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Why are we failing to prevent suicide? David Lester 2-3
How should Durkheim's theory of suicide be modified?
David Lester 4-53
A review of research on suicide in 2000: David Lester 54-109
A review of research using Lester's Helplessness, Hopelessness
Haplessness (HHH) Scale: David Lester 110-116
Guilt and suicide: a study of suicide notes: David Lester 117-122
Suicide notes from China: Zhao-Xiong He 123-141
A review of research on suicide in 2001: David Lester 142-205
Elderly suicide and the religion of their country: David Lester 206-208
Suicide as a political act: David Lester & Mahboubeh Dadfar 209-211
Suicide and the Menstrual cycle: David Lester 212-221

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Suicide Studies, 5(4), 2-3

Editorial

WHY ARE WE FAILING TO PREVENT SUICIDE?[1]

David Lester

There has been a tremendous growth in scholarly articles on suicide over the last 21 years. Looking at publications in English included in PsycInfo, the number has risen from 608 items in 2001 to 2,656 in 2021, 337% increase. How has the suicide rate changed over this period?

According to the National Center for Health Statistics (2023), the suicide rate rose from 10.7 per 100,000 per year in 2001 to 14.1 in 2021, a 32% increase. The correlations between the number of publications on suicide and the suicide rate over this 22-year period is 0.87. The more publications on suicide, the higher the suicide rate. This does not look good. What is happening?

Clearly, lots of academics have obtained tenure and promotion, several grants have been awarded from government and private sources, and many graduate students have produced dissertations on suicide. However, it does appear that we have not learned anything useful about suicide, useful in the sense of helping us prevent suicide.

Of course, it could be argued that, without this growth of "knowledge" about suicide, the suicide rate would have risen even higher. That would be nice to believe, but there is no evidence for this.

Hjelmeland and Knizek (2020) noted that Joiner (2005) proposed a theory of suicide in which three factors explained *all* suicides: thwarted belongingness, perceived burdensomeness and the acquired capability for self-harm. This became the dominant theory of suicide, aided by the factor that Joiner was the editor of *Suicide & Life-Threatening Behavior (SLTB)*. At their peaks, 45% of the articles in *SLTB* were on Joiner's theory, 31% of the articles in the *Archives of Suicide Research* and 23% in *Crisis* according to Hjelmeland and Knizek. Not only does Joiner's theory fail to explain ***all*** suicidal behavior, it has rarely been applied to

[1] My thanks to Steven Stack for a dialogue on this topic.

suicides. Almost all of the research testing the theory examines the theory's relevance for suicidal ideation and attempted suicide. Some of the old stalwarts like Louis Dublin, Ronald Maris and Maurice Farber argued that suicidal ideators and suicide attempters are a different population from suicides, although there may be some overlap. The dominance of Joiner's theory may, therefore, have impeded progress on understanding and preventing suicide.

Lester, et al. (1975, 1979) proposed a methodology in which we might learn about suicides from studies of attempted suicides, specifically by dividing samples of attempted suicides into groups by the lethality of their attempt (or the seriousness of their suicidal intent) and then extrapolating to suicides, the most lethal of them all. This proposal has been ignored.

In other fields, progress is made. There is a great deal of research on medical diseases and, typically, this research leads to better treatments and longer survival rates, sometimes even cures. Apparently, that is not happening in suicidology.

References

Lester, D., Beck, A. T. & Trexler, L. (1975). Extrapolation from attempted suicides to completed suicides. *Journal of Abnormal Psychology, 84*, 563-566.

Lester, D., Beck, A. T. & Mitchell, B. (1979). Extrapolation from attempted suicides to completed suicides: a test. *Journal of Abnormal Psychology, 88,* 78-80.

Suicide Studies, 2024, 5(4), 4-53

HOW SHOULD DURKHEIM'S THEORY OF SUICIDE BE MODIFIED?[2]

David Lester

Abstract: The present essay presents a critique of Durkheim's theory of suicide 125 years after it was first formulated. It is argued that much of the research which purports to test Durkheim's theory does not in fact do so, and suggestions are made as to how the theory might be tested. Various modifications have been proposed for Durkheim's theory, and some of these make the theory more complex than the original theory and, therefore, more useful in understanding suicide both at the societal and at the individual level.

The basic concepts in Durkheim's (1897) analysis of suicidal behavior lead to four descriptive types of suicide. These four types form two groups. The first group, which includes egoistic suicide and altruistic suicide, is based on the concept of *social integration*. A society is integrated insofar as its members possess shared beliefs and sentiments, interest in one another, and a common sense of devotion to common goals (Johnson, 1965). Other attempts to define exactly what Durkheim meant by the concept of social integration state that a society is integrated to the extent that its members possess durable and stable social relationships (Gibbs & Martin, 1964). However, it should be noted that Durkheim himself did not provide a specific explicit definition of the concept (Douglas, 1967).

Suicidal behavior is common in societies where there is a high degree of social integration (*altruistic suicide*) and in societies where there is a low degree of social integration (*egoistic suicide*). Societies with a moderate degree of social integration have the lowest incidence of suicide. Egoism results from excessive individualism, and the individual is protected from egoism by religions with strong group ties, family ties especially where children are involved, or political affiliations. When the ties in a society are minimal, then suicide becomes more likely. At the other extreme, the individual can be too closely integrated and identified with a particular group. He may take his life, for example, as a religious sacrifice or as a result of political or military allegiances.

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[2] Parts of this article are based on Lester (1989, 1999-2000).

The second social variable that Durkheim used was *social regulation*. A society is regulated insofar as the society has control over the emotions and motivations of the individual members. Suicidal behavior is common in societies with a high degree of social regulation (*fatalistic suicide*) and in societies with a low degree of social regulation (*anomic suicide*). Societies with a moderate degree of social regulation have the lowest incidence of suicidal behavior.

Johnson (1965) noted that it was possible to assume from Durkheim's writings that the incidence of suicide in a society is determined by the degree of social integration and the degree of social regulation acting *independently* upon the members of the society.

Durkheim can be faulted on many grounds. He decided upon appropriate meanings in particular societal associations so that his theory would be supported. His statistical analyses were naive by present day standards, and he failed to provide any guidelines for operationalizing the theoretical concepts. Thus, Durkheim's theory of suicide has the fault of being so adjustable as to be irrefutable.

Nonetheless, the influence of Durkheim's work on sociologists who have considered the problem of suicide is illustrated by the degree to which subsequent sociological thought on suicide has been dominated by his theory Almost every new contribution has attempted in some way to clarify, develop, or modify some part of Durkheim's theory. [3]

Major Modifications

Johnson

Johnson (1965) set out to show that Durkheim's four types of suicide were reducible to one. The categories of altruism and fatalism were considered by Johnson to be dispensable since Durkheim could produce very few contemporary and documented examples of their occurrence. For example, most of the instances of altruistic suicide came from primitive societies for which Durkheim had no adequate statistics. The information available to Durkheim in these cases was

[3] Personally, I have found Henry and Short's (1954) theory of suicide to be much more useful in explaining suicidal behavior, but sociologists have, on the whole, ignored their theory.

confined to ancient authors and the impressions of travelers. Durkheim was restricted to the same sources for his information as to the degree of integration and regulation in the societies. The only example of altruism that Johnson considered to be valid was that of military society.[4]

The reasons for ruling out fatalism were similar. Most of the examples were found in premodern and non-Western societies. In addition, Durkheim himself considered fatalism to be of minor importance since he noted it only in a footnote. Two examples of fatalistic suicide were ruled out by Johnson because Durkheim had not attributed the cause to purely social reasons. For example, very young husbands were considered by Durkheim to be prone to fatalism because their passions were too strong and too self-confident to be subjected to severe rules. Johnson noted that the strength of the passions and not the nature of marriage was crucial here and that this, therefore, was not a social cause.

One objection to Johnson's thesis so far is that, although it might be true that fatalism and altruism are rare in contemporary society and that Durkheim slips into justifying his examples of them using individual considerations rather than social variables, this does not mean that they could not be substantiated by modern examples and justified in social terms. All Johnson is saying really is that they are not important. He has not argued that they must necessarily be incorrect or misused.

Johnson then sought to show that egoism and anomie are identical, and he made several cogent points in this regard.

1. Durkheim never considered two societies whose suicide rates he was discussing for their position on both the dimension of social integration and social regulation. For example, he stated that the Protestant Church was less integrated than the Catholic Church, but he made no commitment as to the degree of social regulation of either church. Strictly, therefore, he was not able to predict the relative suicide rates of the churches. Johnson considered that the predictive power of the theory would be improved by eliminating one of the dimensions. Of course, this is not so. If it were possible to provide workable operational definitions of both variables, then there is no reason why the predictive power of the theory would not be greater with two variables in use than with only one.

[4] Czabański (2024) has documented dozens of altruistic suicides in recent wars.

2. Johnson noted that the two states usually occurred together. Even Durkheim stated that anomie and egoism are usually merely two different aspects of one social state. Although the correlation may not be perfect, the existence of an empirical association of the two variables does make separate consideration of both redundant. We will see later that researchers have defined and measured two relatively independent variables of social regulation and social integration (Rootman, 1973; Lester, 1989-)

3. Johnson's final point was that the two concepts were identical conceptually. He extracted from Durkheim's thought three essential features of egoism: lack of interaction among the members of a society, lack of common conscience (or purposes and goals), and lack of social regulation, which is, of course, anomie. Henry and Short (1954) also noted this coincidence. Johnson pointed out that in his other writings Durkheim felt that variables that were related empirically should be regarded as one conceptually. Therefore, there appears to be no reason why egoism and anomie cannot be regarded as the same variable. Again, the fact that Durkheim confused the two variables does not mean that they cannot be measured separately by other researchers.

Johnson felt that Durkheim was aware of the closeness of the concepts and strove to show how they were different. However, when Durkheim attempted this, he often used psychological concepts and not sociological concepts. Egoistic suicide, for example, was said to occur when reflective intelligence was excessively affected whereas anomic suicide occurred when emotions became overexcited and unruly. This does not correspond to a difference in social conditions.

Parsons (1958) has claimed that implicit in Durkheim's thought is the distinction that anomie is linked with the strength of the common conscience and egoism with the content of the common conscience. Johnson argued that this suggestion was not supported by Durkheim's writings in the early part of his book. There are indeed some passages later in the book that might support such a notion, but Johnson felt that Durkheim was confused on occasions. We should note here that the goal of suicidology is to understand suicide. Others may be interested in Durkheim himself and his writings as a topic in itself, but this is irrelevant to suicidologists.[5]

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[5] There is a journal devoted to Durkheim, *Durkheimian Studies*, but the articles in that journal are clearly devoted to Durkheim's thoughts and words and not to any social issue.

Johnson, therefore, arrived at a reformulation of Durkheim's theory in the following terms: the more integrated a societal group is, the lower its suicide rate. Although this final reformulation is simple and neat, we may question its usefulness and its accuracy. It does not cover all of the facts, as Johnson admits when he discusses the case of military society. Thus, we must look for a more complex theory. If a more complex theory can explain more of the available data, then we must choose the more complex theory over the simpler theory. It is only if two theories can predict the same range of phenomena that we choose the simpler.

Perhaps all that is necessary is a conversion of Johnson's linear hypothesis into a U-shaped function: when the integration of a society is very low or very high, then its suicide rate is high, whereas at moderate levels of integration, its suicide rate is low. Were it possible to operationally define two variables (integration and regulation), then it might be possible to determine empirically whether these two variables were perfectly associated and then to propose an even more complex theory.

Whitt (1969) noted that Durkheim's concepts of anomie-fatalism and egoism-altruism differ in that egoism implies that the individual's social self is too weak while anomie implies that the individual self is too strong. A similar distinction can be drawn between altruism and fatalism. Whitt noted that part of Durkheim's thinking on suicide suggests that he partially adhered to a happiness theory of suicide or a psychological equilibrium theory. Unhappiness, which leads to suicide, is caused by the failure of the individual to resolve conflicts between two separate and antagonistic aspects of the self - the individual self (consisting of bodily drives and reactions growing out of experiences of the individual) and the social self (which arises from the incorporation into the self of external societal values and behaviors).

Dohrenwend (1959) proposed another way of categorizing Durkheim's four types of suicide. The categories of egoism, fatalism, and altruism differ from that of anomie in that anomie is the only one of the four that implies that there are no norms or rules. The other three categories each involve the existence of norms or rules of some kind.

Egoism and altruism differ in the content of the rules. In egoism the rules are individualistic whereas in altruism the rules are collective rules. A third distinguishing characteristic is the effective source of regulatory power. For

fatalism the authority is external to the individual, whereas in egoism and altruism the authority is internalized. This last characteristic, the source of regulatory power, has often been the focus of sociological thought on suicide. The theory of Henry and Short employs it for example.

As an alternative to Johnson's view of Durkheim's theory, it may be possible to redefine anomie and egoism so that they are independent concepts. Maris (1969) suggested that an operational distinction between social integration and social regulation could be made by using integration to refer to the number of interpersonal dependency relationships and regulation to refer to the existence of subordinate-superordinate relationships. Maris used the concept of dependency in a non-psychological sense, that is, referring to the individual's various familial, friendship, and occupational associations.

We might note that this measure of regulation does not tap the regulators that have been introjected by the individual from his society and family during socialization. Therefore, this particular measure taps only current external restraints. Also, the measures suggested by Maris, while making sense from a sociological point of view, omit the obvious fact that, at a psychological level, a relationship may involve aspects of regulation while not being in a subordinate-superordinate format. In an equal-dependency relationship, there are still constraints on each individual. These restraints come from a peer rather than an authority, but they nonetheless constitute social regulation.

Powell

Powell (1958) proposed a theory of suicide based on a reformulation of the concept of anomie. Powell's thesis was that the nature and incidence of suicide vary with the social status of the individuals of a society. Social status for Powell means any position held by an individual in any social system. The goals and motives of the individual are defined by his social status. When the individual cannot adopt the goals set for him by his social status, then anomie (a general loss of orientation accompanied by feelings of emptiness, apathy, and meaninglessness) results. Thus far, Powell's thesis is very similar to Durkheim's except that it is phrased more in terms of a sociopsychological approach than a sociological approach. Powell departs radically from Durkheim, however, in proposing that there are two distinct forms of anomie.

Anomie of dissociation, a characteristic of the lower classes, is a dissociation

of the self from the conceptual system of the culture. The reaction to the fear generated by confronting uncomprehended chaos is flight and aggression. *Anomie of envelopment*, which is characteristic of the upper classes, is characterized by envelopment of the self by the culture. There is a deficit of spontaneity as a result of unexamined commitment to the prevailing conceptual framework. Either form of anomie increases the probability of suicide in an individual.

It is clear that Powell's proposed dual forms of anomie are nothing more than a renaming of the Durkheim concepts of anomie and fatalism. The theory, therefore, contains little that is new except the idea that each type of anomie is associated primarily with one class. However, Powell provided no evidence that this idea had any validity. Powell committed the same error as Durkheim in keeping the theory loose enough and so uncluttered by factual evidence that it is possible to read into particular statuses whatever is needed to support the thesis.

Ginsberg

Ginsberg (1966) reinterpreted Durkheim's notion of anomie in terms of the psychological concept of *level of aspiration*. One of the examples of anomic suicide given by Durkheim was that the suicide rate increased during financial crashes and during financial booms. Suicide resulting from these financial changes was seen as an example of anomic suicide since the environmental deficit in external restraint that accompanies these changes allows the desires of the individual to range freely and without control. With no external restraints, the desires become unlimited and insatiable. This is anomie.

Ginsberg noted that anomie arose from the unhappiness or dissatisfaction of individuals. He postulated that anomie was a direct function of the dissatisfaction of the individual, which itself was a direct function of the discrepancy between the actual reward that the individual was receiving and his level of aspiration. In the *normal process*, internalized legitimate norms dependent upon the individual's social position regulate changes in the individual's level of aspiration. The level of aspiration remains proportional to the rewards and the individual is relatively satisfied. In the *anomic process*, the level of aspiration, freed from external constraints, runs away from the rewards, resulting in unhappiness for the individual.

Psychological evidence points to the fact that the level of aspiration of a person adjusts to the present level of rewards at a rate proportional to the degree of

dissatisfaction (March & Simon, 1958). Durkheim's notion was simpler than this and implied that aspirations adjust to the level of reward directly rather than to dissatisfaction.

Ginsberg formalized Durkheim's implicit propositions as follows: (a) as rewards increase, aspirations tend to increase, and as rewards decrease, aspirations tend to decrease, and (b) the rate of change of aspirations is a function of the extent to which rewards increase or decrease. Ginsberg noted that modern theories of aspiration also assume the converse - the reward obtained is affected by the level of aspiration of the individual. The level of aspiration affects the behavior of the person which in turn affects the rewards he obtains.

Ginsberg suggested that, if an individual sees no relationship between what he does and the rewards he obtains, then there is no tendency for aspirations to change. For the level of aspiration to change, the individual must possess and feel a *sense of efficacy.* Although Durkheim paid little attention to this variable, Ginsberg felt that Durkheim implicitly accepted it. As the individual's sense of efficacy increases, his aspirations tend to drop. The sense of efficacy is an intervening variable between changes in his rewards and his level of aspirations.

When rewards increase faster than aspirations, we have a normal process, but when aspirations increase faster than rewards, we have an anomic process. In the anomic process aspirations increase at an increasingly faster rate, running away from rewards, and this is what happens to some individuals during financial booms. Similarly, when rewards decrease and aspirations decrease at a lesser rate, leveling off at some constant value and converging with rewards, we have a normal process. When aspirations decrease at an increasing rate and never reach an equilibrium with rewards, we have an anomic process, and this is what happens to some individuals during financial crashes.

Durkheim held that the difference between the normal and the anomic process was that, in the anomic process, the norms of the society have no control over aspiration change whereas in the normal process they do. In the absence of social control, aspirations change in an anomic manner. Social control can be seen either as a set of internalized controls resulting in a modification and toning down of the individual's desires or as a set of external regulatory forces opposed to the individual's desires. As a result of social control, therefore, aspirations change according to this normal process. Societal norms provide an upper and lower limit within which aspirations and rewards remain in the normal process. Ginsberg

called this the interval of *distributive justice.*

Ginsberg attempted to deduce the discrepancy between aspirations and rewards at different points of the business cycle and managed to predict the observed association between business prosperity and the suicide rate. In formal terms, Ginsberg assumed that (a) the suicide rate in a given society varied directly with the average amount of dissatisfaction in that society, (b) fluctuations in the economy determine the average rewards available, (c) the average dissatisfaction depends upon the average aspirations as well as the average rewards, and (d) economic aspirations are governed by the following five postulates:

(1) When rewards are increasing the individual will expect them to continue to increase and raise his aspirations accordingly.

(2) As long as the rate of change of rewards is increasing and as long as rewards are cumulative, the individual will expect them to continue to cumulate and raise his aspirations to meet the even higher expected rewards.

(3) When rewards are decreasing the individual will expect them to continue to decrease and lower his aspirations accordingly.

(4) As long as the rate of fall of rewards is increasing and as long as the drops are cumulative, the individual will expect them to continue to cumulate and lower his aspirations to meet the even lower expected rewards.

(5) When the rate of change in rewards is decreasing, the rate of change of aspiration will decrease even faster in anticipation of the end of the trend.

Ginsberg noted that Durkheim's evidence for the relationship between the suicide rate and the economy was poor. First it was selective. Secondly, he produced no evidence for a crisis of prosperity. Durkheim showed that the suicide rate was high when there were many bankruptcies, but he did not look at times when there were few. Thirdly, he looked at long-term trends and not crises. However, Ginsberg's arguments appear to be *post hoc,* and I shall try to illustrate this.

Ginsberg noted that if an increase in business prosperity stops early (before the natural peak is reached), a large gap between aspiration level and rewards will occur compared to what happens when the increase follows the usual course. Therefore there will be an increase in the suicide rate just before the peak of business prosperity for slow rises in business prosperity, just as Henry and Short found.

Similarly, a decrease in business prosperity that stops early should lead to a decrease in the suicide rate just before the trough of business prosperity is reached. Ginsberg, however, did not predict this. Instead, he predicted that, in sharp downswings, the level of aspiration almost catches up with rewards, eliminating dissatisfaction and leading to a reduced suicide rate. In slow downswings, the aspiration level does not catch up with the decreasing rewards, and so the suicide rate increases. Therefore, Ginsberg's argument here does not parallel his argument for similar situations regarding business upswings. There appears to be a degree of arbitrariness in Ginsberg's choice of arguments and, furthermore, it is not always clear that his prediction is the only one possible given his set of assumptions.

It should be noted that Ginsberg differs from Durkheim in many respects, among which one of the most important is that, for Durkheim, anomie necessarily involved unlimited aspirations, whereas for Ginsberg the anomic process need not involve unlimited aspirations.

Before we leave Ginsberg's ideas, it is of interest to note his conceptualization of the idea of *fatalism*. Fatalism, for Ginsberg, involved these factors: (a) a gap between aspirations and reward, (b) the aspirations are within the interval of distributive justice, (c) the rewards are low and outside of the interval of distributive justice, that is, illegitimate, and (d) since the rewards are illegitimate, the outcomes are independent of the way an individual feels and acts. Ginsberg did follow Durkheim in seeing normative control as excessive in fatalism (point c) but absent in anomie.[6]

Douglas

Douglas (1967) analyzed the theoretical structure of Durkheim's use of the concepts of social integration and social regulation. Douglas distinguished two approaches to the study of suicide. The approach taken by most American sociologists may be called the *externalistic interpretation*. The demographic and ecological characteristics of a society are seen as determining the patterns of social integration which in turn determine the degree of social integration. Social integration is defined as the strength of the individual's ties to society, which in turn is defined either in terms of egoism and anomie, or else the strength of ties is

[6] Bijou Yang has published a comparison of three theories of the relationship between the economy and suicide, those by Durkheim, by Ginsberg and by Henry and Short (see Lester & Yang, 1997), and it should be noted that her ideas have been plagiarized by others.

hypothesized to be the cause of the given degrees of egoism and anomie. Egoism is defined as a relative lack of social activity that gives meaning to and objectives for life, and anomie is defined as a relative lack of social activity that acts to constrain the individual's passions. Finally, the given balance of egoism and anomie is hypothesized to be the cause of the given suicide rate of the society (Douglas, 1967, pp. 39-40).

Douglas argued that this interpretation was incorrect. The externalistic interpretation argues that social behavior is the cause of shared sentiments and morals (that is, of social meanings) and thence suicide. Douglas proposed an alternative interpretation in which social meanings cause social behavior and thence suicide. Douglas pointed out that Durkheim vacillated between these two positions but that a close reading of the book indicates that Durkheim finally decided upon the second of the two interpretations.

The crucial question in Durkheim's theory, if Douglas's interpretation is adopted, concerns the factors that disturb the equilibrium of these orientations. A change in the strength of a social meaning (such as egoism, altruism, anomie, or fatalism) is caused by a change in the kind of communication of those sharing this social meaning. All people are assumed to possess all four social meanings either because (a) there is a difference in strength to begin with and the stronger meaning grows more than the weaker with continued communication or (b) there is selective communication of meanings in any given association. Douglas felt that there was no evidence that Durkheim ever considered the first alternative and so the second is most likely.

There arise, then, three questions:

1. What determines which of the meanings will be communicated in any given association? One answer could be that different meanings are transmitted because different associations involve different external events occurring with different intensities and frequencies. However, Douglas felt that different associations are significant in the etiology of suicide only insofar as they have different meanings and so different meanings are communicated in different associations because the different associations involve different meanings.

2. How do we measure the relative strengths of the meanings in any given society? This was not a problem for Durkheim since he assumed

implicitly that the meanings communicated in associations were constant. All that was necessary was to know which meanings were being communicated in a given association.

3. How do we know what meanings are being communicated in particular associations? Durkheim considered that these meanings were immediately obvious to the sociologist who is a member of the society. There was no need to provide empirical support for the decisions made by the sociologist. For larger societies, Durkheim studied the juridical (and especially the legal) norms of the society. However, most of the statistics with which he worked were on more restricted groups of individuals (such as different religious groups or age groups), and thus the juridical norms of the larger society could be of no use in discerning the social meanings in these subgroups. Durkheim did not apparently recognize this problem. Douglas pointed out that the social meanings were supplied by Durkheim in order that the data supported the theory. The method was, therefore, essentially *post hoc*.

Abrutyn and Mueller

Abrutyn and Mueller (2014) stressed the role of emotions in Durkheim's typology of suicide, noting that emotions can help distinguish between integration (the structural dimensions of groups) and regulation (the socioemotional and cultural dimensions of groups). From a reading of Durkheim's own words in his book, Abrutyn and Mueller noted that Durkheim noted the following emotions for 3 of the 4 types of suicide.

Egoistic suicide	apathy
Altruistic suicide	energy of passion or will
Anomic suicide	irritation, disgust
Fatalistic suicide	[ignored by Durkheim]

Abrutyn and Mueller suggested that the structure and content of social relationships result in a socio-emotional structure that, in turn, shapes the structure of suicide. In particular, Abrutyn and Mueller focused on the emotions of sadness and shame. Egoism (resulting from a feeling of social isolation) results in sadness. In contrast, anomie stems from feelings of shame and anger at violations of social expectations that threaten the person's sense of self. Abrutyn and Mueller noted that the mixed type of anomic-egoism may be more common than the pure types.

Abrutyn and Mueller proposed that fatalism stems from stigma felt by the individual (whether self-imposed or stemming from the behavior of others) which leads to a feeling of shame. Again, Abrutyn and Mueller proposed that mixed types can occur: fatalism-anomie and fatalism-egoism. For altruistic suicide, Abrutyn and Mueller argued that this is more likely when the socio-cultural milieu stresses self-sacrifice and cooperation. Failing to meet these obligations and expectations would result in shame and anomie, and suicide occurs to avoid these feelings. Again, mixed types exist, such as altruistic-anomic, and Abrutyn and Mueller thought that Buddhist monks immolating themselves to protest the Vietnam War illustrate this type, noting also the role of shame in these suicides.

What is noteworthy about the proposals from Abrutyn and Mueller is that no evidence is presented for them, and a cursory reading of the proposals makes one think that they are wrong. Reading the examples of altruistic suicide on the battlefield presented by Czabański (2024) makes it clear that shame and anomie played no role. Soldiers threw themselves on grenades, for example, to save their comrades spontaneously and without thought or emotion. They did not think, I must throw myself on this grenade to avoid shame. Similarly, if suicides by slaves are really fatalistic in nature, it is not clear that shame played any role in their decision to die by suicide.

Finally, although I have written on the role of shame in suicide (Lester, 1997a), Abrutyn and Mueller seem to give a much greater role to shame in suicides than seems warranted.

Henry and Short

Henry and Short proposed a complex theory of suicide that combined both sociological and psychological components. Henry and Short used instead the frustration-aggression hypothesis developed by Dollard et al. (1939) for the basic framework of their theory. When a person is frustrated by circumstances, Henry and Short assumed that the basic and primary target of aggression is another person rather than the self. Sociologically, the strength of external restraint was seen as the primary basis for the legitimization of other-oriented aggression. When behavior is required to conform rigidly to the demands and expectations of others, the share of others in the responsibility for the consequence of the behavior increases, thereby legitimizing other-oriented aggression. When external restraints are weak, the self

must bear the responsibility for the frustration generated, and other-oriented aggression fails to be legitimized.

In this theory, therefore, suicide is more likely in a society (and in subgroups in the society) in which there are few, if any, restraints on behavior, that is, where social regulation is very low, so that suicide is anomic in nature. Interestingly, Henry and Short also apply their theory to homicide. When external restraints are strong, frustration results in people aggressing outwardly toward others and, in the extreme, murder. Very few other suicidologists have considered suicide and homicide together.

Gibbs and Martin

Gibbs and Martin (1964) agreed with Johnson (1965) that the distinction between anomie and egoism in Durkheim's theory was slight and that there was not much importance to be placed in altruistic suicide. They adopted Johnson's reformulation of Durkheim's theory of suicide. However, Gibbs and Martin criticized Durkheim for other inadequacies: a failure to give operational definitions of social regulation and a failure to correlate a measure of social integration with suicide rates. Gibbs and Martin set out to remedy these omissions. Their theory is summarized in five postulates.

1. The suicide rate of a population varies inversely with the stability and durability of social relationships within that population. This is consistent with Johnson's reformulation of Durkheim's theory.

2. Because of the inadequate state of sociological knowledge regarding social relationships, Gibbs and Martin did not attempt to measure the stability and durability of social relationships directly. Instead, they made use of an idea of Weber's (1947) that a fundamental condition for the maintenance of a social relationship is the requirement of conformity to the demands and expectations of others. Therefore, Gibbs and Martin postulated that the stability and durability of social relationships within a population conform to the patterned and socially sanctioned demands and expectations placed upon people by others. Here Gibbs and Martin bring social regulation into their definition of social regulation.

3. The demands of others constitute the role of the individual in the society. An individual with a particular status has to conform to a certain role if he wishes to maintain stable and durable social relationships. Conformity to one role is made

difficult when an individual occupies several roles. Since people do occupy several statuses at any time, the individual is often faced with a conflict between the roles and, therefore, as to how he should behave. It is when conformity to one role interferes with conformity to another role that the individual has difficulty in maintaining his social relationships. Therefore, the extent to which individuals in a population conform to patterned and socially sanctioned demands and expectations placed upon them by others varies inversely with the extent to which individuals in that population are confronted with role conflicts.

4. Gibbs and Martin defined a status as a social identification. Every member of society is socially identified by inclusion in recognized categories: man, husband, laborer, and so on. If conforming to the role of one status conflicts with conforming to the role of another status, then the statuses are incompatible. Two statuses with conflicting roles are incompatible only when they are occupied simultaneously. Therefore, the extent to which individuals in a population are confronted with role conflicts varies directly with the extent to which individuals occupy incompatible statuses in that population.

5. Gibbs and Martin assumed that if two statuses have conflicting roles, making them incompatible statuses when occupied simultaneously, then they will be less frequently occupied simultaneously then will two statuses with roles that do not conflict. The relative frequency with which a status configuration is occupied is labeled the degree of integration among the statuses in the configuration or, simply, the degree of status integration. The fifth postulate is, therefore, that the extent to which individuals occupy incompatible statuses in a population varies inversely with the degree of status integration in that population.

Combining these five postulates leads to the major thesis: the suicide rate of a population varies inversely with the degree of status integration in that population. This seems a long way conceptually from social regulation and social integration.

How is status integration measured? Gibbs and Martin noted that the measures that they chose were arbitrary. At the one-dimensional level, the degree of status integration is simply proportional to the percentage of individuals in a particular category. Thus, for the categories single, married, divorced, and widowed, the degrees of status integration are proportional to the percentage of individuals in each category. This measure has meaning, of course, only when the groups under investigation are homogeneous on all other statuses. Multi-

dimensional categorizations are preferred (Gibbs and Martin, 1964, pp. 36-40).

The ideas of Gibbs and Martin have not received much attention from sociologists studying suicide, and their proposed measure of status integration sounds much too simplistic. Furthermore, their measure of status integration seems more appropriate to measuring social deviance (belonging to a group that is in a minority), a theory of suicide proposed by Lester (1987, 1989).

Pescosolido

Pescosolido (1994; Pescosolido & Georgianna 1989).) proposed a reconceptualization of social integration into a social network structure. She conceptualized social structure as a safety net with different topographical features. Network ties can be sparse or dense and strong. When social networks are loose or open, then there is little to support the individual when he or she experiences a crisis, making suicide more likely. When social networks are too tight and the safety net closes up, there is no flexibility to the safety net, and the individual in crisis is damaged by the net rather than supported.

Pescosolido's proposal indicates the need for sociologists to think more complexly about the meaning of and measurement of social integration (and social regulation).

Collectivism-Individualism

Reading Durkheim's theory of suicide makes it quite clear that the concept of collectivism-individualism is related to social integration/regulation and, therefore, should be associated in some way with suicide rates. Collectivism is, in part, a construct that emphasizes the group and its interests (Lester, 2024). Collectivism focuses on communal, societal, or national interests. Collectivism can be construed as horizontal, where equality is emphasized and people engage in sharing and cooperation, or as vertical, where a hierarchy is emphasized and people submit to authorities. Horizontal collectivism is based on the assumption that each individual is more or less equal, stresses common goals, interdependence and sociability, and favors democratic decision-making. Vertical collectivism expects individuals to sacrifice themselves for the in-group if necessary, promotes competition between different in-groups, and favors a stricter chain of command.

Collectivism is the opposite of individualism. Individualism emphasizes the worth of the individual. Individualism promotes the pursuit of the individual's goals and desires, values independence and self-reliance, and advocates that the interests of the individual should have precedence over those of the state or a social group. Individualism opposes external interference with the individual's own interests by society or by institutions such as the government.

Individualism in a society should, therefore, result in less social integration and less social regulation. In Durkheim's theory, then, such a society would have higher rates of egoistic and anomic suicide. In contrast, collectivism in a society should result in greater social integration and social regulation and, therefore, result in higher rates of altruistic and fatalistic suicide. If we follow Johnson's argument reviewed above, altruistic and fatalistic suicide are rare, and so individualistic societies should have higher rates of suicide than collectivist societies.

Naroll's Thwarting Disorientation Theory of Suicide

Naroll (1963, 1969) proposed that suicide was more likely to occur in those who were socially disoriented, that is, those who lack or lose basic social ties. However, Naroll noted that suicide was rare, even among those members of society who are socially disoriented. Therefore, psychological factors must come into play well, causing only a small minority of the socially disoriented to choose suicide. Naroll's suggestion for this psychological factor was the reaction of the individual to thwarting disorientation contexts. Thwarting disorientation contexts are: (a) those in which person's social ties are broken, weakened or threatened and (b) those that involve the thwarting of the socially disoriented person by some other person. In thwarting situations, people fail to achieve desired and expected satisfactions or in which they experience undesired and unexpected pain and frustration. This thwarting must be interpersonal and not the result of impersonal natural, social or cultural events. Storm damage to one's house is not thwarting whereas arson by another is thwarting.

Naroll's theory does have connotations different from those of Durkheim's theory. Durkheim's concept of social integration/regulation seems to be a steady-state feature of the society whereas Naroll's concept of social disorientation permits acute, sudden states. Therefore, Naroll's theory, as well as applying to societies as a whole like Durkheim's theory, seems more applicable to individual cases of suicide (Lester, 1995b).

A Mohave Theory of Suicide

The Mohave are a small group of Native Americans situated on the banks of the Colorado River in Arizona and California (Lester, 1997b). The Mohave attributed the high suicide rate of white Americans to a lack of mutual support in White American society. They attributed their own rising suicide rate to increasing distress resulting from their romantic and marital relationships, accompanied by a reduction in the affective commitment to and emotional dependence on the kin group and the tribe as a whole (Devereux, 1961). In the past, the Mohave's primary commitment was to the society which provides the Mohave with an identity. The switch to dependence on a few intimates means that rejection by a single individual now had the same impact as rejection by the whole society. For the Mohave, therefore, the rise in individualism may have resulted in a rising suicide rate.

Four Types of Suicide or Nine Types?

Despite many claims by researchers to be testing Durkheim's theory of suicide in their empirical studies, the research suffers by starting from a confused position. Since Durkheim proposed two social dimensions, societies can be high, moderate, or low in each of the four dimensions, and this produces a 3×3 table of possibilities (see Table 1), nine types of suicide rather than four.

It can be seen that Durkheim's theory would predict highest suicide rates for societies in cells A, C, G, and I, moderate rates in cells B, D, F, and H, and lowest rates in cell E. We might note that suicides in each cell are hard to classify. Suicides in cell B, for example, are fatalistic since social integration is high and social regulation moderate. However, suicides in cell A are fatalistic/altruistic since both social regulation and social integration are high. It is clear that Durkheim's four types of suicide do not adequately encompass the nine cells demanded by his theory.

Table 1. The full Durkheimian array

Social Integration

High Moderate Low

	High	A	B	C
Social	Moderate	D	E	F
Regulation	Low	G	H	I

Two studies have appeared which have tested Durkheim's theory adequately. Rootman (1973) studied fifty-five nonliterate societies. Drawing upon other researchers' rating of these societies, Rootman identified two measures which he thought assessed social integration and social regulation. One measure included scores for the permanency of residence, constancy of food supply, and group life versus atomism. Rootman felt that this would be a good measure of social integration. A second measure included scores for power vested in a chief, organized priesthood, and codified laws. Rootman felt that this would be a good measure of social regulation. Interestingly, scores on the two factors were not strongly correlated, suggesting that the two social characteristics could be measured separately. Rootman found that societies scoring moderate on both dimensions did indeed have the lowest estimated suicide rate, while societies with high and/or low levels of both social variables had the highest estimated suicide rates (see Table 2).

Table 2. Rootman's estimates of suicide rates for primitive societies

		Social Integration		
		Low	Moderate	High
	Low	1.4	1.7	1.7
social	Moderate	1.9	1.2	2.9
regulation	High	2.7	1.3	2.6

Lester (1989) studied suicide in fifty-three nations of the world in 1980. Several measures of social regulation were included in the data set: a political rights index and a civil rights index, and measures of political freedom, religious liberty for Christians, and a political freedom index. The marriage rate and the birth rate were used as measures of social integration.

The seven measures were subjected to a factor analysis and two orthogonal (that is, independent) factors were identified. Factor I appeared to tap social regulation while Factor II possibly tapped social integration. The factor scores were completely independent. Thus, it was again possible to assess the two concepts (social regulation and social integration) separately and independently.

The nations were divided into the nine groups described in Table 1. Nations high on both dimensions and low on both dimensions did have the highest suicide rates. Those moderate on both dimensions had low suicide rates. However, the results had an asymmetry. Low social regulation and high social integration appeared to be the more powerful determinants of suicide rates.

Bearman's Alternative Conceptualization

Bearman (1991) proposed a simplified version of the above table:

		Social regulation	
		Low	High
Social integration	High	anomic	altruistic
	Low	egoistic	fatalistic

Bearman argued that some societies are mechanical societies, much like the military for, upon entering, all individual characteristics are stripped away, such as hair and clothing style. People are defined by their rank, and their personalities are suppressed in order to conform to their role. In such societies, suicide is often altruistic.

At the other extreme, in an organic society, social relationships are instrumental exchanges through which the individuals obtain their unique goals. Suicide in such societies is often egoistic. "Egoistic suicide is the suicide of the modern world; it is the suicide of the highly individuated person with but weak bonds to others across all of the spheres of social life" (p. 512).

Anomie and fatalism are also polar opposites, and both are pathological. Whereas Durkheim saw anomic individuals as lacking societal norms, Bearman argued that the anomic person must also be socially integrated. The anomic person is someone who experiences a societal disequilibrium – such as a banker who loses his fortune during an economic crisis or a poor person who suddenly becomes very rich. These people have to abandon their former social relationships and form new ones. Bearman noted that the adolescent or, we might add, the freshman in college is in a similar crisis, and this may result in anomie.

The fatalist has, in the eyes of others, a identity only aa the occupant of a role. The slave is defined by the label, and the role provides no protection. In their

own eyes, fatalists are without social ties and without purpose. As Artur Grygierczyk has suggested (personal communication), this fits the prisoner on death row.[7]

Is It Legitimate to Look at Overall Suicide Rates?

Since Durkheim proposed four types of suicide, it is crucial to examine the rates of each type of suicide. For example, societies with low levels of social integration are expected to have high rates of *egoistic* suicide. To test predictions based on the concept of social integration, therefore, requires measurement of *egoistic* suicide rates. This, of course, has **never** been done. Researchers use the overall suicide rate of the social group. Because sociological studies of Durkheim's theory of suicide failed to operationalize suicide rates appropriately, Durkheim's theory, original or modified, has never been tested in a methodologically sound manner.

To What Entities Can Durkheim's Theory be Applied?

An important issue to consider is to what may the theory be applied.

Countries

A good deal of sociological research is conducted on nations. Can we legitimately distinguish different levels of social integration and social regulation in different nations? This seems possible. For example, if one nation permits divorce while another does not, we may conclude that, at least in this respect, the two nations differ in the degree of social integration. Similarly, a totalitarian nation differs from a democratic nation in the degree of social regulation.

In the study by Lester (1989) mentioned above of 53 countries, each of the 53 nations was classified as high, moderate or low on each of the factor scores.

High scores on both factors were obtained by Bulgaria, Czechoslovakia, Egypt, Hungary, Poland, Singapore, South Korea and Yugoslavia. Suicides in these nations might be fatalistic/altruistic. Low scores on both factors were obtained by Sweden and Switzerland, and suicides in these countries might be anomic/egoistic.

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[7] Lester and Tartaro (2002) have documented the high suicide rate on death row.

Honduras, Jordan, Mexico, Panama, and the Philippines were high in social regulation and low in social integration; while Australia, Canada, New Zealand and the United Kingdom were low in social regulation and high in social integration. Perhaps, therefore, it is legitimate to classify countries into Durkheimian typers.

Regions within a Country

Can the concepts be applied to regions within a nation? Again, the different states of America, for example, differ in such social variables as divorce rates and church membership, variables which may affect the levels of social integration and regulation. Thus, the concepts may be applicable to regions within a nation.

Subgroups within a Country

Third, within a society, there are different status groups - men and women, blacks and whites, and young and old, for example. These groups may also differ in ways which impact the levels of social integration and social regulation.

Durkheim applied his theory also to subgroups within a society and to generalized figures. For example, Durkheim mentioned fatalistic suicide in a footnote, attributing this type of suicide to young husbands with no children and to slaves. The notion here, presumably, is that the typical suicide by a slave is fatalistic in nature.

