) examined correlates of suicide rates for socio-economic areas of Australia (but omitted to tell us the number of areas in their data set!). Suicide rates were associated with the prevalence of mental disorder, other sub-threshold mental health items and suicide attempts but, in most cases, the associations were non-significant after adjustment for country of birth and urban–rural residence. For males, but not for females, the suicide rate was highest in the lower SES areas.

In a study of suicides in rural and urban areas of Australia, Taylor, et al. (2005b) found that suicide rates (but not rates of attempted suicide) were higher in rural areas for males (but not for females). This difference disappeared after introducing the variables of migrant and area socioeconomic status, mental disorder prevalence, and mental health service utilization.

In a study of the seven provinces of Belarus, Voracek (2005b) found that an estimated measure of IQ (using proxy measures such as eminent persons and writers) was positively associated with suicide rates.

Yamasaki, et al. (2005) studied the 47 prefectures in Japan and, in their words, "The present study intended to clarify the relationships of the age-specific suicide mortality rates with social life factors from 1980 to 1990 in Japan" (p. 343). They factor analyzed 20 socio-economic variables and obtained five factors. In the three chosen, years (1980, 1985, 1990), the predictors of suicide involved all five factors but differed for suicide rates by sex-by-age and by year. Clarification was not achieved for the reader to understand the results.

Baller, et al. (2005) examined the clustering of suicides in Japanese prefectures and found that clustering did occur. They claimed that higher suicide rates tend to cluster in prefectures with lower in-migration and lower newspaper circulation. Baller, et al. suggested that cultural values about suicide are transmitted to neighboring prefectures.

Regions within a State or Province

Burrows and LaFlamme (2005) studied 276 residential area in Tshwane (South Africa). Nineteen variables were reduced to three factors: socioeconomic (e.g., electricity and water), economic need (e.g., dependency ratio, owner-occupied) and matrimonial (e.g., percentage married). The correlates of suicide

rates (which were not presented) varied with race and sex and were often non-linear. There was a decreasing risk of suicide with decreasing socioeconomic circumstances and increasing economic need for both sexes. The correlates for black and white suicide rates were weak.

In a study of suicide in counties in California, Fiske, et al. (2005) found higher suicide rates in the more rural counties resulting from high suicide rates for whites. The rural counties had fewer physicians and mental health care providers per capita, but the number of providers per capita was not related to suicide rates

Time-Series Studies

Tartaro and Lester (2005) found that the time series suicide rate for United State prisoners for the period 1978-1996 was associated with national birth and divorce rates in the same way as was the male suicide rate for the general population, in line with Durkheim's theory of suicide.

For Switzerland in 1965-1994, Yamasaki, et al. (2005) found that male suicide rates (but not female suicide rates) were negatively associated with the tax on cigarettes and positively with the tax on alcohol.

In what appears to be a time series study of alcohol consumption and suicide rates in the provinces of Canada and in Canada as a whole, Ramstedt (2005) found a positive association for both men and women for the period 1950 to 1998.

Over a 32 year period in Ireland, Lucey, et al. (2005) found that the male suicide rate was positively associated with alcohol consumption and the crime rate and negatively with the marriage rate. The female suicide rate was associated positively with all three variables. To control for trends during this time, they studied year-to-year changes for the variables, and no significant predictors for suicide were found.

Research on Distal Variables

Climate

Papadopoulos, et al. (2005) found that suicide was more common in Greece in the four days after solar radiance. This effect was stronger in females. Suicides peaked in June.

In Lithuania over 156 months, Stoupel, et al. (2005) found that monthly numbers of suicide were inversely correlated with solar and cosmic-ray activity and geomagnetic activity. Suicide rates were inversely correlated with total, cardiovascular, traffic accident, and sudden deaths and positively correlated with the number of homicides.

Season

Björkstén, et al. (2005) looked at suicides in West Greenland and found that suicides peaked in June with a trough in Winter

Ajdacic-Gross, et al. (2005b) studied the seasonality of suicide in Switzerland from 1876-2000 and found that the seasonality had declined over this time period and was associated with a decline in the agricultural workforce. They found that the seasonality varied with the method used and the region. For example, no seasonality was apparent in poisoning, and in Geneva and Basle City. Seasonal effects were stronger for drowning and hanging suicides and in rural Catholic regions.

Ajdacic-Gross, et al. (2005a) compared the seasonality of suicide in Zurich (Switzerland). In the 16th to 18th centuries, there was a Spring peak, but the seasonality had smoothed out to some extent by the 1970s and 1980s.

In one region of Australia, Rock, et al. (2005) found that suicide involving violent methods was not seasonal, nor was suicide involving methods with high fatality rate (suicide compared to attempted suicide). Attempted suicide using low lethality methods was seasonal with a peak in November. There was a sex difference with peaks for attempted suicide earlier in the year for males (October in males and December in females), and the seasonality was found only for those aged 25+.

In Hungary, Zonda, et al. (2005) found a summer peak and a winter trough in both men and women. A secondary autumn peak was found for men. After 1988 there was a moderate decrease in the seasonal fluctuation but only for those under 29 years of age.

Postolache, et al. (2005) proposed that the Spring peak in suicides may partly be a result of the onset of Spring seasonal allergies.

Disasters

Yang, et al. (2005) found that suicides increased in a region in Taiwan (compared to other regions) after an earthquake. The increase disappeared after 10 months.

Occupation

Torre, et al. (2005) studied physicians graduating from the Johns Hopkins University School of Medicine and found that both men and women had higher rates of suicide compared to the general population whereas the all-cause mortality was lower.

Hem, et al. (2005) found higher rates of suicide in physicians in Norway compared to other graduates and to the general population. Suicide rates increased with age for physicians and other graduates, whereas for non-graduates the rate was highest in those 40-60 years old. Suicide rates were high for female nurses, intermediate for police officers and low for theologians.

Suggestion

Tousignant, et al. (2005) documented a rise in suicides after the suicide of a well-known person (a television reporter in Quebec [Canada]) appeared in the print media, with the suicides often using the same method.

In Israel, Shoval, et al. (2005) found that a television documentary about a young girl who died by suicide had no impact on suicide rates.

Hittner (2005) objected to the statistics used by Phillips (e.g., Phillips & Carstensen, 1986) in his studies of the Werther effect (an increase in suicides after publicized suicides). He re-analyzed the original data and found support for the Werther effect, but less strong than Phillips found.

Stack (2005) conducted a meta-analysis of 419 findings from 55 studies and concluded: “(1) studies measuring the presence of either an entertainment or political celebrity were 5.27 times more likely to find a copycat effect, (2) studies focusing on stories that stressed negative definitions of suicide were 99% less likely to report a copycat effect, (3) research based on television stories (which

receive less coverage than print stories) were 79% less likely to find a copycat effect, and (4) studies focusing on female suicide were 4.89 times more likely to report a copycat effect than other studies" (p. 121).

Other Distal Variables

Chotai (2005) defined aggregation as the occurrence of an unusually large number of suicides in an area within a relatively short period (assortative susceptibility). In one county in Sweden, aggregated suicides were more often male, aged 45-60, living in rural forested areas, and using firearms, but did not differ in season of birth or marital status.

Cutright and Fernquist (2005) studied suicide rates by marital status, age and sex in the United States at two time periods and used data from a national survey to measure psychological well-being, suicide acceptability for these groups and marital status integration (the percent of persons who are in each marital status for each age–gender group).[11] As usual for this research team, they used a weird measure for suicide rates and reported that psychological well-being, suicide acceptability and marital status integration were related to the suicide measure for those in most age groups.

In a study of the civil war in Northern Ireland for the period 1966 to 1999, McGowan, et al. (2005) found an inverse association between the rate of terrorist caused deaths and both the male and female suicide rates.

Bridges and Kunselman (2005) found that "Status Indians" in British Columbia (Canada) had greater potential years of life lost to suicide (and also homicide) than did all other residents.

Reisch and Michel (2005) documented that installing a safety net at a bridge in Berne (Switzerland) eliminated suicides from the bridge without an increase in suicides from other jumping sites.

Suicide rates for those aged 30-59 in Hong Kong were found by Kwan, et al. (2005) to be higher for longer-term residents. Not working was negatively related to suicide only for men but not for women. The particularly low male-to-female

[11] This measure of status integration (simple frequencies) has been largely ignored by suicide researchers because it does not appear to measure integration.

suicide ratio was not due to a larger protection from marriage for men than for women, but more likely a result of the very high suicide rate for the non-working population.

In one region in Germany, Biermann, et al. (2005) found no association between the phases of the moon and suicide, overall and for violent and non-violent methods for suicide.

Värnik, et al. (2005) studied suicide rates in Estonia and Russia in the years prior to the breakup of the Soviet Empire and afterwards. The suicide rates of, Russians in Estonia (+39%) , Russians in Russia (+26%) and Estonians in Estonia (+17%) all rose after the break-up.

Discussion

There was little (nothing?) new here, but the methodological issues mentioned above (and in other of these reviews) does cast doubt on the validity of sociological studies of the suicide rate. In addition, the use by the World Health Organization of suicide rates for countries that do not report official suicide rates (using, one supposes, an algorithm) renders studies including such countries of dubious (no?) value.

Studies of Suicides

Theories of Suicide

The year 2005 saw the first appearance of the Interpersonal Theory of Suicide in a book (IPTS: Joiner, 2005; van Orden, et al., 2005). This theory has stimulated a tremendous amount of research. The theory has been seriously criticized (e.g., (Hjelmeland & Knizek, 2020)) and by myself. I see the ITPS not, as Joiner claims, a theory of all suicides, but rather one type of suicide (Lester, 2024h; Lester & Gunn, 2022), but I also admit that it is the most substantial theory proposed in this century. I have said that it is fine to criticize the ITPS, but what have you got to offer as a theory that is better?

Turecki (2005) proposed one type of suicide, one with a background of impulsive–aggressive behaviors. The impulsive–aggressive traits are part of a developmental path that increases suicide risk among a subset of suicides. “These personality traits may also mediate familial transmission of suicidal behavior,

defining a behavioral endophenotype that could be useful in molecular genetic studies of suicide" (p. 398).

Based on their study of suicides and attempted suicides, Arie, et al. (2005) proposed three types of suicidal individuals: (1) impulsive and aggressive plus oversensitivity to minor life events; (2) narcissism, perfectionism and an inability to tolerate failure and imperfection combined with a schizoid personality; and (3) hopelessness and depression.

Fazaa and Page (2005) proposed two types of suicides: introjective/self-critical (themes of aggression, self-definition, and self-worth) and anaclitic/dependent (themes of separation, loss, abandonment, envy, and jealousy).

Physiological Research and Medical Issues

Joiner, et al. (2005c) reviewed research on the neurobiology of suicide.

Brain

Karege, et al. (2005) found that there was a decrease in brain-derived neurotrophic factor (BDNF) and neurotrophin-3 (NT-3) proteins levels in the hippocampus and ventral prefrontal cortex(only BDNF), but not in the entorhinal cortex, of suicides compared with non-suicidal healthy controls. The decrease was observed in all suicides, regardless of diagnosis.

Boldrini, et al. (2005) found that the amount of TPH immunoreactivity was higher in suicides than controls in the dorsal raphe nucleus, and not different between suicides and controls in the median raphe nuclei. Unfortunately, the suicides were depressed and the deceased controls not so, thereby confounding the results.

Bielau, et al. (2005) compared suicides with those who died of natural causes and found that "in the rostral subnuclei of the dorsal raphe there was a significant effect of diagnostic group on the ratios of the nucleolar organizer regions to nuclear area (NOR ratio) and a nearly significant effect on numbers of serotonergic neurons" (p. 43).

Vinod, et al. (2005) compared alcoholic suicides (AS) with chronic alcoholics (CA) and found that "The CB_1 receptor density was higher in AS

compared with the CA group in the DLPFC [dorsolateral prefrontal cortex]. Western blot analysis confirmed a greater immunoreactivity of the CB_1 receptor in AS. The CB_1 receptor-mediated [^{35}S]GTPγS binding indicated a greater signaling in AS. Higher levels of N-arachidonyl ethanolamide and 2-arachidonylglycerol were observed in the DLPFC of AS" (p. 480).

Other

Okamura, et al. (2005) found no differences between suicides and living controls in two polymorphisms of the 5-HT6 receptor gene in blood samples.

Stefulj, et al. (2005) found no differences in the tryptophan hydroxylase gene (Tph1) between suicides using violet methods and controls (blood donors).

Suicide Notes and Diaries

Japan codes the content of suicide notes left by suicides. Shiho, et al. (2005) found that health, followed by finance, family and work were the most common motives. The modal suicide was unemployed and in the service industries for men and in agriculture/forestry/fishery for women.

Lester (2005e) found that the incidence of three words indicative of irrational thinking (perfect, always, and never) did not increase in the diary of a suicide over the course of the year preceding her suicide.

Youth Suicides

In a study of adolescent suicides and accidental deaths by risk-takers in Australia, Sankey and Lawrence (2005) described three groups: (1) enduring difficulties, including family dysfunction, mental health problems and school-related difficulties; (2) pivotal life events, including relationship break-ups, deaths of significant people, arguments with partners or family members, a major illness or accident, sexual assault, legal problems and unemployment; and (3) adolescent experimentation such as risk-taking behaviors (e.g., drug and alcohol use and dangerous driving). Sankey and Lawrence did not give numbers of the two groups in each of the three categories.

In a study of adolescent suicides, Portzky, et al. (2005) focused on the duration of the suicidal process as witnessed by informants. The suicidal process

was shorter in suicides diagnosed with adjustment disorder compared with suicides diagnosed with other disorders, but the suicides with adjustment disorders had no indications of a history of emotional or behavioral problems during early adolescence.

In a study of suicides in Finland under the age of 25, Viilo, et al. (2005) found that 70% had physical illnesses. An increased prevalence of mental disorders was found in suicides with diseases of the skin and subcutaneous tissues, musculoskeletal, respiratory, and digestive systems, and in connection with injuries, poisonings, and symptoms or signs of infectious diseases.

Adult Suicides

In a comparison of suicides and accidental deaths in New York City, Miller, et al. (2005) found that the suicides were more often white and from a district with higher per capita income but with no difference in the Gini coefficient. However, the authors concluded that the suicides did come more often from districts with greater income equality even though the statistics were non-significant.

Lester (2005a) noted that official estimates of the suicide rate in veterans of the Vietnam War are low, others suggest a much higher suicide rate. Suicides int these veterans were honored on the website *www.suicidewall.com* which no longer exists).

Carter, et al. (2005a) studied patients in Australia who made 2 or more suicide attempts. Subsequent suicide was predicted by an increase in the number of drugs ingested and an increase in drug or alcohol misuse.

Kim, et al. (2005) compared the relatives of 25 suicides with those of community controls. The relatives of suicides were more likely than relatives of control subjects to attempt or complete suicide after controls for psychopathology. The relatives of suicides were not more likely to exhibit suicidal ideation but had more severe suicidal ideation than relatives of control subjects. These findings were stronger for the suicides diagnosed with cluster B personality disorders.

Agerbo (2005a) compared Danish suicides with living controls. Suicide was more likely if the spouse or partner had had a psychiatric admission, had died, especially by suicide (and especially for women), if a child had died (especially by suicide) and if the couple was separated.

Harriss and Hawton (2005) followed up a sample of attempted suicides and found that their suicidal intent for the attempt predicted later suicide. Male suicide was predicted by suicidal intent and alcohol misuse and female suicide by suicidal intent, previous psychiatric treatment and older age.

In the Swedish population, Magnusson, et al. (2005) found that suicide was more common in shorter men. A 5 centimeter increase in height was associated with a 9% decrease in suicides, suggesting early life influences or stigma experienced by short men.

Lindahl, et al. (2005) reviewed studies of suicide in women while pregnant and postpartum and concluded that suicide and attempted suicide are lower during pregnancy and postpartum than in the general population of women

Gibb, et al. (2005) followed up attempted suicides in New Zealand for ten years. Repeated attempted suicide was more common in females, those under 55, and those whose index attempt used a method of low lethality. Suicide was more common in males, those aged 25 and over; and those whose index suicide attempt used a method of high lethality.

In Hong Kong, suicide using charcoal burning indoors became popular. Chan, et al. (2005) found that those who died by suicide by this method were more likely to have been economically active and physically healthy and less likely to have had pre-existing mental illness than those using other methods for suicide. Charcoal-burning suicide was associated with over-indebtedness.

Lester (2005c) found that for 74 major league baseball players known to have died by suicide, 17 occurred within 28 days of the players' birthdays as compared to an expected number of 11.4.

In the United States, Abel and Kruger (2005a) found that major league baseball players who died by suicide were more often born in August than in any other birth month (and less often born in July and November).

In England, McKenzie, et al. (2005) found that suicides who had contact with mental health services clustered both in method, space and time.

In one county in Georgia (USA), Garlow, et al. (2005) found that African Americans had a lower suicide rate than did whites, but they died by suicide at a younger age.

In a study of a large sample of attempted suicides in England, Cooper, et al. (2005) found a higher SMR for females. Suicide rates were highest within the first 6 months after the attempt. Predictors of suicide were avoiding discovery at the time of the attempt, not living with a close relative, previous psychiatric treatment, self-mutilation, alcohol misuse, and physical health problems.

In a follow-up study of a cohort of Japanese residents, Fujino, et al. (2005) found that suicide was predicted by living arrangement (living alone), marital status (divorced, widowed), satisfaction with living arrangement or residence, self-rated health status, stress related to home life and difficulty maintaining sleep. The risk factors for suicide differed a little for men and women.

Bills, et al. (2005) compared aircraft crashes where the pilot died by suicide with other aircraft crashes (matched for sex of pilot and type of flight). The suicides were younger pilots, were less likely to have another occupant and were more destructive to the aircraft. The suicide crashes were more likely to have occurred away from the airport.

Altindag, et al. (2005) compared suicides in region of Turkey where females (especially young females) have a higher suicide rate (comprising 71% of the suicides), comparing the suicides with community controls, using informants for both groups. The suicides had more recent stressful events and more often a psychiatric illness but did not differ in illiteracy or unemployment.

In Denmark, Agerbo (2005b) found that suicides versus the general population were more often not fully employed. Fully employed people who have been first admitted to a psychiatric hospital within the past year were at increased suicide risk. Psychiatric patients who were unemployed, social benefits recipients, disability pensioners, or otherwise marginalized on the labor market had a lower risk of suicide.

Conner, et al. (2005) studied suicides in China with three different levels of planning. Suicides with high planning were more often men and older individuals, less often with acute stress but more often with chronic stress, and less often used ingestion of pesticides stored in the home.

Pirkola, et al. (2005) compared suicides within one week after discharge from a psychiatric unit with those dying by suicide later. The suicides within one week after discharge were older, more often female, unmarried, retired, with affective disorders and with schizophrenia, and used hanging and jumping more often.

In a sample of ten European countries and cities, Lorant, et al. (2005a) found that for men, a low level of educational attainment was a risk factor for suicide in eight out of the ten countries. The result was less consistent for women. In four out of five countries, the risk of suicide was greater in tenants than in house owners. The risk of suicide for men in was shown to decrease with increasing socio-economic advantage in 9 of the 10 countries, but the results for women were less clear.

In a sample of 8 countries, Lorant, et al. (2005b) found that the lower educational group had a higher rate of suicide compared with the higher group, for both married and non-married individuals. The excess risk was, however, larger for non-married individuals. The protective effect of marriage was not found for the elderly. The statistical significance of the differences varied from country to country.

Qin and Nordentoft (2005) compared all suicides in Denmark with people from the general population, matched for age and sex. Suicides peaked in the one week after admission and the one week after discharge. Suicide was more common in patients with shorter stays in the hospital and in those with affective disorders. For women, suicide was more common in those with substance disorders and with multiple admissions.

Schneider, et al. (2005b) compared suicides with healthy living controls and found that the suicides were more often current smokers and heavy users of cigarettes. Alcohol dependence, other axis I disorders than substance-related disorders, and cluster B personality disorders were predictors for suicide in both sexes, but current nicotine consumption only in men.

Suokas, et al. (2005) followed up attempted suicides by over dose for 14 years. Of these, 23% died and roughly a third of these showed evidence of alcohol misuse. Those abusing alcohol were less likely to die by suicide (and more likely to die from accidents) and more likely to use a non-violent method for suicide.

Harriss, et al. (2005) followed up a sample of attempted suicides and found that suicidal intent for the attempt predicted subsequent suicide, especially in the first year and for female attempters. This effect was stronger for the circumstances of the act other than for self-report of intent. Higher intent was associated with age 55+, not being married and previous attempts, and for men alcohol misuse and for women loneliness.

Military Suicides

Mahon, et al. (2005) studied military suicides and found that the suicides more often had a psychiatric illness and a past history of deliberate self-harm, morning duty, past disciplinary action, and a recent medical downgrading.

Gunnell, et al. (2005) followed up a large sample of Swedish male military recruits for 5-26 years. The suicide rate was two to three times higher in those with lowest IQ test scores, with the strongest association for the logic test. The suicide rate was higher for poorly performing sons of well educated parents.

In a national sample of American male suicides, Stack and Wasserman (2005) found that the use of a violent method was predicted by race (more usage by African Americans), less education, widowed or single, older and in the south or west of America.

Method of Suicide

In New York City, Abrams, et al. (2005) found that falls from a height was the most common method for suicide for those aged 65+, mostly from their homes.

In Sweden, Rådbo, et al. (2005) found that suicides on the railways were evenly distributed by months and weekdays, and most suicides occur during the day while unintentional events usually occur at night. The modal suicide was male and in the 30s. Waiting on or close to the tracks was more common among suicides than among cases with unknown intent.

Erazo, et al. (2005) studied railway suicides in Germany. Suicides versus survivors of the attempt were more often male, at night, on open track (versus in the station) and on the main line (versus local railway).