Sharma (1978) has discussed whether sati, the suicide of a Hindu widow on her husband's funeral pyre, is altruistic suicide. In altruistic suicide, the individual is well integrated into the society, perhaps to the extent that the person belongs to the state. Since sati is performed as a duty, it may be termed *obligatory altruistic suicide*. Sharma noted that, although some Hindu widows may choose sati because there is strong public pressure to do so (obligatory altruistic suicide), other widows presumably do so because they dread life alone without their husband (*optional altruistic suicide*).[8]

Sharma noted that the term altruistic for Durkheim meant that the act was performed as a duty. sati was not regarded as a religious duty until the 10th or 11th centuries and for many years was only found in the warrior class. Hindu society

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[8] I have used the term *sati* here and not the term used by Sharma.

allowed for the separation of husband and wife, and often relatives tried to dissuade widows from sati. Furthermore, Sharma argued that the widow kills herself for the future good of both herself and her husband. Sati ensures that wife and husband will dwell in heaven. The wife's sati affects her husband's destiny. As such, Sharma views it as sacrifice rather than suicide, or perhaps a combination of the two.

Two basic forms of suicide have been described in contemporary Austronesian-speaking Oceania. Some individuals in these societies die by suicide in order to avoid the consequences of public exposure of their immoral or illicit behavior. Suicide spares the suicides and their family from shame and humiliation. Other individuals, usually young men, kill themselves after being slighted or offended, typically by a family member. The act of suicide expresses the person's anger at being mistreated. Since most Oceanic societies discourage the direct expression of anger, especially toward the family, the anger is turned inward onto the self.

MacPherson and MacPherson (1985, 1987) viewed the first type of suicide described above as altruistic suicide since the act affects the honor and prestige of the group as a whole. The person dies by suicide to make amends to the community.

The MacPhersons viewed the second type of suicide as anomic since such suicides occur more frequently during times of social disequilibrium and change when the consensus on social norms and customs is breaking down. The desires of people, especially the young, may rise beyond realistic chances of fulfillment, and they choose suicide when reality indicates that those desires will never be satisfied.

Ofstein and Acuff (1979) suggested that suicide in the elderly could be seen as egoistic. They noted that disengagement theory (Cummings, 1963) suggests that the elderly and the society to which they belong experience a mutual withdrawal with advancing age, leaving the elderly individual in a state of social isolation.

Hitchock (1967) explored the consequences of the shortage of marriageable women among the Nauthars in Nepal. This shortage led to complex arranged marriages being agreed upon involving young children and extreme conflict when the arrangements became difficult to implement. The suicides in young women in the group were viewed by Hitchock as fatalistic in nature.

Breed's Suicide Syndrome

Breed (1972) proposed five basic components for the suicidal syndrome in individuals: commitment, rigidity, failure, shame, and isolation.

By *commitment*, Breed meant having an internalized set of culturally defined roles and goals, a notion which resembles social regulation. *Failure* for women included separation/divorce and childlessness, components of social integration. *Shame* included low self-esteem, feelings of shame from failure, and loss of hope, an anomic state. *Isolation* included living alone, few social contacts and frustration of dependency needs, aspects again of social integration.

Breed (1970) applied his concepts to suicide in blacks. In his study of suicide among young, lower-class, single black males in New Orleans, Breed was struck by the oppression of black society by the white society. In the United States, blacks were inferior, segregated, powerless and less well-protected from arbitrary authorities. For example, in black suicides, Breed identified a high incidence of difficulties with the police and other authorities. Interviews with blacks in the community revealed a widespread fear of the police, and several respondents said that they would choose suicide rather than go to jail. Breed saw fatalistic suicide as a result of the absence of freedom from unjust and arbitrary authorities, and he felt, therefore, that black suicide was fatalistic in nature.

Altruistic and Fatalistic Suicide in Chinese: Women of the Ch'ing Dynasty

Young (1972) examined suicide among Chinese women during the Ch'ing Dynasty in China (1644-1912). Chinese society was guided by an emphasis on familism rather than individualism and, as subordinate members of the family, women were expected to perform their roles according to the Confucian principles of filial piety and chastity. Among some groups, the notion developed that people should sacrifice their lives in order to preserve these values, and female suicide in the name of chastity began to appear from the 12th Century on.

At the *community level*, suicide as an act to preserve chastity inspired admiration, and the suicide was glorified. Some *clans*, however, disapproved of suicide for any cause, while other clans tacitly encouraged suicide to preserve chastity because of the honor it would bestow on the clan. *Families* almost uniformly disapproved of suicide for any cause.

Young noted that, during the Ch'ing Dynasty, some women chose suicide after their husband or fiancé had died, while others chose suicide because they felt that their hitherto unblemished reputation as chaste women had been damaged (perhaps by an attempted rape). Young saw both of these types of suicide as altruistic. Women also chose suicide rather than undergo a forced remarriage or after captive by armed rebel bandits. Young saw these suicides as fatalistic.

In a study of 626 cases of female suicide from selected local gazetteers, Young classified 59% of the suicides as altruistic and 41% as fatalistic. He noted that the methods used by the two types of suicide differed, with the altruistic suicides using hanging much more often than the fatalistic suicides (who used drowning and 'other' methods more often).

Fatalistic Suicide in American Youth

Peck (1983) identified Durkheim's concept of fatalism with Rotter's (1966) concept of an external locus of control. If people have an external locus of control, they think that their lives are determined by external forces beyond their control rather than being affected by how they themselves behave. Peck saw this attitude as similar to fatalism.

Peck examined suicide notes written by suicides under the age of thirty-five from a midwestern city and found evidence of an external locus of control (fatalistic thinking) in 33% of the notes. For example:

> I have attempted suicide because I could no longer take my father's sadistic nature. My mother was a "machine" - lacking in human emotions. This was the only way to get away from my parents. (Peck, 1983, p. 321)

Anomic Suicide in Japanese Youth

Iga and Ohara (1967) proposed that suicide in Japanese youth after the Second World War was anomic in nature. They argued that the components of anomie (egocentrism, goal-means discrepancy, emotional dependency, and insecurity) were prominent in Japanese youth and reinforced by the culture. For example, Japanese place great value on "rising in the world", and parents are highly competitive in striving to enhance their children's chances for getting ahead. On the other hand, channels for social mobility are limited. Firms often look at family background and influential connections before hiring staff, and the

government for a long time gave preference (almost exclusively) to graduates of Tokyo University. Thus, it is not easy for Japanese youth to realize the aspirations set up for them.

Iga and Ohara moved from this general level of discourse to studies of the individual by giving personality inventories to suicidal and nonsuicidal Japanese youth and noting that the suicide attempters obtained high scores on such scales as lack of cooperativeness, inferiority feelings and worries over possible misfortune. They interpreted these differences as indicating anomie in the suicidal Japanese youth.

Individuals

Finally, there are individuals. Might individual suicides be classified as anomic, egoistic, altruistic and fatalistic?

According to Lukes (1972), Durkheim was profoundly affected by the suicide of one of his student peers, Victor Hommay. Hommay had found adolescent life as he prepared to enter university empty and isolated, but the years at the university were enjoyable for him. He missed the company of his friends during his vacations and also, after graduation, when he taught in the provincial lycées. He worked hard on his thesis, which relieved to some extent the tedium of his days. Hommay died, perhaps killing himself, by falling from a window as he was about to leave to teach one day in 1886. Lukes notes that the description that Durkheim later gave of *egoistic* suicide closely fitted Hommay's life.

Faber (1970) used the suicides in the plays of Euripides to illustrate the nature of altruistic suicide as defined by Durkheim. For example, in *Alcestis*, Apollo is fond of Alcestis' husband, Admetus, and, when he finds out that Admetus is going to die at a young age, tries to persuade the Fates to spare him. The Fates agree to do so, but only if a substitute willing to die in his place can be found. Admetus cannot find anyone willing to die in his place, and so eventually his wife, Alcestis, volunteers to do so. Thus, Faber saw Alcestis' suicide as altruistic.

Incidentally, Faber notes that the motivations in the play are more complex than this simple analysis indicates. For example, Alcestis is shocked that her husband is willing to let her make this sacrifice and comes to feel great resentment toward him. She then tries to induce guilt through her death, and her self-sacrifice becomes tinged with unconscious aggression, which in turn suggests that her initial

offer to die in Admetus' place was not serious - that she hoped he would reject her offer.

Kaplan (1987) took all of the suicides discussed in Faber's book, from the plays of both Sophocles and Euripides, and classified them into Durkheim's typology. For Sophocles, Kaplan classified the suicides as follows:

Ajax	egoistic
Oedipus	egoistic
Jocasta	egoistic
Haemon	egoistic
Eurydice	egoistic
Deineira	egoistic
Heracles	anomic/egoistic
Antigone	anomic/egoistic

while, for the suicides in Euripides, Kaplan suggested the following classification:

Hermione	anomic/egoistic
Phaedra	anomic/egoistic
Evadne	altruistic
Iphigenia	altruistic
Menoeceus	altruistic
Macaria	altruistic
Polyxena	altruistic
Alcestis	altruistic

Kaplan also examined the six suicides mentioned in the Hebrew Bible and found that only four possibly fitted into Durkheim's types. The suicides of Abimelech (Judges 9: 54) and Saul's armor bearer (I Samuel 31: 5) were possibly altruistic, and the suicides of Ahitophel (II Samuel 17: 23) and Zimri (I Kings 16: 18) possibly egoistic. However, Kaplan felt that the suicides of Samson (Judges 16: 30) and Saul (I Samuel 31: 4, II Samuel 1: 6, and I Chronicles 10: 4) were the result of a differentiated <u>and</u> integrated relationship with their God, and Kaplan called such suicides <u>convenantal</u>. (The suicides of Saul's armor bearer and Zimri were also thought to be possibly convenantal.)

Criteria For Classifying Individual Suicides

Shulman's analysis of three famous suicides (see below) highlights two important problems which must be addressed before applying Durkheim's typology to individual cases of suicide. First, it is necessary to specify formal criteria for classifying a suicide into each of the four Durkheimian types. When I read Shulman's decisions on Hemingway, Woolf and Gogol, I found myself disagreeing with his placement, and the disagreement is because Shulman and I use different criteria.

A second decision is whether we are going to rely on objective, externally observable, criteria or subjective criteria. For example, a reliance on observable and external criteria might lead to social integration being operationalized in terms of such variables as married/divorced, attends church/does not attend, and lived in same community for ten years/moved in last ten years. In contrast, a reliance on subjective personal criteria would necessitate knowing how the individual felt about his or her social integration and social regulation. It is obvious that a person may appear to be socially integrated, possessing a family, friends and colleagues, yet feel alienated and alone.

An analysis provided by Iga and Ohara (1967) provides a starting point for this task. Iga and Ohara attempted to analyze the Durkheimian types of suicide for the suicide's value orientation, social restraints, suicidal motivation and psychological condition. For example, egoistic suicide was classified as follows:

Value orientation: individualistic values; nonconforming to societal values
Social restraints: weak
Major source of suicidal motivation: the desire for "meaning of life" which is obtainable only by social attachment; conflict between nonconforming values and unconscious wish for sympathy
Psychological condition: depression and melancholy

Iga and Ohara provide page numbers from Durkheim's book for each element in their description.

Another source of ideas for a Durkheimian classification comes from Van Hoesel (1983) who prepared a set of guidelines for classifying suicides into Durkheim's types. Van Hoesel obtained cases of suicides from two medical examiners and made summaries of the cases. An independent judge decided whether the cases might fit more than one typology of suicide, and 404 such cases formed the basis for the study. Undergraduate and graduate student judges then

sorted the set of cases into one or more of ten typologies, including Durkheim's. The concordance rate (percent agreement between judges) for Durkheim's typology was 79 percent, and 71 percent of the cases could be classified. None of the suicides were seen as altruistic, 5.7% as egoistic, 8.7% as fatalistic and 56.7% as anomic. Here are her guidelines.

(1) ***Egoistic Suicide***: This suicide stems from a lack of integration of the individual into society. People most likely to engage in egoistic suicide are not dependent enough on their group and are left too much to their private interests.

> Example: A 78-year-old black male was found in his apartment in a decomposed state. Neighbors reported they had not seen the man for three weeks but said this was normal since he usually "kept to himself." There was no known family or friends to contact for funeral arrangements. Autopsy results showed the man died of a self-inflicted gunshot wound and had a considerable amount of alcohol in his blood at the time of death.

Comment: This man was an older person living alone and clearly alienated from society. He had no friends or family and very limited contact with his neighbors. The fact that he lacked any meaningful social interaction would place him as an egoistic suicide.

(2) ***Altrustic Suicide***: This suicide is characterized by very high social cohesion. Unlike the individual who engages in egoistic suicide, the individual described in the altruistic category is overly integrated into a group and feels that no sacrifice, even that of one's own life, is too much if it would benefit the group as a whole.

> Example: A 23-year-old white male poured gasoline over himself and set himself on fire. Prior to this act he had given an anti-war speech and had said he would kill himself to show that "the peace movement was serious."

Comment: This would be an example of altruistic suicide because this man gave up his life for a cause he believed in.

(3) ***Anomic Suicide***: This occurs in a crisis situation. The person is not capable of dealing with the crisis in a rational manner and chooses suicide as a solution to the problem.

> Example: A 35-year-old white female was found hanging in the basement of her house. She had been very depressed after her husband left her two days prior to her death. About an hour before her death, he had visited her and talked about a divorce. She then called her mother and said she couldn't deal with the situation anymore and would kill herself.

Comment: This is an example of someone experiencing the loss of a loved one which clearly constituted a major crisis in her life. Other examples of an anomic suicide would be the person who experiences a sudden increase or decrease in wealth or the death of a loved one.

(4) ***Fatalistic Suicide***: These are suicides where people die by suicide because of excessive regulation. They feel that they have no freedom and no future.

> Example: A 27-year-old black male was found hanging from the top of his cell door in a state penitentiary. A week before his death he had received a 40-year sentence for his involvement in several armed robberies.

Comment: This man was in a situation where he had very little free choice. He was "choked by oppressive discipline" and had no freedom. (Van Hoesel, 1983, 64-66).

If one focusses solely on the definitions of social integration and social regulation given by Durkheim, then one is forced to look solely at the degree to which a suicide is integrated into and regulated by society. However, Durkheim chose particular labels for his four types. *Altruistic* goes beyond the concept of social integration and suggests that such suicides must intend to help others by their suicide. Altruistic suicide is, therefore, a sacrifice by a socially integrated person. *Fatalistic* indicates that people are overwhelmed by their fate and suggests, therefore, either that a socially determined fate requires their suicide or that suicide is an escape from too strong a regulation. The first type might be illustrated by the mass suicides of Americans in Guyana who were followers of Jim Jones (Kilduff & Javers, 1979) while the second type might be illustrated by the Jews in Austria who killed themselves rather than be sent away by the Nazis to concentration camps (Kwiet, 1984).

Therefore, we must look also at the psychological state of the individual and the motives behind the suicide. The sources of motivation and psychological condition from Iga and Ohara are relevant, and the descriptions given for anomic and fatalistic suicide from Van Hoesel are also relevant.

Famous Suicides

Shulman (1987) classified three famous suicides into Durkheim's types. Ernest Hemingway stressed courage and machismo. His heroes were boxers, soldiers and bull-fighters. His orientation was American individualism and his suicide egoistic.

Virginia Woolf was sexually abused as a child and frigid throughout her marriage. She had several episodes of psychiatric disturbance and was generally pessimistic in her outlook on life. Shulman saw her suicide as anomic.

Nikolay Gogol was politically conservative but often criticized by Russian nobility. After the death of a woman who had served as a mother-figure for him, he fell under the influence of a priest who convinced Gogol that his writings were sinful. Gogol fasted and prayed for forgiveness for his sins for three weeks and died of starvation in 1852. Shulman saw this as an altruistic suicide.

Lester (1991) presented a study of the lives of thirty suicides whose lives and deaths were sufficiently interesting to warrant a biography. Table 3 applies the concepts discussed above to their lives/deaths. The ratings of social integration and social regulation are based more or less on objective information about the social network and degree of regulation of each individual. The final classification uses the criteria both of Van Hoesel and of Iga and Ohara.

Nine of the suicides were classified as anomic, eight as anomic/egoistic, five as egoistic, five as fatalistic, two as fatalistic/egoistic and one as altruistic. All of the thirty suicides could be classified. The problem was not whether they fitted into the typology, but rather which type did they fit best.

As expected, given the problems that sociologists have had in distinguishing between social integration and social regulation (Johnson, 1965), the mixed label of anomic/egoistic was common. However, interestingly, two suicides had elements of both fatalistic and egoistic suicide. This possibility suggests the usefulness of the suggestion that social integration and social regulation should be viewed as two independent dimensions giving nine (three-by-three) cells in the cross-tabulated array if each dimension is scored as high, moderate or low.

As Johnson and others have suggested, altruistic and fatalistic suicide may not be common in modern society. However, almost all of the suicides considered in this analysis took place in countries where political and religious oppression are relatively absent. If I had been able to obtain suicides from nations where oppression is strong, then fatalistic and altruistic suicides might have been more common.

Table 3. The Classification of Thirty Famous Suicides[9]

	Integration	Regulation	Comment	Type
Craig Badialis	high	average	suicide to bring peace	altruistic
Povl Bang-Jensen	high	average	fired from UN felt persecuted	fatalistic
John Berryman	low	low	fears of failure obnoxious alcoholic	anomic
Bruce Clark	low	average	a failure	anomic
Hart Crane	low	low	a failure violent alcoholic	anomic
James Forrestal	high	?	schizophrenic forced resignation	anomic
Sigmund Freud	high	?	fled Nazis dying of cancer	fatalistic
Judy Garland	average	low	immature addict failing	anomic
Kenneth Halliwell	low	low	losing love a failure	egoistic/anomic
Tom Heggen	low	average	alone/needed mentor	egoistic
Ernest Hemingway	high	high	feared being placed in an institution	fatalistic
Christopher Jens	low	low	schizophrenic	egoistic/anomic
Paul Kammerer	mixed*	average	losing wife & lover accused of fraud	anomic/egoistic
Vachel Lindsay	low	low	schizophrenic	anomic
Ross Lockridge	high	average	obsessed with novel anticipating failure	anomic

[9] For biographies of these and other famous suicides, see ww.dravidlester.net. Mixed indicates that there are social ties, but not the ones which the individual most desires.

Jack London	average	average	loss/illness	anomic/egoistic
Yukio Mishima	high	low	tried to overthrow government	anomic
Marilyn Monroe	low	average	alone & rejected	egoistic
O H Mowrer	average	high	widower/depressed	egoistic
Cesare Pavese	low	average	alone	egoistic
Sylvia Plath	mixed	average	husband left her	egoistic/anomic
Freddie Prinze	average	low	addict/impulsive	anomic
Mark Rothko	mixed	low	distrustful/separated rom wife	egoistic/anomic
Gabrielle Russier	mixed	low	lost lover/threat of prison	fatalistic/egoistic
Victor Tausk	mixed	low	rejected fiancé forced into marriage	fatalistic
Sara Teasdale	low	average	alone/fear of illness	egoistic
Vincent van Gogh	low	low	disturbed	egoistic/anomic
Jody White	mixed	low	lost girl friend	egoistic/anomic
Virginia Woolf	high	low	feared insanity	fatalistic
Stephan Zweig	mixed	average	feared old age and Nazis	fatalistic/egoistic

Typical Tests of Durkheimian Hypotheses

Almost all sociological studies of suicide cite Durkheim and purport to be tests of his theory. It is interesting to examine whether such studies do in fact test Durkheim's theory. To do this, I will first examine a study that I consider to be a methodologically sound sociological study.

Breault (1986) sought to examine the effect of religious integration and family integration on suicide in the United States. Breault examined the effects of church membership, divorce, and inter-region migration on the suicide rates of the states (and of counties) at various times during the period 1933 to 1980 by means of multiple regression analyses. In general, suicide rates were higher where divorce rates were higher, inter-region migration higher, and church membership lower.

Breault noted that Durkheim argued that religion reduced the likelihood of suicide because it promotes shared values, intense interactions, and strong social bonds. First of all, we may note that this statement implies both social regulation (shared values) and social integration (intense interactions). Thus, we may question

Breault's assertion that he is examining the effects of social integration on suicide. This is especially relevant since most religions view suicide as immoral and thereby introduce regulatory elements.

Second, is there any evidence that those who are religious are in fact more socially integrated? The evidence that Breault cites in his paper is concerned only with whether religious behavior in a social group is associated with the rate of suicide. It would be useful, if not critically necessary, to show that those who attend church are more socially integrated than those who do not attend church, for we cannot simply assume that those who do not attend church engage in fewer activities which promote social integration. Given the large amount of attention given to the validity of official suicide rates, the failure to explore the validity of measures of social integration and social regulation is noteworthy.

Lester (1988) factor-analyzed a number of social variables over the states of America. He found that divorce rates, interstate migration and church membership all loaded on the same factor., However, the variables of longitude (east-west), population density and the strictness of state handgun control laws also loaded on this factor. Therefore, because of the complex associations between social variables, we cannot always be sure which is the critical social variable in the association with (and more importantly the cause of) our target variable, in this case the rate of suicide.

Sociologists, of course, have to rely on observable behaviors that can be measured in the society. They cannot concern themselves with what is going on in the mind of the person sitting in the church. But we know that, in some cases, the observable behavior does not always indicate what we have assumed about it. I sat in church services daily for many years, during which I became more and more alienated from Christianity, eventually declaring myself an atheist. Was I more integrated (and regulated) during those days of church attendance than during the subsequent days of non-attendance?

The problem becomes more apparent when Breault discusses Durkheim's assertion that Jews are more socially integrated than Roman Catholics who, in turn, are more socially integrated than Protestants. Research on religion and suicide rates has not always produced results consistent with this assertion of Durkheim's. Perhaps Durkheim's theory is incorrect?

Here we confront a common problem in sociological research, which finds a

parallel in psychological research. Just as clinical psychologists feel free to assert what is going on in the mind of their patient (after all, they are experts), sociologists often feel free to assert what is going on in a particular social group (after all, they are experts too). More skeptical commentators would prefer to see evidence that Jews are more socially integrated *because of their religion* than are Roman Catholics, and this evidence cannot be tautological. The evidence from suicide rates cannot be used to prove the difference in social integration which is then used to explain the suicide rates.

Then again, would we not predict that Jews should have high rates of altruistic suicide because of their high level of social integration, while Protestants (or perhaps atheists) should have high levels of egoistic suicide? Breault, himself, adopts Johnson's position, discussed above, that altruistic suicide is not generally applicable to modern society.

The fact then that Breault's analyses show that church membership is associated with suicide rates over regions of the United States is consistent with Durkheim's theory *only if* we can assume that church membership is a measure of social integration.

The use of other social variables to test Durkheim's theory appears to be even less sound. For example, Stack (1978) used the participation of females in the labor force in the states of the USA as a measure of status integration which is, in the theory of Gibbs and Martin (1974), related to social integration. Using a data set collected by Lester (1988), it is easily shown that female participation in the labor force is strongly to related to male participation in the labor force, and so is not of special interest since it is apparently related to the general level of participation in the labor force. Furthermore, Lester showed that female participation in the labor force was not loaded on a cluster of variables which had high loadings with divorce rates, interstate migration rates and (negatively) church attendance (apparently tapping *social disintegration*), but instead was related to a cluster of variables apparently tapping a Southern subculture. Thus, there is no empirical evidence that female participation in the labor force is related to Durkheim's concepts.

Durkheim's theory has been used to explain a variety of sociological correlates of suicide rates in a manner similar to that described above. An alternative method which provides some construct validity for the operational measurement of social integration was demonstrated by Lester (1988) who

subjected 28 social indicators measured for the forty eight continental states of America to a factor analysis. Seven independent factors (or clusters of social indicators) were identified, one of which had high loadings (greater than 0.70) from the divorce rate and the percentage of divorced persons, interstate migration, and church attendance (negatively). These variables appear to tap social integration, and their association on one of the factors gives them construct validity as a measure of social integration. Scores on this factor were highly correlated with suicide rates. Interestingly, no factor emerged which appeared relevant to social regulation, but the output of a factor analysis depends upon which variables are included, and perhaps no social indicators were included which assessed social regulation as distinct from social integration.

The Larger Picture

Two critiques of the sociological approach to the study of suicide have appeared (Moksony, 1990; Taylor, 1990) which were remarkably congruent. They both suggest that sociologists have failed to demonstrate the influence of *the society* on suicide. Taylor (1990) noted that Durkheim 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 casual 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 studies of the spatial differences in suicide rate over the different areas of cities. The early studies of this type 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 of suicide 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?

One set of studies compares the suicide rates of immigrant groups to the suicide rates in their home nations. For example, Sainsbury and Barraclough (1968) found that the suicide rates of immigrant groups to the United States were in the same rank order as the suicide rates of the home nations, and Lester (1972) found the same result for Australia. This suggests that these individuals from different nations have been shaped by their home nations in the years before they emigrated so that the pattern of suicidal behavior characteristic of their nation is carried with them to their new home.

In a study noted above, Lester (1988) 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 United States. Lester's study does not imply that any of these variables is more important than the others in this association. It also does not imply that these 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 areal 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. Lester (1995a) documented that the higher the divorce rate in the American states, the higher the suicide rates of the single, married, divorced and widowed.

Angyal (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 processes of the person's mind. Similarly, for the 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 the 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.

If we could classify a sample of modern societies according to high level system principles and then compare the suicide rates of the countries 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.

Thoughts on Anomic Suicide

Anomie has become a major concept in sociology, and it has assumed great importance in explaining the occurrence of suicide in societies. According to the *New World Encyclopedia*[10], in general anomie refers to a condition of malaise in individuals characterized by an absence (or diminution) of norms or values. It is seen as a state of normlessness and, at the individual level, feelings of alienation and lack of purpose. This is the definition commonly attributed to Durkheim (1897).[11]

Stack (personal communication) has suggested that there may be aspects of greed in anomie and selfishness in egoism, and this is consistent with the ideas of Ginsberg (see above). Given that I have proposed a multiple self theory of personality (Lester, 2007, 2015), I like the proposal by Tomasi (2000) that egoistic is an act in which the individual self overwhelms the social self.

Merton (1949) offered a rather different definition, defining anomie as the discrepancy between common social goals and the legitimate means for obtaining these goals. The *innovator* adopts the goals of the society but uses unacceptable means to attain these goals. The *ritualist* follows the means but loses sight of the goals (as in the inflexible bureaucrat). The *retreatist* abandons both the goals and the means (for example, the alcoholic or drug addict). The *rebel* rejects both the goals and the means but devises new goals and means (as does the terrorist). The *conformist* accepts both the goals and the means. Merton's typology, therefore, would provide for five types of anomic suicide.

A third definition of anomie is provided by Weber (1922-1923). Orru (1989) noted that Weber classified philosophies according to whether they aimed for mastery of the world (*asceticism*) or rejection of the world (*mysticism*) and whether they were *external* (addressed to the outside world) or *internal* (addressed to the inner self). Protestant sects illustrate inner-worldly asceticism, medieval monastic orders other-worldly asceticism, the Confucian literati inner-worldly mysticism

[10] www.newworldencyclopedia.org/entry/Anomie
[11] Stack (personal communication) has suggested that there may be aspects of greed in anomie and selfishness in egoism.

and Buddhist monasteries other-worldly mysticism. Weber's concept of anomie is tied to religious rejections of the world which he viewed as leading to anomie. Anomie is the absence of ultimate guiding values and ethical standards (and the absence of all law). It can be found in mystic Hinduism.

Orru saw previous definitions of anomie as resulting in four types: (1) the absence of institutional norms (Hobbes), (2) the absence of ultimate ethical values (Weber), (3) goals and aspiration are unrestrained and deregulated (Durkheim), and (4) a disjunction between goals and institutionalized means (Merton). Despite his focus in his paper on Weber's views, Orru argued that only types (3) and (4) are found in societies.

Atteslander (2007) offered his own definition of anomie:

> Anomie indicates an anarchic state of crisis-prone uncertainty affecting a broad segment of the population. Cultural interpretative models lose their function. Social integration within a community ceases. Previously valid behavioral norms as well as personal competence disintegrate. Goal-oriented action becomes more and more impossible for both the individual and the collective. Results include a general lack of direction and uncertainty in behavior. The intensity of social or cultural conflict increases. (p. 489)

This definition, however, confounds social regulation with social integration as conceived by Durkheim.

Puffer (2009) noted that many commentators on anomie view anomia as equivalent to normlessness. Puffer noted that that is **not** the way in which Durkheim conceived of anomie. Puffer first noted that the translations of Durkheim were accurate. At the macro level, Durkheim saw anomie as a result of economic conditions, in particular, drastic fluctuations in the business cycle, informally known as boom or bust. These often leaves individuals, at the extremes, thrust into poverty or riches. Anomie results from a lack of regulation or laws regarding the economy.

At the micro (individual) level, the sudden swings in fortune, both good and bad, can set up a fatal chain of events for the individual.

> Individuals experiencing sudden and extreme good fortune can now have anything they want. Nevertheless, human wants are insatiable, and wanting

> more torments individuals, making them suffer. On top of it, eventually, they will experience a check of some kind, which is the more unbearable because of the recent experience of having no checks at all. The individual does not know how to reign in the desires, which go ever more out of control. Until the person learns those controls or how to live at that new economic level, that person suffers…..At the other end of the scale, the person suddenly rendered poor through bankruptcy must learn how to reduce desires even further than previously. The suddenly poor person must learn how to introduce more controls or regulation over spending…..Durkheim astutely observes that both the rich and the poor have with their wealth or poverty since the beginning of time. They know what the limits are and how to control their desires at either economic level……However, the person who enters either state precipitously does not have this knowledge and consequently is vulnerable to self-destruction. (pp. 6-7)

TenHouten (2016) defined two types of anomic suicide. In *intentional anomic suicide*, there is a disregard for the norms of the society, and the accompanying emotions are anger, disgust contempt and pride. In *unintentional passive anomic suicide*, the individual is unsure of which norms to follow, and this type is accompanied by the emotions of surprise, fear, sadness and disappointment. TenHouten hypothesized that both type of anomie may result in murder (premeditated for the intentional anomic person) and unpremeditated (for the passive amonic individual), but suicides are more likely in the passive anomic person.

TenHouten noted also that Durkheim proposed the existence of mixed types of suicide, such as egoistic/anomic (agitation and apathy mixed), anomic/altruistic (exaggerated effervescence) and egoistic/altruistic (melancholy combined with moral fortitude) (Durkheim, 1960, p. 293).

Atteslander proposed five different types of anomie.

Transitional Anomie

This is found as society evolves from primitive to traditional to modern society. If the transition occurs quickly, the crisis can be severe, and it may be useful to distinguish between *acute anomie* and *chronic anomie* This perhaps characterizes the situation of aboriginal societies in the modern world, as found in the United States and Taiwan.

Transformational Anomie

This occurs as societies change political state, from communist to liberal, autocratic to democratic, and planned to market-oriented (or vice versa). This occurred after 1989 when Eastern Europe, and especially the Baltic nations, changed from Soviet domination to democratic. Many in those societies faced poverty, feared the loss of jobs, and experienced rising crime rates.

Depressive Anomie

This is found during times of profound economic recessions and depressions, with accompanying high rates of unemployment. It can also occur when an important political leader ("the father of the nation") is lost.

Modernization Anomie

This occurs when modernization occurs rapidly, unlike the slow process that took place over centuries in Europe. There is often a lack of preparation for confronting the new ideas and products, and poverty and unemployment often result.

Conflict Anomie

This occurs during civil wars and inter-nation wars, as when Yugoslavia broke apart in the 1990s or during the civil war Sri Lanka.

Atteslander mentioned suicide as an outcome during times of depressive anomie, but anomic suicide may also occur during the other four types, thereby giving us five types of anomic suicide.

Discussion

It can be seen that suicidologists have been lax in their discussions of the role of anomie in suicide. There are clearly many definitions of anomie and, therefore, many types of anomic suicide. It would be of great interest in the future for a sample of suicides (or suicidal individuals) to be classified into these many types.

Thoughts on Fatalistic Suicide

Marson and Lillis (2019) criticize Durkheim's conception of fatalism in his discussion of suicide. Durkheim suggested that infertility and slavery were catalysts for fatalistic suicide. Marson and Lillis claimed that this is incorrect and that poverty and poor health were, instead, good examples of fatalistic suicide.

Durkheim described fatalistic as resulting from excessive regulation with the future pitilessly blocked and passions violently choked by oppressive discipline. Marson and Lillis note that research data suggest that infertility can lead to depression in both husband and wives (Fatoye, et al., 2008; Chachamovich, et al., 2010). In a time-series study of the United States from 1933-1984, Lester and Yang (1992) found that the higher the fertility, the lower the suicide rate of those aged 15-44, for whites and non-whites and for men and women.

For slavery as an example of fatalistic suicide, Durkheim cited Corre (1889), but Marson and Lillis saw Corre's description of suicide in slaves as more like anomic suicide. Marson and Lillis also noted that slave populations were varied, involving many ethnic groups. There were, obviously, no data available on the suicide rate among those ethnic groups in Africa. In addition, slave masters may have labelled murders of slaves as suicides, thereby distorting the records. Marson and Lillis argued that all four types of suicide may have occurred among slaves, but that argument does not rule out that some slaves engaged in fatalistic suicide.

In modern society, Marson and Lillis consider that fatalistic suicide may be found in those with declining health and especially in those with chronic incurable illness and permanent physical disability, conditions which are increasingly common today as physicians keep alive people who would have died earlier in the past. Similarly, fatalistic suicide may be found in those who are poor since they are limited in social migration and social mobility. They are, therefore, likely to remain in their unpleasant conditions with no hope of change. For example, Haw, et al. (2006) documented a high rate of suicide among the homeless.

In an interesting proposal, Young (1972) classified altruistic and fatalistic suicides in terms of motive: *in order to* and *because of*. This produced four types of suicide.

Altruistic – in order to	value-rational (suicide as a means to a goal)
Altruistic - because	traditional (e.g., after a transgression)

Fatalistic – in order to	purpose-rational (e.g., to escape after a forced marriage)
Fatalistic – because	affectual (with strong fear or anger)

This may be a useful dichotomy to better understand both fatalistic and altruistic suicide.

Besnard (1988) suggested a redefinition of the anomie-fatalism dimension in terms of widening or narrowing the field of opportunities. Anomie involves indeterminate goals and unlimited aspirations while fatalism involves closed horizons. Besnard also suggested a second dimension – whether there is a chronic structural situation or an acute crisis resulting from a sudden change.

Does Modern Society Increase Fatalism?
(This section was written by Bob Lew)

At the present time, life is regulated in many ways from the kindergartens we chose for our children, to schools, universities, disciplines to study, career paths to pursue, and so on. If you deviate from the path, you will be out of the mainstream society because of the highly competitive job market, economic conditions, boom-bust financial markets, globalisation, and the high cost of living especially in major cities. People who are disadvantaged physically or mentally (or psychologically) will not be able to compete on a fair basis with others. People who are born rich are already one step ahead.

This theme is getting more prominent in the past 40 years. Durkheim wrote in the middle of the Industrial Age in the 1880s. We are about 120 years later now, but modernization has moved very fast in the past decade, with the internet, smaller families, the rising cost of living, less time for parenting, and working mothers and exam/school pressure all creating a more stressful lifestyle, more depression and poor mental health, Is basic human well-being improving?

Many suicides may result from the current lifestyle or expectations from society. If one does not fit in and obtain a decent living, there is little one can do, and this is becoming a world-wide phenomenon in some of the world's leading cities. Those who cannot enter the system successfully may feel marginalised, discriminated against, alienated, and frustrated, experiencing, as a result, severe stress, depression. etc. This may result in fatalism and, in the extreme, fatalistic suicide.

Thoughts on Altruistic Suicide

As Stack (2004) noted, there are three types of altruistic suicide. In *obligatory altruistic suicide* regards suicide as a duty. Cultural norms demand that the individual dies by suicide in the situation. The Hindu custom of sati, in which widow dies on the funeral pyre of the husband, is an example of this, as is the custom of sick elderly in previous eras dying by suicide to prevent being a burden to their families.

Optional altruistic suicide is not a duty but, in specific situations suicide is supported by public opinion. Examples can be found in previous eras and in primitive tribes.

> The Yuit Inuit partake in altruistic obligatory, assisted suicide after a suicidal member of the tribe makes three requests. Motives include poor health or infirmity, or sometimes trying to magically save the life of an ill son. In such a hunting society, to become old and dependent on others for food may put the survival of the group at risk, but this is not necessarily the case. Suicide is sometimes seen as a sign of courage and is respected by the Yuit. The victim is taken to a killing place where relatives either shoot the victim with a rifle or hang him at his request. (Stack, 2004, p. 13)

Acute altruistic suicide would seem to be best illustrated by soldiers in battle sacrificing themselves to save their comrades, such as falling on a grenade tossed into the group. [12]

Altruistic suicides differ in whether they seek publicity (as in self-immolations as protests) or not and in whether they are oriented toward one person or small group (such as the family) or toward larger groups (such as the society as a while). Prophetically, Durkheim observed that, if a man committing an altruistic suicide is ready to sacrifice his own life, then he will not hesitate to sacrifice the life of somebody else, and this has been illustrated by the suicide bombings of the late 20th and early 21st Centuries.

Conclusions

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[12] Stack gives an example here of a person dying by suicide in order to achieve nirvana or join a pleasant world after death, but there appears to be no altruistic motive in this.

It is not easy to draw conclusions from this exploration of developments in Durkheim's theory of suicide some 150 years ago, at least not positive conclusions. It would appear that Durkheim's book has become a Bible. There have been criticisms of his ideas, but his ideas still persist. Suicidologists still talk about the four types of suicide that Durkheim described. We have seen that, even if we stick to these four types, there have been many subtypes proposed which, unfortunately, are ignored. We have seen that no sociologist has ever tested Durkheim's ideas in a methodologically sound manner. For example, no suicidologist has ever attempted to measure the rate of egoistic suicide or anomic suicide. No suicidologist has ever produced evidence that divorced people are less socially integrated than married people.

Yet, many different subtypes of the four Durkheimian types of suicide proposed, and they would appear to have great merit in describing individual suicides. Van Hoesel classified suicides into the four basic types. What would be the results if a sample of suicides was classified into all of the subtypes that have been proposed. Of course, then we would be leaving sociology and moving into psychology but, as suicidologists, we have no need to adhere to academic boundaries.

References

Abrutyn, S., & Mueller, A. S. (2014). The socioemotional foundations of suicide. *Sociological theory, 32,* 327-351.

Angyal, A. (1965). *Neurosis and treatment*. New York: Wiley.

Atteslander, P. (2007). Social transformation in the age of globalization. *International Review of Sociology*, 17, 489-494.

Bearman, P. S. (1991). The social structure of suicide. *Sociological Focus, 6,* 501-524.

Besnard, P. (1988). The true nature of anomie. *Sociological Theory, 6*(1), 91-95.

Breault, K. D. (1986). Suicide in America. *American Journal of Sociology, 92,* 628-656.

Breed, W. (1970). The Negro and fatalistic suicide. *Pacific Sociological Review, 13,* 156-162.

Breed, W. (1972). Five components of a basic suicide syndrome. *Life-Threatening Behavior, 2,* 3-18.

Cavan, R. S. (1928). *Suicid*e. Chicago: University of Chicago.

Chachamovich, J. R., Chachamovich, E., Ezer, H., Cordova, F.P., Fleck, M.M., Knauth, D.R. & Passos, E. P. (2010). Psychological distress as predictor of quality of life in men experiencing infertility. *Reproductive Health, 7*(3), 71–9.

Corre, A. (1889). *Le crime en pays créoles: Esquisse d'ethnographie criminelle* [Crime in creole countries: Sketch of criminal ethnography]. Paris, France: Lyon A. Storck.

Cummings, E. (1963). Further thoughts on the theory of disengagement. *International Social Science Journal, 15,* 377-393.

Czabański, A. (2024). Spontaneous altruistic suicides on the battlefield. *Suicide Studies, 5*(3), 96-107.

Devereux, G. (1981). *Mohave ethnopsychiatry*. Washington, DC: Smithsonian Institution.

Dohrenwend, B. P. (1959). Egoism, altruism, anomie and fatalism. *American Sociological Review, 24,* 468-473.

Dollard, J., Doob, L., Miller, N., Mowrer, O., & Sears, R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.

Douglas, J. D. (1967). *The social meanings of suicide*. Princeton: Princeton University Press.

Durkheim, E. (1897). *Le Suicide*. Paris, France: Felix Alcan.

Faber, M. D. (1970). *Suicide and Greek tragedy*. New York: Sphinx.

Fatoye, F. O., Owolabi, A. T., Eegunranti, A. B. & Fatoye, G. K. (2008). Unfulfilled desire for pregnancy. *Journal of Obstetrics & Gynaecology, 28*, 408–409.

Gibbs, J. P. (1994). Durkheim's heavy hand in the sociological study of suicide. In D. Lester (Ed.) *Emile Durkheim: Le Suicide one hundred years later*, pp. 30-74. Philadelphia, PA: Charles Press.

Gibbs, J. P., & Martin, W. T. (1964). *Status integration and suicide*. Eugene, OR: University of Oregon Press.

Ginsberg, R. B. (1966). Anomie and aspirations. *Dissertation Abstracts, 27A*, 3945-3946.

Haw, C, Keith Hawton & Deborah Casey. (2006). Deliberate self-harm patients of no fixed abode. *Social Psychiatry & Psychiatric Epidemiology 41,* 918-925.

Henry, A. F., & Short, J. F. (1954). *Suicide and homicide*. Glencoe, IL: Free Press.

Hitchcock, J. T. (1967). Fatalistic suicide resulting from adaptation to an asymmetrical sex ratio. *Eastern Anthropologist, 20,* 133-142.

Iga, M., & Ohara, K. (1967). Suicide attempts of Japanese youth and Durkheim's concept of anomie. *Human Organization, 26,* 59-68.