Dumais, et al. (2005b) compared suicides using violent and non-violent methods for suicide. Those using violent methods had a higher level of lifetime aggression, a higher level of impulsivity, and more often a lifetime substance abuse or dependence and psychotic disorders.

Elderly Suicides

Waern (2005) compared elderly suicides who had a family member die by suicide with those who did not. The suicides with a suicide by an offspring were more often substance abusers, under the age of 75 and had a history of suicidal behavior.

Tsoh, et al. (2005) compared elderly suicides, attempted suicides and community controls in Hong Kong. The attempted suicides more often had major depression, past attempts, poor self-care, a history of suicidal behavior, arthritis, no children, and low conscientiousness compared to community controls. The suicides differed from the community controls in major depression, past suicide attempts, arthritis, malignancies, not living with children, change of abode, and more stressful life events. Compared to the attempted suicides, the suicides had more medical problems, were ancestor worshippers, scored higher for conscientiousness and had more stressful life events.

People with Psychopathology

Erlangsen, et al. (2005a) found that elderly suicides in Denmark had more often been psychiatrically hospitalized in the past than the general population, but less so for the very old (80+).

Brown, et al. (2005) followed up psychiatric outpatients. Those who died by suicide more often had been psychiatrically hospitalized, had previously attempted suicide, had major depression or bipolar disorder, were unemployed and scored higher on a wish to die measure as well being older.

In a study of Swedish individuals with long-term disabling mental disorder, Tidemalm, et al. (2005) found that suicide was predicted by a history of inpatient psychiatric care, previous suicide attempt, substance abuse and unmet needs (for support, a contact person, etc.). Personality disorder, especially borderline personality disorder, was the strongest diagnostic predictor of suicide among those with a history of in-patient psychiatric care.

In a national study of American veterans who were psychiatric inpatients, Desai, et al. (2005) found that suicide was associated with a length of stay less than 14 days, poorer continuity of care, and lack of readmission within 6 months, as well as race (white), schizophrenia, major depression and substance abuse positively, and severe service-connected disability negatively. The rate of suicide was also related to state variables (the state suicide rate, percentage of minorities and state social capital [social cohesion and trust in the state]).

Dong, et al. (2005) studied a sample of suicides in hospitalized psychiatric patients (of whom 72% were schizophrenics) compared to non-suicide psychiatric patients. Suicide was common after the first month of admission, during leave, and by jumping from heights. Suicide was predicted by a previous history of deliberate self-harm, admission because of suicidal behavior, depressive symptoms at the time of the suicide, being away without leave (AWOL) at any time during the index admission, and extrapyramidal side effects/akathisia at the time of the suicide.

Affective Disorder

In a sample of patients with affective disorders, Sinclair, et al. (2005) found that those who died by suicide more often had a history of deliberate self-harm, were living alone, and had paid employment.

Hakko, et al. (2005) compared suicides who had had depressive disorders, alcohol-related disorders or both. Survival times in depressed alcoholic and depressed non-alcoholic males were shorter than those with alcohol-related disorders alone. Depressed non-alcoholic suicides more often used violent methods, had less often been under the influence of alcohol, and more often had psychotic disorders. The results were similar for male and females suicides.

Dumais, et al. (2005a) compared suicides with major depression with depressed controls. It seems that the controls were interviewed directly. The suicides more often had current (6-month prevalence) alcohol abuse/dependence, current drug abuse/dependence and cluster B personality disorders, and had higher levels of impulsivity and aggression. These risk factors were stronger for younger suicides (ages 18–40).

Angst, et al. (2005) followed mood disorder patients from 1963 to 2003 (with and without long-term medication): unipolar, bipolar I, bipolar II and primarily manic. The suicide rate was highest in the unipolar patents and lowest in the manic patients (who also had the lowest rate of attempted suicide).

Coryell and Young (2005) followed up a sample of patients with major depression and found that the suicides were more likely to have been inpatients, to have had a history of suicide attempts at baseline and scored higher on hopelessness.

Schizophrenia

In a meta-analysis, Palmer, et al. (2005) estimated that 4.9% of schizophrenics will die by suicide during their lifetimes, usually near illness onset.

Kuo, et al. (2005) compared schizophrenics who died by suicide with matched controls who did not do so. The suicides more often had comorbidity with a depressive syndrome in a residual phase, a lengthier suicide history, and a later age at onset. Fasting cholesterol level and clozapine use had no association with completed suicide, nor did socio-demographic variables.

Personality Disorders

Pompili, et al. (2005a) conducted a meta-analysis of research on suicide in those with borderline personality disorder and confirmed the high suicide rate.

Prisoners and Criminals

Daniel and Fleming (2005) compared prisoners making serious suicide attempters versus those making less serious attempts. Those making serious attempts more often admitted to wanting to die. The seriousl attempters were compared to suicides in the prison system. The two groups did not differ in sex, race or age, type of crime or sentence, DSM diagnosis, substance abuse, hopelessness, anxiety, depression, psychosis, hyperactivity, agitation, loss of appetite, or loss of weight. The suicides had reported delusions and hallucinations more often, were more impulsive and more often expressed guilt. The suicides were more often divorced. The suicides had reported more stress in prison, including ridicule and rape, and had more often got into trouble in prison. The suicides were more likely to have a history of some suicide-related behavior and to

have a medical problem. The suicides more often used hanging and less often psychiatric medications.

Pritchard and King (2005) found that sex offenders (almost all of whom were sex offenders only with no other crimes committed) had a higher rate of suicide than men in the general population (12 times higher).

Huey and McNulty (2005) found that suicide rates were lower at low levels of overcrowding and at minimum-security facilities. At high levels of overcrowding, suicide rates matched those of medium- and maximum-security prisons. The suicide rates in prisons were higher in older facilities, psychiatric facilities, male prisons and prisons with non-dormitory housing.

Renaud, et al. (2005) found that suicides among adolescents who received services at Quebec Youth Services Centers more often had major depression, used hard drugs, had shown aggression toward people or animals, made threats and intimidation, ran away at least twice, had made a previous suicide attempt, had more placements, had more relational conflict and had more disciplinary measures applied by the Youth Centers than the control group.

Way, et al. (2005) compared a sample of suicides occurring in prison with inmates receiving mental health services in the prisons. African Americans and patients with a major mood disorder (bipolar or major depression) were under-represented. Adjustment disorder, schizophrenia, and personality disorder diagnoses were over-represented. The suicides were more likely to have been incarcerated for a violent crime, were younger, and were more often male.

Dahle, et al. (2005) devised a screening test for potential suicides in prison. Although their sample of suicides differed from other prisoners only in past suicide attempts and current suicidal ideation, their screening instrument also had age 40+, no fixed address or residence, zero or one prior conviction, and hard drug use.

Blaauw, et al. (2005) compared suicides in prison with other inmates in the Netherlands. The predictors were age: 40+, homelessness, history of psychiatric care, history of drug abuse, one prior incarceration, and a violent offence. This fit 82% of the suicides in the Netherlands, 53% in the United States and 47% in the UK. The three variables that were significant in all three countries were: violent offense, prior incarceration and age >40.

Snyder (2005) noted that there were 10 suicides in juvenile facilities in the United States in one year and an expected number of 10-11 (based on age, race and sex controls from the general population), a non-significant difference.

Drug and Alcohol Abuse

Schneider, et al. (2005a) compared suicides with community controls and found that the suicides were more often diagnosed with alcohol dependence.

Medical Problems

Préville, et al. (2005) compared elderly suicides with deceased controls and found no differences in chronic health problems, marital status, education, income, living arrangements, meeting with family members or friends or having been isolated during the six-month period preceding their death. The suicides did have less functional autonomy six months prior to death and more often had a mental health disorder.

In Denmark, Brønnum-Hansen, et al. (2005) found that patients with multiple sclerosis had twice the suicide rate of the general population for both men and women, especially in the first year after diagnosis and for those diagnosed in their 30s.

Pompili, et al. (2005b) conducted a meta-analysis of 29 studies of suicide in patients with epilepsy and, overall, found a significantly higher rate of suicide.

Ruzicka, et al. (2005) examined what other issues were listed on the death certificates of suicides versus accidental deaths. The suicides more often had malignant neoplasms, depression/mood disorders, schizophrenia and delusional disorders, and residual mental disorders other than organic or disorders due to psychoactive substance use. Those dying from accidents had, in general, a higher incidence of physical disease. However, chronic and terminal illnesses and cancer were more common in suicides.

In Denmark, Erlangsen, et al. (2005b) found that hospitalization with medical illnesses was associated with an increased suicide risk. The risk of suicide was highest in men over the age of 80 and women aged 52-64 and in those who had experienced three or more different diagnoses

Llorente, et al. (2005) found a higher rate of suicide in men with prostate cancer in Florida. The modal suicide had depression, a cancer diagnosis within 6 months of the suicide, a visit to a physician within 1 month of the suicide, and being foreign-born.

Murder-Suicide

Friedman, et al. (2005a) studied parents who kill their children and then die by suicide. The motives of the parents were altruistic (often realistic) and acutely psychotic. The majority were fathers killing older children (rather than infants), with evidence of depression and psychosis and prior psychiatric care.

In a study of filicide in Chicago, Shackelford, et al. (2005) found that filicide-suicide occurred equally often in genetic parents and step-parents. Suicide was more common if there were multiple victims, after the murder of older children, if the parents were older and if the murderer was a father.

In a sample of elderly (>55) males committing spousal murder-suicide versus male suicides, Malphurs and Cohen (2005) found that the murderers more often engaged in domestic violence and were more often caregivers of their wives and less often recipients of caregiving, but were similarly depressed and socio-demographically similar.

In a sample of Canadian femicides, Dawson (2005) found that femicide-suicide was more often premeditated, with an older offender (>55), less often with a criminal record, and using a gun.

Lester, et al. (2005) studied mass murderers and found that those who were killed by police officers killed and wounded more victims than those who died by suicide who, in turn, killed or wounded more victims than those who were captured. Those rampage killers who died by suicide were less likely to be judged schizophrenic and more likely to be killing present or former co-workers.

Studies of Attempted Suicides

Theory

Zayas, et al. (2005) proposed a conceptual model for understanding attempted suicide in Latina adolescents which is best summarized by the authors.

"Our view of the attempt is that it represents a major developmental struggle between the adolescent's need for autonomy (in identity and sexuality) and her deep regard for family unity that comes from the cultural socialization of familism" (p. 282).

Physiological Research

Brunner, et al. (2005) compared patients with major depressive disorder who had attempted suicide with those who had not done so. To quote their conclusion: "Two-dimensional (2D) gel electrophoresis revealed that suicide attempters differed from non-attempters in one protein with an approximate molecular weight of 33 kD and an isoelectric point of 5.2" (p. 438).

In a sample of psychiatric inpatients with major depression, Pitchot, et al. (2005) found that those who had attempted suicide had lower prolactin, cortisol and temperature responses after administration of flesinoxan, a 5-HT1A receptor full agonist.

In a sample of Americans, Zhang, et al. (2005) found that attempting suicide (but not suicidal ideation) was associated with high-density lipoprotein cholesterol. Men showed no associations and, for both sexes, there was no association of attempted suicide with low-density lipoprotein cholesterol.

De Luca, et al. (2005a) found no association of attempted suicide with a serotonin transporter gene linked polymorphic region (5-HTTLPR) in those with bipolar disorder.

In a sample of schizophrenics, De Luca, et al. (2005b) found no differences between attempted suicides and non-attempters in the gene encoding tryptophan hydroxylase (TPH2),

Zhou, et al. (2005) found evidence for a link between attempting suicide and the haplotype linkage of tryptophan hydroxylase 2 (TPH2).

Courtet, et al. (2005) compared attempted suicides with healthy controls and found no differences in the monoamine oxidase A gene. The frequency of the uVNTR 2–3 alleles was significantly higher in men who had attempted suicide by violent means than in men who had used non-violent means.

Dwivedi, et al. (2005) compared the brains of suicides and normal controls and found that the brains of the suicides had decreased expression of neurotrophins (e.g., mRNA levels of NGF and NT-4/5 were decreased in the hippocampus of suicides).

Pandey, et al. (2005) found that protein kinase A (PKA) activity was significantly decreased in the pre-frontal cortex but not the hippocampus of teenage suicides as compared with non-psychiatric controls (but only PKA RIa and PKA Rib).

Chen, et al. (2005) compared depressed patients who had attempted suicide with those who had not. The attempters had a sharper slope of the loudness-dependent auditory evoked potential (LDAEP) and increased frontal P300 amplitude, implicating the serotonin system.

Using MRIs in a sample of young psychiatric patients (aged 18-35), Ehrlich, et al. (2005) found that those who had attempted suicide had higher periventricular white matter hyperintensities.

Zalsman, et al. (2005) found that the 5-HT2A T102C polymorphism was not associated with suicide attempts in a sample of Ashkenazi inpatient adolescents in Israel.

Huang (2005) found no differences in serum lipid levels and lipoprotein concentrations (TC, TG, HDL, VLDL, LDL and the ratios TC/ HDL and LDL/HDL) between depressive patients with melancholic features or atypical features, with or without suicide attempts.

Limosin, et al. (2005) found that the presence of the S allele of the serotonin transporter protein (5-HTTLPR) was related to a life-time risk of suicide attempts in alcohol dependent individuals, but only in males.

Pfennig, et al. (2005) compared depressed patients with and without a history of suicidal behavior (attempts and ideation). Suicidal behavior was associated with a lower adrenocorticotropin and cortisol response in the combined dexamethasone-suppression/CRH stimulation (Dex/CRH) test, with lowest hormone levels observed in patients with a recent suicide attempt.

Wasserman, et al. (2005) compared attempted suicides with their parents. They found that genetic variation in the SCN8A and VAMP4 genes (but not the RABAC1 gene in a replication sample) may have contributed to the risk for attempted suicide, possibly through alterations in neural conduction.

Youths

In a national sample of adolescents, Perez (2005) studied whether they followed a normal trajectory: ideation to plan, to attempt, medical attention. Of the sample, 18% had this regular trajectory while 4% missed steps in the trajectory. As far as the reader can tell, suicidal behavior was associated with alcohol use, drug use, fighting, sexual activity and smoking, as well as race, sex, age and depression.

Wong, et al. (2005) studied a community sample of adolescents in Hong Kong and compared those who had engaged in self-injurious behavior (a very bad variable which included recklessness) with the other adolescents. Depression, anxiety, older age, stressful life events, suicidal ideation, exposure to suicide attempt or completed suicide and substance use were associated with self-injurious behavior in the past year. This study was spoiled by the use of a poor dependent variable.

Liu and Tein (2005) studied adolescent students in a rural region of China. Suicide attempters reported more negative life events during the past year than suicidal ideators who reported more than non-suicidal adolescents, especially academic stress and family conflicts. The more events, the greater the likelihood of attempted suicide. Both internalizing problems (e.g., depression and anxiety) and externalizing problems e.g., (aggression and delinquency) were significantly associated with attempting suicide and with suicidal ideation.

In a sample of 14-20-year-olds in Trinidad and Tobago, Ali and Maharajh (2005) found that suicidal ideation and attempts were both more common in girls. Youths from families with step-parents more often had suicidal ideation and suicide attempts. Those attending a religious institution less often had suicidal ideation, while prayer with the family lowered suicidal ideation and suicide attempts. Youths with alcohol abuse in the family more often had suicidal ideation and attempts.

In a study of American high school students, Bae, et al. (2005) found that attempted suicide in the past year was more common in females, less common in

blacks and Hispanics, and associated with risky behaviors: being threatened or injured with a weapon, in physical fights, hit or slapped by boyfriend/girlfriend, forced sexual intercourse, drank alcohol or used drugs, and eating disorders. These risk factors varied a little by sex.

Rosario, et al. (2005) followed up LGB youths aged 14-21 at 6 and 12 months. Those who had attempted suicide or had suicidal ideation in the past had higher levels of depressive symptoms, anxious symptoms, and conduct problems at follow-up. At baseline, the suicidal youths had less social support, more negative social relations and lower self-esteem.

Grossman, et al. (2005) studied youths who attempted suicide with a firearm (95% fatal), those with unintentional injuries (52% fatal), and controls. Compared to the controls, households with injuries and attempts less often stored firearms unloaded, locked up firearms, stored firearms separately from ammunition and had ammunition locked up, both for handguns and long guns. The results were similar for suicide attempts and unintentional injuries.

Lieb, et al. (2005) examined a community sample of adolescents aged 14-17. Those whose mothers had attempted suicide had a higher risk for suicidal thoughts and suicide attempts and a tendency toward suicide attempts at an earlier age, even after controls for socio-demographic and psychiatric variables in the mothers and for both boys and girls.

In a large sample of adolescents, Cerel, et al. (2005) found that having a peer attempt suicide or die by suicide in the past year was associated with suicidal ideation and attempting suicide, more so for suicide the peer than for attempted suicide by the peer.

In a national sample of high school students, Sabo, et al. (2005) found that involvement with athletics was associated with less often reporting suicidal ideation and attempted suicide for both boys and girls. However, for the boys, involvement with athletics was associated with more severe injury in the suicide attempts. The associations were stronger for high involvement with sports. For the girls, age, race and parental education also contributed to the prediction of suicidal ideation. For boys, parental education and urban location added to the prediction.

In a sample of adolescents aged 7-17 diagnosed with bipolar disorder, Goldstein, et al. (2005) found that those who had attempted suicide were older,

more likely to have a lifetime history of mixed episodes, psychotic features, Bipolar I. a lifetime history of comorbid substance use disorder, panic disorder, non-suicidal self-injurious behavior, a family history of suicide attempt, a history of hospitalization, and a history of physical and/or sexual abuse.

In a sample of at-risk Swiss adolescents (aged 11-20), Hüsler, et al. (2005) used path analysis to link suicidality (ideation and attempt) with predictors. Negative mood (depression and anxiety) predicted two paths: (1) from negative mood to suicidality and then to substance use, and (2) from negative mood to illness. Protective factors (e.g., good relationships, secure identity) protected against only the negative mood-suicide-substance path.

In sample of Norwegian adolescents in 1992 and 2002, Rossow, et al. (2005) present a poorly reported and poorly analyzed research study which claims to show that attempting suicide is associated with drug and alcohol use after controls for living with both parents, depressive mood, loneliness, global self-worth and parental care. Since the researchers do not present correlations or multiple regressions, their claim is unconvincing.

In a national sample of adolescents, Manetta and Ormand (2005) found that suicidal behavior (ideation plus attempts) was most strongly associated with alcohol and inhalants, followed by marijuana, methamphetamines and steroids.

In a survey of adolescents in rural China, Liu, et al. (2005) found that suicidal ideation was predicted by female gender, older age, boarding in school, life stress, depression, and external locus of control while attempted suicide was predicted by older age, life stress, external locus of control, poor academic performance, depression, and aggression.

In a sample of high school student (aged 14-21) in one region of Turkey, Payci, et al. (2005) found that attempting suicide in the prior year was not associated with gender, grade, parental educational status, family income and need for treatment. Suicidal ideation in the prior year was higher in females and with higher income of parents, but not the parents' educational status or grade level.

In a clinical sample of adolescent outpatients, Fortune, et al. (2005) found that those with suicidality (ideation and attempts) were older, more often had maternal substance abuse, a family history of offending, to have been sexually

abused, used more substances themselves, and have previous episodes of attempting suicide.

In a community sample of adolescents (aged 11-16) in China, Liu and Sun 2005) found that suicidal ideation and attempting suicide was associated with not having nocturnal bladder control by age 3. (The age at first words and first steps did predict suicidality.) The authors found that depression/anxiety and aggressive behavior predicted suicidality and were possible mediators between bladder control and suicidality.

In a sample of adolescents aged 13-15, Martin, et al. (2005) found that suicidal ideation and attempted suicide were predicted by perceived academic performance (failing), self-esteem and locus of control (external).

In a sample of Australian high school students, Richardson, et al. (2005) found that attempted suicide (but not suicidal ideation) was associated with poor academic performance, even after controls for self-esteem, locus of control and depression.

In a sample of Belgium adolescents, Ponnet, et al. (2005) found that boys living in a single parent family reported more suicidality (ideation and attempts) than boys living in an intact family or in a remarried family, while girls living in a remarried family reported more suicidality than girls living in an intact or in a single parent family.

In a sample of adolescents in Hawaii, Nishimura, et al. (2005) for that suicidality (ideation and attempts) was associated with drinking behavior (alcohol), as well as being female and a 9^{th} grade student. Ethnicity was not associated with suicidality.

In an Israeli sample of adolescent psychiatric inpatients, Fennig, et al. (2005) compared male and female attempted suicides and non-attempters. The results are poorly presented, often failing to test statistical significance. The attempters were more often adopted and less often of Ashkenazi and Sephardic origin. The attempters were more depressed and anxious, aggressive, angry, and impulsive and showed more destructive behavior, and antisocial behavior. For girls, attempted suicide was predicted by destructiveness, antisocial behavior and anxiety. For boys, attempted suicide was predicted by depression, antisocial behavior and anxiety.

In a national sample of adolescents, Miller and Taylor (2005) found that the more problem behaviors shown by the adolescents, the more likely suicidal ideation and the more likely attempted suicide. The problem behaviors included binge drinking, tobacco smoking, illicit drug use, high risk sex, violent behavior and disturbed eating. Some 17% of the youths with more than three problem behaviors attempted suicide.

In a sample of American adolescent Latino males, Locke and Newcomb (2005) found that suicidality (ideation or attempts) was associated with a large number of variables but, in a multiple regression, was predicted by sexual abuse, physical abuse, an alcoholic mother, and hard drug use positively and by good relationship with parents, problem-solving confidence and being law-abiding negatively.