Johnson, B. D. (1965). Durkheim's one cause of suicide. *American Sociological Review, 30,* 875–886.
Kaplan, K. J. (1987). Jonah and Narcissus. *Studies in Formative Spirituality, 8*(1), 33-54.
Kilduff, M., & Javers, R. (1979). *The suicide cult*. New York: Bantam.
Kwiet, K. (1984). *The ultimate refuge*. Leo Baeck Institute Yearbook, 29, 135–168.
Lester, D. (1972). Migration and suicide. *Medical Journal of Australia, 1,* 941–942.
Lester, D. (1987). Social deviancy and suicidal behavior. *Journal of Social Psychology, 127,* 339-340.
Lester, D. (1988). A regional analysis of suicide and homicide rates in the USA. *Social Psychiatry & Psychiatric Epidemiology, 23,* 202–205.
Lester, D. (1989). *Suicide from a sociological perspective*. Springfield, IL: Charles Thomas.
Lester, D. (1991). The study of suicidal lives. *Suicide & Life-Threatening Behavior, 21,* 164–173.
Lester, D. (1992). A test of Durkheim's theory of suicide in primitive societies. *Suicide & Life-Threatening Behavior, 22,* 388–395.
Lester, D. (1994). *Patterns of suicide and homicide in America*. Commack, NY: Nova Science.
Lester, D. (1995a). Is divorce an indicator of general or specific malaise? *Journal of Divorce & Remarriage, 23,* 203-205.
Lester, D. (1995b). Thwarting disorientation and suicide. *Cross-Cultural Research, 29,* 14-26.
Lester, D. (1997a). The role of shame in suicide. *Suicide & Life-Threatening Behavior, 27,* 352-361.
Lester, D. (1997b). Note on a Mohave theory of suicide. *Cross-Cultural Research, 31,* 268-272.
Lester, D. (1999-2000). The social causes of suicide. *Omega, 40,* 307-321.
Lester, D. (2007). A subself theory of personality. *Current Psychology, 26*, 1-15.
Lester, D. (2015). *On multiple selves*. New Brunswick, NJ: Transaction.
Lester, D. (2024). Collectivism-individualism and suicide. *Suicide Studies, 5*(3), 106-116.
Lester, D., & Tartaro, C. (2002). Suicide on death row. *Journal of Forensic Sciences, 47,* 1108-1111.
Lester, D., & Yang, B. (1992). Fertility and suicide rates. *Journal of Biosocial Science, 24,* 97-101.

Lester, D., & Yang, B. (1997). *The economy and suicide*. Commack, NY: Nova Science.

Lukes, S. (1972). *Emile Durkheim*. New York: Harper & Row.

MacPherson, C., & MacPherson, L. (1985). Suicide in Western Samoa. In F. X. Hezel, D. H. Rubinstein, & G. M. White (Eds.) *Culture, youth and suicide in the Pacific*. Honolulu, HA: East-West Center.

MacPherson, C., & MacPherson, L. (1987). Toward an explanation of recent trends in suicide in Western Samoa. *Man, 22,* 305-330.

March, J., & Simon, H. (1958). *Organization*. New York: Wiley.

Maris, R. W. (1969). *Social forces in urban suicide*. Homewood, IL: Dorsey.

Marson, F. M., & Lillis, J. P. (2019). Durkheim's greatest blunder. *Journal of Sociology & Social Welfare, 41*(2), 155-177.

McCulloch, J. W. & Philip, A. E. (1972). *Suicidal behavior*. Elmsford, NY: Pergamon.

Merton, R. K. (1949). *Social theory and social structure*. New York: Free Press of Glencoe.

Moksony, F. (1990). Ecological analysis of suicide. In D. Lester (Ed.) *Understanding suicide* (pp. 121-138). Philadelphia: Charles Press.

Naroll, R, (1963). *Thwarting disorientation and suicide*. Unpublished discussion paper, Northwestern University.

Naroll, R. (1969). Cultural determinants and the concept of the sick society. In S. C. Plog & R. B. Edgerton (Eds.) *Changing perspectives in mental illness*, pp. 128-155. New York: Holt, Rinehart & Winston.

Ofstein, D. H., & Acuff, F. G. (1979). Durkheim and disengagement. *Free Inquiry in Creative Sociology, 7*(2), 108-111.

Orru, M. (1989). Weber on anomie. *Sociological forum*, 4, 263-270.

Parsons, T. (1958). *The structure of social action*. Glencoe, IL: Free Press.

Parsons, T. (1966). *Societies*. Englewood Cliffs: Prentice-Hall.

Peck, D. L. (1983). The last moments of life. *Deviant Behavior, 4,* 313-332.

Pescosolido, B. A. (1994). Bringing Durkheim into the Twenty-First Century. In D. Lester (Ed.) *Emile Durkheim: Le Suicide 100 years later*, pp. 264-295. Philadelphia: Charles Press

Pescosolido, B. A., & Georgianna, S. (1989). Durkheim, suicide and religion. *American Sociological Review, 54,* 33-48.

Powell, E. H. (1958). Occupation status and suicide. *American Journal of Sociology*, *23,* 131-139.

Rootman, I. (1973). A cross-cultural note on Durkheim's theory of suicide. *Life-Threatening Behavior, 3,* 83-94.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*(1), 1-28.

Sainsbury, P., & Barraclough, B. M. (1968). Differences between suicide rates. *Nature, 220,* 1252.

Schmid, C. F. (1928). *Suicides in Seattle, 1914-1925*. Seattle: University of Washington.

Shulman, E. (1987). A Durkheimian analysis of three famous writers. In R. Yufit (Ed.) *Proceedings of the 20th Annual Conference*. Denver: American Association of Suicidology, 449-450.

Stack, S. (1978). Suicide. *Social Forces, 57*, 644–653.

Stack, S. (2004). Emile Durkheim and altruistic suicide. *Archives of Suicide Research, 8,* 9-22.

Taylor, S. (1990). Suicide, Durkheim and sociology. In D. Lester (Ed.) *Understanding suicide* (pp. 225–236). Philadelphia: Charles Press.

Tomasi, L. (2000). Emile Durkheim's contribution to the sociological explanation of suicide. In. W. S. F. Pickering & G. Walford (Eds.) *Durkheim's Suicide*, (pp. 11-21). London, England: Routledge.

Van Hoesel, F. M. T. (1983). *An empirical typology of suicide*. Master's Thesis, American University, Washington, D.C.

Weber, M. (1922-1923). *Gesammelte Aufsätze zur Religionssozologie*. Tübingen: J. C. B. Mohr.

Weber, M. (1947). *The theory of social and economic organizations*. New York: Oxford University Press.

Whitt, H. P. (1969). The lethal aggression ratio and the suicide -murder ratio. *Dissertation Abstracts, 29B*, 2624-2625.

Young, L. C. (1972). Altruistic suicide. *Sociological Bulletin, 21*(2), 103-121.

Yang, B., & Lester, D. (2024). Anomie and suicide. *Suicide Studies*, *5*(2), 71-84.

Suicide Studies, 2024, 5(4), 54-109

A REVIEW OF RESEARCH ON SUICIDE IN 2000

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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 3.5 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.

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 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 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.[13]

The reviews of scholarly research published in 1998 and 1999 are published (Lester, 2024a, 2024b). This is the review for 2000. To indicate where I searched, here is a list of abstracting services used.

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[13] My positive opinion of qualitative essays is illustrated by the essays I have written on more than 75 famous suicides (www.drdavidlester.net).

Source	1998	1999	2000
Sociological Abstracts	93 items	106	55
Criminology Abstracts	78 items	94	80
Psychological Abstracts	401 items	460	388

Studies of Suicide Rates and Suicidality

Regional Studies

Cutright and Fernquist (2000a) looked at male suicide rates in 20 developed countries, for seven age groups (15-24 up to 75+) and seven time periods (1955-1959 up to 1985-1989). The variables studies included female labor force participation, income inequality, collectivism, population size and marital status. The results, therefore, are hard to summarize (or make sense of). Cutright and Fernquist summarized their results partly as:

> The hypothesis that the impact of societal integration measures such as female labor force participation will weaken as populations adjust to new sex roles was not supported. (p. 166)
>
> The hypothesis that certain determinants of suicide rates have changed over the period between 1955 and 1989 was rejected, as was the hypothesis that there are effects of period, net of measured predictors. The determinants of suicide rates do vary by age, with the culture of suicide playing an especially important role in the 35–64 age group. (p. 148)

Their study was weakened by their operational definitions of some of the variables. For example, culture was measured by region.

In a sample of 37 countries, Mayer (2000) that the male suicide rate (but not the female suicide rate) was negatively associated with a life expectancy index. Suicide rates were not associated with education, GDP, human development indices and gender-related development indices. In multiple regressions, both male and female suicide rates were predicted by the life expectancy index (negatively) and the gender-related development index positively. For 26 countries, both male and female suicide rates were positively associated with a measure of gender empowerment.

In samples of 17 to 31 developed countries, Johnson, et al. (2000a) found that the suicide rate of 15-24-year-olds was associated with the country's divorce rate (only for the male suicide rate) and the firearm suicide rate. Alcohol consumption was not associated with the suicide rates, whereas firearm available was associated with the male and female suicide rates and the firearm suicide rate.

Lester (2000i) found that the ratio of female/male suicide rates in 50 countries in 1990 was not associated with the year of women's suffrage.

In a sample of 9 European countries, Fernquist and Cutright (2000) claimed to find that male/female egalitarianism (e.g., female participation in the labor force, percent of tertiary education students that are female) impact male and female suicide rates and the proportion of suicides that are male. However, they statistically modified most of the variables, raising the suspicion that the results would have been very different had they used the standard measures of the variables. Both male and female suicide rates were positively associated, for example, with their measures of female labor force participation and egalitarian political attitudes. The ratio of male to female suicides (numbers, not rates) was associated with income inequality and females at college.

In a study of 72 countries, Lester (2000g) factor analyzed a set of socioeconomic variables and identified three factors, labeled: economic development, Islam and Eastern Block countries. Suicide rates were positively associated with factor scores for economic development and the Eastern Block. When all of the predictor variables were placed into a backward multiple regression, suicide rates were predicted by only female participation in the labor force.

In a study of 37 countries, Kirkcaldy and Furnham (2000) used data from personality tests on samples in those countries to explore their associations with suicide rates. The suicide rate was negatively associated with national scores for extraversion, but not with scores for subjective well-being, positive affect, negative affect or neuroticism.

In a sample of 20 developed countries, Cutright and Fernquist (2000b) found that the female age-specific suicide rate for most age groups was associated with female labor force participation and the divorce rate. Other variables impacting the suicide rates were fertility, religious involvement and suicide acceptability.

Lester (2000d) found that the incidence of suicidal symptoms for primary health care patients did not predict national suicide rates in a sample of 10 countries.

In a sample of 35 countries, Pritchard and Baldwin (2000) found that the suicide rates of elderly men (>75) in Catholic and Orthodox countries were proportionally higher (elderly suicide rate/general suicide rate), and the same was found, but to a lesser extent for the suicide rates of elderly women.

Regions within a Country

Lester (2000b) found that indices of democratic rights and local autonomy in the 26 Swiss cantons were not associated with the suicide rates of the cantons.

Congdon (2000) studied the variation of suicide rates in the 33 boroughs of London (England). He found that deprivation (unemployment, household renting and semi or unskilled workers) and anomie (population mobility, one person households and percent not married) were associated with the suicide rate of the boroughs. These two variables apparently also accounted for changes in the suicide rates in the boroughs over time (1979-1994).

Nomiya, et al. (2000) studied the prefectures of Japan and found that the suicide rates were predicted by migration and per capita income (negatively) and percent elderly (positively) while measures of urban disorganization, population and density were not predictors. They suggested that population depletion rather than social disorganization predicted suicide rates in Japanese prefectures.

Lester (2000e), in a study of 296 Standard Metropolitan Statistical Areas in the United States, found that suicide rates were lower in those regions in which church membership was higher, Roman Catholics more common, and religious homogeneity greater.

Time-Series Studies

Isacsson (2000) studied the time-series suicide rate in Sweden for 1978-1996. The suicide rate declined over time and was negatively associated with the rate of prescribing antidepressants, but was not associated with alcohol consumption or unemployment. Similar trends were found in other Scandinavian countries over a much shorter period of time (1990-1996).

Fernquist (2000a) looked at the suicide rates for children (aged 10-14) for 1947-1994 in the United States and data on problem drinking in the family from national surveys (with missing data for some years). The child suicide rate was associated with problem drinking, and parental divorce, but not church attendance.

In a poorly presented paper, Mäkinen (2000) examined changes in the suicide rate in 28 Eastern-bloc countries from 1984-1989 to 1989-1994. Alcohol consumption, democratization, general stress (defined as mortality/life expectancy) and social disorganization predicted changes in the suicide rate for 16 of the 28 countries. It is not clear whether Mäkinen means changes from one period to the other or within the periods and what were the differences between the 16 countries that apparently showed an impact and the 12 that did not.

Lester (2000f) found that he social correlates of suicide rates by each method over time in the United States from 1950 to 1985 were very different, suggesting that suicides by different methods may not be sociologically identical behaviors. Total suicide rates were significantly associated with marriage, birth, and divorce rates. This pattern was found only for suicide rates by firearms or explosives. For suicide rates by solids or liquids all three regression coefficients were negative, and for suicide by hanging or strangulation all three coefficients were positive.

Research on Distal Variables

Princess Diana's Death

Hawton, et al. (2000) found an increase in suicides (and attempted suicides) in the month after Princess Diana's funeral, especially in females and in those aged 25-44.

Season and Climate

For suicides in a tropical/subtropical region of Australia, Cantor, et al. (2000) found a winter trough for males and an autumn trough for females. No impact on these troughs was found for rurality, distance from the equator, employment status, or methods of suicide. Post-mortem blood alcohol levels were higher in spring and summer.

In Hong, Yan (2000a) reported a summer peak in suicides (but it looks more like a December trough), significantly for men and woman and for those over the age of 55. Regarding weather, monthly maximum temperature was positively associated with the suicide rate but significantly only for those aged 35-44, while monthly barometric pressure was negatively associated with the suicide rate. Other variables were not associated with the suicide rate (monthly minimum temperatures, dewpoint, cloud cover, windspeed, and rainfall).

Gibbs (2000) tested his theory of status integration and found a negative correlation between marital status integration and suicide rates for male and female and for white and African American suicide rates and for most age groups. Apparently, marital status integration is a more powerful correlate of suicide rates than occupational status integration. This research is hampered by the lack of clarity of what exactly status integration is and how it should be measured.

In one region of Italy, Rocchi and Perlini (2000) looked for atypical fluctuations in suicides over the year. They found a rhythmicity of 91.4 days, about the length of a season, with a low risk of suicide in the middle of each season (February, May, August and November) and peaks in March, June, September and December.

Other Distal Variables

In a study of youth suicide rates in Australia, Wilkinson and Gunnell (2000) found higher male suicide rates in non-metropolitan regions for 15-24 year-olds but the reverse trend for females aged 25-34.

Gunnell, et al. (2000) confirmed earlier research that the detoxification of domestic gas in England and Wales was accompanied by a decrease in suicide rates despite some switching to other methods for suicide. This was especially notable in older men (>55 years of age). Gunnell, et al also looked at prescription rates for antidepressants, but did not carry out any time-series data analyses.

For 30 Metropolitan Statistical Areas for 1971 to 1900, Fernquist (2000b) studied the impact of championships in football, basketball, baseball and hockey, on suicide rates. Making the playoffs was accompanied by a decline in suicide rates, as did winning a championship Fernquist also included a number of other sociological variables in his analyses, many of which also contributed to the prediction of suicide rates (e.g., divorce and unemployment rates).

Ludwig and Cook (2000) studied the impact of the Brady Handgun Violence Prevnetion Act in 1994. Thirty-two states were required to have new controls (background checks and waiting periods) while the other states already had controls. The only difference for the period 1994 to 1997 was a reduction in firearm suicides for people older than 55 in states that required both controls versus states that required only background checks and a lesser reduction in their overall suicide rates, suggesting some switching of methods for suicide, but not total switching.

Yip, et al. (2000) compared urban-rural suicide rates in China and Australia. In China, both male and female suicide rates were in rural areas than in urban areas. The female suicide rate in China was higher than the male suicide rate. In Australia, the male rural rate was higher than the urban rate, but the female urban rate was higher than the rural rate. Australian males had the higher suicide rate. In Australia, the suicide rates did not change much with age whereas in China suicide rates rose with age.

Jianlin (2000) noted that the higher suicide rate for women in China was found only for those under the age of 40. Jianlin also confirmed that rural suicide rates are higher than urban suicide rates for both sexes.

Chesnais (2000) noted an extremely high rate of suicide in Russia in 1995 after the fall of the Soviet Empire.

Chew, et al. (2000) endeavored to explore whether casinos were associated with a higher suicide rate. In a study of 310 counties in the United States in 1995, Chew, et al. claim that casino resort visitor suicides are not higher than visitor suicides in general. However, the methodology used is difficult to evaluate for its soundness.

In Hong Kong, Yan (2000b) found that suicide rates were highest in service workers and lowest in agricultural workers and fishermen, but not significantly so. There was a spring peak in suicide rates for Professional, technical and related workers and a summer peak for Agriculture workers and fisherfolk.

Discussion

The problem with this research is that the countries in the samples differ considerably, the variables are often poorly operationalized, and many countries do not have data available for the variables of interest. The result is that it is difficult to devise and carry out a comprehensive study to include all of the variables mentioned in the research reviewed above.

For the states of the USA, Lester (1994) factor analyzed 37 socio-economic variables and obtained seven factors (or clusters) of variables. He then correlated these factor scores with the suicide rate, only one of which (labeled *social disorganization*) was associated (positively) with the suicide rate. Lester (1996) factor analyzed 22 socio-economic variables for a sample of countries and obtained 6 factors, only one of which was associated with suicide rates, a factor which Lester labeled as *developing nations*.

Each year, researchers suggest new variables which might be of interest. It is not going to be easy to obtain data on these (and other variables) for a large sample of countries (or regions) to replicate this type of study.

Studies of Suicides

Theories of Suicide

Weiberg (2000) proposed a theory of suicide based on right hemisphere deficiency. The right hemisphere is involved in formation of polysemantic context[14]. Weinberg suggested that functional insufficiency of the right hemisphere the suicidal person causes a

> …..compensatory shift to left hemisphere functioning, which manifests itself in reversed asymmetry of neurotransmitters, tendency to dissociation, alienated and negative perception of the body, lower sensitivity to pain, disintegration of self-representation, cognitive constriction, overly general nature of personal memories, difficulties in affect regulation as well as such personality traits as low openness to experience and personal constriction. (p. 799)

I have not come across empirical tests of this hypothesis yet.

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[14] Polysemy is where a word has several meanings.

Rudd (2000) provided a formal presentation of Aaron Beck's cognitive-behavioral theory of suicide.

Zhang (2000) attempted to explain why the suicide rate in China is higher in women than in men. Zhang looked at track and field records for men and women in China and in the United States and found that Chinese female records are closer to those of Chinese men than is the case in the United States. Zhang suggested that physiological, possibly hormonal (testosterone), differences may account for these findings.

Physiological Research and Medical Issues

Genes

Bennett, et al. (2000) found no differences in the tryptophan hydroxylase (TPH) (a rate-limiting enzyme in the synthesis of serotonin) by comparing the A218C and A779C polymorphisms with published data on their frequency in normal individuals.

Du, et al. (2000) found no differences in genotype and allele distribution of the tryptophan hydroxylase (TPH) gene 218A}C polymorphism in post-mortem brain samples from depressed suicides and control subjects of the same ethnicity. However, both the genotype and alleles of the 5-HT transporter gene were associated with completed suicide. The frequency of the L}L genotype in depressed suicides was almost double of that found in control group.

Brain

Rosel, et al. (2000) found that, compared to normal controls, depressed suicides had a decrease in the number of $5\text{-}HT_{2a}$ binding sites and a lower apparent affinity constant in the hippocampus but not in the frontal cortex. control subjects. Also, IP_3 concentrations were higher in the hippocampus, but not in the frontal cortex, in the suicides.

In a study of serotonin transporters, comparing suicides with major depression and normal controls, Bligh-Glover, et al. (2000) found no differences in $[^3H]$paroxetine binding between in the entire midbrain dorsal raphe nucleus nor in its constituent subnuclei.

Gross-Isseroff, et al. (2000) found no differences in the brains of suicides and controls in region-dependent alterations in the density of a_2-adrenergic receptors.

In a sample of deceased persons who had lifetime histories of major depression, alcoholism, substance abuse or pathological aggression, Mann, et al. (2000) found that the suicides more often had major depression and lower 5-HTT binding (a serotonin transporter). This difference was not present in the individuals without major depression.

Brown, et al. (2000b) compared the brains of depressed patients who died by suicide and those who died of other causes (mainly cardiac arrest). They found increased levels of GRP78 (the 78-kilodalton glucose regulated protein), GRP94, and calreticulin, a third member of the endoplasmic reticulum (ER) stress protein family, in the temporal cortex of the suicides versus controls. This was not found for suicides who were schizophrenic or bipolar versus controls.

In a 15-year follow-up study, Tanskanen, et al. (2000c) found that high serum total cholesterol concentration was predicted later violent suicide. No association was found for non-violent suicide.

Suicide Notes

McLelland, et al. (2000) found that 88% of a sample of suicide notes were concerned with blame – excusing the self and asked others not to blame themselves. Stating causes was next most common, followed by "I love you, "Sorry" and instructions.

Youth Suicides

Dhossche, et al. (2000a) found that young suicides (< 30 years of age) more often had tattoos as compared to matched accidental deaths (matched for age, sex and race). For the whole sample of suicides, the suicides with tattoos were younger than the suicides without tattoos. The presence of tattoos in the suicides was not associated with race, sex, marital status, method for suicide and the presence of alcohol or cocaine.

In a study of suicides using firearm by youths <18 years of age in Colorado, Shah, et al. (2000a) found that compared to matched nonsuicidal controls, the two

groups differed in household access to firearms, conduct disorder, past mental health problems and ever drank alcohol.

Brent, et al. (2000) compared the risk factors for suicide in younger and older adolescent suicides and male and female adolescent suicides versus community controls. Although most of the risk factors were similar, substance abuse was more common in the older (> 16) adolescents who also had higher suicidal intent. Males more often had conduct disorder and used methods for suicide that were more irreversible (primarily because the females used overdoses more than did males). The risk factors overall included past suicide attempt, guns in the home and mood disorder.

Pritchard and King (2000) followed up English youths who were "looked after" by local authorities (residential care) or spent time in "exclusion units." The exclusion unit males had a higher suicide rate in the following 6 years (2 suicides versus 0). None of the 376 females died by suicide. The small sample size makes this report less valuable.

Werenko, et al. (2000) reported on suicides for those <20 years of age in New Mexico (USA). The use of alcohol at the time of the suicide was more common in the older youths and the Native Americans but did not vary by method. The suicide rates did not differ by ethnicity. Males and non-Hispanic whites used firearms more often for their suicidal act.

Adult Suicides

Bhatia, et al. (2000) compared ideators, attempters and suicides in one region in India. The majority of ideators, attempters and completers were 26-35 years old, males (except attempters who were predominantly female), married, literate up to high school, employed (ideators) or housewives (attempters and completers). The suicide attempters and completers had more often attempted suicide in the past than had the ideators. The most common psychiatric diagnoses were mixed anxiety and depressive disorder in the ideators, followed by major depression and schizophrenia. Adjustment disorder with depression was the most common diagnosis in the attempters. The most common method of suicide attempt was organophosphorus whereas the suicides more often used hanging.

Cheng, et al. (2000) compared suicides in Taiwan with living controls. A regression analysis found that the suicides were characterized by a major

depressive episode, substance use disorder, emotionally unstable personality disorder, experience of loss of some kind (health, personal, material), and suicidal behavior in first degree relatives. Living alone, unemployment and migration were also found more often in the suicides.

Denning, et al. (2000) found that female suicides did not differ in suicidal intent (as measured by interviews with informants and official records) from male suicides even though they used less violent methods for suicide. I would have thought that, since all died, their intent was high, and typically informants are quite ignorant about the suicidality of the suicide so that the suicide comes as a shock.

Iribarren, et al. (2000) followed up a large cohort of HMO members in California (USA). Hospitalization for attempted suicide was predicted by age 65-89, medical illness, < 12th grade education, job problems and emotional problems for men, and by age 15-24, white ethnicity, <12th grade education, family problems and emotional problems for women. Completed suicide for both men and women was predicted by age 15-24, white ethnicity, never married, prior hospitalization for attempt, and history of emotional problems. In addition, for women, Asian ethnicity and separated/divorced predicted suicide.

Jacobson and Bygdeman (2000) compared Swedish suicides with siblings born in the same hospitals during the same period. The suicides using violent methods more often had multiple birth traumas (for men only) and less often had mothers given multiple opiate treatment during delivery (for both men and women). **This is the first study that I have come across using a methodology that I have urged for many years, that is, comparing suicides with their siblings. This methodology controls for many family variables (such as socio-economic status, family patterns of alcohol use, suicidal behavior, etc.).**

In a study of a sample of Australian suicides and attempted suicides among the elderly (>60 years), Lawrence, et al. (2000) found that both groups more often had contact with mental health services than the general population. Suicide was more common if the person had previously attempted suicide, had an affective psychosis, adjustment reaction and depressive disorder. Attempted suicide was more common if the persona had an affective psychosis, adjustment reaction, depressive disorder and, for women, a diagnosis of personality disorder. A previous diagnosis of cancer was associated with decreased risk of both suicide and attempted suicide. There were trends for a previous diagnosis of chronic

obstructive lung disease to be associated with a lower risk of suicide, but a higher risk of attempted suicide.

Spicer and Miller (2000) studied suicides and attempted suicides in 8 states and found that the suicides were older and more often males and white than the attempters. They also used different methods, in particular, more often firearms. This article, appearing in the 21st century in the *American Journal of Public Health* attests to the poor quality of research at this time.

In a follow-up study of a large national sample in Finland, Tanskanen, et al. (2000a) found that heavy use of one of alcohol, cigarettes and coffee increased the risk of later suicide by 1.55, heavy use of two of the substances 2.22 and heavy use of all three substances 3.99. Tanskanen, et al. (2000b) reported that heavy smokers had a higher suicide rate than moderate smokers who had a higher suicide rate than non-smokers.

Miller, et al. (2000) followed up a sample of mainly white, middle-aged, male health professional for 8 years. Those who were heavy smokers had a higher suicide rate.

In a study of Danish suicides versus normal controls, Qin, et al. (2000) found that the suicides more often had been hospitalized for mental illness, were older and disabled, lived in the capital region, misused drugs and alcohol, and had been absent from work for sickness. For the women, having a child younger than 2 was a protective factor.

In a national follow-up sample of American, Kposowa (2000) found that divorced and separated men had higher suicide rates than married and single men. For women, there was no impact of marital status on suicide rates.

Collins and Paykel (2000) found that the suicide rate of Cambridge University (UK) students was similar to that of non-students. There was a non-significant tendency for third year students[15] and postgraduate students to have a higher rate. Suicides did not appear to be more common around exam time (April/May).

[15] There are only 3 years needed for most BA degrees at Cambridge University.

Bullock and Diniz (2000) compared suicides using plastic bags versus other methods. Those using plastic bags were older (more over the age of 60) and more often women.

In a study of suicides using gunshots to the head, Weinberger, et al. (2000) found that the suicides were primarily of unmarried, white males, average age 35, with psychiatric disorders, primarily depression. The younger individuals were often under the influence of alcohol or drugs. Stressors, such as the loss of a loved one, were common among young and middle-aged persons, while serious health problems were found among the majority of middle-aged and elderly individuals.

In a study of suicides in one region of Australia, Thacore and Varma (2000) found that single, youth suicides used firearms more for suicide than other groups, and their suicides were more often precipitated by interpersonal conflict.

In Finland, Pirkola, et al. (2000) compared suicides who had misused alcohol with those who had not done so. The misusers were younger, more often male and divorced or separated, and had more often worked, but more often were recently unemployed. They had experienced more recent adverse life events, were more likely to be alcohol-intoxicated at the time of suicide, and tended to use drug overdoses, but they seemed to have better earlier lifetime psychosocial adjustment compared to the non-misusers.

In a sample of 80 famous suicides, Lester (2000c) found no differences between first-borns and last borns in year of birth, sex, age, whether married or not at the time of death, experience of loss of parents in the first 16 years of life, whether they had previously attempted suicide, whether they had a psychiatric disorder or abused alcohol/drugs, whether the death occurred near their birthday, whether they were American or not, and whether they used a violent versus a nonviolent method for suicide

Suicide-by-Cop

Lord (2000) studied incidents of suicide-by-cop and found differences in those who were successful (killed or injured by police officers or died by suicide) and those who survived the incident. The successful individuals were more often characterized by substance abuse (hard drugs), previous suicide attempts, fewer stressful life events, not a resident in the location and more often engaged in homicidal conversations during the incident.

Homant and Kennedy (2000) classified suicide-by-cop incidents into three types: (1) direct confrontations, in which the person instigated attacks on police, (2) disturbed interventions, in which potentially suicidal persons took advantage of police intervention, and (3) criminal interventions, in which subjects preferred death to submission. Homant and Kennedy then broke these categories into nine types.

Mohandie and Meloy (2000) defined two types of suicide-by-cop: (1) instrumental (I am not going back to jail) and (2) expressive (My life is hopeless).

Elderly Suicides

In a study of elderly (>65) Finnish suicides, Pitkälä, et al. (2000) found that the men were more often married and the women widowed, and the men less often had a history of attempted suicide than the women. Both elderly men and women had a prior attempt more often than younger suicides.

Nisbet, et al. (2000) found that suicides over the age of 50 in the United States attended religious activities less often than those dying from other causes, even after controls for the frequency of social contacts.

In a sample of elderly (> 60) patients in primary care, Conwell, et al. (2000) found that the suicides more often had depressive illness, physical illnesses, and functional limitations than controls. For the depressed patients, affective symptom severity and emotional dysfunction distinguished the suicides. However, physical health and overall function did not differ between groups.

People with Psychopathology

Conner, et al. (2000a) compared alcoholics who died by suicide who had been violent domestically with those who had not. The partner-violent suicides were younger, had an earlier of onset of alcoholism and were more often separated from their partner at the time of their suicide.

Scocco, et al. (2000) followed up a large sample of attempted suicides and found that those who subsequently died by suicide were less anxious at intake and more frequently had prior psychiatric admissions, or outpatient treatment and

presented a psychiatric family history. In the initial intake, depression, but not anxiety and other symptoms, impacted suicidal intent.

In a 20-year follow-up study of psychiatric outpatients, Brown, et al. (2000a) found that depression, hopelessness and suicidal ideation at intake predicted later suicide. Affective disorders and personality disorders (but not panic disorder or substance abuse) also predicted suicide. In a multiple regression, increasing age, unemployment and previous attempts also contributed to the prediction.

Conner, et al. (2000b) compared suicides with active versus remitted alcohol use disorders. The remitted group was more often younger with psychotic disorders or older with depressive disorders. The remitted group was more often married.

Funahashi, et al. (2000) compared schizophrenics who died by suicide and those who did not. The suicides were more often middle-children in birth order, with an undulating course of illness (versus simple), with auditory hallucinations and suicidal ideation, mental disorganization and stressful life events.

Powell, et al. (2000) compared psychiatric inpatients who died by suicide with other inpatients. The suicides more often had a planned or an actual suicide attempt, recent bereavement, presence of delusions, chronic mental illness and a family history of suicide (in first degree relatives). Additional differences included alcohol and drug abuse, criminal behavior, depression, hopelessness, worthlessness and guilt.

Brådvik and Berglund (2000) followed up patients with major depression for 15-30 years and compared suicides with matched controls. The two groups did not differ on the total score from a scale for suicidal ideation at any time. The data analysis for this paper was very poor, but the two groups do not appear to differ significantly in suicide attempts during the follow-up period.

Discussion

There is not much of interest here except for that one study comparing suicides with their siblings, as I noted, a methodology I have urged for years. However, the variables studied were not that interesting. I came across this methodology in a study of murderers by Stuart Palmer. Read his book for a good description of this approach, albeit for murder rather than suicide (Palmer, 1960).

Murder-Suicide

Starzomski and Nussbaum (2000) described possible factors leading men to engage in murder-suicide, including social (escape from self), developmental (evolution of self and continuity of self), gender role (power and the male role), and family violence (abusive personality and proximal antecedents of abuse). Starzomski and Nussbaum saw these factors as pertaining to the instability and deconstruction of the self that may accompany life changes and relationship distress that precede many cases of domestic murder-suicide. .

Barnes (2000) studied murder-suicides in Australia and found that men more often killed their intimate partner while women more often killed their children. The men more often used violent methods for murder. Non-Australian born were over-represented in the sample.

Bourget, et al. (2000) compared cases of spouses murdered in which the murderer died by suicide versus those who did not do so in Quebec (Canada). The murderers who died by suicide were older, more often used a firearm for the murder, were more often men, more often separated or divorced, less often had a blood alcohol level, and more often had a psychiatric disorder (especially major depre ss s sion).

Studies of Attempted Suicides

Physiological Research

In a sample of patients with schizophrenia, Chong, et al. (2000) found no genotypic or allelic association of the 5-HTTLPR polymorphism (associated with serotonin synthesis) with history of attempted suicide.

Van Heeringen, et al. (2000) found that psychiatric patients making violent suicide attempts (recent or lifetime) had higher urinary cortisol levels, a significantly lower mean plasma MHPG level, also a lower mean score on reward dependence, and a slightly higher score for novelty seeking. The groups did not differ in platelet MAO or blood serotonin.

Sarchiapone, et al. (2000) found lower serum cholesterol levels in a sample of attempted suicides compared to healthy controls.

Rujescu, et al. (2000) found no association between attempting suicide and genetic polymorphism in ABCG1, a positional candidate on chromosome 21q22.3 in blood samples from attempted suicides and healthy controls.

In a sample of depressed inpatients, Corrêa, et al. (2000) found that those with a history of attempted suicide showed a significantly lower prolactin response to D-fenfluramine compared to non-attempters and healthy controls.

Prochazka, et al. (2000) found no differences in blunted serum prolactin (PRL) response to fenfluramine (d-FEN) in depressed patients, attempted suicides and healthy controls.

Geijer, et al. (2000) compared attempted suicides to normal controls and found no differences in polymorphisms in the genes coding for tryptophan hydroxylase, serotonin receptor 2A and serotonin transporter.

Urine

Garvey and Underwood (2000) found lower levels of N-acetyl-ß-glucosaminidase (NAG) in the urine of those making serious suicide attempts than in those making non-serious attempts. Garvey and Underwood suggested that NAG may be a marker of serotonin.

Blood

In a study of platelet 5-HT receptor densities, Alda and. Hrdina (2000) found that depressed suicidal patients more often had a higher frequency distribution of 5-HT_{2A} receptor density ([^{3}H]LSD B_{max}) than non-suicidal depressed patients and healthy controls.

Almeida-Montes, et al. (2000) compared depressed patients who had attempted suicide with those who had not. The two groups did not differ in serum cholesterol, HDL, LDL or triglyceride levels. The attempters had lower levels of serum 5-HT and tryptophan.

Alvarez, et al. (2000) found that suicide attempters using violent methods had lower levels of serum cholesterol than those using non-violent methods and healthy controls.

In a sample of male alcoholics, Gorwood, et al. (2000) found that the "short" (s) allele of the serotonin transporter gene (5-HTTLPR) was found more often in the blood of suicide attempters (using genomic DNA), especially those making severe and repetitive suicide attempts.

Bellivier, et al. (2000) found no association between the "s" allele of the 5-HTTLPR and suicide attempt, but those making a violent attempt more often had the "s" allele than both non-attempters and control subjects.

Huang and Wu (2000) found no difference in serum cholesterol in psychiatric inpatients diagnosed with schizophrenia between those who had attempted suicide and those who had not.

Nolan et al. (2000) found that schizophrenic and schizoaffective patients making violent suicide attempts had the catechol-O-methyltransferase COMT) L allele more often than did those making non-violent attempts, but only for males.

Tripodianakis, et al. (2000) compared attempted suicides with adjustment disorder with healthy controls. Platelet MAO activity was lower in both male and female attempters compared to controls. 5HIAA and HVA were not different between attempters and controls, but MHPG was s higher in the attempters, as were plasma levels of cortisol.

Spinal Fluid

In a sample of murderers, Lidberg, et al. (2000) found that those who had attempted suicide had lower mean concentration of spinal fluid 5-hydroxyindoleacetic acid (5-HIAA), a serotonin metabolite. There was a tendency for the attempters to have lower homovanillic acid (HVA) but they did not differ in 4-hydroxy-3-methoxyphenyl glycol (HMPG).

Youths

Brinkman-Sull, et al. (2000) followed-up adolescent psychiatric inpatients for one to two years. Attempting suicide during follow-up was predicted by depression, hopelessness and self-esteem and, on a family assessment scale, role performance, communication, and control.

In a survey of high school students, Cleary (2000) found that suicidal behavior (including attempts), violent behavior and suicidal-plus-violent behavior were all associated with victimization (verbal and physical) for both boys and girls.

Donaldson, et al. (2000) gave adolescent suicide attempters measures of perfectionism, hopelessness and depression. Hopelessness was predicted by prior attempts and depression (in particular self-criticism), but not by perfectionism.

In a study of female adolescent twin pairs, Nelson, et al. (2000) found that, if the one twin reported social phobia, that twin was more likely to have suicidal ideation and to have attempted suicide. Suicidal behavior was more likely if the twin had social phobia with major depression.

Lyon, et al. (2000) studied African American adolescents who had made serious suicide attempts with nonsuicidal controls at the same pediatric hospital. The two groups differed on many variables, but the multiple regression identified the better predictors as insomnia, threat of separation, alcohol/drug abuse, neglect, academic problems and current suicidal ideation, but less often truancy, threatening others and separation from their mother for more than two weeks before the age of 12 (which the authors describe as unexpected findings).

In Hawaiian high school students, Yuen, et al. (2000) found that attempting suicide was more common in native Hawaiians. For native Hawaiians, the predictors of attempting suicide were depression, substance abuse, grade level, Hawaiian cultural affiliation, and main wage earner's education. The predictors of attempting suicide in non-Hawaiians were depression, substance abuse, and aggression.

Velting, et al. (2000) found that depressed adolescents with a history of attempted suicide had higher scores on scales for the forceful (sadistic) and borderline scales and lower scores for the submissive and conforming scales of the Millon Adolescent Clinical Inventory than those with no past attempts.

In data from a national sample of high school students, Simon and Crosby (2000) found that those who made suicide plans before attempting suicide more often made multiple attempts but did not more often require medical treatment after the attempt. Attempters with no planning more often reported binge drinking and use of marijuana and cocaine, but less often carried a weapon. Those students who made plans, attempted suicide and both made plans and attempted suicide

more often reported binge drinking and drug use than the nonsuicidal students and those reporting only suicidal ideation. All attempters got into more physical fights than the ideators and nonsuicdal students.

In a sample of adolescents (aged 5-19) seen at an outpatient psychiatric clinic, Strauss, et al. (2000) found no differences between ideators, attempters, and nonsuicidal youths for anxiety disorders in general or in specifically for panic disorder, agoraphobia, social phobia, simple phobia, and obsessive-compulsive disorder. In those aged 5-15, the attempters had a lower prevalence of separation anxiety disorder (compared with ideators and nonsuicidal youths. In those aged > 15, generalized anxiety disorder was more prevalent in ideators than in the nonsuicidal youths.

Van Heeringen and Vincke (2000) compared homosexual and bisexual adolescents with regular high school students. The homosexual and bisexual adolescents more often reported suicidal ideation and, for the females, attempted suicide. Less satisfying homosexual relationships were also associated with suicidality. The suicidal homosexual and bisexual adolescents had higher scores for depression and hopelessness and lower scores for self-esteem and more often knew someone who had suicidal ideation or who had attempted suicide. There were no differences in social support, alcohol consumption, having a stable relationship, having many homosexual friends or age, sex and socio-economic status.

In a study of Slovenian high school students, Tomori and Zalar (2000a) found that those who had attempted suicide had lower self-esteem, higher depression scores, a stronger emotional reaction to family problems, more often ran away from home, and had substance abuse. They more often reported smoking and drug use and suicidal behavior in their families.

In a sample of Slovenian high school students, Tomori and Zalar (2000c) found that female attempters were more depressed and had more disputes with parents, whereas the male attempters were more often runaways and substance abusers. The two groups did not differ in suicidal ideation. However, Tomori and Zalar noted that these differences were also found in comparisons of the nonsuicidal boys and girls in their sample.

In another study, possibly of a different sample (the numbers do not match up), Tomori and Zalar (2000b) fund that female adolescent suicide attempters more

often thought that sport was not important for health and were less likely to engage in sports when in distress. The male adolescent attempters also felt that sport was not important for health and had less involvement in sports.

In a sample of adolescent psychiatric inpatients, Osman, et al. (2000) found that those who had attempted suicide had high scores for repulsion by life and attraction to death scales. Suicidal ideators had a greater repulsion by life.

Pfeffer, et al. (2000) devised an inventory to assess children and adolescents' suicide potential. The scale appeared to have three factors: (1) anxious-impulsive depression, (2) suicidal ideation/acts and (3) family distress. In a sample of child and adolescent psychiatric patients and community children and adolescents, those who had suicidal ideation or who had attempted suicide scored higher on all three factor scores, and the attempters scored higher than the ideators on factor 2 scores.

In a sample of adolescent psychiatric inpatients, DiFilipo and Overholser (2000) found that suicidal ideation was associated with attachment to mother (for boys and girls) and attachment to peers (for girls) but not after controlling for depression scores. Attachment to the father did not contribute to the prediction of suicidal ideation.

Fritsch, et al. (2000) explored whether adolescent attempted suicides had a distinctive profile on the Millon Adolescent Personality Inventory. The most common one-point code was sensitive, the most common two-point codes was sensitive-inhibited, and most common three-point code was sensitive, inhibited and forceful.

Grøholt, et al. (2000) compared Norwegian adolescent attempters with community controls. The attempters were distinguished by depression, disruptive disorders, low self-worth, infrequent support from parents, parents' excessive drinking and low socio-economic status, and these differences were greater for the attempters who were hospitalized.

In a sample of Australian adolescents who had attempted suicide, Vajda and Steinbeck (2000) found that re-attempting suicide in the following year was predicted by drug abuse, alcohol abuse, non-affective psychotic disorders, and chronic medical conditions/illness, while a history of sexual abuse was almost significant, in a multiple regression. Other variables that distinguished the re-

attempters but did not make it into the multiple regression were personality disorders and comorbidity.