In a sample of lesbian, gay, and bisexual youths, D'Augelli, et al. (2005) found that attempted suicide was more common in those with greater childhood psychological abuse, more childhood gender-atypical behavior, early openness about sexual orientation, being called a sissy and parental efforts to discourage gender atypical behavior, as well as a history of family suicidality and depression. The presentation of the results, however, was far from being clear (e.g., poorly labelled tables).

In a sample of university students in Turkey, Eskin, et al. (2005) found that lifetime suicidal ideation and attempts were more common in women, but past year ideation and attempts showed no sex difference. Past year suicidal ideation was predicted by sexual orientation and childhood sexual abuse positively and parental closeness negatively and past year attempts by childhood sexual abuse. Identifying as homosexual or bisexual was associated with suicidal ideation in the past year.

In a study of adolescent attempted suicides and community controls, Grønholt, et al. (2005) found that the attempted suicides had lower self-esteem and self-concept stability, higher loneliness and less support from parents and from peers. More interestingly, the predictors of self-esteem differed for the two groups. For the attempters, global self-worth was predicted by loneliness and depression and for the controls by self-concept stability, scholastic competence and support.

In a community sample of adolescents, Rosenberg, et al. (2005) found that those making 2+ attempts differed from single attempters and from those with zero

attempts for both boys and girls on depressed mood, sexual risk taking, engagement in violence, experience of sexual assault, experience of physical assault, weight problems, tobacco use, marijuana use, alcohol use and hard drug use.

In a study of a community sample of those aged 14-24 followed up for 40 months, Bronisch, et al. (2005) found that mania and hypomania predicted suicidal ideation and attempted suicide at baseline, but only mania predicted suicidal ideation (and not attempted suicide) during the follow-up.

Skarbø, et al. (2005) studied child and adolescent psychiatric patients. Lifetime attempted suicide at referral was associated with more adverse life events during childhood and adolescence especially in the relationship to parents and to significant others, including physical, sexual and emotional abuse and many other traumatic events (e.g., abortions, eating disorders, having to take care of siblings). These variables also predicted attempting suicide during the 5-9-year follow-up.

Brunstein-Klomek, et al. (2005) compared adolescent psychiatric inpatients who had attempted suicide, those who had not, and healthy controls. They found that the attempters differed in self-complexity from the non-suicidal patients and controls in the number of negative traits and negative self-aspects. Compared to the healthy controls, the attempters had the highest number of positive categories and the lowest number of neutral categories and redundancy in the positive traits, but did not differ from the psychiatric controls the number of positive and neutral self-aspects and in the level of redundancy of the positive traits.

In a sample of adolescent psychiatric outpatients with adjustment disorder, Pelkonen, et al. (2005) found that those with suicidal behavior (attempts plus suicidal ideation) more often had received previous psychiatric treatment, poor psychosocial functioning at treatment entry, dysphoric mood and psychomotor restlessness.

In a national sample of adolescents, Feigelman (2005) claimed to find no difference in suicide attempts or suicidal ideation in the past year between those adopted and those not adopted. However, suicidal behavior was sometimes significantly higher in the adoptees until sample weights (supposedly to correct for sampling bias, whatever that means) were applied. Feigelman also noted that being adopted by relatives versus strangers was important. My conclusion is that his data indicate a higher risk of suicidal behavior in adoptees, and it is noteworthy that

Feigelman failed to control for many variables (e.g., the presence of biological children).

In a sample of potential high school drop-outs, Thompson, et al. (2005b) found that suicidal behaviors (ideation and attempts) was associated with depression, hopelessness, anxiety, drug use, and lack of family support.

Adults

In a national sample of college students, Kisch, et al. (2005) found that suicidal ideation and attempts were positively associated with race, marital status, depression, being non-heterosexual, emotional abuse in relationships, smoking, loss of weight, and amphetamine use, but negatively with alcohol use.

Henriques, et al. (2005) followed up attempted suicides and classified them on the basis of their reaction to surviving the attempt. Those who said that they wished they had died after the attempt were 2.5 times more likely to die by suicide eventually than those who were glad that they survived and those who were ambivalent about the attempt.

In a sample of young adults followed up for 10 years, Breslau, et al. (2005) found that current daily smoking, but not past smoking, predicted the subsequent occurrence of suicidal thoughts or attempt, independent of prior depression, substance use disorders, prior suicidality, and prior psychiatric disorders.

In a sample of attempted suicides, Baca-Garcia, et al. (2005b) found that the personality trait of impulsivity was not a predictor of attempt impulsivity. Impulsive attempts were associated with low lethality and lack of depression.

Fergusson, et al. (2005) followed a cohort of adolescents for 25 years and found that suicidal ideation and attempted suicide in adolescence predicted subsequent suicidal ideation and attempts later (and major depression as well). For females, suicidal ideation in adolescence predicted alcohol dependence and drug dependence later.

In a sample of African American males, Wingate, et al. (2005) found that suicidality (ideation plus attempts) was less in the South. Suicidality was also associated with religiosity and social support, but these did not eliminate the association with region.

In a sample of psychiatric outpatients, Gil (2005) found that attempted suicides, strong suicidal ideators and weak suicidal ideators differed linearly in novelty seeking and harm avoidance (with the attempters obtaining the highest scores) but did not differ in reward dependence.

In a sample of college students, Witte, et al. (2005) compared non-attempters, one-time attempters and multiple attempters, giving them a suicide probability scale every day for four weeks. A high variability of suicidal ideation was the only significant predictor of previous attempt status, especially for males (along with mood disorder). The variability, intensity and duration of suicidal ideation were inter-correlated.

In a community sample of adults, Grucza, et al. (2005) found that young age, female sex, poor self-reported health, and Medicaid status predicted attempted suicide, as well as two of seven personality scales – low harm avoidance and low self-directedness. Grucza, et al. felt that the personality variables mediated the associations of attempted suicide with the demographic variables.

Jollant, et al. (2005) compared attempted suicides using violent and non-violent methods, patients with affective disorders and healthy controls. On a gambling task, the attempted suicides performed worse (had impaired decision making) than the healthy controls. The violent attempters performed worse than the affective disorder patients. The order for good performance was healthy subjects, affective disorder patients, non-violent attempters and violent attempters.

Chandrasekaran and Gnanaselane (2005) studied first time attempted suicides in one region of India and found that suicidal intent for the attempt was not associated with sex, marital status, employment status, family history of suicide, method used for the attempt, or physical illness. Intent was higher if a psychiatric disorder was present, in those who were older, and in those with higher depression and hopelessness scores.

Jeglic, et al. (2005) compared one-time attempters with multiple attempters. The multiple attempters more often had a family history of suicidal behavior and scored higher for negative problem solving. The relationship between family history and suicide attempt status seemed to be mediated by negative problem solving (that is, cognitions and emotions that impede effective problem solving).

Seedat, et al. (2005) found that women in the community who reported intimate partner violence were more likely to have attempted suicide than those without such violence.

Joiner, et al. (2005b) found that past suicidal behavior predicted attempting suicide and current suicidal ideation, after controls for hopelessness, symptoms of various Axis I and II syndromes and other variables in four separate samples: suicidal patients, undergraduates, patients with mood disorders and attempted suicides with mood disorders.

In a study of attempted suicides in Greece, Antonatos, et al. (2005) found that the male attempters were older, more often employed, more often alcohol abusers, and had more serious suicidal intent and used more violent methods. The men and women did not differ in personality disorders, previous attempts, repeated attempts or marital status.

In Vietnam, Thanh, et al. (2005) found that the ratio of female/males in attempted suicides was more equal in rural areas (1.2/1) whereas females exceeded males more in urban areas (2.1/1)

In a sample of Danes aged 16-35, Norlev, et al. (2005) found no clear gradient in the different forms of suicidal behavior (none, past year ideation, ever made an attempt, ideation plus attempt). Predictors of suicidal behavior were: being single, exposure to violent threats, exposure to sexual abuse, being a daily smoker, doing nothing to stay healthy, poor mental health, mental symptoms within the past 2 weeks, contact with psychologist and absence from work due to illness.

In a sample of Turkish women in the community, Akyuz, et al. (2005) found that those who reported attempting suicide more often had frequent childhood physical abuse, emotional abuse, sexual abuse and neglect

In a large community survey in Iran, Mohammadi, et al. (2005) found that attempted suicide was more common in those 26–55 years old, married, more highly educated, female, retired, and lived in urban areas. The most common lifetime psychiatric disorder was major depression.

In a large community survey of Australians, De Leo, et al. (2005) found that suicidal ideation and attempts were more common in individuals aged 25–44 years

and declined with increasing age. In most cases, suicidal experiences did not develop over time with progressively increasing severity. Knowledge of someone else's suicidal behavior increased the risk of similar acts.

Ploderl and Fartacek (2005) found higher rates of suicidal ideation and attempts in Austrian LGB adults than in heterosexuals. Many of the correlates of suicidality were the same in both groups (hopelessness, depression, self-esteem), but the LGB individuals had associations also with victimization and lack of support from family.

Matsuishi, et al. (2005) studied attempted suicides and found that reported suicidal ideation decreased after the attempt except for those aged 60+. Suicidal ideation after the attempt was higher in those diagnosed with neurotic, stress-related and somatoform disorders.

In a sample of Canadian undergraduates, Kennedy, et al. (2005) found that identification with the mainstream culture or being first, second or third generation immigrants did not predict attempted suicide or suicidal ideation. However, identification with one's heritage culture predicted suicidal ideation (but not attempted suicide).

Carter, et al. (2005b) followed up a sample of attempted suicides by self-poisoning and found that they had increased mortality from accidental and natural causes.

In a 16-year follow-up study of attempted suicides, Owens, et al. (2005) found that suicide was predicted by characteristics that preceded the episode of attempted suicide (being older, being male, living alone and reporting past psychiatric contact), aspects of the suicide attempt (taking psychotropic drugs, or cutting as well as self-poisoning), attendance at the emergency unit (attending in the daytime and being drowsy or unconscious) and later events (being discharged directly from the unit after psychiatric assessment and with early repetition of attempted suicide.

In a sample of adolescent psychiatric inpatients, Osman, et al. (2005) found that attempted suicide and suicidal ideation were associated with hopelessness, low self-esteem, inability to cope, and social isolation.

In a non-psychiatric sample, Nuns and Loas (2005) compared attempters with non-attempters and found that the attempters had higher scores on depression and subscales on a test of interpersonal dependency (emotional reliance on another person and social self-confidence, but not assertion of autonomy). The attempters reported more previous suicide attempts and a higher prevalence of family history of suicide, and a higher incidence of severe somatic disorders.

Kaslow, et al. (2005) studied African Americans who attempted suicide compared to patients with medical issues. For both sexes, life hassles positively and social support negatively predicted attempting suicide while age, homelessness, abuse of their partner, partner dissatisfaction and racist events did not predict attempting suicide.

Meadows, et al. (2005) compared African American women who attempted suicide with women with medical issues, a sample that was previously reported on by Kaslow, et al. (2002. The groups do not seem to differ in socio-demographic variables (although Table 1 is mis-labelled and lacks statistical significance levels). Meadows, et al. identified seven protective factors: hopefulness, spiritual well-being, self-efficacy, coping, social support family, social support friends, and obtaining resources.