In a sample of adolescents, Mazza (2000) found that depression and PTSD symptomatology predicted both suicidal ideation (along with sex) and attempted suicide (sex was not significant).

In a 2-year follow-up study of Norwegian students (grades 7-12), Wichstrøm (2000) found that attempting suicide during the follow-up was predicted by previously attempting suicide, female, young age, perceived early pubertal development (stronger among girls), suicidal ideation, alcohol intoxication, not living with both parents, and poor self-worth. Depressed mood, eating problems and conduct problems were associated with prior and future suicide attempts.

Fergusson, et al. (2000) followed up a cohort of New Zealand children for 21 years. Suicidal behavior was monitored after 16, 18 and 21 years. Predictors of suicidal ideation at ages 15-21 were the number of parental changes, attachment to parents, childhood sexual abuse, neuroticism, novelty seeking and gender. Predictors of attempted suicide at ages 15-21 were family socio-economic status at birth, attachment to parents, childhood sexual abuse, parental alcohol problems, neuroticism, novelty seeking and gender. In addition, psychiatric disorders, depression, anxiety disorders, conduct disorder, substance use disorder and stressful life events predicted suicidal behavior.

Ho, et al. (2000) studied a sample of Hong Kong school students who had a fellow student attempt or compete suicide and controls. Both groups of peers showed an increase in suicidal ideation and attempts, more so for the peers of attempters. The close friends of suicides were particularly at risk of internalizing problems, whereas the close friends of attempters were at high risk of externalizing problems. Self-reported drug use was also more common in the peers of attempters.

In samples of adolescent psychiatric outpatients, Pelkonen, et al. (2000) compared the suicidal females (ideation or attempts) with the non-suicidal females. The suicidal females had less parental support, more often previous inpatient psychiatric care and more often had mood disorders. Compared to suicidal males, the suicidal females had less parental support but more lifetime suicide attempts. The females and males did not differ in diagnosis.

Smith and Anderson (2000) compared suicide attempters and ideators presenting at a mental health clinic in New Zealand. The two groups did not differ in psychiatric diagnosis or alcohol and drug abuse. The ideators more often had a psychiatric history. The two groups did not differ in negative social support, but the ideators had less positive social support. The attempters were rated to be at a higher risk level and greater impairment.

In a study of adolescents living in group homes, Johnson, et al. (2000b) found that children who had attempted suicide were more likely to perceive that they had not received enough parental attention, to have had more conflicts with parents, to have run away from home, and to have a family history of drug use.

Adults

Aghanwa (2000) described a small sample of attempted suicide in Fiji. The modal attempter was young (16-25), female, Indian, a student, never married, Hindi, and using drugs or pesticides. Compared to other psychiatric patients seen, the attempters were younger, more often single and less often employed, but did not differ in sex, race or religion.

In a sample of attempted suicides, Balázs, et al. (2000) found that 84% had an Axis-I psychiatric disorder, and 79% had a subthreshold disorder in addition, while 69% had both types of disorder.

In a national sample in the United States, Carpenter, et al. (2000) found that a high BMI was associated with both major depression and suicide ideation in women (but not with attempts) while. lower BMI was associated with major depression, suicide attempts, and suicide ideation in men. Race did not impact these results.

In one region of Norway, Dieserud, et al. (2000) found that the attempted suicide rate was higher in divorced females and separated males. For both men and women, attempted suicide was associated with unemployment and substance abuse. However, these conclusions were made without the researchers using a control group.

In a sample of college students Holden and McLeod (2000) found three dimensions on a reasons for attempting suicide scale: internal perturbation based

reasons, manipulative motivations, and extrapunitive motivations. Suicide attempters in the sample scored higher on all three subscales.

Ramberg and Wasserman (2000) found that Norwegian mental health staff were not more likely than members of the general population to had had suicidal ideation or attempts in the past year but were more likely to have these behaviors lifetime. The results did not differ by profession (psychiatrist, social worker, psychologist, nurse).

In a sample of African American women who were members of a healthcare system, Kaslow, et al. (2000; Thompson, et al., 2000) found that the attempters reported worse current family life (physical and nonphysical partner abuse, family strengths, and marital adjustment) and a worse family-of-origin (physical, sexual, and emotional abuse and emotional neglect). In a multiple regression, childhood sexual abuse and marital discord predicted attempted suicide and, in a second study, PTSD contributed to the prediction of attempts. The attempters were more often unemployed and homeless.

In a study of Norwegian physicians, Hem, et al. (2000) found that suicidal ideation and attempts were more common in females and in those living alone and with depression, but not with working conditions.

In a survey of Australians, Pirkis, et al. (2000) found that both suicidal ideation and attempts in the prior year were associated with anxiety disorders, affective disorders and substance abuse disorders. Age, marital status, and disability were associated with ideation while marital status and employment status were associated with attempts. Only employment status (employed versus other) differentiated ideators from attempters.

Rudd, et al. (2000) tried to identify clusters of suicidal individuals (attempters or serious ideators) using the Millon Clinical Multiaxial Inventory. They identified three clusters: (1) negativistic-avoidant (n=61), (2) avoidant-dependent-negativistic (self-defeating) (n=13), and (3) negativistic-avoidant-antisocial (n=9). The clusters differed somewhat in psychiatric symptoms and personality test scores, with those in cluster 2 having the most severe psychiatric symptoms.

In a sample of Hungarians, Szádóczky, et al. (2000) found that attempting suicide was associated with being having a psychiatric disorder (especially

dysthymic and bipolar disorders and with comorbidity) and being female, previously married, never married, unemployed, or economically inactive. Having two children had a protective effect. Agitation was the only depressive symptom that increased the likelihood of a suicide attempt.

In a sample of attempted suicides in England, Blenkiron, et al. (2000) found that their acts peaked from 10 pm to midnight. Attempts earlier in the day (3 am to 2 pm) were less likely to involve alcohol, and these early attempters were more depressed and more often had concerns about their mental health. Suicidal intent scores did not vary by the time of day of the attempt.

Kontaxakis, et al. (2000) compared suicide attempters who took many pills (>30) with those who took only a few. Overdosers who used a great number of tablets more often had schizophrenia, a history of previous **s**uicidal attempts and a concurrent somatic illness, while attempters using a small number of tablets (<12) more often had personality disorders.

Baca-García, et al. (2000) found that the number of suicide attempts during the follicular phase of the menstrual cycle (particularly during the menstrual phase) was higher than expected in their sample of female attempted suicides.

In a study of female suicide attempters and non-emergency medical controls, Twomey, et al. (2000) found that the attempters more often report childhood sexual and physical abuse, emotional abuse, and emotional and physical neglect. On an object relations and reality testing inventory, the attempters scored higher on alienation, insecure attachment, egocentricity and social incompetence.

Neale (2000) studied a sample of non-fatal overdoses in Scotland and found that 49% had suicidal intent (with suicidal ideation before overdosing). These suicidal overdoses had a lifetime history of mental health issues and were not using heroin. Those with versus without suicidal intent did not differ in demographic or other variables (such as homelessness or criminal history).

Preti and Miotto (2000) explored whether there was a seasonal effect for attempted suicides in Italy. They found a Spring and Summer peak, especially for elderly attempters (> 65) for both males and females. This peak was stronger for males using violent methods. (For the males, those using non-violent methods peaked in March.) Male attempts, but not female attempts were higher in warmer

months (although the authors do not specify the time unit for temperature while using months for the rest of their data).

Adults with Psychopathology

In a study of psychiatric inpatients with major depression or borderline personality disorder or both, Kelly, et al. (2000) found that the major depression group was less likely to have attempted suicide. Attempting suicide was associated with lower social adjustment overall and within the family. Recent life events did not predict attempting suicide.

Joiner and Rudd (2000) studied a sample of patients evaluated for treatment for suicidal crisis, comparing multiple attempters with zero and one attempters. They found that the severity of baseline suicidal ideation was predicted by negative life events and being a multiple attempter. Similarly, the duration of suicidal ideation after one month was predicted by the same two variables. In a similar study of adolescent suicidal patients, Joiner, et al. (2000) found that multiple attempters were more depressed at baseline but did not have a longer duration of the suicidal crisis.

In a sample of psychiatric inpatients with major depression, Malone, et al. (2000) found that those who had attempted suicide had lower scores on a Reasons for Living scale, and scored higher for depression, hopelessness and suicidal ideation. The attempters were also more often white, female, non-Catholic and nonmarried.

In a sample of psychiatric inpatients, Bornstein and O'Neill (2000) found that the number of past attempts and currently suicidality were positively associated with scores on the MMPI dependency scale, for both men and women and also after controlling for depression scores.

In a qualitative study, Chance, et al. (2000) compared inpatients with borderline personality disorder who had attempted suicide and those who had not. No differences were found between the two groups in heightened dependency needs, perceived rejection by others, and subsequent anger. Relationship patterns were similar in the two groups. All the patients had a wish to be loved and understood, experienced others as rejecting, and responded with depression and disappointment.

In a study of African American psychiatric inpatients, Craig and Bivens (2000) found that those with a history of attempting suicide scored higher on the schizoid, avoidant, depression, dependent, passive–aggressive (negativistic), self-defeating, and paranoid scales and significantly lower on histrionic and compulsive scales. The attempters scored higher on all clinical syndrome scales on the Millon Clinical Multiaxial Inventory-III except for drug dependence and delusional disorder.

Warshaw, et al. (2000) followed up a sample of patients with panic disorder. A suicide attempt during follow up was more likely if the patient had an affective disorder, substance abuse, eating disorder, personality disorder, and being female. Marriage and children were protective factors.

In a sample of substance-abusing women, Hill, et al. (2000) found that attempting suicide was predicted by early sexual abuse and a mother who had died, but not by age at first consensual sex or years of education.

King, et al. (2000) found that elderly psychiatric inpatients with major depression who had attempted suicide did not differ from the non-attempters on a battery of neuropsychological tests (such as trail making, fluency and card sorting).

Suominen, et al. (2000) compared attempted suicides with personality disorders with attempters without personality disorders. Those with personality disorders more often had a history of previous suicide attempts and lifetime psychiatric treatment but did not differ in suicide intent, hopelessness, lethality or impulsiveness.

Yamaguchi, et al. (2000) compared eating disorder patients who had attempted suicide during their lives, those who had not done so, and non-psychiatric controls. The attempted suicides experienced higher overprotection by both parents than the two control groups and more often had a history of child abuse, affective instability, unstable self-image, avoidance of abandonment, maladaptive perfectionism, personality disorder, and mood disorder.

Placidi, et al. (2000) compared patients with a major depressive disorder who had attempted suicide with those who had not. The attempters and non-attempters did not differ in the presence of panic disorders, but the attempters had less severe agitation, psychic anxiety and hypochondriasis independently of measures of aggression and impulsivity.

In a sample of bipolar disorder patients, Oquendo, et al. (2000) found that those who had attempted suicide had more life-time episodes of major depression and were more likely to be in a current depressive or mixed episode. Attempters reported more suicidal ideation immediately prior to admission and fewer reasons for living. Attempters had more lifetime aggression and were more likely to be male but did not differ in lifetime impulsivity.

In a study of bipolar patients, Potash, et al. (2000) found that those comorbid with alcoholism had a higher rate of attempted suicide. Patients with both alcoholism and attempted suicide had higher rates of attempted suicide in first degree relatives with bipolar disorder.

In a group of patients referred for psychiatric evaluation, Dhossche, et al. (2000b) found that the attempters were younger and diagnosed more often with depressive disorders and with comorbid substance abuse. Self-reported suicide intent was associated with increasing age, male sex and comorbid depression and substance abuse.

Lykouras, et al. (2000) compared psychotic (delusional) and nonpsychotic elderly psychiatric inpatients with unipolar depression after the age of 60. The two groups did not in the frequency of serious suicide attempts, but attempts were more likely in the older patients.

In a comparison of patients who had been diagnosed as having multiple personality/dissociated identity disorder (MPD) who had developed false memories, and had relinquished them, were compared with patients with mood disorders for suicide attempts before and after the diagnosis. Fetkewicz, et al. (2000) found that the MPD patients more often attempted suicide after the diagnosis than before. The mood disorder patients more often attempted suicide before the diagnosis than afterwards.

Freeman, et al. (2000) compared veterans with PTSD who had attempted suicide and those who had not. The attempters scored higher on alexithymia, depression, IQ, and PTSD symptom severity and had lower scores for vitality, mental health, and general health.

In a sample of inpatients with major depression, Malone, et al. (2000) found that those who had attempted suicide scored lower on a Reasons for Living scale, but did not differ in the severity of depression or in recent life events.

Soloff, et al. (2000) compared patients with major depression and borderline personality disorder. Patients comorbid for both disorders made the most attempts and the highest level of planning. Hopelessness, impulsive aggression and borderline personality disorder predicted the number of attempts. Those with borderline disorder made their first attempts at a younger age than those with major depression.

In a sample of women with panic disorder, Başoğlu, et al. (2000) found that patients with premenstrual exacerbation of panic disorder had higher suicidality scores than patients with panic disorder without premenstrual exacerbation.

Osgood and Manetta (2000) followed up women (>55 years of age) who had been psychiatric patients and found that those who had attempted suicide or who had suicidal ideation more often reported victimization (childhood abuse, rape and battering). Of the individual victimizations, childhood sexual abuse came close to statistical significance.

Bottlender, et al. (2000) compared bipolar and unipolar depressed patients. The bipolar patients had a higher frequency of past attempted suicide but did not differ in current suicidal ideation. Suicidal ideation on admission was associated with a positive family history for affective disorders, past suicide attempts, the depressive syndrome and the paranoid hallucinatory syndrome and was negatively associated with being female, older age and a longer duration of the disorder.

In a study of alcoholics, Roy (2000) found that those who had attempted suicide more often had a history of first or second-degree relatives dying by suicide and more often a relative who had attempted suicide.

In a sample of elderly (>50) depressed psychiatric inpatients, Duberstein, et al. (2000) found that the number of lifetime suicide attempts was associated with neuroticism (positively) and extraversion (negatively) using the Five Factor Model of Personality. Suicidal ideation in the prior week was associated only with neuroticism. The authors also claimed that an absence of suicidal ideation or behavior in the past month was associated with low openness and high agreeableness.

Malingering

In a sample of prisoners who attempted suicide in prison, Dear, et al. (2000) found that those whose motive was escape had more serious suicidal intent and their attempts were more medically serious than those seeking psychological relief and those who goal was manipulation.

Studies of Suicidal Ideation

Methodological Issues

In an American sample of students presenting at a counseling center, Morrison and Downey (2000) found that ethnic minority patients were much less likely to self-disclose suicidal ideation to a counselor. For many, a suicide risk assessment revealed suicidal ideation (*hidden ideators*). There were no differences by age and sex. Those seeking counseling for issues concerned with racial identity or discrimination were more suicidal.

Clum, et al. (2000) found that a scale to measure suicidal ideation and a clinical interview to measure suicidal ideation had different correlates. However, Clum, et al. did not report the correlation between the two measures.

Physiological Studies

Russ, et al. (2000) compared psychiatric patients considered to be at risk for suicide with normal controls. The two groups did not differ in genotype frequencies of functional polymorphisms in the genes encoding the serotonin transporter 5-HTT and the enzyme catechol-O-methyltransferase COMT. In the suicide risk group, increased hopelessness and suicide ideation were associated with homozygosity of the 5-HTT high promotor activity allele.

Youths

Wagner, et al. (2000) compared adolescent psychiatric patients with and without suicidal ideation. Those with suicidal ideation had higher depression and hopelessness scores, lower self-esteem scores, and a more depressed attributional style (negative events viewed as internal, stable, and global), although the poor statistical presentation makes the results difficult to interpret.

In a study of suicidal psychiatric adolescent inpatients, Prinstein, et al. (2000) found that severe suicidal ideation was associated with greater levels of perceived peer rejection, lower levels of close friendship support, deviant peer affiliations, global family dysfunction, substance use and depression symptoms. Prinstein, et al. unfortunately used path analysis rather than multiple regression or factor analysis of the variables.[16]

In a sample of middle and high school students, Carney (2000) found that victims of bullying and bystanders of bullying did not differ in hopelessness, suicidal ideation, negative self-evaluation or hostility. No students identified themselves as bullies!

In a sample of New Zealand high school students, Carlton and Deane (2000) found that those reporting suicidal ideation were less likely to seek professional help for suicidal thoughts and had less often sought professional help in the past.

In a sample of high school students, Cohen (2000) studied variables such as attraction to death and repulsion by death rather than suicidal ideation. However, she found that attraction to death was positively associated with past exposure to violence of all types and past witnessing of all types of violence.

Adults

In a national sample of college students, Barrios, et al. (2000) found that suicidal ideation was associated with carrying a weapon, being in physical fights, boating or swimming after drinking alcohol, driving after drinking, riding with a driver who had been drinking and not using seat belts, all risk-taking behaviors.

In a sample of college students, Exline, et al. (2000) found that strain associated with religion was associated with greater depression and suicidality, regardless of religiosity levels or the degree of comfort found in religion. Suicidality was associated with religious fear and guilt, particularly with belief in

[16] My objection to path analyses is that researchers never test whether the correlations posted for particular paths are significantly different from other potential paths between the variables. Similar objections can be made for multiple regressions, and only factor analysis of the variables in the study can identify clusters of related variables whose factor scores can then be used for correlational and regression analyses.

having committed an unforgivable sin. Similar results were found for a group of subjects seeking psychotherapy at a clinic for anxiety and depression.

Morrison and Downey (2000) found that African American college students scored higher on two scales of a Reasons for Living scale: survival and coping beliefs and moral objections.

In a sample of university women, Gutierrez, et al. (2000) confirmed that experience of physical and sexual abuse was associated with later suicidal ideation. Those abused were also less repulsed by death and more repulsed by life. Although Gutierrez, et al. measured childhood and adult abuse, the data analysis did not seem to address this distinction. The results of this study appear to have been supported by the same authors using a different sample (Thakkar, et al., 2000).

In a sample of African American college students, Harris and Molock (2000) found that suicidal ideation was predicted by perception of family support, family cohesion and depression but not by communalism scores (the degree to which a person is socially interdependent, values social relationships and adheres to a group orientation).

In a sample of college students, Hamilton and Schweitzer (2000) found that suicidal ideation was associated with perfectionism (in particular concern about mistakes and doubts about actions) and general psychological distress.

In a sample of college students, Yang and Clum (2000) found that suicidal ideation was associated with child neglect and physical abuse (but not sexual abuse), a poor family environment, current social support and life stress, hopelessness, self-esteem and problem solving. Rather than factor analyzing their many variables, Yang and Clum presented a path analysis and argued that early negative experiences, while being associated with adult suicidal ideation, were mediated by cognitive deficits which have a stronger effect on suicidal ideation.

In a comparison of American and Ghanian college students, Eshun (2000) found that sex and rumination predicted suicidal ideation for the American students, but only rumination for the Ghanian students.

Hovey (2000a) studied a group of immigrants from Central America and found that suicidal ideation was positively associated with depression and

acculturative stress scores, negatively with social support and religiosity, and not associated with family functioning.

Hovey (2000b). studied a sample of Mexican immigrants and found that suicidal ideation was positively associated with depression and acculturative stress and negatively with social support (and not significantly with family functioning). Suicidal ideation was also associated with expectations for the future, agreement with the decision to migrate, and the perceived influence of religion.

Cochran and Mays (2000) compared men aged 17-39 in a national sample based on the sex of their partner. The men with same sex partners reported more suicidal ideation than the other two groups and had a tendency to more have recurrent major depression.

In a sample of college students with moderate to high suicidality, Clum, et al. (2000) found that suicidal ideation was associated with three psychosocial variables (high life stress, problem-solving avoidance, and low problem-solving confidence), while two psychosocial variables (low social support and low problem-solving confidence) correlate with interview-based level of suicidal ideation. In contrast, none of the diagnostic variables examined (anxiety and depression disorders and substance abuse) were associated with either measure of suicide ideation. It is odd that the researchers chose not to include nonsuicidal and low scoring suicidal students in the study.

In a random sample of Australians, Goldney, et al. (2000) found that suicidal ideation was predicted by young ager, low income, clinical depression and traumatic events (e.g., life-threatening accident, physical assault). Psychosocial events (such as moving house, discrimination) also were associated with suicidal ideation but did not contribute to the multiple regression.

In a sample of college students, Street and Lester (1900 found that past suicidal ideation was associated with imposter and manic scores while previous self-harm was associated with perfectionism and manic scores. Depression scores did not contribute to the multiple regressions.

In a community sample of the elderly (>70), Barnow and Linden (2000) found that suicidal ideation was predicted by older age, female, major depression, plus a comorbid DSM diagnosis.

Patients with Medical Illnesses

Shah, et al. (2000b) studied geriatric patients who were acutely medically ill. The presence of suicidal ideation was associated with previous self-harm, but not with the severity of the physical illness.

Amir, et al. (2000) found that the suicidal risk in women with fibromyalgia was greater than the risk for healthy controls, but the risk did not differ for three types of patients: fibromyalgia patients, rheumatoid arthritis patients and lower back pain patients.

Kalichman, et al. (2000) studied a group of middle-aged and elderly people with HIV-AIDS. Suicidal ideation was associated with greater levels of emotional distress and poorer health-related quality of life, use of escape and avoidance strategies for coping with HIV infection and less use of positive-reappraisal coping They more likely to have disclosed their HIV status to the people close to them, and yet received less social support from friends and family.

Gilbar and Eden (2000) compared cancer patients newly diagnosed with cancer, those receiving chemotherapy and those whose cancer had re-occurred and found that they did not differ in suicidality (or depression). The newly diagnosed patients were more hopeless, and the cancer recurrence patients had more social support.

In a sample of patients undergoing testing for Huntington's disease, Whalin, et al. (2000) found that those with the gene for the disease more often reported suicidal ideation in the prior year.

Patients with Psychopathology

In a sample of psychiatric patients with major depression, Schaffer, et al. (2000) found that suicidal ideation was associated with lifetime anxiety disorder and being female, but not with age or the severity of the depression.

In a group of bipolar patients on lithium, Hughes, et al. (2000) induced acute tryptophan depletion overnight, presumably impacting brain serotonin. There was no impact of this on suicidal ideation despite the plasma tryptophan falling significantly.

Huber, et al. (2000) studied suicidal psychiatric inpatients and controls. The suicidal ideators had higher scores for lifetime aggression, and impulsivity.

In a sample of schizophrenics, Schwartz (2000) found that suicidal ideation was positively associated with insight into the disorder, in particular, insight into the need for treatment and insight into the social consequences of the disorder. General awareness of having a mental disorder did not predict suicidal ideation.

In a sample of elderly (>60) geriatric psychiatric inpatients, Uncapher (2000) found that suicidal ideation was associated with depression scores, but not with perceived health status, hopelessness or physical illness.

In a study of women who had been sexually assaulted and enrolled in a nightmare treatment program, Krakow, et al. (2000) found that suicidality scores (and depression scores) were higher in those with sleep movement disorder and sleep-disordered breathing and especially so in those with both disorders.

In a sample of prisoners, Dear (2000) found that suicidal ideation was predicted by dysfunctional impulsivity more strongly than functional impulsivity, but not after controls for depression, a result opposite to that reported by Lester (1993) in a sample of college students.

Attitudes toward Suicide

Using data from a national survey in the United States, DeCesare (2000) found that approval of suicide for terminally ill people was associated with religion (with Jews and no religion most approving) and liberal political attitudes. Those who approved of suicide aslo were more likely to approve of euthanasia.

In a sample of college students in England, Knight, et al. (2000) found that attitudes toward suicide were not associated with extraversion scores. Psychoticism scores were associated positively with belief in the right to die by suicide and suicide as normal and negatively with suicide as immoral. Neuroticism scores were associated only with belief in the right to die by suicide (positively).

In a study of geriatric psychiatric inpatients with major depression or bipolar depression, Lifton and Kettle (2000) found that the choice to refuse CPR (in their

advanced health directives) was stronger in those with suicidal ideation, those over the age of 70 and those with major depression rather than bipolar depression.

Bender (2000) surveyed elderly African American and white females in one city in the United States and found that the black females were less accepting of suicide. The two groups did not differ in depression or religiosity scores.

Using national survey data, Stack (2000) found that blues fans were no more accepting of suicide than non-fans. Suicide acceptability was positively associated with education and negatively with church attendance and conservatism.

Domino, et al. (2000) gave his Suicide Opinion Questionnaire to American and Taiwanese samples (that were not exactly matched). The two groups differed on all subscales of the questionnaire, including the right to die and the normality of suicide.

Lester (2000h) suggested that the motivations of those seeking to prevent and assist suicide may be conceptualized as defensive styles of repression versus sensitization adopted to deal with personal suicidal desires.

Phsysician-Assisted Suicide

In a study of terminally ill people, Emanuel, et al. (2000) found that support for physician-assisted suicide (PAS) was less if the person felt appreciated, aged more than 65, and being African American. Support for PAS was positively associated with depression and pain. In a follow-up interview, patients with depression and dyspnea were more to change to favor PAS.

Mouton, et al. (2000) surveyed elderly (>60) patients at a health care clinic for their approval of PAS. Approval was higher in whites (versus Mexican Americans), those with higher annual income and those with lesser religiosity.

Worthen and Yeatts (2000) surveyed a sample of Texas residents and found that age, sex, and caregiving experience were not associated with views on assisted suicide. Support was less for religious respondents, less if the person was not in pain and if the presumed patient was a child.

The Language of Suicide

Meszaros and Fischer-Danzinger (2000) used the term *extended suicide* for murder-suicide.

Discussion

Personal Comments

I reviewed research on suicide in four editions of *Why People Kill Themselves*, and in the 4th edition (Lester, 2000a), my conclusions were extremely critical of recent research. For earlier decades, I chose who I thought were the major contributors to suicidology. I could not find a nominee for the 1990s.

So far in my reviews of suicide research and theory from 1998-2000, my negative view of the field continues. However, because of the changing nature of access to journals, chapters and books, my recent reviews are nowhere near as comprehensive as the reviews in *Why People Kill Themselves.* Rather than re-write my criticisms of the field, let me reprint the conclusions from the 4th edition.

> **Chapter 26**
>
> **Conclusions**
>
> It is not easy to draw simple conclusions from the review of this vast body of research. In the first edition of this book, I quoted Kahne (1966) who was very disenchanted with the research on suicide up until that point. However, the 1960s and 1970s witnessed the identification of interesting issues in suicide research, some great research and some attempts to derive new theories to supplement the classic theories of suicide. The 1990s have not continued these trends. There has been poor research, an absence of theorizing and no new issues opened up for research.
>
> With regard to the genetics of suicidal behavior, no studies have appeared on identical twins reared apart nor on cross-fostering, let alone studies which have controlled for the inheritance of psychiatric disorder. (If identical twins reared apart are more similar in suicidal behavior than nonidentical twins, then this could result from the inheritance of an affective disorder.)
>
> In physiological studies of suicide, most of the research appears to be conducted to elucidate the physiological basis of depression. Therefore, the

control subjects are typically normal people. Such studies fail to advance our understanding of suicide because of the confounding factor of psychiatric disorder and, in particular, depression. There have also been few meta-analyses to identify consistent trends in the research.

With regard to studies of adolescent suicide, psychiatric disorder and personality traits, most studies take a sample already collected for other purposes (typically of psychiatric patients) or form a new sample (typically of school or college students), throw in a number of variables and search for correlates of suicidal behavior. The same variables are used, and the same results typically found. Suicidal individuals are more depressed, disturbed and more hopeless, have lower self-esteem, come from dysfunctional families, and have suffered stress.

The most promising researchers in these fields are John Mann and David Brent, and we look forward to their work in the next century.

There have been no new theories of the sex difference in suicidal behavior and almost no research to test the existing theories. There have been very few studies which endeavor to identify perinatal, infant and childhood predictors of later suicidal behavior.

Few adequately designed studies have appeared to test the classic sociological theories of suicide (although almost every research paper pretends to be a test of Durkheim's theory), and the same is true for psychological theories. Few typologies of suicidal behavior have appeared, save those which classify suicidal individuals based on their psychiatric diagnosis.

Several "fads" are observable. There has been a growth in research into sexual abuse and suicidal behavior, almost of which fails to control for the possibility that sexual abuse increases the level of psychiatric disturbance which is the cause of the increase in suicidal behavior. There has also been an increase in studies of suicidal behavior in AIDS patients, replacing the interest in cancer patients in the 1980s.

Research has continued on the choice of methods for suicide and on the issue of whether restricting access to lethal methods for suicide might reduce the suicide rate.

In my previous volumes reviewing research, I identified the major contributors to the field. The criteria for a major contribution include making a substantial contribution (that is, several research studies or a complex theory), greatly increasing our knowledge in the field, having relevance for future research, and identifying a new area of study. The following is my judgment concerning the major contributions to the field of suicidology:

1800s: Emile Durkheim -- sociological theory
1950s: Andrew Henry and James Short -- sociopsychological theory
1960s: Edwin Shneidman and Norman Farberow -- psychological studies
Charles Neuringer -- the thought processes of the suicidal individual
Alex Pokorny: the study of climate
1970s: Aaron Beck: hopelessness in suicidal individuals
David Phillips: imitation effects
1980s: Antoon Leenaars -- the study of suicide notes
David Lester -- psychiatric epidemiology, availability of methods , and theories of suicide
Stephen Platt -- unemployment and suicide
Steven Stack -- sociological studies of suicide and imitation effects
1990s: no-one

What Have We Learned About Suicide?

There are many problems with the research reviewed here.

1. Some articles compare suicidal individuals with normal controls, thereby bringing in psychiatric disorders as confounding factors.

2. Several papers located are merely simple descriptions of samples of suicidal people.

3. The data analysis is often quite poor. SPSS has been around for a long time now, and statistical consultants are always available.

4. The editors and reviewers for the journals often seem to be quite lax and, certainly, less critical than those I have encountered.

5. In studies using many variables to predict suicidality, the use of path analysis and multiple regression is widely used and is a bad idea. These statistical techniques chose one correlation over another even though they may not differ significantly. It would be much better to cluster the variables and identify the major dimensions involved using factor analysis. Then, rather than singling out one or two predictors that are chosen sometimes only because of non-significant differences in the many correlation coefficients, find the major dimensions involved.

Noteworthy Research

As mentioned already in this review, the comparison of suicides with their siblings is long overdue (Jacobson & Bygdeman, (2000), although the variables studied in their research are not very interesting. Weiberg (2000) proposal of a theory of suicide based on right hemisphere deficiency is a novel idea and deserves attention in future research. Two noteworthy studies is encouraging.

References

Aghanwa, H. S. (2000). The characteristics of suicide attempters admitted to the main general hospital in Fiji Islands. *Journal of Psychosomatic Research, 49,* 439-445.

Alda, M., & Hrdina, P. D. (2000). Distribution of platelet 5-HT_{2A} receptor densities in 2A suicidal and non-suicidal depressives and control subjects. *Psychiatry Research, 94,* 273-277.

Almeida-Montes, L. G., Valles-Sanchez, V., et al. (2000). Relation of serum cholesterol, lipid, serotonin and tryptophan levels to severity of depression and to suicide attempts. *Journal of Psychiatry & Neuroscience, 25,* 371-377.

Alvarez, J. C., Cremniter, D., et al. (2000). Low serum cholesterol in violent but not in non-violent suicide attempters. *Psychiatry Research, 95*. 103-108.

Amir, M., Neumann, L., et al. (2000). Coping styles, anger, social support, and suicide risk of women with fibromyalgia syndrome. *Journal of Musculoskeletal Pain, 8*(3), 7-20.

Baca-García, E., Díaz-Sastre, C., de Leon, J., & Saiz-Ruiz, J. (2000). The relationship between menstrual cycle phases and suicide attempts. *Psychosomatic Medicine, 62*, 50-60.

Balázs,J., Bitter, I., et al. (2000). Prevalence of subthreshold forms of psychiatric disorders in persons making suicide attempts in Hungary. *European Psychiatry, 15,* 354-361.

Barnes, J. (2000). Murder followed by suicide in Australia, 1973-1992: a research note. *Journal of Sociology, 36,* 1-11.

Barnow, S., & Linden, M. (2000). Epidemiology and psychiatric morbidity of suicidal ideation among the elderly. *Crisis, 21,* 171-180.

Barrios, R. C., Everett, S. A., Simon, T. R., & Brener, N. D. (2000). Suicide ideation among US college students. *Journal of American College Health, 48,* 229-223.

Başoğlu, C., Çetin, M., et al. (2000). Premenstrual exacerbation and suicidal behavior in patients with panic disorder. *Comprehensive Psychiatry, 41,* 103-105.

Bellivier, F., Szöke, A., et al. (2000). Possible association between serotonin transporter gene polymorphism and violent suicidal behavior in mood disorders. *Biological Psychiatry, 48,* 319-322.

Bender, M. L. (2000). Suicide and older African-American women. *Mortality, 5,* 158-170.

Bennet, P. J., McMahon, W. M., et al. (2000). Tryptophan hydroxylase polymorphisms in suicide victims. *Psychiatric Genetics, 10,* 13-17.

Bhatia, M. S., Aggarwal, N. K., & Aggarwal, B. B. L. (2000). Psychosocial profile of suicide ideators, attempters and completers in India. *International Journal of Social Psychiatry, 46,* 155-163.

Blenkiron, P., House, A., & Milnes, D. (2000). The timing of acts of deliberate self-harm. *Journal of Psychosomatic Research, 49,* 3-6.

Bligh-Glover, W., Kolli, T. N., et al. (2000). The serotonin transporter in the midbrain of suicide victims with major depression. *Biological Psychiatry, 47,* 1015-1024.

Bornstein, R. F., & O'Neill, R. M. (2000). Dependency and suicidality in psychiatric inpatients. *Journal of Clinical Psychology, 56,* 463-473.

Bottlender, R., Jäger, M., Strauss, A., & Möller, H. J. (2000). Suicidality in bipolar compared to unipolar depressed inpatients. *European Archives of Psychiatry & Clinical Neuroscience, 250,* 257-261.

Bourget, D., Gagné, P., & Moamai, J. (2000). Spousal homicide and suicide in Quebec. *Journal of the American Academy of Psychiatry & the Law, 28,* 179-182.

Brådvik, L., & Berglund, M. (2000). Suicidal ideation in severe depression. *European Archives of Psychiatry & Clinical Neuroscience, 250,* 139-143.

Brent, D. A., Baugher, M., et al. (2000) Age- and sex-related risk factors for adolescent suicide. *Journal of the American Academy of Child & Adolescent Psychiatry, 38,* 1497-1505.

Brinkman-Sull, D. C., Overholser, D. C., & Silverman E. (2000). Risk of future suicide attempts in adolescent psychiatric inpatients at 18-month follow-up. *Suicide & Life-Threatening Behavior, 30,* 327-340.

Brown, C., Wang, J. F., MacQueen, G., & Young, L. T. (2000b). Increased temporal cortex ER stress proteins in depressed subjects who died by suicide. *Neuropsychopharmacology, 22,* 327–332.

Brown, G. K., Beck, A. T., et al. (2000a). Risk factors of suicide in psychiatric outpatients. *Journal of Consulting & Clinical Psychology, 68*, 371-377.

Bullock, M. J., & Diniz, D. (2000). Suffocation using plastic bags. *Journal of Forensic Sciences, 45,* 608-613.

Cantor, C. H., Hickey, P. A., & De Leo, D. (2000). Seasonal variation in suicide in a predominantly Caucasian tropical/subtropical region of Australia. *Psychopathology, 33,* 303-306.

Carlton, P. A., & Deane, F. P. (2000). Impact of attitudes and suicidal ideation on adolescents' intentions to seek professional psychological help. *Journal of Adolescence, 23*, 35-45.

Carney, J. V. (2000). Bullied to death. *School Psychology International. 21,* 213-223.

Carpenter, K. M., Hasin, D. S., Allison, D. B., & Faith, M. S. (2000). Relationships between obesity and DSM-IV major depressive disorder, suicide ideation, and suicide attempts. *American Journal of Public Health, 90,* 251-257.

Chance, S. E., Bakeman, R., et al. (2000). Core conflictual relationship themes in patients diagnosed with borderline personality disorder who attempted, or who did not attempt, suicide. *Psychotherapy Research, 10,* 337-355.

Cheng, A. T. A., Chen, T. H. H., Chen, C. C., & Jenkins, R. (2000). Psychosocial and psychiatric risk factors for suicide. *British Journal of Psychiatry, 177,* 360-385.

Chesnais, J. C. (2000). Homicide and suicide in the industrial world. *Population: An English Selection, 12*, 331-334.

Chew, K. S. Y., McCleary, R., et al. (2000). Visitor suicide risk in casino resort areas. *Population Research & Policy Review, 19,* 551-570.

Chong, S. A., Lee, W. L., et al. (2000). Attempted suicide and polymorphism of the serotonin transporter gene in Chinese patients with schizophrenia. *Psychiatry Research, 97,* 101-106.

Cleary, S. D. (2000). Adolescent victimization and associated suicidal and violent behaviors. *Adolescence, 35*(140), 671-682.

Clum, G. A., Esposito, C. L., Hirai, M., & Nelson, W. A. (2000). The relative contribution of diagnostic and psychosocial variables to severity of suicidal ideation. *Journal of Psychopathology & Behavioral Assessment, 22,* 79-90.

Cochran, S. D., & Mays, V. M. (2000). Lifetime prevalence of suicide symptoms and affective disorders among men reporting same-sex sexual partners. *American Journal of Public Health, 90,* 573-578.

Cohen, E. (2000). Suicidal ideation among adolescents in relation to recalled exposure to violence. *Current Psychology, 19*(1), 46-56.

Collins, I. P., & Paykel, E. S. (2000). Suicide amongst Cambridge University Students 1970-1996. *Social Psychiatry & Psychiatric Epidemiology, 35,* 128-132.

Congdon, P. (2000). Monitoring suicide mortality. *European Journal of Population, 16,* 251-284.

Conner, K. R., Duberstein, P. R., & Conwell, Y. (2000a). Domestic violence, separation, and suicide in young men with early onset alcoholism. *Suicide & Life-Threatening Behavior, 30,* 354-359.

Conner, K. R., Duberstein, P. R., et al. (2000). After the drinking stops. *Journal of Psychoactive Drugs, 32*, 333-337.

Conwell, Y., Lyness, J. M., et al. (2000). Completed suicide among older patients in primary care practices. *Journal of the American Geriatrics Society, 48*, 23-29.

Corrêa, H., Duval, F., et al. (2000). Prolactin response to D-fenfluramine and suicidal behavior in depressed patients. *Psychiatry Research, 93,* 189-199.

Craig, R. J., & Bivens, A. (2000). MCMI-III scores on substance abusers with and without histories of suicide attempts. *Substance Abuse, 21,* 155-161.

Cutright, P, & Fernquist, R. M. (2000a). Effects of societal integration, period, region, and culture of suicide on male age-specific suicide rates. *Social Science Research, 29,* 148-172.

Cutright, P, & Fernquist, R. M. (2000b). Societal integration, culture, and period. *Sociological Focus, 33,* 299-319.

Dear, G. E. (2000). Functional and dysfunctional impulsivity, depression, and suicidal ideation in a prison population. Journal of Psychology, 134, 77-80.

Dear, G. E., Thomson, D. M., & Hills, A. M. (2000). Self-harm in prison. *Criminal Justice & Behavior, 27,* 160-175.

DeCesare, M. A. (2000). Public attitudes toward euthanasia and suicide for terminally ill persons. *Social Biology, 47,* 264-276.

Denning, D. G., Conwell, Y., King, D., & Cox, C. (2000). Method choice, intent, and gender in completed suicide. *Suicide & Life-Threatening Behavior, 30,* 282-288.

Dhossche, D., Snell, K. S., & Larder, S. (2000a). A case-control study of tattoos in young suicide victims as a possible marker of risk. *Journal of Affective Disorders, 59,* 165-168.

Dhossche, D. M., Meloukheia, A. M., & Chakravorty, S. (2000b). The association of suicide attempts and comorbid depression and substance abuse in psychiatric consultation patients. *General Hospital Psychiatry, 22*, 281-288.

Dieserud, G., Loeb, M., & Ekeberg, Ø (2000). Suicidal behavior in the municipality of Bærum, Norway. *Suicide & Life-Threatening Behavior, 30,* 61-73.

DiFilipo, J. M., & Overholser, J. C. (2000). Suicidal ideation in adolescent psychiatric inpatients as associated with depression and attachment relationships. *Journal of Clinical Child Psychology, 29,* 155-166.

Domino, G., Su, S., & Shen, D. (2000). Cross-cultural of a new set of scales for the Suicide Opinion Questionnaire. *Omega, 41,* 307-321.

Donaldson, D., Spirito, A., & Farnett, E. (2000). The role of perfectionism and depressive cognitions in understanding the hopelessness experienced by adolescent suicide attempters. *Child Psychiatry & Human Development, 31,* 99-111.

Du, L., Faludi, G., et al. (2000). Tryptophan hydroxylase gene 218A/C polymorphism is not associated with depressed suicide. *International Journal of Neuropsychopharmacology, 3,* 215-220.

Duberstein, P. R., Conwell, Y., et al. (2000). Personality traits and suicidal behavior and ideation in depressed inpatients 50 years of age and older. *Journal of Gerontology: Psychological Sciences, 55B*(1), PP18-P26.,

Emanuel, E. J., Fairclough, D. L., & Emanuel, L. L. (2000). Attitudes and desires related to euthanasia and physician-assisted suicide Among terminally ill patients and their caregivers. *Journal of the American Medical Association, 284,* 2460-2468.

Eshun, S. (2000). Rolf of gender and rumination in suicide ideation. *Cross-Cultural Research, 34,* 259-263/

Exline, J. J., Yali, A. M. & Sanderson, W. C. (2000). Guilt, discord, and alienation. *Journal of Clinical Psychology,56,* 1481-1496.

Fergusson, D. M., Woodward, L. J., & Horwood, L. J. (2000). Risk factors and life processes associated with the onset of suicidal behaviour during adolescence and early adulthood. *Psychological Medicine, 30,* 23-39.