Anglin, et al. (2005) compared African Americans who had attempted suicide with patients with medical problems. The attempters were younger, more often homeless, less often had a religious affiliation and rated suicide as more acceptable and their spiritual well-being as worse.

In Newfoundland and Labrador (Canada), Alaghehbandan, et al. (2005) found that attempted suicide was more common in Aboriginals, women, the divorced and separate and the less educated.

Moosa, et al. (2005) compared attempted suicides with medical patients in one town in South Africa. The attempters more often had a past history of a psychiatric illness and of physical or sexual abuse.

Horváth, et al. (2005) found that serious intent to die in a sample of attempted suicides was more often present in the older attempters, those with affective disorders and, for those using overdoses, more pills taken.

In a sample of physically abused women, McFarlane, et al. (2005) found that those who had also been sexually abused were more likely to have threatened or attempted suicide.

In a national American sample, Hills, et al. (2005) found that lifetime attempting suicide was associated with externalizing disorders (antisocial personality disorder, drug dependence, and alcohol dependence), as well as anxious-misery disorders (major depression, dysthymia, generalized anxiety disorder, and PTSD), but not fear disorders (simple phobia, social phobia, agoraphobia, and panic disorder).

In a study of African American men and women, Walker, et al. (2005) found that the level of acculturation was negatively correlated with suicidal ideation but not with attempted suicide. In multiple regressions, however, both suicidal ideation and attempted suicide were predicted by religious well-being (unexpectedly), and not by acculturation or social support.

Compton, et al. (2005) compared African American attempted suicides with medical patients at the same hospital. The attempters had lower levels of family adaptability, family cohesion, social embeddedness and social support. The attempters were more often homeless and with criminal convictions and past psychiatric hospitalizations.

Jallade, et al. (2005) compared patients admitted after a suicide attempt with patients admitted after an accident. They found that depression, anxiety, two sub-scales of the MMPI (Hysteria, Depression) and general functioning improved in the suicide attempter group, while impulsivity and hopelessness remained stable during the follow-up, indicating a cathartic effect of the attempt (and, we might add, treatment).

Lam, et al. (2005) compared car crashes in New Zealand in which the driver was injured or killed with random drivers and found a higher incidence of suicidal ideation in the crash drivers in the prior year. Those on antidepressant medication did not have a higher incidence of suicidal ideation.

The Elderly

In a sample of elderly psychiatric inpatients, Osvath, et al. (2005) found that those who had attempted suicide less often had dementia and other organic

disorders (mainly delirium) and more often had depressive mood disorder and adjustment disorder and a previous suicide attempt.

In a study of elderly psychiatric inpatients in Israel, Barak, et al. (2005) found that a greater percentage of Holocaust survivors had a history of attempted suicide but they did not differ in age, sex, or psychiatric diagnosis.

Adults and Children with Psychopathology

Trémeau, et al. (2005) studied samples of patients with schizophrenia, unipolar depression and opioid dependence. A family history of suicide was associated with a higher risk for suicide attempt, with using a high-lethality method, with repeated attempts, and with the number of attempts in all three diagnostic groups.

In a community sample followed up for two years, Sareen, et al. (2005a) found that an anxiety disorder at baseline was associated with attempted suicide and suicidal ideation at baseline and during the follow-up. Suicidal behavior was more for those with mood disorders plus anxiety disorders than for those with only mood disorders. In another sample, Sareen, et al. 2005b) found that lifetime suicidal ideation and attempts was associated with PTSD, major depression, bipolar disorder, antisocial personality disorder and 3+ lifetime psychiatric disorders.

Loas, et al (2005), in a sample of patients with a medley of disorders found that excessive dependency and dependent personality disorder was associated with suicidal ideation in bulimic patients, female alcoholics and male drug abusers. The associations with attempted suicide were weaker or absent.

In a study of American psychiatric patients, Oquendo, et al. (2005a) found that Latinos and non-Latinos did not differ in a history of attempted suicide, the number of attempts, or suicidal intent, Latinos reported significantly less suicidal ideation and made less lethal attempts. The two groups differed on some of the Reasons for Living subscales. The researchers present multiple regressions and many variables predicted suicidal ideation (ethnicity, age and education), attempted suicide (sex and education), suicidal intent (sex and negative symptoms) and the lethality of attempts (age and ethnicity).

Baca-Garcia, et al. (2005a) compared attempted suicide in patients with schizophrenia and major depression. The two groups did not differ in the method used or impulsivity scores, but the schizophrenics made more lethal attempts, reported fewer life events influencing the attempt, lower global assessment of functioning scores and a trend toward higher scores in aggressive behavior history.

In a study of Medicare primary care patients under the age of 65, Friedman, et al. (2005b) found that those with mental problems more often had suicidal ideation and attempted suicide in the prior year than those with physical problems.

In a study of attempted suicides in a region of Japan, Ichimura, et al. (2005b) found that the predominant psychiatric disorders changed from 1992-1993 to 2000 (the period when the recession became serious) with more depression and neurosis and less schizophrenia in 2000.

Müller, et al. (2005) found that lifetime attempted suicide in psychiatric patients with major depression and patients with schizophrenia was associated with poor premorbid social adjustment, low age at onset, low scores on the Global Assessment Scale and childlessness in females.

Affective Disorder

Tsuchiya, et al. (2005) compared patients with bipolar disorder with, apparently, other psychiatric patients. Those who had experienced a parental suicide had an increased risk for bipolar disorder, both for paternal suicide and for maternal suicide. The non-suicidal deaths of parents had no association. Those who experienced maternal suicide before reaching the age of 10 were seven times as likely to develop bipolar disorder.

Allen, et al. (2005) studied patients with bipolar disorder who had or had not attempted suicide. Depression was associated with suicidal ideation in both groups. Poor psychosocial adaptation and openness were associated positively and extraversion and anxiety negatively with suicidal ideation in the attempters while anxiety and extraversion were protective against ideation. For non-attempters, depression, anxiety, and neuroticism were positively associated and past drug abuse and fear negatively associated with suicidal ideation.

In a sample of bipolar I patients, Johnson, et al. (2005) found that suicidality (ideation and attempts) was associated with anxiety, depression and hopelessness. Diagnosis with a mixed state lessened the suicidality score.

In a study of bipolar patients, Valtonen, et al. (2005) found that hopelessness and severity of depressive episode predicted suicidal ideation while hopelessness, prior attempted suicide and comorbid personality disorder predicted attempted suicide. The predictors differed for bipolar I patients (hopelessness and previous attempt) and II patients (comorbid personality disorder).

Ichimura, et al. (2005a) compared attempted suicides with depression to those with other disorders. The depressed attempters were older, male, married, and used methods other than poisoning, but did not differ in sibling order, living alone, duration of education, or state of employment.

MacKinnon, et al. (2005) studied families with one member with bipolar disorder. A history of rapid switching and panic disorder were associated with a higher likelihood of a history of suicidality (ideation plus attempt). Familial suicidal behavior, as well as drug abuse, increased the likelihood of attempted suicide but did not increase the likelihood of suicidal ideation. Female sex, early age at onset, and disabled/unemployed status were associated with both ideation and with attempted suicide.

Garno, et al. (2005) found that lifetime attempted suicide in bipolar patients was predicted in a multiple regression by comorbid Cluster B personality disorder and childhood sexual abuse but not by depression scores, substance abuse or childhood emotional abuse.

In a study of patients with major depressive disorders, Grunebaum, et al. (2005) compared those who had attempted suicide with non-attempters on two major scales that measure depression. The attempters had lower scores for anxiety on the Hamilton Depression Rating Scale and higher scores for self-blame on the Beck Depression Inventory. They also scored higher on other scales for impulsivity, hostility and aggression.

In a sample of patients with bipolar disorder, Swann, et al. (2005) found that a history of attempted suicide (and especially medically serious attempts) was associated with more impulsive errors on a immediate memory task and shorter response latencies, especially for impulsive responses. Impulsivity was highest in

subjects with the most medically severe suicide attempts. A history of alcohol abuse was also associated with attempted suicide, but not when impulsivity was taken into account.

Oquendo, et al. (2005b) studied patients with major depression with and without comorbid PTSD. Those with a lifetime history of PTSD were more likely to have attempted suicide, but the two groups did not differ in suicidal ideation, suicidal intent, number of attempts made, or maximum lethality of attempts. The PTSD group had higher depression, impulsivity, and hostility scores, had a higher rate of comorbid cluster B personality disorder, and were more likely to report a childhood history of abuse.

Kaviani, et al. (2005) compared depressed attempted suicides with healthy controls. The attempters produced more overgeneral memories and responded more slowly to positive than negative cue words. On a problem-solving task, the depressed attempters produced less effective strategies, fewer and more irrelevant means, and took longer to respond to the task. This study, therefore, confounded suicidal behavior and depression.

In a sample of children and adolescents diagnosed with depression, Kochman, et al. (2005) found that scores on a measure of cyclothymic-hypersensitive temperament predicted prior suicidal ideation and attempted suicide.

In a study of residents in São Paulo (Brazil), Moreno and Andrade (2005) found that individuals with bipolar disorder had a higher incidence of suicide ideation and attempted suicide than other residents.

In a study of patients with mood disorders, Mann, et al. (2005) found that those who had attempted suicide more often had a first degree relative with a history of suicidal behavior but not more often a first degree relative with a mood disorder.

In a sample of adolescents with major depressive or bipolar disorder, Dilsaver, et al. (2005) found that suicidal ideation and attempted suicide were more common in the females. Being in a mixed state (with symptoms of both disorders) did not predict suicidal ideation or a suicide attempt for the total sample but did for the girls. Age, presence of psychotic features and family history of mood disorder had no bearing on suicidality.

In an 18-month follow-up of patients with major depressive disorder, Sokero, et al. (2005) found that the strongest predictors of a suicide attempt were: lacking a partner, a previous suicide attempt and total time spent in major depressive episodes, as well as depression and anxiety scores and a comorbid personality disorder.

Schizophrenia

Roy (2005) compared schizophrenics who had attempted suicide and those who had not done so. The attempters reported significantly higher Child Trauma Questionnaire scores for emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect.

Ran, et al. (2005) studied schizophrenics living in a rural China community and found that those who had attempted suicide were younger, with higher level of education, a higher rate of lifetime depressed mood and hopelessness, and a larger number of positive symptoms.

In a sample of first-episode schizophrenic patients, Crumlish, et al. (2005) found that insight into their illness six months after admission up (as well as the duration of the mental illness and a younger age) predicted attempted suicide in a 4-year follow-.

Drug and Alcohol Abusers

In a sample of abstinent substance dependent patients, Roy and Janal (2005) found that past attempts at suicide were associated with sex, a family history of suicidal behavior and childhood trauma. Being female and a higher level of childhood trauma were associated with a younger age of first attempting suicide and making more attempts.

Sher, et al. (2005) compared depressed patients with and without a history of alcoholism. “Depressed subjects with a history of alcoholism had higher lifetime aggression and impulsivity, and were more likely to report a history of childhood abuse, suicide attempts, and tobacco smoking. Depressed suicide ideators with a history of alcoholism had higher suicide ideation scores than depressed suicide ideators without a history of alcoholism” (p. 1144).

In a sample of heroin users undergoing treatment, Darke, et al. (2005) found that the predictors of a suicide attempt during the 12-month follow-up period were: social isolation, having made an attempt in the preceding 12 months, suicidal ideation at baseline, a greater number of treatment episodes and higher levels of baseline polydrug use.

In a sample of veterans with PTSD, Butterfield, et al. (2005) found that those who had attempted suicide had higher serum levels of dehydroepiandrosterone and estradiol than non-attempters but not androstenedione or testosterone. The attempters were younger but did not differ in history of suicide attempt, concurrent alcohol use disorder, current tobacco use, or childhood trauma.

Benda (2005) studied suicidal ideation and attempts in homeless veteran drug abusers. The correlates differed for ideation and attempts and for men and women. " Childhood and current sexual and physical abuse, depression, fearfulness, relationship problems, limited social support, and low self-esteem was more strongly associated with suicidal thoughts and attempts for women than for men veterans. Extent of alcohol and other drug abuse, aggression, resilience, self-efficacy, combat exposure, combat-related PTSD, and work problems were more strongly associated with suicidal thoughts and attempts for men than for women" (p. 106).

Prisoners

In a study of female prisoners in England, Milligan and Andrews (2005) found that those who had self-harmed (the authors seem to have combined attempted suicide and self-mutilation!) had more often experienced childhood physical and sexual abuse, had higher scores for trait anger, anger in and anger out, and three types of shame (character, behavioral and bodily) and were more often white. In a multiple regression, ethnicity and bodily shame were the strongest predictors of self-harm.

In a study of English prisoners, Jenkins, et al. (2005) found that prior attempted suicide was associated with lack of social support, female, white, younger age, on remand (versus convicted), a psychiatric disorder and drug and alcohol abuse. Past suicidal ideation was associated with the same variables except for drug and alcohol abuse and remand versus sentenced.

Palmer and Connelly (2005) compared new arrivals at an English prison who had been suicidal (self-harm or attempt) with non-suicidal admissions. The suicidal group scored higher on depression, hopelessness and suicidal ideation.

In a sample of female prisoners, Verona, et al. (2005) found that past attempted suicide was positively associated with physical abuse, sexual abuse, negative emotionality and antisocial-impulsive behavior and negatively with affective-interpersonal aspects of psychopathy and behavioral constraint.

In a sample of female inmates, Chapman, et al. (2005) found that a history of attempted suicide was associated with borderline personality disorder, hopelessness, depression, childhood physical/emotional abuse, and a family history of suicide and mood disorders, and negatively associated with income, reasons for living scores, and problem-focused coping.

In a sample of Australian incarcerated youths, Putniņš (2005) found that substance use, prolonged dysphoric mood, attention deficit hyperactivity disorder signs, and having a bad temper predicted prior attempted suicide and suicidal ideation.

Gambling

Ledgerwood, et al. (2005) studied callers to a gambling helpline. Problem gamblers reporting gambling-related suicidality were more likely to report family, financial, legal, and mental and substance-related problems. Those who had attempted suicide more often reported gambling-related illegal behaviors, mental health and substance abuse treatment, and family histories of alcohol problems.

Other Disorders

In a sample of patients with body dysmorphic disorder (BDD), Phillips, et al. (2005) found that lifetime suicidal ideation was predicted by major depression and great lifetime impairment resulting from BDD. Attempted suicide was predicted by PTSD, substance use disorder, and great lifetime impairment resulting from BDD.

In a 3-year follow up of patients with personality disorders, Yen, et al. (2005a) found that negative life events (especially love–marriage or crime–legal matters), predicted suicide attempts, even after controlling for baseline diagnoses of BPD, major depressive disorders, substance use disorders, and a history of

childhood sexual abuse. The events in the months before an attempt were being a victim of a physical assault or attack, being accused of a crime, being arrested, being sent to jail, and being involved in a court case, but not robbed or burglarized.

In a study of adolescent female patients with eating disorders, Ruuska, et al. (2005) found that bulimics had significantly more suicidal ideation and deliberate self-harm than anorectics. Bulimia and depression predicted suicidal ideation, whereas general psychopathology predicted deliberate self-harm.

Medical Diseases

Cooperman and Simoni (2005) studied a sample of women with HIV/AIDS. Suicidal ideation and attempted suicide were predicted by psychiatric symptoms, physical or sexual abuse and, surprisingly, having children and being employed. Spirituality was negatively associated only with suicidal ideation.

Kalinin and Polyanskiy (2005a) studied suicidal ideation and attempt in patients with epilepsy. For the men, suicidality was predicted by seizure types, whereas for women suicidality was predicted by daily doses of different antiepileptic drugs. Kalinin and Polyanskiy (2005b) found that the risk of a suicide attempt was higher in patients with epilepsy and a concomitant diagnoses of organic affective disorder and cognitive impairment. The risk was also higher for females. Early age of epilepsy onset and high frequency of secondary generalized, simple partial and all seizures were risk factors for attempted suicide in males, while low frequency of complex partial seizures was a risk factor in females.

Goodwin and Eaton (2005) in a survey of residents in one American town found that asthma and lifetime major depression both were associated with an increased incidence of suicidal ideation and attempted suicide.

In a 6-year follow-up of patients with traumatic brain injury, Simpson and Tate (2005) found that attempted suicide was more likely if the patient had a post-injury history of psychiatric/emotional disturbance, substance dependence, or both.

Comment

Several of the studies reviewed are ruined by combining suicidal ideation and attempted suicide into a single suicidal behavior variable.

Studies of Suicidal Ideation

Methodological Issues

Using a five-item scale for suicidality and samples in Nepal of students and patients with depression, Joiner, et al. (2005a) claimed to have confirmed that suicidal ideation and more active suicidality (plans and attempts) are two separate behavior.

Youths

In a sample of maltreated 8-year-olds, Thompson, et al. (2005a) found that severity of physical abuse, chronicity of maltreatment, and the presence of multiple types of maltreatment predicted suicidal ideation. Suicidal ideation was also associated with ethnicity, witnessed violence and maltreatment, childhood psychological distress, substance use, and poor social problem solving.

Liu (2005) studied the impact of closeness of adolescents to their mothers and to their father on their suicidal ideation. In general, there was a protective impact, but it varied by the age, sex and ethnicity of the adolescent and which parent.

In a sample of adolescents in psychotherapy, Wright, et al. (2005) compared those judged to be at high risk for suicide versus those judged to be at low risk and healthy controls. The high risk group more often indicated enmeshed/preoccupied attachment narratives and no secure narratives, whereas the low risk group was more diversely spread across the three main attachment narrative patterns (enmeshed, avoidance, secure). The high risk group scored lower on emotional openness and optimism.

Cowell, et al. (2005) found that depression and suicidal ideation were associated in a sample of 4th and 5th grade Mexican American children.

In a community sample of adolescents, Elliott, et al. (2005) found that mattering (the belief that one makes a difference in the lives of others) was associated with suicidal ideation, but not when self-esteem and depression were entered into the regression. In the multiple regression, being female was significant, but the importance of religion was not.

In a community sample of families in an American region, Yoder and Hoyt (2005) found that suicidal ideation in adolescents was associated with parental hostile behavior and physical abuse and parental depressive symptoms and behaviors, as well as low self-esteem and depression in the adolescents. Yoder and Hoyt argued that family economic pressure played a role, but the correlations do not support this, although the researchers present a path analysis which, supposedly, provided some support.

Papolos, et al. (2005) had a sample of parents complete the Child Bipolar Questionnaire for their children with bipolar disorder. Making threats of suicide by the children was associated with hallucinations, cursing or foul language, low energy and withdrawal, imagery of gore/violence, destroying property, poor self-esteem, excessive risk-taking, and excessive anxiety/worry.

Rueter and Kwon (2005) tested adolescents repeatedly over a period of 7 years. The incidence of suicidal ideation peaked at age 15, especially in those adolescents whose parents reported lifetime suicidality.

In a sample of high school students, Gutierrez, et al. (2005) found that suicidal ideation was associated with the depression scores for both white and black students. Exposure to suicide in friends or family was not associated with suicidal ideation in either group although the authors claim in the Abstract that there was an association.

Stewart, et al. (2005) studied adolescents (aged 14-18) in Hong Kong and the United States and found that, in both countries, self-efficacy and hopelessness at baseline was associated with suicidal ideation at baseline and six months later, more strongly so for the American adolescents.

In a sample of Turkish students aged 17-19, Ulusoy and Demir (2005) found that suicidal ideation was associated with gender (girls), cigarette smoking, school achievement (low) and anxiety/depression, but not socio-economic variables.

In a sample of Turkish students aged 14-20, Terzi-Unsal and Kapci (2005) used path analysis, making their results difficult to interpret. It appears that suicidal ideation was associated with self-worth, psychological health and hopelessness, but they also studied physical appearance, peer popularity, professional goals, impulsivity, peer and parental support, and adolescent life events, but they failed to provide the relevant correlations.

Laukkanen, et al. (2005) found that suicidal ideation in adolescents seen for psychiatric evaluation was associated with a negative self-image and in boys with being bullied at school and talking about one's problems only with friends, and in girls with a negative attitude towards the future and a negative self-image of their mental health.

In a poorly designed and poorly presented study of suicide risk (presumably ideation and attempted suicide) in 8th grade students, Evans, et al. (2005) found that suicide risk was associated with being female and an external locus of control positively and with enjoying one's home negatively (and with other environmental factors and preferences), but not with rural or urban dwelling, primary guardian, parental employment, family income, or race.

Adults

In a sample of undergraduates, Hills and Francis (2005) found that suicidal ideation was not associated with religious behavior (e.g., praying and church attendance). Suicidal ideation was associated positively with neuroticism, psychoticism and, for men, questioning their religious beliefs, but not with intrinsic or extrinsic religiosity or extraversion.

In a sample of undergraduates, Konick and Gutierrez (2005) found that depression, hopelessness and negative life events were associated with suicidal ideation, and they proposed a path model for these variables.

Pritchard-Boone and Range (2005) found that suicidal ideation was associated with performance on a test of suggestibility in a sample of undergraduates.

Mitchell, et al. (2005) studied those who had lost a significant other to suicide in the last month and found that suicidal ideation was predicted by depression and complicated grief.

In a community survey in England, Crawford, et al. (2005) found that suicidal ideation was less common in ethnic minorities than in whites, but higher in ethnic minorities born in England than in those who migrated to England as adults.

Ovuga, et al. (2005) found differences in suicidal ideation in two districts in Uganda. In one of the districts, suicidal ideation was more common in the women and in those who were unemployed.

Walker and Bishop (2005) found that suicidal ideation in college students was associated with depression positively and with intrinsic religiosity (but not extrinsic religiosity) and social support negatively, and the associations were equally strong for whites and for African Americans.