Fernquist, R. M. (2000a). Problem drinking in the family and youth suicide. *Adolescence, 35*(139), 551-558.

Fernquist, R. M. (2000b). An aggregate analysis of professional sports, suicide, and homicide rates. *Aggression & Violent Behavior, 5*, 329-341.

Fernquist, R. M., & Cutright, P. (2000). Attitudinal and structural predictors of of the gender gap in suicide. *Omega, 42,* 253-267.

Fetkewicz, J., Sharma, V., & Merskey, H. (2000). A note on suicidal deterioration with recovered memory treatment. *Journal of Affective Disorders, 58*, 155-159.

Freeman, T. W., Roca, W., & Moore, W. M. (2000). A comparison of chronic combat-related posttraumatic stress disorder (PTSD) patients with and without a history of suicide attempt. *Journal of Nervous & Mental Disease, 188,* 460-463.

Fritsch, S., Donaldson, D., Spirito, A., & Plummer, B. (2000). Personality characteristics of adolescent suicide attempters. *Child Psychiatry & Human Development, 30,* 219-235.

Funahashi, T., Ibuki, Y., et al. (2000). A clinical study on suicide among schizophrenics. *Psychiatry & Clinical Neurosciences, 54*, 173–179.

Garvey, M. J., & Underwood, K. (2000). Relationship of N-Acetyl-ß-Glucosaminidase levels to seriousness of suicide attempts. *Neuropsychobiology, 42,* 169-171.

Geijer, T., Frisch, A., et al. (2000). Search for associations between suicide attempt and serotonergic polymorphisms. *Psychiatric Genetics, 10,* 19-26.

Gibbs, J. P. (2000). Status integration and suicide. *Social Forces, 79,* 363-384. Also 949-968.

Gilbar, O., & Eden, A. (2000). Suicide tendency in cancer patients. *Omega, 42,* 159-170.

Goldney, R. D., Wilson, D., et al. (2000). Suicidal ideation in a random community sample. *Australian & New Zealand Journal of Psychiatry, 34*, 98–106

Gorwood, P., Batel, P., et al. (2000). Serotonin transporter gene polymorphisms, alcoholism, and suicidal behavior. *Biological Psychiatry, 48,* 259-264.

Grøholt, B., Ekeberg, Ø., Wichstrøm, L., & Haldorsen, T. (2000). Young suicide attempters. *Journal of the American Academy of Child & Adolescent Psychiatry, 39,* 868-875.

Gross-Isseroff, R. Weizman, A., et al. (2000). Unaltered a_2-noradrenergic/imidazoline receptors in suicide victims. *European Neuropsychopharmacology, 10,* 265–271.

Gunnell, D., Middleton, N., & Frankel, S. (2000). **TITLE** *Social Psychiatry & Psychiatric Epidemiology, 35*, 437-443.

Gutierrez, P. M., Thakkar, R. R., & Kuczen, C. (2000). Exploration of the relationship between physical and/or sexual abuse, attitudes about life and death, and suicidal ideation in young women, *Death Studies, 24,* 675-688.

Hamilton, T. K., & Schweitzer, R. D. (2000). The cost of being perfect. *Australian & New Zealand Journal of Psychiatry, 34,* 829-835.

Harris, T. L., & Molock, S. D. (20000. Cultural orientation, family cohesion, and family support in suicidal ideation and depression in African American college students. *Suicide & Life-Threatening Behavior, 30,* 341-353.

Hawton, K., Harriss, L., et al. (2000). Effect of death of Diana, Princess of Wales on suicide and deliberate self-harm. *British Journal of Psychiatry, 177,* 463-466.

Hem, E., Grønvold, N. T., Aasland, O. G., & Ekeberg, Ø. (2000). The prevalence of suicidal ideation and suicidal attempts among Norwegian physicians. *European Psychiatry, 15,* 183-190.

Hill, E. M., Boyd, C. J., Kortge, J. F. (2000). Variation in suicidality among substance-abusing women. *Journal of Substance Abuse Treatment, 19,* 339-345.

Ho, T. P., Leung, P. W., et al. (2000). The mental health of the peers of suicide completers and attempters. *Journal of Child Psychology & Psychiatry, 41,* 301-308.

Holden, R. R., & McLeod, L. D. (2000). The structure of the Reasons for Attempting Suicide Questionnaire (RASQ) in a nonclinical adult population. *Personality & Individual Differences, 29,* 621-628.

Homant, R. J., & Kennedy, D. B. (2000). Suicide-by-police. *Policing, 23,* 339-355.

Hovey, J. D. (2000a). Acculturative stress, depression, and suicidal ideation among Central American immigrants. *Suicide & Life-Threatening Behavior, 30,* 125-139.

Hovey, J. D. (2000b). Acculturative stress, depression, and suicidal ideation in Mexican immigrants. *Cultural Diversity & Ethnic Minority Psychology, 6,* 134-151.

Huang, T. L., & Wu, S. c. (2000). Serum cholesterol levels in paranoid and non-paranoid schizophrenia associated with physical violence or suicide attempts in Taiwanese. *Psychiatry Research, 96,* 175-178.

Huber, H. P., Rottraut, I., & Zapotoczky, H. G. (2000). Suicidal ideation, suicide risk and aggressiveness. *Review of Psychology, 7*(1-2), 19-25.

Hughes, J. H., Dunne, F., & Young, A. H. (2000). Effects of acute tryptophan depletion on mood and suicidal ideation in bipolar patients symptomatically stable on lithium. *British Journal of Psychiatry, 177,* 447-451.

Iribarren, C., Sidney, S., Jacobs, D. R., & Weisner, C. (2000). Hospitalization for suicide attempt and completed suicide. *Social Psychiatry &Psychiatric Epidemiology, 35,* 288-296.

Isacsson, G. (2000). Suicide prevention. *Acta Psychiatrica Scandinavica, 102*, 113-117.

Jacobson, B., & Bygdeman, M. (2000). Obstetric care and proneness of offspring to suicide as adults. *Journal of Prenatal & Perinatal Psychology & Health 15*(1), 63-74.

Jianlin, J. (2000). Suicide rates and mental health services in modern China. *Crisis, 21,* 118-121.

Johnson, G. R., Krug, E. G., & Potter, L. B. (2000a). Suicide among adolescents and young adults. *Suicide & Life-Threatening Behavior, 30,* 74-82.

Johnson, N. P., Wise, B. K., & Smith, J. T. (2000b). Children in group homes. *Journal of Health & Social Policy, 12,* 45-64.

Joiner, T. E., & Rudd, D. M. (2000). Intensity and duration of suicidal crises vary as a function of previous suicide attempts and negative life events. *Journal of Counseling & Clinical Psychology, 68,* 909-916.

Joiner, T. E., Rudd, D. M., Rouleau, M. R., & Wagner, K. D. (2000). Parameters of suicidal crises vary as a function of previous suicide attempts in youth inpatients. *Journal of the American Academy of Child & Adolescent Psychiatry, 39,* 876-880.

Kahne, M. J. (1966). Suicide research. *International Journal of Social Psychiatry, 12,* 177-186.

Kalichman, S. C., Heckman, T., et al. (2000). Depression and thoughts of suicide among middle-aged and older persons living with HIV-AIDS. *Psychiatric Services, 51,* 903-907.

Kaslow, N. J., Thompson, M. P., et al. (2000). Ratings of family functioning of suicidal and nonsuicidal African American women. *Journal of Family Psychology, 14,* 585-599.

Kelly, T. M., Doloff, P. H., et al. (2000). Recent life events, social adjustment, and suicide attempts in patients with major depression and borderline personality disorders. *Journal of Personality Disorders, 14,* 316-326.

King, D. A., Conwell, Y., et al. (2000). A neuropsychological comparison of depressed suicide attempters and nonattempters. *Journal of Neuropsychiatry & Clinical Neurosciences, 12,* 64–70.

Kirkcaldy, B., & Furnham, A. (2000). Positive affectivity, psychological well-being, accident- and traffic-deaths, and suicide. *Studia Psychologica, 42,* 97-104.

Knight, M. T. D., Furnham, A. F., & Lester, D. (2000). Lay theories of suicide. *Personality & Individual Differences, 29,* 453-457.

Kontaxakis, V., Havaki-Kontaxaki, B., & Christodoulou, G. (2000). Overdosing. *European Journal of Psychiatry, 14*(3), 137-142.

Kposowa, A. J. (2000). Marital status and suicide in the National Longitudinal Mortality Study. *Journal of Epidemiology & Community Health, 54,* 254-261.
Krakow, B., Artar, A., et al. (2000). Sleep disorder, depression, and suicidality in female sexual assault survivors. *Crisis, 21,* 163-170/
Lawrence, D., Almeida, O. P., et al. (2000). Suicide and attempted suicide among older adults in Western Australia. *Psychological Medicine, 30,* 813-821. \
Lester, D. (1993). Functional and dysfunctional impulsivity and suicidal ideation in a subclinical population. *Journal of General Psychology, 120,* 187-188.
Lester, D. (1994). *Patterns of suicide and homicide in America*. Nova Science,
Lester, D. (1996). *Patterns of suicide and homicide in the world*. Nova Science.
Lester, D. (2000a). *Why people kill themselves*. Springfield, IL: Charles Thomas.
Lester, D. (2000b). Democracy and suicide. *Psychological Reports, 87,* 822.
Lester, D. (2000c). Suicide and birth order. *Perceptual & Motor Skills, 91,* 836.
Lester, D. (2000d). Suicidality in primary health care and national suicide rates. *Psychological Reports, 87*, 688.
Lester, D. (2000e). Religious homogeneity and suicide. *Psychological Reports, 87*, 766.
Lester, D. (2000f). Correlates of rates of suicide and homicide committed by different methods. *Perceptual & Motor Skills, 91,* 616.
Lester, D. (2000g). Islam and suicide. *Psychological Reports, 87*, 692.
Lester, D. (2000h). Motivations for preventing versus assisting suicide. *Psychological Reports, 86,* 134.
Lester, D. (2000i). Equality in suicide and dates of women's suffrage. *Psychological Reports, 87,* 738.
Lester, D. (2024a). A review of research on suicide in 1998. *Suicide Studies,*2024, 5(2), 2-61.
Lester, D. (2024b). A review of research on suicide in 1999. *Suicide Studies,*2024, 5(3), 2-63.
Lidberg, L., Belfrage, H., et al. (2000). Suicide attempts and impulse control disorder are related to low cerebrospinal fluid 5-HIAA in mentally disordered violent offenders. *Acta Psychiatrica Scandinavica, 101,* 395-402.
Lifton, I., & Kettle, P. A. (2000). Suicidal ideation and the choice of advance directives by elderly persons with affective disorders. *Psychiatric Services, 51,* 1447-1449.
Lord, V. B. (2000). Law enforcement-assisted suicide. *Criminal Justice & Behavior, 27,* 401-419.

Ludwig, J., & Cook, P. J. (2000). Homicide and suicide rates associated with implementation of the Brady Handgun Violence Prevention Act. *Journal of the American Medical Association, 284,* 585-591.

Lykouras, E., Gournellis, R., et al. (2000). Psychotic major depression in the elderly and suicide behavior. *Psychiatriki, 11*(3), 177-183.

Lyon, M. E., Benoit, M., et al. (2000). Assessing African America adolescents' risk for suicide. *Adolescence, 35*(137), 121-134.

Mäkinen, I. H. (2000). Eastern European transition and suicide mortality. *Social Science & Medicine, 51,* 1405-1420.

Malone, K. M., Oquendo, M. A., et al. (2000). Protective factors against suicidal acts in major depression. *American Journal of Psychiatry, 157,* 1084-1088.

Malone, K. M., Oquendo, M. A., et al. (2000). Protective factors against suicidal acts in major depression. *American Journal of Psychiatry, 157,* 1084-1088.

Mann, J. J., Huang, Y. Y., et al. (2000). A serotonin transporter gene promoter polymorphism (5-HTTLPR) and prefrontal cortical binding in major depression and suicide. *Archives of General Psychiatry, 57,* 729-738.

Mayer, P. (2000). Development, gender equality, and suicide rates. *Psychological Reports, 87,* 367-372.

Mazza, J. J. (2000). The relationship between posttraumatic stress symptomatology and suicidal behavior in school-based adolescents. *Suicide & Life-Threatening behavior, 30,* 91-103.

McLelland, L., Reicher, S., & Booth, N. (2000). A last defence. *Journal of Community & Applied Social Psychology, 10,* 225-240.

Meszaros, K., & Fischer-Danzinger, D. (2000). Extended suicide attempt. *Psychopathology, 33,* 5-10.

Miller, M., Hemenway, D., & Rimm, E. (2000). Cigarettes and suicide. *American Journal of Public Health, 90,* 768-773.

Mohandie, K., & Meloy, J. R. (2000). Clinical and forensic indicators of "suicide-by-cop." *Journal of Forensic Sciences, 45,* 384-389.

Morrison, L. L., & Downey, D. L. (2000). Racial differences in self-disclosure of suicidal ideation and reasons for living. *Cultural Diversity & Ethnic Minority Psychology, 6,* 374-386.

Mouton, C. P., Espino, C. V., Esparza, Y., & Miles, T. P. (2000). Attitudes toward assisted suicide among community-dwelling Mexican Americans. *Clinical Gerontologist, 22*(2), 81-92.

Neale, J. (2000). Suicidal intent in non-fatal illicit drug overdose. *Addiction, 95,* 85-93.

Nelson, E. C., Grant, J. D., et al. (2000). Social phobia in a population-based female adolescent twin sample. *Psychological Medicine, 30,* 797–804.

Nisbet, P. A., Duberstein, P. R., Conwell, Y., & Seidlitz, L. (2000). The effect of participation in religious activities on suicide versus natural death in adults 50 and older. *Journal of Nervous & Mental Disease, 188, 543-546.*

Nolan, K. A., Volavka, J., et al. (2000). Suicidal behavior in patients with schizophrenia is related to COMT polymorphism. *Psychiatric Genetics, 10,* 117-124.

Nomiya, D., Miller, A. S., & Hoffman, J. P. (2000). Urbanization and rural depletion in rural Japan. *International Journal of Comparative & Applied Criminal Justice, 24,* 1-18.

Oquendo, M. A., Waternaux, C., et al. (2000). Suicidal behavior in bipolar mood disorder: clinical characteristics of attempters and nonattempters. *Journal of Affective Disorders, 59,* 107-117.

Osgood, N. J., & Manetta, A. A. (2000). Abuse and suicidal issues in older women. *Omega, 42,* 71-81.

Osman, A., Gilpin, A. R., et al. (2000). The Multi-Attitude Suicide Tendency Scale. *Suicide & Life-Threatening Behavior, 30,* 377-385.

Palmer, S. (1960). *A study of murder*. New York: Crowell.

Pelkonen, M., Marttunen, M., et al. (2000). Mood disorders and severe psychosocial impairment characterize adolescent suicidal female outpatients. *Nordic Journal of Psychiatry, 54,* 189-194.

Pfeffer, C. R., Jiang, H., & Kakuma, T. (2000). Child-Adolescent Suicidal Potential Index (CASPI). *Psychological Assessment, 12,* 304-318.

Pirkis, J., Burgess, P., & Dunt, D. (2000). Suicidal ideation and suicide attempts among Australian adults. *Crisis, 21,* 16-25.

Pitkälä, K., Isometsä, E. T., Henriksson, M. M., & Lönnqvist, J. K. (2000). Elderly suicide in Finland. *International Psychogeriatrics, 12,* 209-220.

Placidi, G. P. A., Oquendo, P. A., et al. (2000). Anxiety in major depression. *American Journal of Psychiatry, 157,* 1614-1618.

Potash, J. B., Kane, H. S., et al. (2000). Attempted suicide and alcoholism in bipolar disorder. *American Journal of Psychiatry, 157,* 2048-2050.

Powell, J., Geddes, J., et al. (2000). Suicide in psychiatric hospital in-patients. *British Journal of Psychiatry, 176,* 266-272.

Preti, A., & Miotto, P. (2000). Influence of method on seasonal distribution of attempted suicides in Italy. *Neuropsychobiology, 41,* 62-72.

Pirkola, A. P., Isometsä, E. T., Heikkinen, M. E., & Lönnqvist, J. K. (2000). Suicides of alcohol misusers and non-misusers in a nationwide population. *Alcohol & Alcoholism, 35*, 70-75.

Prinstein, M. J., Boergers, J., et al. (2000). Peer functioning, family dysfunction, and psychological symptoms in a risk factor model for adolescent inpatients'

suicidal ideation severity. *Journal of Clinical Child Psychology, 29,* 392-405.

Pritchard, C., & Baldwin, D. (2000). Effects of age and gender on elderly suicide rates in Catholic and Orthodox countries. *International Journal of Geriatric Psychiatry, 15,* 904-910.

Pritchard, C., & King, E. (2000). 'High risk' adolescents five years on. *International Journal of Adolescence & Youth, 8,* 139-148.

Prochazka, H., Sjögren, M., & Ågren, H. (2000). Oral d-fenfluramine test in treatment-refractory depression. *Journal of Affective Disorders, 57,* 201-208.

Puffer, P. (2009). Durkheim did not say "normlessness." *Journal of Rural Social Sciences, 24*(1): Article 11.

Qin, P., Agerbo, E., et al. (2000). Gender differences in risk factors for suicide in Denmark. *British Journal of Psychiatry, 177,* 546-550.

Ramberg, I., & Wasserman, D. (2000). Prevalence of reported suicidal behaviour in the general population and mental health-care staff. *Psychological Medicine, 30,* 1189-1196.

Rocchi, M. B., & Perlini, C. (2000). Intraseasonal pattern in the time distribution of suicides. *Crisis, 22,* 95-97.

Rosel, P., Arranz, B., et al. (2000). Altered 5-HT binding sites and second messenger 2A inositol trisphosphate IP levels in hippocampus but ž / 3 not in frontal cortex from depressed suicide victims. *Psychiatry Research: Neuroimaging Section, 99,* 173-181.

Roy, A. (2000). Relation of family history of suicide to suicide attempts in alcoholics. *American Journal of Psychiatry, 157*, 2050-2051.

Rudd, M. D. (2000). The suicidal mode. *Suicide & Life-Threatening Behavior, 30,* 18-33.

Rudd, M. D., Ellis, T. E., Rajab., H., & Wehrly, T. (2000). Personality types and suicidal behavior. *Suicide & Life-Threatening Behavior, 30,* 199-212.

Rujescu, D., Giegling, I., et al. (2000). Association study of suicidal behavior and affective disorders with a genetic polymorphism in ABCG1, a positional candidate on chromosome 21q22.3. *Neuropsychobiology, 42*(supplement 1), 22-25.

Russ, M. J., Lachman, H. M., et al. (2000). Analysis of catechol-O-methyltransferase and 5-hydroxytryptamine transporter polymorphisms in patients at risk for suicide. *Psychiatry Research, 93*, 73-78.

Sarchiapone, M., Roy, A., Camardese, G., & de Risio, S. (2000). Further evidence for low serum cholesterol and suicidal behaviour. *Journal of Affective Disorders, 61,* 69-71.

Schaffer, A., Levitt, A. J., et al. (2000). Suicidal ideation in major depression. *Canadian Journal of Psychiatry, 45,* 822-826.

Schwartz, R. C. (2000). Insight and suicidality in schizophrenia. *Journal of Nervous & Mental Disease, 188,* 235-237.

Scocco, P., Marietta, P., et al. (2000). The role of psychopathology and suicidal intention in predicting suicide risk. *Psychopathology, 33,* 143-150.

Shah, A., Hoxey, K., & Mayadunne, V. (2000). Suicidal ideation in acutely medically ill elderly inpatients. *International Journal of Geriatric Psychiatry, 15*, 162-169.

Shah, S., Hoffman, R. E., Wake, L., & Marine, W. M. (2000a). Adolescent suicide and household access to firearms in Colorado. *Journal of Adolescent Health, 26,* 157-163.

Simon, T. R., & Crosby, A. E. (2000). Suicide planning among high school students who report attempting suicide. *Suicide & Life-Threatening Behavior, 30,* 213-221.

Smith, D., & Anderson, R. (2000). Social support, risk-level and safety actions following acute assessment of suicidal youth. *Journal of Youth & Adolescence, 29,* 451-465.

Soloff, P. H., Lynch, K. G., et al. (2000). Characteristics of suicide attempts of patients with major depressive episode and borderline personality disorder. *American Journal of Psychiatry, 157,* 601-608.

Spicer, R. S., & Miller, T. R. (2000). Suicide acts in 8 states. *American Journal of Public Health, 90,* 1885-1891.

Stack, S. (2000). Blues fans and suicide acceptability. *Death Studies, 24,* 223-231.

Starzomski, A., & Nussbaum, D. (2000). The self and the psychology of domestic homicide-suicide. *International Journal of Offender Therapy & Comparative Criminology, 44,* 468-447.

Strauss, J., Birmaher, B., et al. (2000). Anxiety disorders in suicidal youth. *Canadian Journal of Psychiatry, 45,* 739-745.

Street, M. E., & Lester, D. (2000). Manic-depressive tendencies, suicidality, and perfectionism. *Psychological Reports, 86,* 142.

Suominen, K. H., Isometsä, E T., et al. (2000). Suicide attempts and personality disorder. *Acta Psychiatrica Scandinavica, 102,* 118-125.

Szádóczky, E., Vitrai, J., Rihmer, Z., & Füredi, J. (2000). Suicide attempts in the Hungarian adult population. *European Psychiatry, 15,* 343-347.

Tanskanen, A., Tuomilehto, J., et al. (2000a). Joint heavy use of alcohol, cigarettes and coffee and the risk of suicide. *Addiction, 95,* 1699–1704.

Tanskanen, A., Tuomilehto, J., et al. (2000b). Smoking and the risk of suicide. *Acta Psychiatrica Scandinavica, 101,* 243-245.

Tanskanen, A., Vartiainen, E., et al. (2000c). High serum cholesterol and risk of suicide. *American Journal of Psychiatry, 157,* 648-650.

TenHouten, W. D. (2016). Normlessness, anomie, and the emotions. *Sociological Forum, 31,* 465-486.

Thacore, V. R., &S. L. Varma (2000). A study of suicide in Ballarat, Victoria, Australia. *Crisis, 21,* 26-30.

Thakkar, R. R., Gutierrez, P. M., Kuczen. C. l., & McCanne, T. R. (2000). History of physical ad/or sexual abuse and current suicidality in college women. *Child Abuse & Neglect, 24,* 1345-1354.

Thompson, M. P. Kaslow, N. J., Lane, D. B., & Kingree, J. B. (2000). Childhood maltreatment, PTSD, and suicidal behavior among African American females. *Journal of Interpersonal Violence, 15,* 3-15.

Tomori, M., & Zalar, B. (2000a). Characteristics of suicide attempters in a Slovenian high school population. *Suicide & Life-Threatening Behavior, 30,* 222-238.

Tomori, M., & Zalar, B. (2000b). Sport and physical activity as possible protective factors in relation to adolescent suicide attempts. *International Journal of Sports Psychology, 31,* 405-413.

Tomori, M., & Zalar, B. (2000c). Gender differences among adolescent suicide attempters and nonattempters. *International Journal of Adolescent Medicine & Health, 12*(2-3), 177-190.

Tripodianakis, J., Markianos, M., Sarantidis, D., & Leotsakou, C. (2000). Neurochemical variables in subjects with adjustment disorder after suicide attempts. *European Psychiatry, 15,* 190-195.

Twomey, H. B., Kaslow, N. J., & Croft, S. (2000). Childhood maltreatment, object relations, and suicidal behavior in women. *Psychoanalytic Psychology, 17,* 313-335.

Uncapher, H. (2000). Cognitive biases and suicidal ideation in elderly psychiatric patients. *Omega, 42,* 21-36.

Vajda, J., & Steinbeck, K. (2000). Factors associated with repeat suicide attempts among adolescents. *Australian & New Zealand Journal of Psychiatry. 34,* 437–445.

Van Heeringen, C., & Vincke, J. (2000) Suicidal acts and ideation in homosexual and bisexual young people. *Social Psychiatry & Psychiatric Epidemiology, 35,* 494-499.

Van Heeringen , K., Audenaert, K., Van de Wiele, L., & Verstraete, A. (2000). Cortisol in violent suicidal behaviour. Journal of Affective Disorders, 60, 181–189.

Velting, D. M., Rathus, J. H., & Miller, A. L. (2000). MACI personality scale profiles of depressed adolescent suicide attempters. *Journal of Clinical Psychology, 56,* 1381-1385.

Wagner, K. D., Rouleau, M., & Joiner, T. (2000). Cognitive factors related to suicidal ideation and resolution in psychiatrically hospitalized children and adolescents. *American Journal of Psychiatry, 157,* 2017-2021.

Warshaw, M. G., Dolan, R. T., &Keller, M. B. (2000). Suicidal behavior in patients with current or past panic disorder. *American Journal of Psychiatry, 157,* 1876-1878/

Weinberg, I. (2000). The prisoners of despair. *Neuroscience & Biobehavioral Reviews, 24,* 799–815

Weinberger, L. E., Sreenivasan, S., et al. (2000). Psychological factors in the determination of suicide in self-inflicted gunshot head wounds. *Journal of Forensic Sciences, 45,* 815-819.

Werenko, D. D., Olson, L. M., et al. (2000). Child and adolescent suicide deaths in New Mexico, 1990–1994. *Crisis, 21*, 36-44.

Whalin, R. T. B., Bäckman, L., et al. (2000). High suicidal ideation in persons testing for Huntington's disease. *Acta Neurologica Scandinavica, 102,* 150-161.

Wichstrøm, L. (2000). Predictors of adolescent suicide attempts. *Journal of the American Academy of Child & Adolescent Psychiatry, 39,* 603-610.

Wilkinson, D., & Gunnell, D. (2000). Youth suicide trends in Australian metropolitan and non-metropolitan areas, 1988–1997. *Australian & New Zealand Journal of Psychiatry, 34,* 822-828.

Worthen, L. T. & Yeatts, D. E. (2000). Assisted suicide. *Omega, 42,* 115-135.

Yamaguchi, N., Kobayashi, J., et al. (2000). Parental representation in eating disorder patients with suicide. *Journal of Psychosomatic Research, 49*, 131-136.

Yan, Y. Y. (2000a). The influence of weather on suicide in Hong Kong. *Perceptual & Motor Skills, 91,* 571-577.

Yan, Y. Y. (2000b). Suicide and occupation in Hong Kong. *Perceptual & Motor Skills, 91,* 105-106.

Yang, B., & Clum, G. A. (2000). Childhood stress leads to later suicidality via its effect on cognitive functioning. *Suicide & Life-Threatening Behavior, 30,* 183-198.

Yip, P. S. F., Callanan, C., & Yuen, H. P. (2000). Urban/rural and gender differentials in suicide rates. *Journal of Affective Disorders, 57,* 99-106.

Yuen, N. Y. C., Nahulu, L. b., Hishinuma, E. S., & Miyamoto, Y. H. (2000). Cultural identification and attempted suicide in native Hawaiian adolescents.

Journal of the American Academy of Child & Adolescent Psychiatry, 39, 360-367.

Zhang, J. (2000). Gender differences in athletic performance and their implications in gender ratios of suicide. *Omega, 41,* 117-123.

Suicide Studies, 2024, 5(4), 110-116

A REVIEW OF RESEARCH USING LESTER'S HELPLESSNESS, HOPELESSNESS, HAPLESSNESS (HHH) SCALE

David Lester

Abstract: Lester devised a scale to measure hopelessness, helplessness and haplessness. This article reviews the research that has been conducted using the scale. The subscales have proven to have good reliability, and there have been many interesting correlates of the subscales, especially the hopelessness and helplessness subscales.

Beck, Weissman, Lester and Trexler (1974) published the Hopeless Scale (Beck, 1988) based on responses from a sample of attempted suicides. To date (May 14, 2024), the original article has received 8,131 citations according to Google Scholar.

Lester thought that the item content was mixed with some items referring to hopelessness, some to helplessness and some to haplessness (chance). He therefore devised a scale (HHH) to measure these three separate components (Lester, 2001). The present article is a review of research that has used the HHH, with a summary of the results.

The HHH Scale

Lester (1998) published a preliminary paper on the HHH Scale. The HHH Scale had ten items for each component and was administered to college students. The split-half reliabilities were moderate to good (0.57 to 0.81). In multiple regressions, hopelessness predicted current and past suicidal ideation while helplessness predicted a history of attempted suicide. However, Lester did not report the actual correlations.

Lester (2001) published a more formal presentation of the HHH Scale, together with the items so that other researchers could use the scale (without obtaining permission from Lester). The HHH Scale uses a Likert-type answer format..

Lester (2001) factor analyzed the 30 items in the HHH scale and identified 8 orthogonal factors. As a result, by eliminating items with low loadings of the factors, Lester created three 4-item scales to measure the components.

The Research

The results of research using the HHH Scale are presented in three tables. Table 1 presents the measures of reliability of the three subscales. The Cronbach alphas were high, and the one study on the test-retest reliability found moderate reliabilities.

Research on correlates of the subscale scores are shown in Table 2. The majority are as expected. All three subscale scores are associated with depression and other measures of mental health. Typically, the correlations with hopelessness and helplessness are of similar magnitude, but sometimes the correlations with helplessness are the highest, for example, with measures of defeat and entrapment.

Some of the studies cited in Table 2 used many more variables than those shown in the table (Shamloo & Ciox 2010; Tebbe, et al., 2022; Ward & Hay, 2015). Some research used only a few items from the HH Scale (e.g., Cho, 2022) and their results are not included here, while other papers cited the HHH Scale but did not use the scale (e.g., Drinkwater, et al., 2023).

Conclusion

The HHH Scale has proven to be useful in distinguishing between hopelessness, helplessness and haplessness and may, therefore, be more useful when using multiple regression to predict target variables than scales which combine these three attitudes toward life into a single score.

References

Beck, A. T. (1988, 1993). *Beck Hopelessness Scale*. New York: Pearson.

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: the hopelessness scale. *Journal of Consulting & Clinical Psychology, 42,* 861-865.

Brassai, L., Piko, B. F., & Steger, M. F. (2012). Existential attitudes and Eastern European adolescents' problem and health behaviors. *Psychological Record, 62,* 719-734.

Cho, H. (2022). Privacy helplessness on social media. *Internet Research, 32,* 150-171.

Drinkwater, K., Denovan, A., Dagnall, N., & Williams, C. (2023). The General hopelessness Scale, *PLUS One, 18*(6), e0287016.

Gençöz, F., Vatan, S., Walker, R., & Lester, D. (2008). Helplessness, hopelessness, and haplessness as predictors of suicidal ideation. *Omega, 57,* 315-318.

Hanson, S. H. (2023). *Self-compassion and burnout in socially progressive student activists*. M.A. thesis, University of Manitoba, Canada.

Lester, D. (1998). Helplessness, hopelessness, and haplessness and suicidality. *Psychological Reports, 82,* 946.

Lester, D. (2001). An inventory to measure helplessness, hopelessness, and haplessness. *Psychological Reports, 89,* 495-498.

Lester, D. (2012a). Defeat and entrapment as predictors of depression and suicidal ideation versus hopelessness and helplessness. *Psychological Reports*, 111, 498-501.

Lester, D. (2012b). Spirituality and religiosity as predictors of depression and suicidal ideation. *Psychological Reports*, 110, 247-250.

Lester, D., & Walker, R. L. (2007). Hopelessness, helplessness, and haplessness as predictors of suicidal ideation. *Omega, 55,* 321-324.

McClintock, A. S., McCarrick, S. M., Anderson, T., Himawan, L., & Hirschfeld, R. (2017). Development and validation of a six-item version of the Interpersonal Dependency Inventory. *Assessment, 24,* 360-370.

Shamloo, Z. S., & Cox, W. M. (2010). The relationship between motivational structure, sense of control, intrinsic motivation and university students' alcohol consumption. *Addictive Behaviors, 35,* 140-146.

Smetana, E. N. (2022). The relationship of minority stress with the mental health of LGBTQ college students on a Christian campus with non-affirming policies. M.Sci. thesis, Abilene Christian University, Texas.

Tebbe, E. A., Simone, M., Wilson, E., & Hunsicker, M. (2022). A dangerous visibility. *Psychology of Sexual Orientation & Gender Diversity, 9.* 259-271.

van den Brand, S. J. (2018). *Crying at work, cause and consequence*. M.A. thesis, Tilburg University, the Netherlands.

Vatan, S., & Lester, D. (2008). The internal consistency and concurrent validity of the hopelessness, helplessness, and haplessness scale in a Turkish clinical sample. *Psychological Reports, 103,* 701-702.

Vatan, S., Ertaş, S., & Lester, D. (2011). Test-retest reliability and construct validity of the helplessness, hopelessness, and haplessness scale in patients with anxiety disorders. *Psychological Reports, 108*, 673-674.

Ward, R. M., & Hay, M. C. (2015). Depression, coping, hassles, and body dissatisfaction. *Eating Behaviors, 17,* 14-18.

Table 1: Reliabilities

			Hopelessness	Helplessness	Haplessness
Gençöz, et al. (2008)					
Turkish	College Ss	alpha	+0.76	+0.81	+0.81
American	College Ss	alpha	+0.80	+0.39	+0.77
Hanson (2023)					
Canadian	College Ss		+0.90		
Lester (1998)	College Ss	alpha	+0.74	+0.79	+0.79
Lester (2001)	College Ss	alpha	+0.80	+0.87	+0.75
Lester Walker (2007)	College Ss	alpha	+0.80	+0.79	+0.77
Lester (2001)	College Ss	alpha	+0.65	+0.63	+0.69
McClintock, et al. (2017)	College Ss	alpha	-	+0.87	-
Vatan & Lester (2008)					
Turkish Psychiatric patients		alpha	+0.90	+0.67	+0.76
Vatan, et al. (2011)					
Turkish Psychiatric patients		alpha	+0.84	+0.64	+0.64
		3-week test-retest	+0.52	+0.73	+0.52
Ward & Hay (2015)	College Ss	alpha	+0.78	+0.81	+0.72

Table 2: Results of studies using the HHH Scale

Subjects		Hopelessness	Helplessness	Haplessness
Brassai, et al. (2012)				
Hungarian	High school Ss			
aggression past		+0.31*		
aggression future		+0.39*		
academic problems past		+0.29*		
academic problems future		+0.28*		
healthy eating past		+0.13*		
healthy eating future		+0.10*		
physical activity past		+0.11*		
physical activity future		+0.11*		
Gençöz, et al. (2008)				
Turkish	College Ss			
suicidal ideation		+0.49*	+0.44*	+0.33
American	College Ss			
sucidal ideation		+0.36*	+0.38*	+0.18*
Hanson (2023)				
Canadian	College Ss			
activist burnout		+0.47*		
student burnout		+0.47*		
Lester (1998)	College Ss			
depression		+0.37*	+0.43*	+0.21*
Lester (2001)	College Ss			
manic tendencies		+0.25*	ns	ns
depression		+0.50*	+0.47*	ns
trust in God		-0.31*	ns	ns
trust in government.		ns	-0.24*	ns
trust in self		ns	ns	ns
Lester (2012a)	College Ss			
defeat		+0.54	+0.64	+0.38
internal entrapment		+0.34	+0.56	+0.36
external entrapment		+0.28	+0.52	+0.31
Lester (2012b)	College Ss			
depression		+0.38*	+0.44*	+0.25*
manic tendencies		+0.13	+0.20*	+0.22*
past suicidal ideation		+0.26*	+0.34*	+0.25
past attempted suicide		+0.13	+0.13	-0/01
Lester Walker (2007)				
College Ss				
hopelessness		+0.67*	+0.48*	+0.29*
suicidal ideation		+0.36*	+0.38*	+0.18*

Table 2 continued

Subjects	Hopelessness	Helplessness	Haplessness
McClintock, et al. (2017)			
College Ss			
Interpersonal dependency	-	+0.56*	
Shamloo & Cox (2010)			
Wales College Ss			
intrinsic motivation	-0.30*	-0.39*	-0.24*
extrinsic motivation	+0.32*	+0.47*	ns
weekly drinking	-	+0.50*	-
positive sense of control	-	-0.32*	-
Smetana (2022)			
LGBTQ college Ss			
discriminatory experiences	+0.16		
stigma consciousness	+0.35*		
Tebbe, et al. (2022)			
transgender Ss			
depression	+0.69*		
anxiety	+0.56*		
internalized transphobia	+0.44*		
van den Brand. (2018)			
China, the Netherlands, St. Maarten			
Female employees			
crying at work -	-	+0.28*	
work stress	-	+0.37*	
Vatan & Lester (2008)			
Turkish Psychiatric patients			
hopelessness	+0.72*	+0.54*	+0.49*
Vatan, et al. (2011)			
Turkish Psychiatric patients			
death anxiety	+0.26*	+0.22*	+0.14
anxiety	+0.39*	+0.36*	+0.20*
Ward & Hay (2015) College Ss			
body shape attitudes	+0.25*	+0.33*	+0.25*
eating problems	+0.31*	+0.27*	+0.23*

Table 3: Inter-correlations between the three subscales scores

	hopelessness & helplessness	hopelessness & haplessness	helplessness & haplessness
Shamloo & Cox (2012)	+0.63* -	+0.43*	+0.51*
Lester (2012a)	+0.57*	+0.33*	+0.57*
Vatan, et al. (2011)	+0.57*	+0.17	+0.45*
Ward & Hay (2015)	+0.75*	+0.71*	+0.62*

Suicide Studies, 2024, 5(4), 117-122

GUILT AND SUICIDE: A STUDY OF SUICIDE NOTES

David Lester

Abstract: Samples of suicide notes were examined for mentions of guilt (saying *sorry*) and requests for forgiveness. Few differences were found by sex or age, between genuine and simulated suicide notes, or suicide notes from completed versus attempted suicide.

Researchers have occasionally studied whether guilt plays a role in suicidal behavior, although all of the research has been conducted on suicidal ideation and occasionally attempted suicide. The researchers often confuse and combine guilt and shame. For example, Kealy, et al. (2021) found that generalized guilt and generalized shame were both associated with recent suicidal ideation in a sample of patients attending an outpatient mental health clinic.

[Guilt can be illustrated by "I cannot believe that I did **that**" for which the person can apologize. Shame is illustrated by "I cannot believe that **I** did that" for which only escape and hiding are the options.]

Because of the methodological problems, no studies of guilt in suicides have appeared. The present paper attempts to fill that gap with studies of suicide notes.

Methodology

Lester (2014) has accumulated samples of suicide notes from several countries and several sources and has presented various analyses of these notes using the Linguistic Inquiry Word Count program from Pennebaker, et al. (2001). The present paper explores the use of the word *sorry* in these suicide notes. In almost all cases, the word *sorry* was used to refer to the writer of the note ("I'm sorry I am a failure"), but on rare occasions the word was directed toward another (as in "I'm sorry you are a failure"). The present analysis excluded this latter use of the word *sorry*.

Genuine versus Simulated Suicide Notes

Shneidman and Farberow (1957) published a sample of suicide notes that they found in the files of the Los Angeles medical examiner's office. They matched 33 genuine suicide notes with 33 "simulated" suicide notes, that is, suicide notes solicited from people who were not contemplating suicide who were asked to pretend that they were going to die by suicide and to write a suicide note. Since then, many papers have appeared comparing this set of genuine and simulated suicide notes.[17]

Ten of the 33 genuine suicide notes (30.3%) contained *sorry*, as did 10 of the simulated suicide notes (30.3%).

A Second Sample of Genuine and Simulated Suicide Notes

Seiden and Tauber (1970) also collected a sample of 21 genuine and 21 simulated suicide notes and a sample of 21 notes left by people who had possibly pretended to die by suicide from the Golden Gate Bridge. These cases had no eyewitness to the jump and no body was found. Nine of the genuine suicide notes (42.9%) contained *sorry*, 4 of the simulated suicide notes (19.0%), and 11 of the hoax suicide notes (52.4%) ($X^2 = 5.25$, df =2, p = 0.073). It is interesting to note that the hoax notes contained *sorry* as often as the genuine notes.

Suicide Notes from Attempted and Completed Suicides

A sample of suicide notes from 20 attempted suicides and 20 completed suicides was collected by Livermore (1985; Brevard, et al., 1990) from a town in the United States. Seven of the suicides notes from completed suicides (35.0%) contained *sorry* compared to only 3 of the notes from attempted suicides (15.0%), a non-significant difference ($X^2 = 2.44$, df = 1, p = 0.12).

[17] For each suicide note, an individual matched for age and occupational level was asked to write a suicide note. The sample was restricted to Caucasian, Protestant, native-born males aged 25 to 60.

Protest Suicide in Korean Students and Laborers[18]

Protest suicide has a long history in Korea. For example, several scholars died by suicide in 1905 to protest the colonial occupation of Korea by the Japanese. In the last thirty years of the 20th Century, nearly 100 people killed themselves in South Korea as a means of political protest (Park, 2004). These fell mainly into two groups: (1) workers protesting the repression of workers and their unions by companies and by the government, and (2) students protesting the government's policies and its cooperation with the United States in the confrontation with North Korea. Some of the protest suicides left suicide notes.

Two samples of notes from protest suicides in South Korea were obtained from the period 1975 to 2003, a period during which South Korea was mostly ruled by authoritarian military leaders (Park & Lester, 2009). There were 16 notes from students and 15 notes from workers. Four of the suicide notes from the students (25.0%) contained *sorry*, as did 4 of the suicide notes from the laborers (26.7%).

The Suicide Notes of Men and Women

Shneidman's Sample

Edwin Shneidman discovered a trove of suicide notes in the Medical Examiner's office in Los Angeles in the 1950s. A clerk in that office gave Shneidman a collection of 721 suicide notes written between 1945 and 1954 that he had archived. The notes have no information attached to them. Most, but not all, have the name of the writer. Where the first name is not ambiguous, the sex of the writer can be determined. For other notes, the writer refers to a wife or husband or signs the note with a word such as "Daddy." In these cases, the sex of the writer can be confirmed. Lester and Leenaars (2016) examined differences by sex using the LIWC (Pennebaker, et al., 2001).

There were four double suicides, and none of their notes had *sorry*. Of the 171 female suicides notes, 18.7% had *sorry*, while of the 519 male suicide notes 19.8% had *sorry* ($X^2 = 0.11$, df = 1).

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[18] There is a problem in using suicide notes from non-English speaking countries because of the problem of mistranslation.

A German Sample

Forty suicide notes were obtained from 20 men and 20 women from a town in Germany (Lester & Heim, 1992). Only one of the notes from men (5.0%) and one of the notes from women (5.0%) contained *sorry* ($X^2 = 0.00$, df = 1).

An American Sample

Forty-eight suicide notes from 34 men and 14 women were obtained from Buffalo (New York). Four of the women (28.6%) used *sorry*, as did 10 of the men (29.4%) ($X^2 = 0.01$, df = 1, p = 0.95).

In a second sample of 28 suicide notes from the United States, 3 of 6 women said *sorry* versus 5 of 22 men ($X^2 = 1.72$, df = 1, p = 0.19).

An Australian Sample

Two hundred and sixty-one suicide notes were obtained from completed suicides in Tasmania, Australia (Haines, et al., 2010). For the women, 32.8% contained *sorry* as compared to 28.7% for the men ($X^2 = 0.39$, df = 1, p = 0.53).

Phi coefficients for the correlations between saying *sorry* and sex (male=1, females=0) are shown in Table 1. None of the correlations were statistically significant. Three were positive, and three were negative.

Differences by Age

Point biserial correlation coefficients between saying *sorry* and age are shown in Table 1. All of the correlations were negative, but only one was statistically significant.

Alcoholics

Suicide notes were available for 16 alcoholics who died by suicide, 11 men and 5 women. Four of the men (36.4%) used the *sorry* in their suicide notes versus none of the women (0.0%) (Fisher exact p = 0.24).

Table 1: Correlations for age and sex

Country	n	mean age (range)	% female	Correlation with age (Pearson r)	sex (phi)
USA	28	39.2 (18-84)	21.4%	-0.05	-0.25
USA	48	43.2 (18-74)	29.2%	-0.39**	+0.01
USA	690	-	24.8%	-	+0.18
Australia	261	41.8 (12-86)	24.6%	-0.04	+0.01
Alcoholics	16	45.1 (32-57)	31.2%	-0.29	-0.39
Russia	28	43.5 (16-84)	32.1%	-0.25	-0.01

Discussion

Using an objective method for ascertaining guilt in suicide notes, examination of several samples of suicide notes failed to find any consistent differences by sex and by age and no differences between genuine and simulated suicide notes or suicide notes written by completed versus attempted suicides.

This study was repeated using the word *forgive*, which could equally indicate guilt. However, *forgive* was used less often than the *guilty*. For example, for the 48 suicide notes from Buffalo, 29.2% contained *guilty* whereas only 16.7% contained *forgive*. The point biserial correlation of age with *forgive* was +0.29 (ns) and the phi for sex and *forgive* was -0.08 (ns). A similar infrequency of f*orgive* was found in other samples. In the notes from completed and attempted suicides, 25.0% contained *sorry* whereas 17.6% contained *forgive*. Therefore, finding significant differences and correlations was even less likely for *forgive* than for *sorry*.

References

Brevard, A., Lester, D., & Yang, B. (1990). A comparison of suicide notes written by suicide completers and suicide attempters. *Crisis*, 11, 7-11.

Haines, J., Williams, C. L., & Lester, D. (2010). Completed suicides: Is there method in their madness? *Clinical Neuropsychiatry*, 7, 133-140.

Kealy, D., Treeby, M. S., & Rice, S. M. (2021). Shame, guilt, and suicidal thoughts. *British Journal of Clinical Psychology, 60,* 414-423.

Lester, D., & Leenaars, A. (2016(. A comparison of suicide notes written by men and women. *Death Studies*, *40,* 201-203.

Lester, D. (2014). *The "I" of the storm*. Warsaw, Poland: De Gruyter.

Lester, D., & Heim, N. (1992). Sex differences in suicide notes. *Perceptual & Motor Skills*, 75, 582.

Livermore, A. (1985). Forty suicide notes. In R. Cohen-Sandler (Ed.) *Proceedings of the 18th Annual Meeting*, pp. 47-49. Denver, CO: American Association of Suicidology.

Park, B. C. B. (2004). Sociopolitical contexts of self-immolations in Vietnam and South Korea. *Archives of Suicide Research*, 8, 81-97.

Park, B. C. B., & Lester, D. (2009). Protest suicide. *Perceptual & Motor Skills*, 109, 917-920.

Pennebaker, J. W., Francis, M. E., & Booth, R. J. (2001) *Linguistic inquiry and word count*. Mahwah, NJ: Erlbaum.

Seiden, R., & Tauber, R. (1970). Pseudocides versus suicides. In *Proceedings of the 5th International Congress for Suicide Prevention*, pp. 219-223. Vienna, Austria: International Association for Suicide Prevention.

Shneidman, E. S., & Farberow, N. L. (1957). (Eds.) *Clues to suicide*. New York: McGraw-Hill.

Suicide Studies. 2024, 5(4), 123-141

SUICIDE NOTES FROM CHINA

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Note: My wife (Bijou Yang) and I met Professor He at a conference of the American Association of Suicidology in Washington, DC, in 1995. Thereafter, we collaborated on several scholarly publications. Professor He gave me a paper he had written on Chinese suicide notes that has lain dormant in my files. The present article provides an edited and re-organized version of the article and of the suicide notes. It appears that Professor He obtained all of the notes from published books and journals rather than directly from officials responsible for investigating and recording the deaths. His references for the notes (using his translation of the titles) are:

Weng, Tai-dong. (1987). *Outer biography of Chen Bu-lei*. Beijing: China Literature & History Publications.
Zhang, Pan-xi. (1987). *Social diseases of the young, Volume 1*. Beijing: Spring-Autumn Press.
Zhou, Ming. (ed.) (1987). *History ponder here*. Hua Xia Publishing.
The movies stars of early phase in China. Guangzhou: Guangdong People's Press.
Qiu Shi Journal. (1990).
Ren Wu Journal. (1981).
The Notables' Biography Journal. (1990).
Xin Hus Abstract Journal. (1990).

Professor He gave us his article in English, and so we could not check on his translation from the Chinese. His translation was quite poor, and so I have edited it for ease of comprehension. Some of these notes also were included in a sample of suicide notes from young people – see accompanying article.

The following is his article.

[19] Professor He's name is written here in English style.

SUICIDE NOTES FROM CHINA

ZHAO-XIONG HE
Guangxi Academy of Social Sciences

The present article presents 29 suicide notes (and mentions one celebrity ‘s poems) from 31 suicides. The longest note was written by a high-ranking officer and includes 10 letters and one part of diary which had been written before the suicide and numbered roughly 7,000 Chinese words. The shortest note was written by a famous actress and numbered three Chinese words.. The notes come from 17 men and 14 women, and their ages range from 13 to 68.

Twenty-nine died, and three were rescued. The three rescued were not attempted suicides or non-fatal deliberate self-harm. They were failed suicides. A Lieutenant General who tried to die by suicide in the Japanese style (harikari) was rescued. The other two cases were suicides involving a husband and wife. They killed their children first and then tried to die by suicide but failed, and they were rescued accidentally.

The Suicide Notes

#1
Male, 25, college teacher
Poison, marital problems
Theme: motive for suicide
Addressed to fiancée

> My dear: Probably you’ll never see me again, but I don’t want to leave you. You are still my wife before the government and the people.

#2
Female, 23, college student
Jumping from high place
Theme: Apologies and explanations

> The old me is dead, the new me has jumped to its death.

#3
Male, 24, college student
Train impact
Learning difficulty
Theme: motive for suicide.

Too much pain

#4
Female, 20, college student
Overdose
Love -oriented crisis
Theme: motive for suicide

There are two goals in this life: a career and love

#5
Female, 28, postgraduate
Poison
Love-oriented crisis
Theme: life after death

I resented it that I couldn't follow my mother in death.

#6
Male, 23, college student
Train impact
Professional crisis
Theme: motive for suicide

I lack willpower in whatever I try to do. I have lost my confidence and find no pleasure in life.

#7
Male, 26, postgraduate
Electric shock
Psychiatric disorder
Theme: motive for suicide

Thinking made life worthwhile, but thinking also led me to death. I shan't be remembered either with reverence or as a devil. All my life I've had to suppress my desires.

#8
Male, 22, college student
Hanging
Psychiatric disorder
Theme: motive for suicide.

I live only for a single goal - love.

#9
female, 13, middle school student
Poison
Love crisis
Theme: quality of life, motive for suicide, apologies and explanations
Addressed to: parents, friend, public

Whenever I came home from school in the dusk, i always saw farmers with ragged clothes laboring very hard in the fields. Why were they so poverty-stricken? I hated hypocrisy, and I despised people who lied and were afraid of telling the truth. However, I was warned by my elders many times in the past that, "There is no reward for telling the truth." All friends and friendships are false. Some advised mc that I should not trust others and should not be truthful. I never paid attention. I believed firmly that my straightforwardness and honesty would never change except to become more straightforward and true. I would rather suffer than sacrifice my humanity.

My teacher acted lewdly toward me a couple of times. I felt so disgusted and anxious. The dull atmosphere in school, the cold relationships between people, the blossoming of love too early, all this oppressed my heart. I felt suffocated. I couldn't live like this. I was not interested in school. I really wanted to leave this disturbing world and escape reality. Let the nearby river, the hazy mountain, and the drizzling rain stay poetic.

People, oh people! Tricky, superficial, slimy, dirty and odd people! You are all superficial and disgusting.

You're not willing to leave this dirty world - a voice said. But I am too weak, and I do not have enough Courage. Please rescue me! Help me! Let me be free and liberated!

#10
Male, 24, college education, engineer
Hanging
Psychiatric disorder
Theme: quality of life, motive, apologies
Addressed to: parents, friends, the public

(l) Suicide note to parents
Dad and Mom:

I am going. This is probably my last cry to you. You devoted yourselves entirely to my sister and me. From childhood to adulthood, from poverty to comfort, you have provided us with affection. Why do I choose this alternative? I cannot explain it clearly, but here are some possible reasons. (i) Ever since I was little, I never developed any competitive ability. I don't joke around. I prefer to be quiet rather than athletic. And I dislike arguing. (ii) I don't like to socialize with people, and I can't tell right from wrong. (iii) I concentrated only on learning and excelled in school, and I didn't nurture other abilities. All these factors led to my decision.

(2) Suicide note to friends

I was brought up in a family devoted to academic achievement. I was raised to listen to the elderly and to teachers. I was not allowed to develop my own thoughts. Prudence is a virtue that you want your children to have, along with education. However, so far, I have become a person who is useless to society. is the value of my existence?

(3) Suicide note to girlfriend

Society is a puzzle to me! Even though I have lived for twenty-four years, I understand very little about society. Now I think that one should decide what to do even when you are little, how to differentiate right from wrong. One should learn to become independent. All these are beneficial for life.

#11
Female, 17, high school student
Drowning
Maltreated by family

Theme: quality of life, motive for suicide, anger
Addressed to: parents, brother, sister

Dear Mom, Brother, and Sister:

I am going, probably forever. I have lived too long. Seventeen years. How painful? How much worry? How much fear? Seventeen humiliating years!

Yes, you have saved me three times - first in giving birth to me, secondly my disappearance in xxx, and thirdly you stopped me from killing myself. However, you only preserved a physical body, its soul was destroyed long ago.

I have never felt my family's warmth and laughter. All I got was discrimination and disdain from my parents, and beatings from my brother and sister. How could I forget? I am human after all. I am not a three-year-old. I have my dignity. (A summary of abuses and beatings followed.)

I am too cowardly. Don't I know how to resist? No, I am not afraid of you. What I'm afraid of is destiny.

Yes, I am dull, a worrywart, and I have no sense of humor. In this family, filled with verbal insults, such as "bastard" and "bitch," any carelessness led to abuse and scoldings. Can I ever be happy? This is why I do not come home for lunch. I would rather starve than stay a moment longer at home. I should have been happier at boarding school. On the contrary, my inferiority complex was so deeply rooted in my heart that it was hard to uproot. As I grew older, I gained more knowledge, and my thinking matured, but my problems caused me more pain. My psychological scars were never going to heal. At school I had a few close friends, but now I have nothing. I am filled with desolation and bitterness.

Life is like a dream. But I do miss something in life. I wrote a poem myself: "Life seems like a dream. After waking up from a dream, you realize everything is in vain. I lift my head and sigh at life. Hopefully it is not like the bell tolling from the Buddhist temple."

My feeling of desolation made me seek love. I used to hate young love. But I changed my mind. After all, I am flesh and blood. I want support.

I am not interested in studying. My life is boring. All day it is filled with loneliness, fear, and worry. Who knows how I feel? Who understands me, sympathizes with me, consoles me? I miss my childhood. The past is over, no lingering, no traces. The only thing left is regret. No warmth, no comfort. How many times have you pulled me abruptly from my bed, violently beating me? How much hair was pulled out? There were bruises all

over my body from the beatings from my family. I suspected many times that I was not your biological child. Do you know? You are my enemies. Who would believe that a girl's enemies are her folks.

Dad, Mom, I am filled with conflict over you in my heart. You should have been a support for me. But what have you given me? Please remember that I am the result of your love. After I die, make sure you spread my ashes on the river. I could not be happy. I want to flow vibrantly with the water.

#12
Male, 19, high school education
Poison
Marital problems
Theme: quality of life, post-suicide instructions, apologies and explanations
Addressed to: parent, brother and sister

To Parents, Brothers and Sisters,

I feel very sorry for you. My parents raised me, but I will be gone before I've had the chance to pay them back. You will be astonished by my action. Actually, I just learned the truth myself a day before my suicide. It is sudden indeed.

Last year I failed the specialty exam. I was not upset by it. I started studying and devoted myself more than before. I was hoping to devour books so as to fill my young and innocent mind. As time passed, I gradually learned more and more. I was happy and cheerful. Nonetheless, it was too early for me to be happy. On one occasion by chance, I read "The Heart of a Young Maiden," "Compassionate and Compatible," "A Quiet Night," "First Love," etc. - pornographic novels. Ever since then, my world has changed. I have changed. My interest in reading focused more on embracing, kissing, lovemaking, etc. in order to arouse me sexually. Once I got excited, I could not resist. I found myself slipping away uncontrollably and my self-control vanished.

I knew I was sinking. I regretted it. Oh, God! I cannot do this. I used to have ideals. I tried to help myself. It distressed me. I felt mad. I even wanted to cut off my fingers to pledge my determination or blind myself, or burn all the books. However, how could I burn off the poisonous thoughts? I regretted reading so many bad books, learning so much about it. Even though I close my eyes, the words from those books are vivid in front of me. I behaved sinfully and committed crimes for which I could be accused in the court. How horrid! Rather than sin, I choose to die early. I have no

alternative. I can only burn the present me and leave you the past me. How horrid? I am afraid of death. I don't want to die. However, what is the point of living? Unfortunately, I am only nineteen.

Brother, Sister, I am going to die soon. I hope that you learn better how to serve the people and not become bewitched by pornography.

Yesterday I met xxx. She is pregnant because of me and that is the reason for my death. If she wants to kill herself, you have to save her.

Dear Father, Mom, Brother, and Sister: Farewell. I hope you remember me as one of this family.

#13
Male, 23, high school education
Hanging
Unemployed, accused falsely
Theme: life questions, motive for suicide, anger

In my brief twenty-three years, I've had ups and downs and been wounded all over my body. However, I don't complain about life because of that. I continued to face life honestly. I want to start over and begin a new life. However, I don't know why there are so many constraints in life.
I thought about it a lot but got nowhere. When you stumble, others say you are incompetent. If you stop for a while, others blame you for not going further. If you improve a bit, others are sarcastic, butter you up or let you show off.

I had innocent dreams. I've had happiness. I pursued the clouds, the birds, and the flowing stream.

In September 1976, when I entered middle school, my dream was crushed. One mischievous classmate wrote a note to a girl, and the teacher thought it was me and asked me to confess. I was forced to confess and became a "target" in school.

I discovered for the first time that people's hearts can be so black and their souls so dirty. The world is not as nice as we imagine. My morals and my integrity were impugned.

I've thought about death before, yet I did not die. I wanted revenge against those people who stabbed me in the back, who gave me no love but only hatred. The only hope I had was to grow up quickly.

I've sat calmly and thought seriously. I hoped that I would be able to become something in the future. However, why is life so disturbing and tumultuous? I've tried very hard to control myself, hoping that I would be

able to sail through life without sinking, but I do not know how long I can hold on. I feel I have hardly any strength left.

I am wandering. I do not know why this is the case. The person who wants so dearly to live is often the one who cannot do it. The person who tries very hard to achieve is the one who gets endless pain. I can't understand it. There are many people who are doing nothing at all, but they are coping quite well. I don't understand what the relationship should be between the individual and society. I feel pain and I am lost.

#14
Female, 28, physician
Overdose; love reverse
Theme: life questions, motive, anger

Life has not been fair to me. The pain in the past few years has been unbearable. I love my reputation more than my life. Now that I am physically hurt and my reputation is also ruined, what is the point of living? I think about death. But I see my two innocent kids. What will my death do to them? I cannot stand the thought. I can see the family breaking down. My heart is hurting as if it had been knifed. Am I really an immoral person? How I hate this! I hate my weakness and naivete. I hate those people who look human, put on the mask of kindness, but behave despicably.

#15
Female, 21, high school education, worker
Drowning, marital problems
Theme: life question, motive for suicide

I discovered accidentally that he'd written this in his diary: "In the last two years, I've been tortured by my feelings. It has made me very unhappy all the time. When can I be relieved from the shackles of love? My future is lost."

I realized then that he has been in deep pain and unable to help himself. He offers me now sympathy and pity, but he has never suggested a separation. I am a young woman, no longer a virgin, and I'm not willing to even mention separation. He pities me, and I appreciate it, but I am not willing to accept pity as a substitute for love. I left my hometown for his future and happiness. I leave him too for the same reasons. I want to escape

from this loveless life. In this foreign place with so many strange people, I think about suicide.

At last, I have to come back to the reality of this life without love. But, tomorrow, how am I supposed to go forward? I am lost, lost, lost.

#16
Female, 19, high school education
Poison, romantic problems
Theme: motive for suicide

With his silver tongue and sweet talk, I gave him my virginity. Now he already has a new love.

I am so hurt that I want to destroy him. But I am a very proud person. People do not know anything about us. If I destroy him, the whole thing will be exposed which would be the same as destroying myself. I'd really like to die together with him.

What I have lost is lost forever. My heart is hurting as if it has been stabbed.

#17
Female, 22, college educated
Hanging
Psychiatrically disturbed

I begin to think that the world has turned upside down. The world is so depressing that it has created a sense of fear in me. Falseness. Falseness seems to be everywhere.

The world was once full of color, but it is now off-white. I can hardly recognize it.

I hate this falseness. However, sometimes I have to do things unwillingly - to praise what the government has accomplished, to put on a smiling face to get by. I really don't know what to do, I feel like resisting, but I would be alone in this. I want to follow the herd, but I am not willing to betray myself. I want to escape, but that would be a retreat. I give in too easily to my whims, too sentimental. I can't control myself emotionally, and this impedes my studies. It pains me a great deal. I am thinking of death, but I hesitate. Where should I

#18

Male, 44, college educated, high-ranking officer (Communist Party)
Overdose: accused falsely
Theme: anger
Addressed to: wife, his commander

I was accused falsely by Jiangching and Chen Po-de. I didn't think that I would come to such pass after eighteen years. As the proverb says, good will be rewarded with good and evil with evil. There is no good end for the evil…..

I believe that the Party will clear the problem for me. The unjust charge will be overturned.

#19
Male, 54, college educated, High rank propagandist for the Communist Party
Overdose; accused falsely
Theme: motive for suicide, anger, apologies and explanations
Addressed: higher official, wife

(1) To the party leader:

I wish that some officers will be appointed by the party to re-examine the meaning of my essays and poems to see whether any mistakes were there. There were two questionable books of mine including 171 essays. I believe that we can make clear which essays are wrong and which are not. If some wrongs exist, we can also make clear the nature of them at the same time. We can hardly change the nature of objective being.

Some important paragraphs in my accused essays and poems have been misunderstood by the critics.

There was someone who appreciated the criticized poem *Bad Dreams*, but not I.

I should have accepted initially the stern test of the Great Revolution. I regret that I have a recurrence of old diseases. We can't delay anymore, otherwise it would increase the burden for the Party and the people to no avail. My heart will respect the Party and respectable Chairman Mao forever.

(2) To wife

Owing to the long letter which I wrote to the Municipal Party Committee hurriedly, there is not enough time to write to you. At the present time, my heart beats very irregularly, my enteritis hurts. I'm not going to write anymore.

Don't think of me forever. Forget me forever. I have harmed you too much. You should be free forever from the mental injuries which I inflicted.

Farwell, my dear.

#20

Male, 59, high-ranking officer (Kuomintang)
Overdose; accused falsely
Addressed to: leader, subordinates, colleagues, wife, son, daughter, friend
Theme: motive for suicide, post-suicide instructions, apologies and explanations

(1) Diary

I've exhausted the energy of my brain by my hard work. It appeared quite useless in retrospect. It exhausted me like a lamp has gone out

Our country is entering into an extraordinary period. How did our virtue get lost? Although the sudden action of suicide may be better than living in degradation, how can my action be called a success?

The action that I took should not be a model for others. Everyone is now able to despise and blame me.

I know how frequently my ideas grow. As long as I felt sorrowful, the idea of finishing my life occurred, especially in the Spring and Summer of 1942, 1943 and 1945.

Now I'm really old, feeble and exhausted. The source of my inspiration has dried up.

It requires the following conditions if the leader had asked me to work for him.

- Let me have good health
- The leader should have a proper estimation of my ability
- Preparation should be provided before a big effort

As an old man of 60, I've nothing to say about my disgraceful end. There may be nothing but sin.

(2) To the leader

I was very upset by the witness this Spring. After Summer and Autumn, my symptoms appeared obvious resulting from neurasthenia. I am actually unable to support myself.

At this arduous and dangerous stage of our party and country, because of my inability, I have determined to finish my valueless life. God bless

China. May it take a turn for the better and be out of danger. As a useless intellectual, I have disappointed the country and the President. [20]

(3) To wife

I regret that I go ahead of you. I'm so sorry that I failed to live up to your affection.

Don't grieve over my death. I have several intimate friends who can help you.

Recall the third son who stayed at home and let him serve you.

I have no alternative but to choose this ungraceful way. You shall understand what I mean.

Prepare a funeral and bury me economically in Nanking [Nanjing]. Don't let it become expensive. Most sorrowful! Most sorrowful! I wish the situation was getting better and better and that our country exists forever.

(4) To adjutant

Convoy Madam to Shanghai after my funeral is over. Hereafter you may decide on your own to select a new position.

When you see this letter, the first thing to do is to store the portfolio which is in the right drawer of the chest of drawers. (There is a key for the safe.) and store my seal too. The above may be returned to Madam when she arrives at the capital.

(5) To colleagues

[He bids farewell to them and asks them to look after his wife.]

Such is my destiny. I've no words to say.

(6) To close friends

[A request for them to look after his wife.]

(7) To sons and daughters

The central leadership of our country doesn't exist. The policy is absolutely wrong. You should be loyal to the country and the nation. Serve mother and take every care of her.

(8) To brothers

On the occasion of this difficult and dangerous situation, I ask no forgiveness, but there is no alternative. I have to choose this road.

Hereafter I hope that God blesses China, turns the dangerous situation into a safe one. I hope my brothers take good care of yourselves.

[20] The man had been criticized by the leader. The leader said, "Is your brain not enough to be useful? Why do always make a rival argument? Intellectual discussion causes a delay in work. You had better rest!

My wife will be alone and pitiable from now on. I intend to have her take residence in Shanghai so that you can take care of her and give her assistance.

(9) To colleagues

[Asked them to see to affairs and settle the accounts.]

(10) To his men

[There is no need for emergency

Tells them he has taken an overdose

Tells them how to arrange the files and documents

Appoints an individual to deliver his letter to Chiang Kai-shek

Asks for an inexpensive coffin, funeral and burial

Requests that 300 yuan left out of the 700 yuan to be given to Adjutant Tao]

#21

Male, 58, college educated, translator of literature

Female,53, college educated, housewife

Hanging; accused falsely

Addressed to: relatives

Theme: motive, post-suicide instructions, apologies and explanations

Even though we have seen much crime, we have never thought of restoring reactionary rule.

We are convinced that we would be found guilty even though we have tried to explain, but in vain. The reason for my decision is that the days of suffering after a false accusation is just as difficult to survive as jail. But even our death would not expiate all of our crimes before the people. Moreover, as the remnants remain from the old society, we should move from the historical era quickly.

We trust you to do the following if convenient. Otherwise, please ask the police to do what we ask you.

- Deal with our friend’s stored luggage
- Deal with our remains
- Distribute out remaining money
- Return things that we have borrowed from others
- Pay for our cremation

#22

Male, 42, college educated, Lieutenant General

Harikari, rescued; to protest government policy

Theme: motive for suicide; anger

[written in poetry style]

I was disappointed so I sacrificed in order to promote the solidarity of our nation and to eliminate the enemy.

Over and over, freely and freely, What does the earth demand from me? I am worried about the national spirit being destroyed, so I am willing to promote freedom with my body.

As I paid homage to Dr. Sun Yat-sen's mausoleum, I was sad. There were no tears when I saw the mausoleum, but I was heart-broken. The greatest shame is that I made no sacrifices. My mortifying surrender to the enemy in order to pursue safety is worth nothing.

The harikari suicides in Japan show the dark side of the soul in the three islands. That solemn and stirring sacrifice is found in notable families. What is most precious in the universe? As long as our spirit existed and people perished, our country remained. We should sacrifice by extinguishing our vanity and rely on the youth.

#23
Male, 68, college educated, high-ranking officer
Overdose; accused falsely
Addressed to: his leader
Theme: motive, apologies and explanations

To the Chairman:

I and the whole family absolutely have committed no crime of maintaining illicit relations with a foreign country. I appeal to the Central Committee to investigate and examine the case. A practical and realistic conclusion will be drawn.

#24
Female, 26 college educated, actress
Overdose, marital problems
Theme: motive

General rest

#25
Female, 46, college educated, writer

Hanging; love reverse
Theme: motive

> Birth starts a journey through life. Can't death be another point of departure? If a next life exists, I'm willing to be a female once more, but I want to be an entirely different person. I'll have many children. I will be close to them and love them faithfully.
>
> My life is really like a play. If the day comes, does my death mean the end? I don't know.

#26
Female, 25, high school education, movie star
Overdose; marital problems
Theme: motive, anger

> A dreadful rumor

#27
Male, 38, high school graduate, army officer
Female, 35, primary school educated, housewife
Hanging, rescued, their 3 children died; accused falsely
Theme: apologies and explanations

> For the socialist government, and for defending Mao's revolutionary line, I am willing to offer everything.

#28
Male, 36, high school education, athlete
Hanging; accused falsely
Theme: apologies and explanations

> I've a clean record. Don't suspect that I'm an enemy. Let me shout at the last time: Long live CCP. Long live Chairman Mao.

#29
Male, 66, college educated, writer
Drowning; insulted and tortured
Theme: anger

[He wrote lines from Mao's poetry]

Comments

Intelligence

Suicide notes are more commonly written by the educated and by those from middle and upper classes and less often by workers.

Confucian Influence

Confucian thought (filia1 piety; fraternity; loyalty; confidence) has a strong influence on people and is frequently reflected in the suicide notes

Although some were accused falsely by the government, they pledged loyalty to the leader and the government (of Chairman Mao or Chiang Kai-shek) and believed that their leaders knew them well (cases 18, 19, 22, 23, 27, 28). Even as he faced death, one shouted long life to the leader and Chairman Mao (case 28).

Others were maltreated by their parents or other family members, but they still expressed filial piety and fraternity to the family members. When one husband died by suicide, he told his children to show filial obedience to their mother (case 20). If the notes mentioned brother or sister, fraternal duty was urged (case 20) The notes that were for the friends or relatives called for confidence and righteousness (case 20)

Chinese Intellectuals

Chinese traditional culture emphasized intellectual integrity. People would rather die than be insulted. All those falsely accused claimed innocence. Their suicide was actually a protest against the wrong policy, and the notes were protests of their innocence. Case 29 was honored by the government as People's Artist of the year in the past, but he was accused of being an active counterrevolutionary during the Cultural Revolution. He died by suicide by drowning with a handwritten copy of Mao's poems in his hand.

The Influence of Western Ideas

The people seem confused as to whether sexual liberty, sex harassment, and high spending are correct or wrong. The contradiction between the ideal and reality, rich countries and poor countries, led some people to become perplexed and confused (e.g., case 12).

Classification of the Content (Theme)

Quality of Life

Many suicides are concerned with the quality of life, especially those in the 15-24-year-old age group, for example, case 9.

> Oh, people! Tricky, vulgar, contemptible, dirty and odd people! I'm disgusted with how you are so vulgar. Let me depart from this dirty world. A voice is calling for me, but I'm so weak that I can hardly pluck up the courage. Oh, save me! Help! Help me! Let me free myself independently.

Stating the Motive for the Suicide

In many cases, stating the motive for the suicide was prominent (e.g., for example, case 3),

> Too much pain

and case 11.

> What a terrible mess it has been during these 17 years! I felt no warmth in our family. I suffered discrimination and condemnation from our parents, and beatings from my elder brother and sister. How can I forget this? I am an adult and not a child now. I have my own dignity. [There followed a list of maltreatments and beatings.]

Anger

Anger was present in eight cases, for example, case 11

> What a terrible mess it has been during these 17 years! I felt no warmth in our family. I suffered discrimination and condemnation from our parents, and beatings from my elder brother and sister. How can I forget

this? I am an adult and not a child now. I have my own dignity. [There followed a list of maltreatments and beatings.]

Post-Suicide Instructions

Post-suicide instructions were prominent in three cases, especially in the older and educated suicides. Case 20 was a high-ranking officer with a confidential position to President Chiang Kai-shek. His note to his men indicated

[There is no need for emergency
Tells them he has taken an overdose
Tells them how to arrange the files and documents
Appoints an individual to deliver his letter to Chiang Kai-shek
Asks for an inexpensive coffin, funeral and burial
Requests that 300 yuan left out of the 700 yuan to be given to Adjutant Tao]

Life After Death

Six cases mention life after death, for example, case 12

Brother and sister, I shall go to Heaven soon……

Apologies and Explanations

Apologies and explanations are especially common in those falsely accused of crimes, especially political. Case 19 is a good example of this. The suicide was a high rank propagandist, accused falsely by the *Gang of Four*.[21]

I wish that some officers will be appointed by the party to re-examine the meaning of my essays and poems to see whether any mistakes were there. There were two questionable books of mine including 171 essays. I believe that we can make clear which essays are wrong and which are not. If some wrongs exist, we can also make clear the nature of them at the same time. We can hardly change the nature of objective being.

[21] From Wikipedia: The Gang of Four……was the name given to a political group of four Chinese Communist Party officials. The leader of the group was Jiang Qing, Mao Zedong's last wife. The other three were Zhang Chunqiao, Yao Wenyuan and Wang Hongwen.

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A REVIEW OF RESEARCH ON SUICIDE IN 2001

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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.

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 this is an attempt to do a reasonably thorough review, although it will not be comprehensive. I do not have access to all the abstracts 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 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 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.[22]

The reviews of scholarly research published in 1998, 1999 and 2000 are published (Lester, 2024a, 2024b, 2024c). This is the review for 2001. To indicate where I searched, here is a list of abstracting services used.

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[22] My positive opinion of qualitative essays is illustrated by the essays I have written on more than 75 famous suicides (www.drdavidlester.net).

Source	1998	1999	2000	2001
Sociological Abstracts	93 items	106	55	56
Criminology Abstracts	78 items	94	80	98
Psychological Abstracts	401 items	460	388	425

Studies of Suicide Rates and Suicidality

Methodological Issues

Black and Lester (2001) compared suicide notes by completed and attempted suicides on 52 variables (see Black 1993) and found only two significant differences. They suggested, therefore, that the study of suicide using substitute subjects (i.e., attempted suicides) may be a valid methodology. Of course, as Lester, et al. (1975) noted, the methodology may be more valid if the attempted suicides are classified into groups based on their suicidal intent or the lethality of their attempt and then extrapolating to most serios intent and lethality.

Lester (2002) noted that English suicide statistics are undercounts and, therefore, reported suicide rates should not be trusted. Dennis, et al. (2001) studied one region of England where the coroners reported 384 suicides. Dennis et al found 420 definite suicides and 46 probable suicides. The coroners' official report was, therefore, an 18% undercount.

Cantor, et al. (2001) looked at suicides in Queensland (Australia). For 1990-1995, Australia registered 2,585 suicides in Queensland, while Queensland registered 2,728 suicides (5.5% more than Australia). However, Cantor, et al. decided that 141 cases listed in Queensland as suicides were not suicides. Queensland registered more suicides than Australia for females, those aged 25-44 and for methods involving overdoses, drowning and "other methods."

Theory

Bijou Yang Lester (Lester, B. Y., 2001) examined the impact of the economy on suicide based on three theories: a U-shaped theory (Durkheim, 1897), a procyclical theory in which suicide rates decline during recessions (Ginsberg, 1966) and a counter-cyclical theory in which suicide rates rise during depressions (Henry & Short, 1954).

Yang and Lester (2001) proposed a theory that a higher quality of life may result in a lower suicide rates for individuals but, at the societal level, regions with a higher quality of life may have a higher suicide rate.

Yang and Lester (1991) hypothesized that the suicide rate could never be zero, and they called this the *natural rate of suicide*. They supported this with multiple regressions to predict the suicide rate and found that the constant term was always positive once the causal factors (such as divorce and unemployment rates were set to zero). Kunce and Anderson (2001), using a different set of predictor variables, confirmed this in a multiple regression of variables predicting suicide in the states of America.

Regional Studies

Fernquist (2001b) studied 8 European countries for the period 1973-1990 for whether favoring the European Union was related to suicide rates. Typically, with research by Fernquist, there are 8 nations, 15 years out of the 18, and five age groups. As far as one can tell from the data presentation, there is no consistent association between favoring the union and suicide rates by age. In the same paper, suicide rates by age are correlated with sociological variables, but the number of data points are unclear. If data from all 8 countries are combined, it would have been better to run the correlations as time series analyses for each country. There were too few countries for an ecological study.

In a sample of 27 nations, Lester (2001b) found that in 1991, but not in 1965, per capita consumption of alcohol was associated with the suicide rates. Mortality from cirrhosis of the liver and membership numbers in AA did not predict suicide rates.

Lau and Pritchard (2001) calculated the suicide rate for older adults (>75) divided by the total suicide rate for 40 countries. This ratio was highest in Singapore, Hong Kong, Bulgaria and Portugal for males and Singapore, Hong Kong, Bulgaria and the Czech Republic for females.

Barber (2001) surveyed school students in 7 countries for how well adjusted they were and found that this score was associated positively with the youth suicide rate for males and negatively with the youth suicide rate for females.

Kondrichin and Lester (2001b) found that formerly eastern European nations had higher rates of mortality from suicide and tuberculosis in 1990 and 1995 and a greater increase in these rates over the 5-year period than western European nations. For the groups of eastern European and western European nations considered separately, morality from tuberculosis and suicide were not associated in 1990 or 1995.

Regions within a Country

Connolly and Lester (2001) studied correlations between socio-economic variables and suicide rates in Irish counties in two periods: 1978-1984 and 1988-1994. They found that the correlations in the two time periods differed. In the first period, population age and related variables predicted the suicide rate whereas, in the later period, urbanization predicted suicide rates. It is, therefore, important to check the reliability of regional correlates of suicide rates over time.

In an empirical study of the American state suicide rates, Bijou Yang Lester (Lester, B. Y., 2001) found that the suicide rate was predicted by interstate migration and divorce rates positively and the gross state product per capita negatively. These predictors varied for the different sex-by-race groups.

In nine census regions of the United States, Birckmayer and Hemenway (2001) found that firearm ownership levels were correlated with suicide rates among those aged 15-24 and 65-84, but not among those aged 25-64.

Lester (2001e) studied correlates of suicide by violent and non-violent methods over the 48 continental American states. The correlate for violent suicide rates was a factor labelled social disintegration (one that fits with Durkheim's theory of suicide). The correlates for the non-violent suicide rates were social disintegration, urban/wealth and Southernness.

Kondrichin and Lester (2001a) found that mortality from cancer and suicide were positively associated over the regions of Ukraine and negatively associated over the states of America. The significant social correlates of suicide and cancer were identical in sign in the Ukraine where the associations were significant for percent urban and divorce, abortion, birth, death, illegitimacy and homicide rates, but were opposite in sign in the USA for population density and birth, death, and infant mortality rates. Thus, the hypothesis that cancer and suicide mortality may

both be indices of social disintegration may be valid only in less developed regions.

Kondrichin (2001) studied the oblasts of the eastern part of Russia and found that suicide rates were associated with the violent mortality death rate, the crime rate and the unemployment rate positively and the life span for men and votes for the Communist Party negatively.

Regions within a State or Province

Hawton, et al. (2001a) studied deliberate self-harm (self-poisoning or self-injury) and suicides in the electoral wards of a town in England. They scored each ward for socio-economic deprivation and social fragmentation (population turnover, single person households, non-married adults, people in privately rented accommodation). Both variables predicted rates of attempted suicide in males and females, but only social-economic deprivation predicted suicide rates and only for males.

Time-Series Studies

In a complexly presented study of suicide rates by age in 18 developed nations, Pampel and Williamson (2001) found that the increasing suicide rate with age over a 40-year period declined. Youth suicide rates rose relatively to elderly suicide rates. The national variation in youth to elderly suicide rates was impacted by measures of collectivism, income inequality and age equality in public spending.

In similarly complex study, Cutright and Fernquist (2001a) studied the male and female suicide rates and the sex ratio in 20 developed nations for the period 1955-1994. Their analysis is obscure – they seemed to have grouped the suicide rates and ratio into five-year periods rather than using 40 individual years. They also present correlations without stating their statistical significance or the number of data points on which the correlations are based. The results are presented separately for 1955-1974 and 1975-1994. Female labor force participation, enrolment of females in tertiary education, religious books, income inequality and disapproval of suicide were significantly associated with male and female suicide rates and the sex ratio of the suicide rates in at least one of the two time periods. Cutright and Fernquist concluded that institutional adjustment variables, but not political context variables, were important in determining the gender gap, a

conclusion which is difficult to relate to their variables and analysis. A similarly and poorly presented study focused on the *age structure* of male suicide rates in the same period (Cutright & Fernquist, 2001b). [23]

Rancans, et al. (2001) presented data on suicide in Latvia for the period 1980-1998. Suicide rates rose over the period and seemed to be associated with the drop on gross domestic product, alcoholism and unemployment rates, but no time series regressions were presented and the impact of the break-up of the Soviet Union ignored.

For Italy for the period 1864-1913, Lester (2001d) found that the military participation rate was positively associated with the suicide rate.

Ramstedt (2001) investigated the impact of per capita alcohol consumption on male and female suicides (and by age) in 14 European countries. Ramstedt concluded that suicide rate tended to be more responsive to changes in per capita consumption in dry drinking cultures than in wet. The positive and significant relationship between alcohol and gender- and age-specific suicide rates was revealed most often in northern Europe and least often in southern Europe. The results of this study are spoiled by the extensive modification of the raw data and the diverse statistical techniques involved, suggesting that a simple time-series study would not have led to the same results.

In Austria for the period 1950-1995, Lester (2001a) found that the suicide rate in prisons and the male suicide rate in the general population in Austria were both predicted by marriage, birth and divorce rates, variables relevant to Durkheim's (1897) theory of suicide. The prison suicide rate was also predicted by the unemployment rate.

In Canada for the period 1970-1995, Lester (2001c) found that the accidental death rate from guns (a measure of the availability of guns) was associated with the percentage of suicides using guns for those aged 0-54, but not for those over the age of 55.

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[23] When data analyses become complex, a good assumption is that a simpler analysis did not produce the desired results.

Research on Distal Variables

Availability of Methods for Suicide

Amos, et al. (2001) studied the use of car exhaust for suicide in England after legislation on car exhaust emissions was passed in 1993. The suicide rate using car exhaust declined after 1993, except for young men and women whose use of hanging increased. The decline in the overall suicide rate was clearest for those over the age of 45.

Schapira, et al. (2001) found that suicide rates dropped in a town in England from 1961 to 1994, particularly from carbon monoxide and barbiturates. The use of paracetamol and hanging increased over the period.

Beautrais (2001b) explored the impact of the removal of safety barriers from a bridge in Australia that had been a popular suicide venue. After removal of the barriers, the number of suicides from the bridge increased, combined with a parallel decrease in suicides from other bridges.

van Houwelingen and Beersma (2001) examined the timing of train suicides in the Netherlands. There was no variation by month. Suicides were more common between 10 am and midnight, and 10 times more common than the number between 2 am and 6 am. Eighty percent of the suicides were in the 1½-2 hours after sunset than in the 4 hours prior to sunset. Men had relative more evening suicides while women had relatively more daytime suicides.

In Hong Kong, Chung and Leung (2001) documented an increase in the use of burning charcoal indoors in order to die by suicide after a highly publicized case from zero before the case to 22 in the next three months. Those using this method were younger than those using jumping from a height and hanging.

Occupation

Hawton, et al. (2001b) found the male doctors in England had a lower suicide rate than men in the general population whereas female doctors had a higher suicide rate than women in the general population. Anesthetists, community health doctors, general practitioners and psychiatrists had higher suicide rates compared to general hospital medical doctors. The role of seniority was not statically significant.

Stack (2001) used American national data to find that, after controls for demographic variables, male doctors, dentists, mathematicians, scientists and artists had a higher rate of suicide while clerks had a lower rate. For women, nurses and social workers had higher rates of suicide.

Based on a sample of 4,564 eminent artists, Preti, et al. (2001) found that suicide appeared to be higher in literary artists than in musical artists.