Stroebe, et al. (2005) found that suicidal ideation was more common in widowed people than in married people, especially for women. Suicidal ideation in widowed people was positively associated with depression scores, emotional loneliness and poor social support.

In a follow-up study of 3-year-olds in one town in New Zealand for 18 years, McGee, et al. (2005) found that suicidal ideation was predicted by female sex, and depressed mood, high stress and low attachment to parents at age 15, but not daily cigarette smoking at age 15.

In a sample of undergraduates, Fitzpatrick, et al. (2005) found that sexual orientation was not associated with scores on a suicidal ideation scale, but those who were cross-gendered on an androgyny scale had higher scores for suicidal ideation.

In a sample of university students, Chioqueta and Stiles (2005) found that suicidal ideation was predicted by neuroticism (from the Big Five Inventory) and the subscales of depression and hopelessness (positively) and extraversion (negatively). Neuroticism, depression and self-consciousness predicted suicide ideation.

In a sample of college students, Wilburn and Smith (2005) found that life stressors (chronic but not recent) and self-esteem predicted suicidal ideation. Their abstract claimed that for those with suicidal ideation, recent negative life stressors had lower self-esteem than those with more distance stressors. The reverse was found for non-ideators, but this does not appear in the results section.

In a sample of South African police, Pienaar and Rothmann (2005) found that suicidal ideation was associated with race (higher in black and Indian officers), rank (constable and sergeant), the province where the police officer is based,

gender (males), the use of alcohol, educational level (grade 12 or lower), the presence of a medical condition and a previous suicide attempt, but not with marital status, age, years in service, years in the particular position and the size of the station.

In a sample of male compulsory Israeli soldiers referred for medical problems, Lieberman, et al. (2005) found that suicidal ideation was associated with self-esteem, social support, and perceived health negatively and distress positively.

In a sample of college students in Pakistan, Khokher and Khan (2005) found that suicidal ideation was associated with belonging to single parent families and living at home, compared to those using hostel facilities.

Elderly

In a sample of the elderly in Hong Kong. Chou, et al. (2005) found that suicidal ideation was positively associated with depression, hopelessness and loneliness and negatively with self-rated health and life satisfaction.

In a community sample of elderly men (65+), Alpass and Neville (2005) found that suicidal ideation was associated with income, stress, loneliness, hopelessness, depression, negative affect and a previous psychological problem, but not to age, self-reported health, or social support.

In a community sample of the elderly (aged 65-74) in Taiwan, Yen, et al. (2005b) found that recent suicidal ideation was associated with being female, unemployed, not being married, low average family income, poor physical health status, depressive symptoms, low community activity participation, and with no religious affiliation,

In a community sample of elderly Australians, Vanderhorst and McLaren (2005) found that suicidal ideation was associated with depression and low social support and sense of belonging.

In a community sample of elderly in Japan, Awata, et al. (2005) found that suicidal ideation was associated with depression, lack of social support and impaired instrumental activities of daily living. In the elderly with depressive symptoms, suicidal ideation in the prior two weeks was associated with mental disorders, including depressive and alcohol-related disorders.

Online Writing

Barak and Miron (2005) compared online writing from suicidal and nonsuicidal individuals. The suicidal individuals had more stable and global attributions, were more self-focused in their writings, and expressed more unbearable psychological pain and cognitive constriction.

Patients with Psychopathology

In a sample of elderly medical and psychiatric inpatients and outpatients, Heisel, et al. (2005) found that suicidal ideation was associated with hopelessness, worthlessness, emptiness, and an absence of happiness.

Links, et al. (2005) found that patients with severe and persistent psychiatric disorders had thoughts of suicide for roughly two weeks after a crisis event, typically an increase in psychiatric symptoms (with roughly ¼ requiring hospitalization).

Affective Disorders

In a study of depressed patients in primary care, Schulberg, et al. (2005) found that suicidal ideation was greater in the younger patients, those not living with others, in those not employed, and those in more pain and more disabled.

In a study of depressed adolescents in a psychotherapy trial, Bridge, et al. (2005) found that patients who developed suicidal ideation during the trial did not differ in age, sex, race, socioeconomic status, and referral type. Patients who developed emergent suicidality had lower scores on the Children's Negative Cognitive Errors Questionnaire, reflecting greater cognitive distortion, and higher Beck Depression Inventory scores.

In a study of patients with affective disorders, Akiskal and Benazzi (2005) found that suicidal ideation was most common in bipolar II patients. Suicidal ideation in patients with major depressive disorders was associated with depressive mixed state (racing/crowded thoughts and psychomotor agitation/activation during the index depression), mood lability, decreased self-esteem, anorexia, and melancholic and psychotic features.

Marzuk, et al. (2005) compared depressed patients with and without suicidal ideation. After controls for age, verbal IQ and severity of depression, those with suicidal ideation showed significantly worse performance on several measures of executive functioning that involve the frontal region of the brain but not on non-frontal tests.

In a sample of depressed adolescents, Barbe, et al. (2005) found that those with suicidal ideation had a more severe episode and poorer functional status, were more hopeless, and more frequently had insomnia. For post-pubertal depressed females, suicidal ideation was associated with hopelessness, increased severity of MDD and more frequent lifetime history of any disruptive behavior. For prepubertal depressed males, suicidal ideation was associated with increased severity of MDD and poorer functional status.

Williams, et al. (2005) compared patients with a history of major depression (MD) who had suicidal ideation, formerly MD patients who were non-suicidal and healthy controls. After a sad mood induction procedure, only the patients with suicidal ideation showed less effective interpersonal problem-solving performance.

In a sample of patients with unipolar depression, Akiskal, et al. (2005) found that patients with psychomotor agitation and racing thoughts more often had suicidal ideation.

Benazzi (2005) studied bipolar-2 patients and found that suicidal ideation was associated with worse global assessment of functioning scores, more persistent major depression symptoms, and more melancholic depressions. A multiple regression identified the predictors to be decreased self-esteem, racing/crowded thoughts, and psychomotor agitation.

Drug and Alcohol Users

In a sample of drug users, Cottler, et al. (2005) found that suicidal ideators were more depressed and had diagnoses for depression, antisocial personality disorder, and alcohol use disorders (and for males cocaine use disorders). Male ideators were more likely than male nonideators to meet criteria for cocaine use disorders. Female ideators were older and more likely to have been married.

In adolescent Taiwanese methamphetamine users, Yen and Shieh (2005) found that suicidal ideation was associated with illicit drug use among family members, depressive, anxiety and adjustment disorders, and emotional instability.

Sakuraba, et al. (2005) studied male alcoholics in a psychiatric ward. Suicidal ideation was associated with scores for the degree of alcoholism and perhaps with scores for alexithymia, but the researchers failed to report appropriate correlations.

In a poorly analyzed data set, Zoričić, et al. (2005) found that alcohol addicts were more suicidal the non-alcoholic controls and their suicidality was associated with depression scores.

In a sample of alcoholics, Monika, et al. (2005) found that the suicidal subjects (undefined) more often had -141C Ins/Del polymorphism located upstream to exon 1 in the 5′-region of the dopamine D2 receptor (DRD2) gene.

Medical Diseases

In a sample of patients with Huntington's disease, Paulsen, et al. (2005) found that suicidal ideation increased from at-risk persons with a normal neurological examination to at-risk persons with soft neurological signs and increased further to 23.5% in persons with possible Huntington's disease. In those with a diagnosis of Huntington's disease, suicidal ideation was more common stage 2 than in stage 1 but then declined in stages 3-5. However, the severity of the suicidal ideation increased from stage 1 to stage 5.

Attitudes toward Suicide

In a study of nursing professionals in Brazil, Botega, et al. (2005) found that opposition to the right to commit suicide was stronger in older professionals, those who had never taken care of suicidal patients, those who had a family history of suicide, and in those who were Protestants and went more frequently to church services.

Physician-Assisted Suicide (PAS)

Rurup, et al. (2005) asked Dutch physicians, the general population and those who had a relative die from PAS whether they approved of an easily

available suicide pill. The general population and relatives were more in favor than were physicians, but still a minority. Age, education and religious beliefs affected the approval by the general population and relatives, with the older, more education and less religious being more in favor of a suicide pill.

Marcoux, et al. (2005) studied Dutch individuals who requested PAS and then changed their mind. Patients who changed their mind had more mental health problems and less mental clarity than those who died by PAS. They had fewer general health problems, had less unbearable suffering, and were less concerned about loss of dignity. They also more often had alternative treatment options.

Gill and Voss (2005) surveyed a small sample of disabled people and found that women, African Americans, and Latinos were least likely to support assisted suicide.

Pearlman, et al. (2005) studied the reasons for requesting PAS and found that the common reasons were illness-related experiences (e.g., functional losses), a loss of their sense of self, and fears about the future. None of the patients were acutely depressed when planning PAS.

Burdette, et al. (2005) found that religiously unaffiliated were most in favor of PAS followed by liberal Protestants. Conservative Protestants and Catholics were less in favor of PAS. Blacks, females, were more conservative in their views.

In a sample of Kuwaiti university students, Abdel-Khalek, et al. (2005) found that approval of physician-assisted suicide was not associated with age, sex, or scores for death anxiety and fears of death and dying of self and others.

The Language of Suicide

Fitzpatrick (2005) discussed *silent suicide,* an intention to kill oneself via nonviolent means such as self-starvation or noncompliance with essential medical treatment, also called *passive suicide* or *chronic suicide*, this latter term a misleading term since it often refers to people such as alcoholics and drug abusers.

Discussion

Personal Comments

In my reviews of previous years of research into suicidal behavior, I have criticized the research because it is repetitive (studying the same variables) and throws little or no light on why people die by suicide. It is also clear that prestigious journals publish this useless research which suggests that, having established themselves as major journals, they are desperate for articles. The same criticism applied for this review.

The most interesting research study I came across was not on suicide! The article had *suicide* in the title, but was a proposal for an inventory for measuring attitudes toward death based on Durkheim's constructs of altruism, fatalism, egoism and anomie. It is not, therefore, included in this review, but look for an article on it in *Suicide Studies*, 2025, 6(3).

Methodology

I am always amazed that reviewers and editors allow poorly designed studies to be published. For example, Milligan and Andrews (2005) combined attempted suicide and self-mutilation, making their study neither a study of suicidal behavior nor a study of self-mutilation.

Kaviani, et al. (2005) compared depressed attempted suicides with healthy controls. The attempters produced more overgeneral memories and responded more slowly to positive than negative cue words. On a problem-solving task, the depressed attempters produced less effective strategies, fewer and more irrelevant means, and took longer to respond to the task. This study, therefore, confounded suicidal behavior and depression.

It is important to note also that ecological studies typically fail to control for the regional distribution of medications (for example, SSRIs for depression: Gibbons, et al. 2005) and the availablility of methods for suicide (e.g., firearm storage: Grossman, et al., 2005)/

What Have We Learned About Suicide?

Not much that we didn't already know. Given that these reviews have so far revealed little of interest, I have to wonder whether to continue with them in this format. I will think about this and write an editorial in *Suicide Studies*, 2025, 6(3).

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