Aasland, et al. (2001) documented extremely high suicide rates for both male and female physicians in Norway.

Season

In Singapore, Parker, et al. (2001) found no seasonal variation in suicide.

Other Distal Variables

In a 3- and 9-year follow-up study of Americans, Kposowa (2001) found that unemployment increased the risk of suicide during the follow-up period, especially for females, after controlling for other variables.

Fernquist (2001a) found that suicide rates in the United States by educational level varied with age, sex and ethnicity. For example, for whites aged 25-42, suicide rates were lowest for both men and women who had 16+ years of education. However, for whites aged 55+, suicide rates were lower in the more education men but higher for the more educated women. The results were not the same for Hispanics, African Americans, Native American and Asian Americas.

Lubin, et al. (2001) studied suicide in Israel and found that suicide rates were higher in Jews than in Arabs and higher in men than in women. The suicide rates rose more steeply with age in Jews than in Arabs.

Preti and Miotto (2001) studied the diurnal variation in suicide for Italy. Suicides peaked in late morning (8 am to 11 am). By age, suicides in the elderly showed this pattern whereas younger suicides (aged 14-24) peaked in late afternoon (4 pm to 7 pm). This is found for both men and women but was more marked for men.

Anon (2001) found that school-associated suicides in America showed no variation over the semester but were higher in the Spring semester than in the Fall semester.

For the Beijing region of China, Yip (2001) reported higher suicide rates in rural areas, similar suicide rates for men and women, with the rate higher for women for those aged 15-34. Suicide rates were declining from 1987 to 1996 for teenagers and the elderly.

Etzerdorfer, et al. (2001) examined whether reporting a suicide by firearm by an Austrian national newspaper impacted suicide rates. The readership of the newspaper varied by region. In regions where the distribution was greatest, firearm suicides increased after the reporting, and there was a correlation between the density of readership in the regions and an increase in suicides by firearm.

In a national sample, Oquendo, et al. (2001) found that the suicide rate was higher for males than for females. Mexican American and Puerto Rican males had lower suicide rates than white males, and the same trend was found for females.

Cameron (2001) found that, in England and Wales from 1900-1949, there was no association between suicides by those suspected of murder and the state execution rate.

Lethal Violence

Vollum and Titterington (2001) found that the suicide rate/(suicide+murder rates) were higher in women than in men. (The researchers used data on murderers, not victims). Women are more likely, therefore, to exhibit lethal violence as suicide rather than murder, even though their rates of both suicide and murder are lower than the rates for men.

Discussion

This year saw two interesting theoretical theories: (1) the hypothesis of a natural (non-zero) suicide rate was supported by empirical research, and (2) three theories of the association of the economy and suicide were proposed by Bijou Yang Lester.

Studies of Suicides

Methodological Issues

It is methodologically unsound (and pointless) to compare suicides with normal controls. The suicides will more often have the presence of psychiatric disorder and all of the accompaniments of that state. Comparing them to living controls is even worse: self-report by the living versus family reports for the suicides, sources of data which are not comparable.

Mohler and Earls (2001) found that American suicides rates for those aged 10-24 were undercounts as a result of suicides being misclassified (as accidents or as homicide victims). The undercount was found for most sex-by-age-by-ethnicity except for black and white females aged 20-24.

In one town in England, Linsley, et al. (2001) compared suicides with open verdicts. The two groups did not differ in prior suicide attempts or psychiatric diagnosis or care. The open verdicts more often involved deaths due to drowning and falls from a height. The variables distinguishing the two groups were suicide note, hanging, use of carbon monoxide, age, other methods (e.g., cutting) and other substances (e.g., paraquat).

Physiological Research and Medical Issues

Dopamine

Allard and Norlén (2001) studied the involvement of the dopamine system in suicides. Depressed suicides had no differences in the binding of [3H]raclopride to dopamine D2 receptors in the caudate nucleus from normal controls. A subgroup with major depression did have significantly higher K_d values than controls.

Pitchot, et al. (2001a) compared depressed individuals who died by suicide within the next year to non-suicidal depressed patients for their growth hormone response to apomorphine and found that the suicides had a lower peak response, suggesting a role for dopamine in suicide.

Serotonin

Arango, et al. (2001) compared the brains of suicides with normal controls and found no differences in the concentration of serotonin transporter (SERT) sites, SERT mRNA, and 5-HT_{1A} binding. However, in the brainstem dorsal raphe nucleus (DRN) of suicides, the volume of tissue defined by 5-HT_{1A} binding was 40% smaller, and an index of the total number of 5-HT_{1A} receptors was lower in the brains of the suicides.

Ono, et al. (2001b) studied the A-1438G polymorphism of the serotonin 2A (5-HT2A) receptor gene and found no differences between suicides and controls.

In a sample of MZ twins whose co-twin had died by suicide, Roy, et al. (2001b) found that, compared to normal controls, the MZ co-twins had a significantly higher tryptophan hydroxylase 17 779C allele frequency, but did not differ in serotonin transporter alleles.

Other

Turecki, et al. (2001) genotyped a sample of suicides for tryptophan hydroxylase (TPH). They found no differences between suicides and controls for genetic variation at single loci, but haplotype analysis revealed that one haplotype (-6526G -5806T 218C) was significantly more frequent among suicides, especially in those using violent methods for suicide.

Sastre, et al. (2001) found that, in the brains of suicides compared to controls, the ratio between α_2- and β- or β_1-adrenoceptors (α_2-full agonist sites/b-sites) was $greater_1$-adrenoceptors (a -full agonist sites/ β -sites) was greater than in the brains of controls.

Odagaki, et al. (2001) studied the components of cyclic AMP signaling cascade catalytic (Ca) subunit of cyclic AMP-dependent protein kinase (PKA) and cyclic AMP response element binding protein (CREB)) in the prefrontal cortex of depressed suicides and controls. There was an increased level of CREB, both in total and phosphorylated forms, but not in PKA Ca levels in the brains of the suicides. The increases in CREB were specifically observed in antidepressant drug-free subjects, but not in the antidepressant-treated subjects. There were significant correlations between the levels of PKA and those of tCREB and pCREB in the prefrontal cortex of the suicides.

Hiroi, et al. (2001) found no differences in the quantitative expression of corticotropin-releasing hormone receptors, CRH-R1 and CRH-R2, in the pituitaries of suicides and controls

Blood

Abbar, et al. (2001) compared attempted suicides and control for differences in tryptophan hydroxylase (TPH), the rate-limiting enzyme of serotonin synthesis. They found differences for three of the seven introns in the TPH gene, especially in those using violent methods for suicide who had a history of major depression.

Dexamethasone suppression test

Coryell and Schlesser (2001) followed up psychiatric inpatients with major depression or schizoaffective, depressed type for 15 years. Those with an abnormal dexamethasone suppression test score were more likely to die by suicide. Psychiatric (e.g., delusional) and background variables (e.g., living alone) did not predict suicide.

Reviews

Although these reviews of research on suicide do not typically include review articles, the physiological research is difficult to make interpret. Van Heeringen (2001) provided a review of research on serotoninergic functioning in suicides. Good reviews of the role of genes in suicide are provided by McGuffin, et al. (2001) and Du, et al. (2001).

Suicide Notes and Poetry

Stirman and Pennebaker (2001) compared poems from poets who died by suicide and from those who did not do so. The poems of the suicides contained more words pertaining to the individual self and fewer words pertaining to the collective. The groups did not differ in negative emotions, but the suicides did refer to death more often.

Leenaars, et al. (2001) studied suicide notes across the life span. The notes of teenagers differed from those of adults in having more content coded as

cognitive constriction, indirect expressions, rejection-aggression, and identification-egression than the notes of other age groups.

In a sample of suicide from youths in China, He, et al. (2001) found that interpersonal friction as a precipitant, while anger and self-criticism were common.

Youth Suicides

Weinberger, et al. (2001 studied all child and adolescent suicides (< 16) in the Los Angeles region. The suicides were more often males, over the age of 14 and Hispanic, with an even split between firearms and hanging for method of suicide.

In secondary schools in one region of Finland, Poijula, et al. (2001) found an increase beyond chance in suicides in the year after a suicide in the schools, suggesting contagion.

Adult Suicides

In a sample of twins in which one twin died by suicide, Roy and Segal (2001) found that MZ twins were more concordant for suicide than DZ twins.

Beautrais (2001a) compared suicides, those making serious attempts and normal controls. The suicides and serious attempters were similar in current mood disorder, previous suicide attempts, prior outpatient psychiatric treatment, admission to a psychiatric hospital within the previous year, low income, a lack of formal educational qualifications exposure to recent stressful interpersonal, and legal and work-related life events. The suicides were more often male and to have a current diagnosis of non-affective psychosis, and less likely to have a current diagnosis of anxiety disorder and to be socially isolated. Beautrais concluded that the two groups were two overlapping populations. Beautrais failed to apply the proposal by Lester, et al. (1975) to divide attempters into three groups based on intent or lethality and explore whether extrapolation to suicides was valid.

Fombonne, et al. (2001) followed up child and adolescent patients who had major depression, with and without conduct disorder. By the mean age of 34, five of the six suicides had conduct disorder and most were men (no numbers were given). Attempted suicide was also more common in those with conduct disorder.

In a 20-years follow-up study of people aged 18-64 in Finland, Koivumaa-Honkanen, et al. (2001) found that a measure of life satisfaction at baseline predicted suicide even after controls for age, sex, baseline health status, alcohol consumption, smoking status and physical activity.

Wissow, et al. (2001) studied suicide in one Southwester Native American tribe. The age-adjusted suicide rate for the tribe was similar to that of the surrounding community (both higher than the national suicide rate), but the tribal suicides were younger and the surrounding community suicides older. There was evidence of one cluster during the 4-year period, seven cases in 40 days, all 13-28 years of age and involving hanging.

In a follow-up study of the Finnish population, Tanskanen, et al. (2001) found that the greater the frequency of nightmares, the higher the risk of suicide after controlling for a wide variety of demographic and clinical variables (such as age, sex, depression, life stress, etc.)

Conner, et al. (2001c) compared a national sample of suicides with accident victims by interviewing next of kin. Violent behavior in the last year of life predicted suicide, especially in individuals with no history of alcohol misuse, those who were younger, and women.[24]

In a study of suicides in Denmark, Agerbo, et al. (2001) found that the suicide risk for patients admitted to psychiatric wards fell with decreasing income, both for recent discharges and later in life. This was not found for the general population of suicides.

Wong, et al. (2001) studied Canadian military suicides among those who served as UN peacekeepers. In general, all military suicides were more often single and childless, French-speaking, low ranks (e.g., Corporals) and with less education than living personnel. The suicides had more psychosocial stress (e.g., relationship problems, release pending, and conflict with the system), more often prior attempts, and more often a psychiatric disorder. For those suicides with peacekeeping experiences, those in the air force had a higher probability of suicide. Wong, et al. commented that the air force peacekeepers were not subject to a selection process and were given no preparation.

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[24] This is a methodologically sound comparison.

Florkowski, et al. (2001) reported on suicide in the Polish armed forces. Privates were more likely to die by suicide in the first year of service, whereas professional soldiers died by suicide more often between years 11 and 15 of service.

Elderly Suicides

Rubenowitz, et al. (2001) compared suicides with normal controls for up to two years prior to their suicide. The suicides more often had somatic illness, family discord, financial trouble, mental disorder, lower education, feelings of loneliness and previous suicide in the family and less often active participation in organizations and having a hobby. In a multiple regression, suicide was predicted by mental disorder and family discord.[25]

Harwood, et al. (2001) compared a sample of elderly suicides in England with people dying from natural causes. More of the suicides merited a psychiatric diagnosis, primarily depression, a personality disorder, and accentuated (extreme) personality traits.

He and Lester (2001b) speculated that the rising suicide rate among the elderly in China could be a result of the increasing poverty of elderly people and the lack of social resources allocated to providing them with needed services to ensure their health and mental well-being.

People with Psychopathology

Hiroeh, et al. (2001) followed up Danish psychiatric patients for 1-20 years and found that all diagnoses predicted a higher suicide risk (as measured by the standard mortality ratio). The SMR was highest for men and women drug users (2,460 and 2,397 for men and women, respectively), and lowest for those diagnosed with learning disabilities (314 and 412 for men and women, respectively). These are high given that the normal SMR is one, but research has shown that, the longer one follows up a group of people, the percentage of deaths due to suicide declines since the suicides tend to occur earlier in life than other causes of death (Lester, 2006).

[25] That is the problem of using normal controls!

King (2001) compared suicides in England with and without a recent psychiatric contact. The suicides with a recent psychiatric contact were more likely to have a family history of mental illness, attempted suicide in the past 6 months, died from an overdose of prescribed medication, been depressed and seen a physician in the previous week.

King, et al. (2001b) studied patients who died by suicide after discharge with matched controls. The suicides had more often become unemployed, had new relationship problems, had a history of deliberate self-harm (and also in the hospital), were more hopelessness and had more suicidal ideation upon admission, more often lived alone,

King, et al. (2001a) compared suicides that occurred in the hospital with other patients. Few differences were found. The suicides had more symptoms of depression, more often threatened to discharge themselves and also went AWOL were more often admitted under the Mental Health Act, had a history of deliberate self-harm, and showed violence to property. Compared to patients who died by suicide outside of the hospital, the inpatient suicides more often went AWOL, showed violence toward property and were admitted under the Mental Health Act, and were more often living alone, not white, had a history of deliberate self-harm, had more hopelessness and were more often suicidal at admission and more often had lost their job and had relationship problems.

McKenzie & Wurr (2001) compared psychiatric patients who died by suicide after discharge with psychiatric patients who did not. Dying by suicide withing three months of discharge (versus controls) was predicted by previous deliberate self-harm, mood disorder diagnosis at discharge, suicide (attempt or intent) during admission, and length of medical notes (>8 pages). Later suicide (versus early suicide) was predicted only by previous deliberate self-harm.

Attempted Suicides

Ostamo and Lönnqvist (2001b) followed up attempted suicides in Finland and found excess deaths from suicide for both males and females, and also deaths from medical diseases, accidents, homicide and undetermined causes. The predictors of all-cause mortality were male, single, retired, use of drug overdose for the attempt, and repeated attempts. Death from natural causes was predicted by male and older age. Death from accidents was predicted by male, low level of education and repeated attempts.

Affective Disorders

O'Leary, et al. (2001) reviewed 75 studies of suicides in patients with primary affective disorders. For follow-up periods over 20 years, the mean suicide rate was 3.76 per 1,000 person-years. Suicides accounted for 12.3% of all deaths in samples in which 40% or more of patients had died.

Blair-West and Mellsop (2001) noted that estimates of what proportion of people with major depression will die by suicide (15%) must be over-estimates. If it were true, the suicide rate would be much higher than it is. By reviewing studies of suicide in such patients, they concluded that 3.4% is a more reasonable estimate (7% for men and 1% for women), and the sex discrepancy is even higher for those <25 years of age (10:1).

In one region of England, Boardman and Healy (2001) found a lifetime prevalence rate of suicide for any affective disorder to be 2.4%, with a rate for those uncomplicated by substance abuse, personality disorder or non-affective psychosis also 2.4%, and a rate for uncomplicated cases who had no mental health service contact 1.1%, lower than research previously reported for patients with affective disorders.

Lecrubier (2001) studied samples of suicides and attempted suicides and concluded that psychiatric disorder was the most obvious influence in their acts. A Major depressive disorder combined accompanied by other disorders (in particular, with anxiety disorder and impulsivity) was also a predictive factor.

Schneider, et al. (2001) followed up patients with major depression for five years. Compared to living patients and those who died from natural causes, the suicides more often reported hypochondriacal preoccupations or delusions (but not delusions or preoccupations of impoverishment, guilt or sin), suicidal thoughts and suicide attempts as well as feelings of severe hopelessness during the index episode. Compared to living patients, in a stepwise logistic regression, hypochondriac delusions and preoccupations, preoccupations and delusions of reference, and initial insomnia characterized the suicides.

Gladstone, et al. (2001) followed patients with major depressive disorders for 10 years and compared those who died by suicide with attempted suicides and non-suicidal patients. The suicides had had a great number of admissions, were

older and more often in a relationship, and were more often male and married or female and single. The suicides had made fewer suicide attempts and had less suicidal ideation than the attempters on admission.

Schizophrenics

In a sample of schizophrenic patients followed up after 2-21 years, De Hert, et al. (2001) found that suicide was predicted by male gender, chronic illness with frequent relapses, frequent short hospitalizations, a negative attitude towards treatment (non-compliance), impulsive behavior (acting out, involuntary commitment), attempted suicide (especially if a highly lethal attempt), high pre-morbid IQ, psychosis and depression. Early onset and daily activity were protective factors.

Taiminen, et al. (2001) devised a prediction scale for suicide in schizophrenics by given the scale to living schizophrenics and using psychological autopsies for those that died by suicide. The suicides more often would have agreed with the items for suicide plans communicated to someone during the past 3 months, one or more previous suicide attempts, depression observed during an interview, suicide plans communicated during an interview, and loss of a job that demands skills. Apart from the last item, the other items are rather obvious.

Prison Suicides

Balauw, et al. (2001) compared suicides, suicidal inmates and non-suicidal inmates in Dutch jails. Bullying was noted in 34% of the suicides, but of these 38% of the reports were of mild bullying and 62% serious bullying (e.g., with threats to life). The suicidal inmates also reported more bullying than the non-suicidal inmates (66% versus 34%), especially if the inmate was charged with a violent offense or sexual offense, was a first-time inmate, had been in prison for more than 6 weeks, with a history of psychiatric care, in special care and if they had been suicidal prior to imprisonment.

Medical Illness

Rubio, et al. (2001) compared a sample of elderly suicides with those dying from natural causes. The brains of the suicides did not differ in amyloid plaque scores, but the suicides did have more individuals with early Alzheimer's pathology.

Myslobodsky, et al. (2001) found that people with Parkinson's disease had a lower rate of suicide than matched controls, ten times lower. Suicide was more common in patients with Parkinson's disease who were married and who had affective disorders.

Teasdale and Engberg (2001) followed up patients with concussion, cranial fracture, a cerebral contusion or traumatic intracranial hemorrhage and found an increased suicide rate, especially for those with cerebral contusions or traumatic intracranial hemorrhages. The presence of substance misuse increased the risk of suicide, as did a longer stay in the hospital,

Teasdale (2001) found an increased rate of suicide in patients who suffered a stroke, especially for patients under the age of 50 and for those hospitalized less than two weeks.

Patja, et al. (2001) for that Finnish female mentally retarded individuals were as likely to die by suicide as the general female population, but male mentally retarded individuals had one-third the likelihood of suicide. Most suicides had only mild mental retardation and were hospitalized for comorbid mental disorders. Suicide methods were passive, and alcohol was involved in only one case (out of ten suicides).

Assisted Suicides

Roscoe, et al. (2001) compared Kevorkian-assisted suicides with physician-assisted suicides (PAS) in Oregon. The PAS suicides were more likely to have cancer, whereas Kevorkian suicides were more often women and those who were divorced or had never married.

Murder-Suicide

In California, Lund and Smorodinsky (2001) compared intimate partner murders where the murder died by suicide with those the murderer who did not die by suicide. Forty percent of the murderers died by suicide. For victims, murder-suicide was more common in Hispanics and whites, in those over the age of 50, less often dating (and more often married or separated/divorced) and all of the victims were female. For the murderers, murder-suicide was more common in those over the age of 50, slightly more common in Hispanics and whites (p=0.06),

if using a gun and being male. (No females were murders in the murder-suicide cases.)

Malphurs, et al. (2001) compared older married male murders who killed spouses and then died by suicide with male suicides. The suicides more often had medical issues (e.g., cardiovascular disease), more often gave evidence of suicidality, and were less often caregivers for the wife.

In a region in England, Pritchard and Bagley (2001) studied 27 murderers of children (aged 0-16). Seven of these murderers died by suicide, all from the 22 intrafamilial murders.

Studies of Attempted Suicides

Theoretical Ideas

Coombs, et al. (2001) applied a Transtheoretical Model of Change (TMC) to a sample of hospitalized suicidal ideators and attempters. Four stages of TMC were used: precontemplation, contemplation, preparation, and action. All of their patients could be classified into one of these four stages. Coombs et al. also looked at strategies used by the patients, such as counter conditioning (the inability to engage in distracting responses) and dramatic relief (feelings of relief after the decision to die by suicide).

Based on a projective test (the Rorschach) given to psychiatric inpatients, some of whom had attempted suicide, Fowler, et al. (2001) proposed three components to the suicidal process: unconscious processes indicative of (i) penetrating affective overstimulation, (ii) disturbance in the capacity to maintain adequate ego boundaries, and (iii) depressive affective states characterized by a morbid preoccupation with death and inner decay. These processes may merit empirical study if they can be operationalized.

Methodological Considerations

Rowley, et al. (2001) asked adolescents and their parents about suicidal ideation and suicide attempts by the adolescents. In the school sample, the parents reported less suicidal behavior than did the adolescents. In a clinical sample, the adolescents reported less suicidal behavior than did the parents. In both groups, the

suicidal adolescents obtained more internalizing and externalizing problem scores. Therefore, the source of data affects the accuracy of the data.

Conner, et al. (2001a) compared diagnoses of attempted suicides using structured interviews versus proxy-based data from a family member or friend. Diagnostic agreement was good for major depression and bipolar disorders, and moderate for non-affective psychoses, organic mood and anxiety disorders. Agreement was good for substance dependence but poor for substance abuse disorders.

Conner, et al. (2001b) compared the methods used for assessing life events. Agreement was substantial for public and observable events (e.g., parent's death, medical problems, legal problems) but lower for more ambiguous events (e.g., emotional support). The two methods were similar regarding suicidal ideation and past attempts.

Burless and de Leo (2001) noted the limitations in surveys to study attempted suicides and suicidal ideation, limitations which make comparison of the results from different studies difficult, including population characteristics, sample selection, response rates, research instruments, and method of data collection,

Barber, et al. (2001) asked psychiatric inpatients whether they had made aborted suicide attempts (i.e., came close but stopped). Of those eventually known to have made aborted attempts, 44% answered *no* to the question. (16% gave false positives.) Their answer was not related to sociodemographic variables, diagnoses or reported history of attempted suicide.

All of these studies throw doubt on the accuracy of the data used in studies of suicidal behavior.

Physiological Research

Gene Studies

In a study of the tryptophan hydroxylase gene, Souery, et al. (2001) found that the frequency of the C–C genotype (homozygosity for the short allele) was lower in unipolar affective disorder patients (24%) with suicide attempts than in control subjects (43%). There was no difference for bipolar patients. When corrected for multiple testing, this observation did not remain significant. There

was no difference in allele or genotype frequency between patients presenting violent suicidal behavior and their matched control subjects.

In a sample of alcohol-dependent inpatients, Preuss, et al. (2001) found that 5-HTT promoter polymorphisms (5-HTTLPR) S-alleles were seen more frequently in attempted suicides compared to non-suicidal alcohol-dependent subjects.

Rujescu, et al. (2001) found that attempted suicides, as compared to normal controls, did not differ in allele or genotype frequency of the serotonin transporter gene and, for the attempters, by method (violent or not) and by lifetime history of mood disorders, unipolar depression, personality disorders. These results suggest that the 5-HTTLPR polymorphism does not play a role in attempting suicide.

Marazziti, et al. (2001) investigated the platelet 5-HT transporter, by means of the specific binding of tritiated paroxetine ([^{3}H]Par) in attempted suicide attempters and healthy control subjects and non-suicidal psychiatric patients. The results showed a decreased number of [^{3}H]Par binding sites in the attempted suggesting the involvement of the presynaptic 5-HT transporter in self-aggressive behavior.

Courtet, et al. (2001) genotyped a sample of suicide attempts who made violent attempts and unspecified non-suicidal subjects. The frequencies of the S allele and the SS genotype of the serotonin transporter gene were significantly higher in the violent suicide attempters than in the controls.

In a sample of people with personality disorders, New, et al. (2001) found that those with a history of attempted suicide tended to have a lower frequency of the “G” allele of HTR1B, a gene involved in serotonin, and this was statistically significant for white individuals.

Serotonin

In a sample of inpatients with major depression, Duval, et al. (2001) found that those who had attempted suicide showed a lower hormonal response to the d-fenfluramine test but comparable basal and post- dexamethasone suppression test cortisol levels. Duval et al. concluded that their results suggested that, in depressed patients, hypothalamic-pituitary-adrenal axis hyperactivity is not responsible for the reduced serotonergic activity found in patients with a history of suicidal behavior.

Spreux-Varoquaux, et al. (2001) studied plasma serotonin (5-HT), 5-hydroxyindoleacetic acid (5-HIAA), homovanillic acid (HVA) and platelet 5-HT content in patients within 3 days following a violent suicide attempt and in matched healthy controls. Plasma 5-HIAA was lower in violet suicide attempters versus controls, while platelet 5-HT levels were lower in violent attempters than in controls. Plasma HVA was not associated with suicide behavior.

Serum Cholesterol

Using blood samples, Sarchiapone, et al. (2001) found that serum cholesterol levels were lower in attempted suicides just admitted to the hospital (mostly by overdose) than in non-suicidal patients and healthy controls. Neither the prolactin nor cortisol responses to *d*-fenfluramine correlated significantly with serum cholesterol levels.

In a sample of psychiatric outpatients on lithium, Bocchetta, et al. (2001) found that those with a history of attempted suicide (especially a violent attempt) or with a first degree relative who died by suicide had lower serum cholesterol levels.

Other Studies

In a sample of schizophrenic patients, Płocka-Lewandowska, et al. (2001) found that both baseline and post-dexamethasone cortisol levels were significantly higher in patients with previous suicide attempts. Baseline cortisol levels were higher in patients who made a future attempt. DST non-suppression was observed in the majority of patients with a history of suicide attempts, but not in patients without such a history. No association was observed between the intensity of depression and present or previous DST non-suppression.

Westrin, et al. (2001) followed up attempted suicides after 7 months. Suicidality and depression had lessened at follow-up and cerebrospinal fluid–somatostatin had significantly increased, but the level of corticotrophin releasing hormone had not changed in the cerebrospinal fluid.

In a sample of depressed inpatients, Pitchot, et al. (2001b) found that those who had attempted suicide had a lower peak in growth hormone response to apomorphine than the non-attempters. Violent versus non-violent methods for the

attempt did not impact the peak. Pitchot, et al. (2001d) replicated this result in a sample of non-depressed attempted suicides versus controls. Pitchot, et al. (2001c) found no differences in the peak response of the growth hormone (GH) to clonidine, an alpha-2-adrenergic agonist

In a study of the MRIs of a sample of patients with unipolar depression, Ahearn, et al. (2001) found that those who had attempted suicide had significantly more subcortical gray matter hyperintensities.

Brunner, et al. (2001) found that patients who attempted suicide prior to admission had significantly lower lumbar cerebrospinal fluid corticotropin-releasing hormone (CSF CRH) concentrations than psychiatric patients without suicidal behavior. There was no difference between suicide attempters and patients with acute suicidal ideation. Plasma CRH and plasma cortisol concentrations did not differ between suicide attempters vs. non-attempters

The Methods for Attempted Suicide

Townsend, et al. (2001) noted changes over time in the methods used for attempted suicide in England which may have been associated with the availability of the methods (such as antidepressants), but they did not carry out a formal analysis. The methods used differed by sex, age, first-timers versus repeaters, and level of suicidal intent.

Youths

In a sample of Turkish adolescents, Çetin (2001) found that the attempted suicides differed from psychiatric controls and normal adolescents in that they had more siblings, were more often the older child, and experienced negativity in the familial aspect of their self-image. The self-image factor was significant only for suicidal girls.

Glowinski, et al. (2001) studied a sample of female adolescent twins. Attempted suicide was associated with alcohol dependence (but not abuse), conduct disorder, major depression, social phobia and childhood physical abuse and African American ethnicity. More importantly, attempted suicide was associated with attempted suicide and suicide in the co-twin, suicide in the biological mother and biological father but not with suicidal behavior in non-first-degree relatives or stepfather. Concordance rates for attempted suicide were 25%

for MZ twins and 12.8% for DZ twins, but this difference was not statistically significant.

Rew, et al. (2001b) studied middle and high-school students and found that attempted suicide was most common in Hispanic Latina girls. Attempted suicide for the whole sample was associated with a family history of attempted suicide, friends attempting suicide, childhood sexual and physical abuse, environmental stress and risky behavior. In a different analysis of the data, attempting suicide was predicted by age, sex, depression, hopelessness, social connectedness and religious influence in addition to the first set of variables listed above.

In a sample of black inner-city youths, Price, et al. (2001) found that those who had attempted suicide engaged more often in risky behavior (e.g., sniffing glue, smoking marijuana, beating someone up, damaging property for fun) and had fewer developmental assets (e.g., getting along with their family).

In a sample of adolescent attempted suicides by overdose, Guertin, et al. (2001) compared those who also self-mutilated with those who do not. The self-mutilators were more often diagnosed with oppositional defiant disorder, major depression, and dysthymia and had higher scores on measures of hopelessness, loneliness, anger, risk taking, reckless behavior, and alcohol use.

Mazza and Reynolds (2001) found that suicidal adolescents (current and prior suicidal ideation and attempts) scored higher on scales to measure psychopathology than did non-suicidal adolescents.

Mazza and Eggert (2001) found that adolescents scoring higher on a suicide risk scale engaged in more solitary activities.

In a survey of adolescent girls in Massachusetts (USA), Silverman, et al. (2001) found that experience of physical or sexual abuse when dating increased the odds of suicidal ideation and attempts even after controlling for other factors using multiple regressions.

Lewinsohn, et al. (2001) tested high school students at the age of 14-18 and followed them up to age 24. Attempting suicide was more common for the females up to age 19 whereupon the rates became more similar. The females still scored higher for depression. Attempted suicide by the females was predicted by negative cognitions, self-esteem, emotional resilience, coping skills, family support and

major depression. Attempted suicide by the males was predicted by negative cognitions, attribution style, coping skills and support from friends, and major depression.

In sample of adolescents (aged 9-17), King, et al. (2001c) found that, compared to the suicidal ideators, the suicide attempters were more likely to report stressful life events, being sexually active, to have smoked more than one cigarette daily, and to have a history of ever having smoked marijuana. Those with ideation or attempt reported more stressful life events, poor family environment, parental psychiatric history, low parental monitoring, low instrumental and social competence, sexual activity, marijuana use, recent drunkenness, current smoking, and physical fighting compared to the non-suicidal adolescents

Sourander, et al. (2001) followed up a sample of 8-year-olds for 8 years. Suicidal behavior (ideation and attempts) by age 16 was associated with gender (females more often), family composition, parental and self-report of deviant functioning, and ratings of social competence (negatively). Depression at age 8 also predicted suicidal behavior later. [26]

Wunderlich, et al. (2001) studied adolescents and young adults aged 14-24 in one German city. For those who had attempted suicide, the females attempted at a younger age, more frequently had experienced rape or sexual abuse, and more frequently had anxiety disorders (including panic attacks) but did not differ in other socio-economic variables. The females more frequently had suicidal ideation than the males, especially for those aged 14-17.

Watt and Sharp (2001) studied adolescents from a survey who had attempted suicide. Attempts were more frequent in the females in the sample. The boys and girls differed in the stressors that they had experienced. The male attempters, compared to the male non-attempters, more often had a mother on welfare, felt social unaccepted, and wanted to leave home. The female attempters, compared to female non-attempters, more often had low grades, had downward mobility compared to mother, felt socially unaccepted, felt that their parents did not care or understand them, and did not socialize with friends in the prior week.

Tomori, et al. (2001) found that Slovenian high school students reported suicidal ideation and attempts more often than did Dutch high school students. The

[26] There were other rating scales, but it is unclear what they measured.

correlates of suicidal behavior were similar in both groups, such as unfavorable families (death of parents, conflict between parents, and changes in the living situation), and this relationship was stronger for Slovenia girls.

In a national sample, Russell and Joyner (2001) found that adolescents who had same-sex romantic attractions or relationships were more like to have suicidal ideation and to have attempted suicide. Attempted suicide was mediated by depression, hopelessness, alcohol abuse, recent suicide attempts by a peer or a family member, and experiences of victimization.

Cornelius, et al. (2001) followed the children of men with and without substance abuse disorder (SUD) from age 10-19. The children whose fathers had SUD were themselves more likely to have SUD (of various drugs) and more likely to report suicidal ideation and attempted suicide. A measure of dysregulation (e.g., disruptive behavior) at age 10 (but not at age 16) predicted later suicidality.

Homeless Youths

Noell and Ochs (2001) studied homeless youths and found that being homosexual or bisexual was associated with a lifetime history of attempted suicide but not suicidal ideation

Rew, et al. (2001a) found that homeless youths who had attempted or thought about suicide in the prior year more often had experienced sexual abuse.

Repeat Attempters

In a study of adolescent attempted suicides in 7 cities in Europe, Hultén, et al. (2001) found that after the index suicide attempt, a repeat attempt within one year was predicted by attempting suicide prior to the index attempt and the used of “hard” methods (e.g., hanging, jumping or cutting) for the attempt.

Stewart, et al. (2001) followed up for 6 months, adolescents presenting at an emergency room for suicidal ideation or attempted suicide. Attempting suicide during the follow-up was predicted by age 15-19 (versus 7 to 14), past foster/group home placement, past mental health care, a suicide plan, previous attempts, mood symptoms, , general substance use, child welfare guardianship, and abuse history, and no substance intoxication at ER visit.

In a group of released adolescent psychiatric inpatients, Goldston, et al. (2001) found that, if the adolescents had prior attempts, hopelessness was associated with increased risk of attempts during the 1 to 7 year follow-up period, whereas greater survival and coping beliefs (on a reasons for living scale) were associated with a decreased risk. These variables did not predict attempting suicide during the follow-up period for those adolescents with no prior attempts prior to intake.

Adolescents with Psychopathology

Weller, et al. (2001) compared hospitalized children aged 5-13 with major depression with children with other diagnoses. Those with major depression more often had suicidal ideation and had attempted suicide. For the major depression sample, the suicidal children more often had parents with psychopathology (e.g., alcoholism and suicidal behavior).

Carlson (2001) compared small samples of attempters, depressed adolescent ideators and normal adolescents. The ideators and attempters reported fewer positive descriptors for ability, appearance, family, friends, school, present self, hope for future self and expected future self than the normal group, but the two suicidal groups did not differ from each other.

Kelly, et al. (2001) sampled adolescent psychiatric outpatients and inpatients Suicidal ideation was predicted by major depressive disorder and chronic stress for boys, while major depressive disorder, low self-esteem and high family dysfunction predicted suicidal ideation in girls. Attempted suicide was predicted by major depressive disorder for boys, while attempted suicide in girls was predicted by major depressive disorder and comorbid alcohol use plus conduct disorder. Despite the title of this article, alcohol use disorders did not contribute to the multiple regression.

Orbach, et al. (2001) compared adolescent attempted suicides, non-suicidal psychiatric inpatients and normal controls. The attempted suicides had more negative attitudes toward their bodies, including lack of control, body aberration and body protection.

Horesh (2001) found that adolescent attempted suicides versus psychiatric controls did not differ on self-reported impulsivity but did differ on a computerized measure of impulsiveness for impulsiveness and inattention.

Walrath, et al. (2001) studied a sample of adolescents treated for mental health problems. First time and repeat attempters more often had depression or dysthymia than non-attempters, were less likely to have conduct disorders, more likely to have family members psychiatrically disturbed, more likely to have experienced physical or sexual abuse, and more likely to have functional impairment (at school, at home, and with drugs). The previous and repeat attempters scored higher on these variables than did the first-time attempters.

Adults

College Students

In a study of college students, Furr, et al. (2001) found that those who reported having attempted suicide reported more hopelessness and helplessness than depressed students. Attempters did not differ in scores from those reporting suicidal ideation. Those reporting suicidal ideation had higher scores for helplessness, hopelessness, loneliness and problems with parents than the depressed students.

In a sample of college students, Bridgeland, et al. (2001) found that attempted suicide was more common in those who had experienced childhood physical or sexual abuse. Victims and perpetrators of rape recently also had an increased incidence of attempted suicide.

In a sample of college students, Edwards and Holden (2001) found that suicidal ideation (past and present) was associated with emotion-oriented coping, avoidance-distraction coping and hopelessness positively and sense of coherence and purpose in life negatively. Prior attempted suicide was associated positively with emotion-oriented coping, avoidance-distraction coping and hopelessness for men. For women, attempted suicide was associated positively with emotion-oriented coping and hopelessness and negatively with sense of coherence. The statistical analysis in this paper was poor, and neither a factor analysis of the predictor variables nor a complete multiple regression was presented, but the predictor variables have been rarely used in previous research (if ever).

Adults

In a population sample of adults in Quebec (Canada), Stravynski and Boyer (2001) found that both attempted suicide and suicidal ideation were associated with loneliness, living alone and psychological distress.

Adult Attempters

Simon, et al. (2001) studies serious suicide attempters in people aged 13-34. Those who were impulsive (attempted suicide within 5 minutes between thought and action) had more often been in a physical fight and were less likely to be depressed. The predictors of an impulsive attempt were male sex, fighting, and hopelessness but not depression. The impulsive attempts happened more often from 7pm to 7am and used a violent method,

Swahn and Potter (2001) compared those making nearly lethal attempts at suicide with those making less lethal attempts aged 13-34. The lethal attempters were younger (13-17) and less often had made prior attempts or sought help and scored lower for hopelessness and depression. Powell, et al. (2001), apparently with the same sample but versus healthy controls, found that the attempters more often differed in drinking frequency, drinking quantity, binge drinking, alcoholism, drinking within 3 hours of suicide attempt, and age began drinking. Drinking within 3 hours of suicide attempt was the most powerful predictor. Potter, et al. (2001), comparing the nearly healthy attempters with healthy controls, found that the attempters had more often moved residence in the prior 12 months, along with aspects of the move (e.g., distance, and difficulty staying in touch). Again, using the attempers and healthy controls, Barnes, et al. (2001) asked whether they sought help for health or emotional problems. The two groups did not differ much, except that the attempted suicides had sought help more from psychiatrists and had brought up suicidality much more often. Ikeda, et al. (2001), using the same sample, found that the attempters more often had serious medical problems, after controlling for age, race/ethnicity, alcoholism, depression, and hopelessness. It is difficult to understand why healthy controls were used in four of the five studies and why the four studies were not combined.

Pillay, et al. (2001) reported on attempted suicides of African descent in South Africa. Over half of them attempted suicide over the weekend. More adolescents than adults ingested medicines, while more adults used violent methods. The precipitating factors were similar across the sample.

Segal and Roy (2001) studied attempted suicide and suicidal ideation in co-twins whose deaths were not suicides. MZ and DZ did not differ in attempted suicide or suicidal ideation in the first two months after the loss. Suicidal ideation (but not attempts) was associated with social closeness and quality of life and negatively with grief intensity.

Aghanwa (2001) compared attempted suicides in Fiji using overdoses e.g., paracetamol) versus poisons (e.g., paraquat). Those using overdoes were older more often females, and more often psychiatrically disordered and less often alcohol abusers.

Baca-García, et al. (2001) found that the more impulsive a suicide attempt was, the less lethal was the attempt.

Dieserud, et al. (2001) studied attempted suicides and psychiatric outpatients and identified two pathways to attempting suicide:

> The first path began with low self-esteem, loneliness, and separation or divorce, which advanced to depression, and was further mediated by hopelessness and suicidal ideation which led to suicide attempt. The second path developed from low self-esteem and a low sense of self-efficacy and advanced to suicide attempt, mediated by a negative appraisal of one's own problem-solving capacity, and poor interpersonal problem-solving skills. (p. 153)

Savin-Williams (2001) studied heterosexual women aged 18-25 and found that 23% had attempted suicide. In a second sample non-heterosexual women and men were more likely to report attempting suicide than were heterosexuals. However, considering only life-threatening attempts, the significant differences were no longer found.

Ostamo, et al. (2001) studied attempted suicides in Finland during an economic recession. The attempters had higher unemployment rates than the general population. For the suicide attempters, young middle-aged men with low education had the highest risk of becoming unemployed. Ostamo, et al. did not include a sample of non-attempters to compare their unemployment and transitions from employment to unemployment. Ostamo and Lönnqvist (2001a) found no changes in the overall rate of attempted during this recession (1989-1997), but the rates for males aged 15-34 did decline.

In a survey of adults, Dube, et al. (2001) found that having attempted suicide was associated with adverse childhood experiences (such as emotional, physical and sexual abuse, household substance abuse and mental illness, and domestic violence). These experiences also increased the incidence of illicit drug use, alcoholism and depression. The more adverse childhood experiences, the greater the likelihood of past attempted suicide, particularly when the respondents were children or adolescents.

Kuo, et al. (2001) followed up a community sample in an American town for 13 years. Suicide attempts were more common in those with drug abuse/dependence, affective disorder, and antisocial personality disorder. Attempts were more common in the youngest age group, lower socioeconomic individuals, and those separated/divorced. Only age predicted the presence of suicidal ideation.

Weyrauch, et al. (2001) studied a sample of attempted suicides admitted to a hospital. The impulsiveness of the attempt was less if the number of disruptive interpersonal relationships in the preceding year was greater than three, if the patient had psychiatric disorder, and if there was a history of physical abuse. For those making more than one attempt, the more recent attempt had fewer final acts in preparation for the attempt, a lesser length of premedication, and less often had a suicide note.

Pollock and Williams (2001) compared first time attempted suicides with non-suicidal psychiatric controls and normal controls. The attempters scored than both comparison groups for depression and suicidal ideation but were not more hopeless than the psychiatric controls. The attempters scored worse than both comparison groups on the means-ends problem-solving task. On autobiographical memory, the attempters tended to give less specific and more general memories in response to cue words. For the attempted suicides, the more general their autobiographical memories, the worse their problem solving.

Polewka, et al. (2001) compared first-time female attempted suicides with repeat attempters. The repeat attempters and first-time attempters did not differ unemployment, education, marital status, or psychiatric diagnosis, nor in depression and hopelessness. They did score lower for a sense of coherence, and scores on this scale correlated negatively with depression scores.

Childhood Sexual Abuse

In a national survey in the United States, Molnar, et al. (2001) found that childhood sexual abuse (both for rape and for sexual molestation) predicted later attempted. suicide, even after controls for lifetime psychiatric illnesses preceding the attempt.

Barker-Collo (2001) studied a sample of females who had experienced childhood sexual abuse. Many made internal attributions of blame as children, and this was associated with worse adult symptomatology, including attempted suicide.

Adults with Psychopathology

Affective Disorder

Fisher, et al. (2001) studied patients in a rehabilitation unit in a psychiatric service. Depressed patients with suicidal ideation versus those with no suicidal ideation did not differ in pain severity, physical functioning, appraisal of pain, and pain coping. Both groups reported more pain and problems with pain than a nondepressed group. The depressed patients with suicidal ideation did report more often a previous suicide attempt.

Oquendo and Mann (2001) found that patients with bipolar 1 or bipolar NOS who attempted suicide had higher levels of suicidal ideation, lifetime aggression, and substance abuse and more depressive episodes than non-attempters.

In a sample of patients with major depression, Brodsky, et al. (2001) found that those with a history of childhood sexual abuse were more often female, African American, with borderline personality and a history of attempted suicide. The suicide attempters with a history of sexual abuse did not differ in the number of attempts, the lethality or the suicidal intent. They did score higher on scales to measure impulsivity and aggression. In a multiple regression, prior suicide attempts were predicted by abuse and aggression.

In a study of depressed psychiatric inpatients, McDermut, et al. (2001) found that a history of attempted suicide was predicted by an earlier age of onset, number of prior hospitalizations and observer rated poor family communication. Compared with the non-suicides, attempters were more often diagnosed with a personality disorder, had a higher rate of comorbid dysthymic disorder, had an earlier age of onset of depression, more depressive episodes in the last 3 years, more lifetime

psychiatric hospitalizations, more hopelessness and higher dysfunctional attitude scores. Attempters had an earlier age of onset of depression and more psychiatric hospitalizations than the ideators. Compared with the non-suicide group, the ideators had an earlier age of depression onset, more episodes in the last 3 years, more hopelessness and a higher dysfunctional attitude score. Other aspects of family functioning did not appear to play a role.

In a study of elderly (>50 years) depressed inpatients, Seidlitz, et al. (2001) compared for emotional states those who had attempted suicide after the age of 50 with those who had not done so. The attempters scored lower in Warmth and Positive Emotions, but only lower Anxiety was associated with attempter status when all seven emotion traits were included as predictors. For the attempters, those who had made a greater number of attempts had scores for lower Positive Emotions and higher Anger/Hostility and Guilt, but only lower Positive Emotions predicted multiple attempts in a multiple regression. For those 41 patients whose index admission was precipitated by an attempt, lower Anger/Hostility was associated with higher intent to die, and lower Anger/Hostility and lower Guilt was associated with higher lethality of method.

In patients with major depression, Placidi, et al. (2001) found lower CSF 5-HIAA and greater suicidal intent in high-lethality suicide attempters compared with low-lethality suicide attempters. Low-lethality attempters did not differ biologically from non-attempters. The high lethality attempters had higher suicidal intent but did not differ in scores for impulsiveness, aggression or personality disorder

Keilp, et al. (2001) compared patients with major depressive disorders who had attempted suicide with low versus high lethality, non-attempters and healthy controls. They found that hopelessness was higher in non-attempters and low-lethality attempters than in high-lethality attempters, while suicide ideation scores were highest in low-lethality attempters. There tended to be more often young (<35) patients with comorbid borderline personality disorder in non-attempters and high lethality attempters. On neuropsychological tests, of course the attempted suicides scored worse than the healthy controls! The attempters and non-attempers did not differ in general intellectual functioning or attention. The attempter groups performed worse on memory than the non-attempters and also on intellectual functioning (fluency and Wisconsin Card Sorting Test), but the two attempter groups did not differ.

López, et al. (2001) studied bipolar 1 psychiatric patients and found that those who had attempted suicide had an earlier age at onset and more often a history of hospital admission during depressive episodes, drug abuse, and a family history of affective disorder.

Schizophrenia

Gut-Fayand, et al. (2001) compared schizophrenic patients who were substances abusers with those who were not. The substance abusers did not differ in anhedonia or positive and negative schizophrenic symptoms, but they had higher scores for impulsivity and had more often attempted suicide.

Panic Disorder

In a sample of patients with panic disorder, Schmidt, et al. (2001) found that suicidal ideation was associated with overall self-rated anxiety, agoraphobia, avoidance of bodily sensation, fear of cognitive incapacitation and depression, but none of these variables predicted past suicide attempts.

Substance Abuse

Malbergier and de Andrade (2001) compared drug-injecting drug addicts who were HIV-positive and HIV-negative and found no differences in their history of attempted suicide. Attempted suicide was predicted by depressive disorder, but not by anxiety disorder or cocaine dependence.

Rossow and Lauritzen (2001) found that drug addicts who had attempted suicide reported more adverse experiences during childhood (sexual or violent assaults, bullying, parents' alcohol abuse, parents' psychiatric problems, school adjustment problems and their own psychiatric problems) than non-attempting addicts, and attempting suicide was associated with the number of areas of such adverse childhood experiences. Similar associations were found for recent suicidal ideation, even after controls for a history of attempted suicide.

In a study of cocaine dependent patients, Roy (2001a) found that those who had attempted suicide were more often female, had a family history of behavior, had childhood trauma, and had comorbidity with alcohol and/or opiate dependence, major depression, and physical disorders, and were more introverted,

neurotic, and hostile. Roy, et al. (2001a) found no differences between attempters and non-attempters in cocaine dependent patients in serum cholesterol levels.

Roy (2001b) documented the history of childhood emotional, physical and sexual abuse in childhood, as well as emotional and physical neglect, in male cocaine patients who had attempted suicide compared to those who had not attempted suicide. Roy (2001c) found that alcoholics who had attempted suicide had significantly higher childhood trauma scores for emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect than the alcoholics who had never attempted suicide.

In a sample of female patients with borderline personality disorder, Rietdijk, et al. (2001) found that attempting suicide in the next six months was not predicted by scores on the reason ns for living scale, but only by one subscale on a coping scale – low score for reassuring thoughts.

In a study of acute admissions to a psychiatric unit, Moselhy and Conlon (2001) found that those admitted for attempted suicide more often had abused alcohol and drugs.

Prisoners

Verona, et al. (2001) compared prisoners who had attempted suicide with those who had not done so. The attempters had higher scores for chronic antisocial deviance and were more likely to be diagnosed as having antisocial personality disorder, as measured by valid instruments. They did not differ on the affective and interpersonal features of psychopathy. On the Multidimensional Personality Questionnaire, the attempters scored high on a factor measuring stress reaction, alienation, and aggression and lower on a factor measuring control, harm avoidance, and traditionalism.

In a study of forensic psychiatric patients, Stålenheim (2001) found that those who had attempted suicide scored low for socialization and high for impulsivity, and they had higher psychopathy scores and lower levels of platelet MAO activity. They did not differ in violent criminality.

Other Disorders

In a sample of psychiatric inpatients and outpatients, Grunebaum, et al. (2001) found no evidence of a relationship between delusions and history of suicidal ideation or suicide attempts in those diagnosed with major depression, schizophrenia, or bipolar disorder.

Apter, et al. (2001) compared ideators, nonserious attempters, serious attempters and psychiatric and healthy controls and found that the serious attempters scored significantly lower than all the other groups of a measure of self-disclosure. All of the suicidal groups scored higher than the healthy controls for hopelessness and depression/anxiety.

Osgood and Manetta (2001) studied elderly women (55+) who had been psychiatric patients and discharged and found that those who had attempted suicide or had suicidal ideation noted in their charts more often had a history of prior victimization, including childhood abuse, rape and battering.

Verdoux, et al. (2001) followed up for two years patients admitted for psychosis. Those who attempted suicide (including one suicide) more often had a history of prior attempted suicide and a longer duration of psychotic symptoms, had a lower PANSS positive score, a longer duration of first admission, were more often readmittions and more often misused substances during the follow up.

Stanley, et al. (2001) compared suicide attempters with cluster B personal disorders who self-mutilate with those who do not do so. The suicide attempts of both groups were equally lethal, but the self-mutilators perceived their attempts as less lethal and with a lesser likelihood of death and a greater chance of being rescued. The self-mutilators scored higher for depression, hopelessness, aggression, anxiety, impulsivity, and suicide ideation and were more likely to have a history of childhood abuse. The self-mutilators also more often reported impulsive sexual activity, feelings of emptiness and boredom, and sensitivity to personal rejection.

In a two-year follow-up of English patients diagnosed as psychotic, Walsh, et al. (2001) found that those who attempted suicide during the follow-up were younger, more often white, more often schizoaffective (versus schizophrenic), younger at onset of disorder, more depressed, and had more admissions in the prior two years. In a multivariate analysis, only two variables predicted a suicide attempt during follow up: previous attempts and multiple admissions in the past two years.

In a sample of psychiatric outpatients, Read, et al. (2001) found that childhood sexual abuse predicted attempted suicide and current suicidal risk (as did childhood physical abuse) better than a current diagnosis of depression.

In a poorly analyzed study, Kryzhanovskaya and Canterbury (2001) compared psychiatric inpatients diagnosed with adjustment disorder to patients with other psychiatric diagnoses and found that a history of attempted suicide was more common in the patients with adjustment disorder. Many other variables were studied for the two groups of patients but not for attempted suicides versus non-attempters.

Studies of Suicidal Ideation

Children

Jackson and Nuttall (2001) studied preadolescent outpatients (aged 5-12) and found that suicidal ideation was associated with child risk factors (anger, anxiety/depression, antisocial behavior), childhood traumas, family stressors and social supports. The strongest item correlates were becoming irritable or belligerent, bed wetting, being withdrawn, feeling worthless, wanting to die, being restless or hyperactive and assaultive towards other children, being ignored by parents and recent maternal separation.

Youths

Allison, et al. (2001) found that a sample of female high school students in Australia had higher scores than did males for depression and suicidal ideation. The higher score for suicidal ideation in females was found only for depression scores in the moderate range (and not at low or high levels of depression).

Field, et al. (2001) studied high school seniors and found that suicidal ideation was predicted by poor family relationships (closeness to siblings, intimacy with parents, relationship with mothers), peer relationships (number of friends, popularity, quality of relationships), emotional state (happiness, anger, depression), drug use and grade point average. The best predictors were happiness, number of friends, anger and use of marijuana.

In a sample of French Canadian high school students, Lacourse, et al. (2001) found that preference for heavy metal music did not predict suicidal ideation for

boys or for girls. For boys, suicidal ideation was predicted by drug use and self-estrangement/powerlessness whereas, for girls, suicidal ideation was predicted by age, father negligence, self-estrangement/powerlessness normlessness, drug use positively and listening to their favorite music for vicarious release negatively.

In a sample of adolescents aged 15-19 in Hong Kong, Lai and McBride-Chang (2001) found that suicide ideation was associated with perceived authoritarian parenting, low parental warmth, high maternal over-control, negative child-rearing practices, and a negative family climate.

Burge and Lester (2001) found that suicidal ideation in high school students was predicted by depression, reasons for living scores and music preferences (for country and pop rock and for heavy metal and classic rock).

In a sample of 8th grade students, Evans, et al. (2001) found that suicide risk (recent suicidal ideation plus past attempts) was higher in ethnic, urban and female students. High suicide risk students were more likely to have started a fight in the past six months, to have threatened to use a weapon, to have used a weapon, to have witnessed violence, and to have been victims of violence.

Flannery, et al. (2001) found that violent female high school students (those who had attacked someone with a knife or gun) were more likely to report suicidal ideation than violent males and nonviolent females and males.

Finzi, et al. (2001) studied children aged 6-12 (recruited from the community) and found that suicidality (mainly ideation with a few attempters) and depression was more often present in those children who had been physically abused (with parents under legal investigation) than in those neglected and those neither abused nor neglected.

Tortollero and Roberts (2001) found that Mexican middle school children were more likely to report suicidal ideation than white Americans, even after adjustment for sex, age, family structure, maternal education, and language use.

In a large sample of homeless older (aged 13-20) adolescents, Rohde, et al. (2001) found that suicidal ideation and hopelessness were associated with higher rates of intravenous drug use but lower rates of multiple sex partners and, in young homeless women, less sexual coercion.

Reinecke, et al. (2001) found that adolescent psychiatric inpatients with poor problem-solving scores (e.g., negative problem orientation and avoidant or impulsive problem-solving style) were more likely to report suicidal ideation, as well as depression and hopelessness. In a sample of adolescent psychiatric inpatients, Reinecke and DuBois (2001) found that suicidal ideation was predicted by daily hassles, perceived social support, self-esteem and maladaptive cognitive schemas (and socio-economic status). They concluded that "Cognitive measures, furthermore, were found to mediate the associations of socioenvironmental measures to assessed levels of mood and suicidality, such that evidence of indirect effects involving the three sets of measures was found (e.g., daily hassles -» maladaptive schemas -» depression)" (p. 195).

Olvera (2001) found that suicidal ideation was reported more often by Hispanic and mixed ancestry middle-school children than by white children. For the total sample, suicidal ideation was associated with depressive symptoms, family dysfunction, lower levels of acculturation, and poor coping strategies. Using multivariate analysis, Hispanic ancestry, depressive symptoms, family dysfunction, and the use of poor coping strategies predicted suicidal ideation.

In Canadian high school students, Barber (2001) found that suicidal ideation was positively associated with depression and their social comparison with others and negatively with self-esteem.

McGee, et al. (2001) measured self-esteem, hopelessness in children aged 11-13 and followed them up at ages 18-21. Using path analysis, for males, adult suicidal ideation was predicted by self-esteem, hopelessness and thoughts of self-harm in childhood. For females, only self-esteem predicted later suicidal ideation.

Adults

College Students

Westefeld, et al. (2001) found that college students who were homosexual or bisexual obtained higher scores than heterosexuals for loneliness and depression and lower scores for reasons for living.

In a sample of college students, Gibb, et al. (2001) chose those at high or low cognitive risk for depression based on psychological tests (the Dysfunctional Attitudes Scale and the Cognitive Style Questionnaire) and followed them up for

2½ years. Childhood emotional maltreatment (but not childhood physical or sexual maltreatment) predicted suicidal ideation during the follow-up period. Cognitive risk contributed to the prediction, but hopelessness was a more powerful additive variable.

In a sample of college students given the MMPI-2 and scored for its content scales, Kopper, et al. (2001) found that suicidal ideation for the females was predicted by hopelessness and reasons for living and the Correction, Paranoia, Conversion Hysteria, Psychopathic Deviate, and Hypomania scales along with the Anger content scale. For the males, suicidal ideation was predicted by hopelessness, the Lie and Hypomania scales, and the Type A content scale.

Gutierrez, et al. (2001) found that the correlations between scores on the attraction/repulsion to life and death scale and suicidal ideation differed by ethnic group for college students. Ideation. Suicidal ideation was associated with depression scores for white, African Americans and Hispanic Americans, but the associations with the attraction/repulsion to life and death scores were significant only for white students. Exposure to attempted or complete suicide was associated with suicidal ideation only for whites and Hispanic Americans.

In a sample of college students, Deane, et al. (2001) asked them from whom would they seek help for suicidal thoughts. Hopelessness score was correlated with not seeking help. Suicidal ideation was correlated with seeking help only from a friend and not seeking help.

Other Adults

In a sample of people seen by social workers, Nugent and Williams (2001) found that the severity of suicidal ideation was predicted by depression and low self-esteem, along with aggression and alcohol abuse.

In a sample of Chinese individuals, He and Lester (2001a) found that females had a higher incidence of ever wishing that they were dead regardless of marital status, age and occupation.

Gili-Planas, et al. (2001) surveyed a sample of the general population from a Spanish Balearic Island. They found that suicidal ideation was associated with the scores on the General Health Questionnaire, somatic symptoms, anxiety,

depression and social dysfunction and with the presence of a psychiatric disorder, but not with the presence of medical illnesses.

In a study of elderly residents in Japan, Ono, et al. (2001a) found that suicidal ideation was associated with depression scores.

In a survey of Swedish residents, Renberg (2001) found that suicidality was reported more often by females, younger persons, those living alone and women in urban areas.

Hintikka, et al. (2001) sampled the general population of Finland and followed up one year later with a questionnaire. Suicidal ideation was associated with the severity of depression. Daily smoking was associated persistent suicidal ideation one year later, along with living alone, unemployment, financial hardship, and frequent alcohol drinking.

In a community sample, Marshall, et al. (2001) found that suicidal ideation was more common the more symptoms of PTSD reported (even after controls for major depressive disorder). Suicidal ideation was also associated with most psychiatric diagnoses.

Miller, et al. (2001) compared students (mean age 21) and older adults (mean age 68) for suicidal ideation and reasons for living. The younger group had higher scores on a measure of suicidal ideation. On the reasons for living scale, the younger group had less concern with child-related issues and moral objections to suicide.

In a sample of medical students graduating and one year later, Tyssen, et al. (2001) found that suicidal ideation in medical school was predicted by lack of control, personality traits, single marital status, negative life events and mental distress (anxiety and depression). In the first post-graduate year, suicidal ideation was predicted by mental distress, job stress, vulnerability (neuroticism), single status, and more working hours.

Palmer (2001) studied depressed African Americans admitted to a behavioral health unit. Those who had attempted suicide had lower serum cholesterol level, scored higher on the Suicide Risk Scale, and scored lower for perceived social support from family than did depressed patients with no history of attempted suicide.

In a study of young (20-35) rural women in China, Domino, et al. (2001a) found that suicidal ideation was associated with a number of variables including psychological aspects (e.g., self-esteem and personal adjustment), coping strategies, the degree of support found in the family and in the community; and attitudes toward suicide. Domino, et al. did not apply straight-forward statistical techniques, and they present a path analysis which they admit had limitations. Domino, et al. (2001b) added a comparable group of young American rural women. The two groups differed on all of the variables. For example, the American women had higher scores for suicidal ideation, self-esteem and support. In multiple regressions, the same variables predicted suicidal ideation for both samples (self-esteem, instrumental support, coping and viewing suicide as morally bad).

Scocco, et al. (2001) studied Italian elderly living at home. In a multiple regression, those reporting suicidal ideation were more often older than 85, had more symptoms of depression and anxiety and scored higher on a hostility scale.

Patients with Medical Disorders

Atbaşoğlu, et al. (2001) studied a sample of patients with schizophrenia or schizophreniform disorders. Akathisia was associated with higher scores for suicidality, depersonalization, and agitation. Depressive mood and subjective awareness of akathisia were the only predictors of suicidality.

In a sample of persons who injected drugs, Grassi, et al. (2001) compared patients who were HIV-positive with those infected with the hepatitis C virus and those who tested negative for both conditions and found no differences in suicidal ideation.

In small samples of institutionalized elderly patients, Fortin, et al. (2001) found that those who had suicidal ideation did not differ from the non-suicidal patients in self-determination but did not take others into account when making decisions.

Patients with Psychopathology

Panic Disorder

Goodwin, et al. (2001) studied patients in primary care and found that suicidal ideation was associated with major depression and comorbid panic disorder or panic attacks. Controlling for major depression, substance use disorders, and sociodemographic variables, patients with either panic attacks or panic disorder still more often reported suicidal ideation.

In a study of patients with panic disorder, Iancu, et al. (2001) found that patients with or without agoraphobia did not differ in a measure of suicide risk. However, suicide risk was associated with alexithymia scores. Those who had suicidal ideation in the hospital more often had a psychiatric history and alcohol abuse or dependence and less social support than those having suicidal ideation after discharge. Both acutely and delayed suicidal patients more often had major depression and impaired social functioning.

Schizophrenia

Schwartz and Cohen (2001a) studied schizophrenics living in the community. Suicidal ideation was predicted by severity of depressive symptoms, younger age and recent traumatic stress. Schwartz and Cohen (2001b) studied schizophrenic inpatients. Suicidal ideation was predicted by depressive symptomatology, female sex, younger age, recent traumatic stress, and less severe psychotic symptoms.

Other Disorders

In a sample of young adults in treatment for suicidality, Joiner, et al. (2001) found that scores on a scale of positive emotions at intake were negatively correlated with suicidal ideation and problem-solving skills.

Kotler, et al. (2001 compared patients with PTSD, non-PTSD anxiety disorder patients and those who were not, and healthy controls. Patients with PTSD had the highest scores on the measures of suicide risk, anger, and impulsivity and the lowest scores on social support, but suicide risk was predicted only by impulsivity. The greater the social support, the less the suicide risk for both patient groups. For the healthy controls, only anger predicted suicide risk

People with Medical Problems

Ishi, et al. (2001a, 2001b) studied patients with stroke, traumatic brain injury, myocardial infarction and spinal cord injury.

Attitudes toward Suicide

In a sample of mental health counselors presented with a vignette about a suicidal person, Rogers, et al. (2001) found that Catholics and Methodist counselors were less in favor of suicide than Jewish and atheist/agnostic counselors (e.g., As a professional, how much action would you take to prevent X from killing himself?).

Physician-Assisted Suicide (PAS)

Manetta and Wells (2001) surveyed social workers and found that approval of PAS was not associated with taking courses in mental health, suicide or ethics.

Blank, et al. (2001) gave elderly hospitalized but non-terminally ill patients scenarios about physician-assisted suicide. After six months, depending on the scenario, 7% to 15% changed their mind from accept to refuse, indicating instability in opinions. (From 1% to 11% switched from refuse to accept.)

In a study of support for PAS among residents of Hawaii, Braun, et al. (2001) found most support by Japanese and least by Filipinos and Hawaiians. Age, immigrant status, education, experience (with life-threatening illness and caregiving) and religion (Catholicism) did not play a role.

The Language of Suicide

Interestingly, Weyrauch, et al. (2001) called attempted suicide *failed suicide*. Physiological researchers continue to label suicides as *suicide victims*.

Discussion

Personal Comments

I have been very critical of the research in my reviews of suicide research for 1998-2000. I find the reviews of each successive year to be more worthy of criticism.

I have expressed my doubts about the value of physiological studies. Many of them find no differences between suicides and controls, and I assume that the publications are peripheral to the main focus of the research project (or grant), but the researchers have simply seized the opportunity of an additional publication. It is also striking how many co-authors these physiological studies have. Eight or more co-authors is not uncommon. Aside from the traditional practice of adding the chairperson of the department to the author list despite not contributing to the paper, a common practice in medical schools, I doubt that each of the co-authors contributed to the paper, despite the more modern practice of listing what each co-author contributed, a listing that can easily be made up.

As a reviewer, I would have rejected several of the papers reviewed here for inadequate statistical analysis. This makes evaluation of the results difficult. In addition, most of the research studies added little or nothing to our understanding of suicide, and many studies simply repeated studies of variables that had been studied and published many times in the past by others.

As I have fussed in the earlier reviews, most of these papers add little or nothing to our understanding of suicidal behavior. The same variables are plugged into samples time and time. Yes, we know that childhood abuse increases the risk of suicide, that LGBTQ individuals are at higher risk of suicidal behavior, and we certainly know that depression and hopelessness correlate with suicidality.

In studies of suicide and suicidality in psychiatric patients, the use of healthy controls is usually pointless. The strongest correlate of suicidality in these studies is psychiatric disturbance in these studies and variables related to that.

However, this year, there were several research reports that were of interest. Some studied variables that had not been studied in the past, and others advanced new ideas.

What Have We Learned About Suicide?

This year saw two interesting theoretical hypotheses: (1) the hypothesis of a natural (non-zero) suicide rate proposed by Yang and Lester (1991) and supported by Kunce and Anderson (2001) with empirical research, and (2) three theories of the association of the economy and suicide described by B. Y. Lester (2001). Little else was noteworthy except for occasional suggestions for a new variable to be

studied such as emotional coping (Edwards & Holden, 2001) and emotions in general (Seidlitz, et al., 2001).

At the sociological level of analysis, Preti and Miotto (2001) studied the variation of suicides over the hours of the day (potentially useful for preventing suicide), and the availability of methods for suicide was found to be important in impacting the suicide rate.

References[27]

Agerbo, E., Mortensen, P. B., et al. (2001). Risk of suicide in relation to income level in people admitted to hospital with mental illness. *British Medical Journal, 322,* 334-335.

Aasland, O. G., Ekeberg, Ø., & Schweder, T. (2001). Suicide rates from 1960 to 1989 in Norwegian physicians compared with other educational groups. *Social Science & Medicine, 52,* 259-265.

Abbar, M., Courtet, P., et al. (2001). Suicide attempts and the tryptophan hydroxylase gene. *Molecular Psychiatry, 6,* 268-273.

Aghanwa, H. S. (2001). Attempted suicide by drug overdose and by poison-ingestion methods seen at the main general hospital in the Fiji islands. *General Hospital Psychiatry, 23,* 266-271.

Ahearn, E. P., Jamison, K. R., et al. (2001). MRI correlates of suicide attempt history in unipolar depression. *Biological Psychiatry, 50,* 266-270.

Allard, P., & Norlén, M. (2001). Caudate nucleus dopamine D2 receptors in depressed suicide victims. *Neuropsychobiology, 44,* 70-73.

Allison, S., Roger, L., Martin, G., & Keeves, J. (2001). Gender differences in the relationship between depression and suicidal ideation in young adolescents. *Australian & New Zealand Journal of Psychiatry, 35,* 498-503.

Amos, T., Appleby, L., & Kiernan, K. (2001). Changes in rates of suicide by car exhaust asphyxiation in England and Wales. *Psychological Medicine, 31,* 9835-939.

Anon. (2001). Temporal variations in school-associated student homicide and suicide events. *Morbidity & Mortality Weekly Report, 50,* 657-660.

Apter, A., Horesh, N., et al. (2001). Relationship between self-disclosure and serious suicidal behavior. *Comprehensive Psychiatry, 42,* 70-75.

[27] Up to four co-authors, all are listed. Five or more and only the first two co-authors are listed in these references.

Arango, V., Underwood, M. D., et al. (2001). Serotonin 1A receptors, serotonin transporter binding and serotonin transporter mRNA expression in the brainstem of depressed suicide victims. *Neuropsychopharmacology, 25,* 892–903

Atbaşoğlu, E. C., Schultz, S. K., & Andreasen, N. C. (2001). The relationship of akathisia with suicidality and depersonalization among patients with schizophrenia. *Journal of Neuropsychiatry & Clinical Neurosciences, 13,* 336-341.

Baca-García, E., Diaz-Sastre, C., et al. (2001). A prospective study of the paradoxical relationship between impulsivity and lethality of suicide attempts. *Journal of Clinical Psychiatry, 62,* 560-564.

Barber, J. G. (2001). Relative misery and youth suicide. *Australian & New Zealand Journal of Psychiatry, 35*, 49-57.

Barber, M. E., Marzuk, P. M., Leon, A. C., & Portera, L. (2001). Gate questions in psychiatric interviewing. *Journal of Psychiatric Research, 35,* 67-69.

Barker-Collo, S. L. (2001). Adult reports of child and adult attributions of blame for childhood sexual abuse. *Child Abuse & Neglect, 25,* 1329-1341.

Barnes, L. S., Ikeda, R. M., & Kresnow, M. (2001). Help-seeking behavior prior to nearly lethal suicide attempts. *Suicide & Life-Threatening Behavior, 32*(supplement)*,* 68-75.

Beautrais, A. L. (2001a). Suicides and serious suicide attempts. *Psychological Medicine, 31,* 837-845.

Beautrais, A. L. (2001b). Effectiveness of barriers at suicide jumping sites. *Australian & New Zealand Journal of Psychiatry, 35,* 557-562.

Birckmayer J., & Hemenway, D. (2001). Suicide and firearm prevalence. *Suicide & Life-Threatening Behavior, 31,* 303-310.

Blaauw, E., Winkel, F. W., & Kerkhof, A. J. F. M. (2001). Bullying and suicidal behavior in jails. *Criminal Justice & Behavior, 28,* 279-299.

Black, S. T. (1993). Comparing genuine and simulated suicide notes. *Journal of Consulting & Clinical Psychology, 61,* 699-702.

Black, S. T., & Lester, D. (2001). The use of substitute subjects in the study of suicide. *European Journal of Psychiatry, 15*(3), 133-136.

Blair-West, G. W., & Mellsop, G. W. (2001). Major depression. *Australian & New Zealand Journal of Psychiatry, 35,* 322-328.

Blank, K., Robison, J., Prigerson, H., & Schwartz, H. I., et al. (2001). Instability of attitudes about euthanasia and physician assisted suicide in depressed older hospitalized patients. *General Hospital Psychiatry, 23,* 326-332.

Boardman, A. P., & Healy, D (2001). Modelling suicide risk in affective disorders. *European Psychiatry, 16,* 400-405.

Bocchetta, A., Chillotti, C., et al. (2001). Association of personal and familial suicide risk with low serum cholesterol concentration in male lithium patients. *Acta Psychiatrica Scandinavica, 104,* 37-41.

Braun, K. L., Tanji, V. M., & Heck, R. (2001). Support for physician-assisted suicide. *The Gerontologist, 41*, 51-60.

Bridgeland, W. M., Duane, E. A., & Stewart, C. S. (2001). Victimization and attempted suicide. *College Student Journal, 35*(1), 63-76.

Brodsky, B. S., Oquendo, M., et al. (2001). The relationship of childhood abuse to impulsivity and suicidal behavior in adults with major depression. *American Journal of Psychiatry, 158,* 1871-1877.

Brunner, J., Stalla, G. K., et al. (2001). Decreased corticotropin-releasing hormone (CRH) concentrations in the cerebrospinal fluid of eucortisolemic suicide attempters. *Journal of Psychiatric Research, 35,* 1-9.

Burge, M., & Lester, D. (2001). Predicting suicidal ideation in high school students. *Psychological Reports, 89,* 283-284.

Burless, C., & de Leo, D. (2001). Methodological issues in community surveys of suicide ideators and attempters. *Crisis, 22,* 108-123.

Cameron, S. (2001). Self-execution, capital punishment, and the economics of murder. *American Journal of Economics & Sociology, 60,* 881-809.

Cantor, C., McTaggart, P., & de Leo, D. (2001). Misclassification of suicides. *Psychopathology, 34,* 140-146.

Carlson, K. T. (2001). The self – yesterday, today, and tomorrow. *Child & Adolescent Social Work Journal, 18,* 241-252.

Çetin, F. Ç. (2001). Suicide attempts and self-Image among Turkish adolescents. *Journal of Youth & Adolescence, 30,* 641-651.

Chung, W. S. D., & Leung, C. M. (2001). Carbon monoxide poisoning as a new method of suicide in Hong Kong. *Psychiatric Services, 52,* 836-837.

Connolly, J. F., & Lester, D. (2001). Suicide rates in Irish counties. *Irish Journal of Psychological Medicine, 18*(3), 87-89.

Conner, K. R., Cox, C., et al. (2001). Violence, alcohol, and completed suicide. *American Journal of Psychiatry, 158,* 1701-1705.

Conner, K. R., Duberstein, P. R., & Conwell, Y. (2001a). The validity of proxy-based data in suicide research. *Acta Psychiatrica Scandinavica, 104,* 204–209.

Conner, K. R., Conwell, Y., & Duberstein, P. R. (2001b). The validity of proxy-based data in suicide research, *Acta Psychiatrica Scandinavica, 104,* 452-457.

Coombs, D. W., Fish, L., et al. (2001). The transtheoretical model of change applied to developing suicidal behavior. *Omega, 44,* 345-359.

Cornelius, J., Kirisci, L., & Tarter, R. E. (2001). Suicidality in offspring of men with substance used disorder. *Journal of Child & Adolescent Substance Abuse*, *10,* 101-109.

Coryell, W., & Schlesser, M. (2001). The dexamethasone suppression test and suicide prediction. *American Journal of Psychiatry, 158,* 748-753.

Courtet, P., Baud, P., et al. (2001). Association between violent suicidal behavior and the low activity allele of the serotonin transporter gene. *Molecular Psychiatry, 6,* 338-341.

Cutright, P., & Fernquist, R. M. (2001a). The relative gender gap in suicide. *Social Science Research, 30,* 76-99.

Cutright, P., & Fernquist, R. M. (2001b). The age structure of male suicide rates. *Social Science Research, 30,* 627-640.

Darke, S., & Ross, J. (2001). The relationship between suicide and heroin overdose among methadone maintenance patients in Sydney, Australia. *Addiction, 96,* 1443-1453.

Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2001). Suicidal ideation and help-negation. *Journal of Clinical Psychology, 57,* 901-914.

De Hert, M., McKenzie, K., & Peuskens, J. (2001). Risk factors for suicide in young people suffering from schizophrenia. *Schizophrenia Research, 47,* 127-134.

Dennis, M., Read, S., et al. (2001). Suicide in a single health district. *Journal of Mental Health, 10,* 673-682.

Dieserud, G., Røysamb, E., Ekeberg, Ø., & Kraft, P. (2001). Toward an integrative model of suicide attempt. *Suicide & Life-Threatening Behavior, 31,* 153-168.

Domino, G., Domino, M., & Su, A. (2001a). Psychosocial aspects of suicide in young Chinese rural women. *Omega, 44,* 223-240.

Domino, G., Su, A., & Johnson, S. L. (2001b). Psychosocial correlates of suicide ideation, *Omega, 44,* 371-389.

Du, L., Faludi, G., et al. (2001). Serotonergic genes and suicidality. *Crisis, 22,* 54-60.

Dube, S. R., Anda, R. F., et al. (2001). Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span. *Journal of the American Medical Association, 286,* 3089-3096.

Durkheim, E. (1897). *Le suicide*. Paris, France: Felix Alcan.

Duval, F., Mokrani, M. C., et al. (2001). Lack of effect of HPA axis hyperactivity on hormonal responses to d-fenfluramine in major depressed patients. *Psychoneuroendocrinology, 26,* 521-537

Edwards, M. J., & Holden, R. R. (2001). Coping, meaning in life, and suicidal manifestations. *Journal of Clinical Psychology, 57*, 1517-1534.

Etzersdorfer, E., Voracek, M., & Sonneck, G. (2001). A dose–response relationship of imitational suicides with newspaper distribution. *Australian & New Zealand Journal of Psychiatry, 35,* 251.

Evans, W. P., Marte, R. M., Betts, S., & Silliman, B. (2001). Adolescent suicide risk and peer-related violent behaviors and victimization. *Journal of Interpersonal Violence, 16,* 1330-1348.

Fernquist, R. M. (2001a). Education, race/ethnicity, age, sex, and suicide. *Current Research in Social Psychology, 6,* 277-290.

Fernquist, R. M. (2001b). Attitudes toward the unification of Western Europe and cross-national suicide rates. *Suicide & Life-Threatening Behavior, 31,* 333-341.

Field, T., Diego, M., & Sanders, C. E. (2001). Adolescent suicidal ideation. *Adolescence, 36,* 241-248.

Finzi, R., Ram, A., et al. (2001). Depressive symptoms and suicidality in physically abused children. *American Journal of Orthopsychiatry, 71,* 98-107.

Fisher, B. J., Haythornthwaite, J. A., et al. (2001). Suicidal intent in patients with chronic pain. *Pain, 89,* 199-206.

Flannery, D. J., Singer, M. I., & Wester, K. (2001). Violence exposure, psychological trauma, and suicide risk in a community sample of dangerously violent adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 40,* 435-442.

Florkowski, A., Gruszczyński, W., & Wawrzyniak, Z. (2001). Evaluation of psychopathological factors and origins of suicides committed by soldiers, 1989 to 1998. *Military Medicine, 166,* 44-47.

Fombonne, E., Wostear, G., et al. (2001). The Maudsley long-term follow-up of child and adolescent depression. *British Journal of Psychiatry, 179,* 218-223.

Fortin, A., Lapierre, S., et al. (2001). Suicidal ideation and self-determination in institutionalized elderly. *Crisis, 22,* 15-19.

Fowler, J. C., Hilsenroth, M. J., & Piers, C. (2001). An empirical study of seriously disturbed suicidal patients. *Journal of the American Psychoanalytic Association, 49,* 161-186.

Furr, S. R., Westefeld, J. S., McConnell, G. N., & Jenkins, J. M. (2001). Suicide and depression among college students. *Professional Psychology, 32,* 97-100.

Gibb, B. E. Alloy, L. B., et al. (2001). Childhood maltreatment and college students' current suicidal ideation. *Suicide & Life-Threatening Behavior, 31,* 405-415.

Gili-Planas, et al. (2001). Roca-Bennasar, M., & Ferrer-Perez, V., & Bernardo-Arroyo, M. (2001). Suicidal ideation, psychiatric disorder, and medical illness in a community epidemiological study. *Suicide & Life-Threatening Behavior, 31,* 207-213.

Ginsberg, R. B. (1966). Anomie and aspirations. *Dissertation. Abstracts, 27A,* 3945-3946.

Gladstone, G. L., Mitchell, P. B., et al. (2001). Indicators of suicide over 10 years in a specialist mood disorders unit sample. *Journal of Clinical Psychiatry, 62,* 945-951.

Glowinski, A. L., Bucholz, K. K., et al. (2001). Suicide attempts in an adolescent female twin sample. *Journal of the American Academy of Child & Adolescent Psychiatry, 40,* 1300-1307.

Goldston, D. B., Daniel, S. S., et al. (2001). Cognitive risk factors and suicide attempts among formerly hospitalized adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 40,* 91-99.

Goodwin, R., Olfson, M., et al. (2001). Panic and suicidal ideation in primary care. *Depression & Anxiety, 14,* 244-246.

Grassi, L., Mondarini, D., et al. (2001). Suicide probability and psychological morbidity secondary to HIV infection. *Journal of Affective Disorders, 64,* 195-202.

Grunebaum, M. F. Oquendo, M. A., et al. (2001). Delusions and suicidality. *American Journal of Psychiatry, 158,* 742-747.

Guertin, T., Lloyd-Richardson, E., et al. (2001). Self-mutilative behavior in adolescents who attempt suicide by overdose. *Journal of the American Academy of Child & Adolescent Psychiatry, 40,* 1062-1069.

Gut-Fayand, A., Dervaux, A., et al. (2001). Substance abuse and suicidality in schizophrenia. *Psychiatry Research, 102,* 65-72.

Gutierrez, P., M., Rodriguez, P. J., & Garcia, P. (2001). Suicide risk factors for young adults. *Death Studies, 25,* 319-340.

Harwood, D., Hawton, K., Hope, T., & Jacoby, R. (2001). Psychiatric disorder and personality factors associated with suicide in older people. *International Journal of Geriatric Psychiatry, 16,* 155-165.

Hawton, K., Clements, A., et al. (2001b). Suicide in doctors. *Journal of Epidemiology & Community Health, 55,* 296-300.

Hawton, K., Harriss, L., et al. (2001a). The influence of the economic and social environment on deliberate self-harm and suicide. *Psychological Medicine, 31,* 827-836.

Hawton, K., Harriss, L., et al. (2001c). Social class and suicidal behaviour. *Social Psychiatry & Psychiatric Epidemiology, 36,* 437-443.

He, Z. X., & Lester, D. (2001a). Sex differences in suicidal ideation in a community sample from China. *Crisis, 22,* 132-134.

He, Z. X., & Lester, D. (2001b). Elderly suicide in China. *Psychological Reports, 89,* 675-676.

He, Z. X., Yang, B., & Lester, D. (2001). Suicide notes of Chinese youth. *Perceptual & Motor Skills, 93,* 317-318.

Henry, A. F., & Short, J. R. (1954). *Suicide and homicide*. New York: Free Press.

Hintikka, J., Pesonen, T., et al. (2001). Suicidal ideation in the Finnish general population. *Social Psychiatry & Psychiatric Epidemiology, 36*, 590-594.

Hiroeh, U., Appleby, L., Mortensen, P. B., & Dunn, G. (2001). Death by homicide, suicide, and other unnatural causes in people with mental illness. *Lancet, 358,* 2110-2112.

Hiroi, N., Wong, M. L. et al. (2001). Expression of corticotropin releasing hormone receptors type I and type II mRNA in suicide victims and controls. *Molecular Psychiatry, 6,* 540–546.

Horesh, N. (2001). Self-report vs. computerized measures of impulsivity as a correlate of suicidal behavior. *Crisis, 22,* 27-31.

Hultén, A., Jiang, G. X., et al. (2001). Repetition of attempted suicide among teenagers in Europe. *European Child & Adolescent Psychiatry, 10,* 161-169.

Iancu, I., Dannon, P. M., et al. (2001). Alexithymia and suicidality in panic disorder. *Comprehensive Psychiatry, 42,* 477-481.

Ikeda, R. M., Kresnow, M. J., et al. (2001). Medical conditions and nearly lethal suicide attempts. *Suicide & Life-Threatening Behavior, 32*(Supplement), 60-67.

Ishi, Y., Robinson, R. G., & Kosier, J. T. (2001a). Suicidal ideation among patients during the rehabilitation period after life-threatening physical illness. *Journal of Nervous & Mental Disease, 189*, 623-628.

Ishi, Y., Robinson, R. G., & Kosier, J. T. (2001b). Suicidal ideation among patients with acute life-threatening physical illness. *Psychosomatics, 42,* 382-390.

Jackson, H., & Nuttall, R. L. (2001). Risk for preadolescent suicidal behavior. *Child & Adolescent Social Work Journal, 18,* 189-203.

Joiner, T. E., Pettit, J. W., et al. (2001). Can positive emotion influence problem-solving attitudes among suicidal adults? *Professional Psychology, 32,* 507-512.

Keilp, J. G., Sakheim, H. A., et al. (2001). Neuropsychological dysfunction in depressed suicide attempters. American Journal of Psychiatry 158, 735-741.

Kelly, T. M., Lynch, K. G., Donovan, J. E., & Clark, D. B. (2001). Alcohol use disorders and risk factor interactions for adolescent suicidal ideation and attempts. *Suicide & Life-Threatening Behavior, 31,* 181-193.

King, E. A. (2001). The Wessex Suicide Audit 1988-1993. *International Journal of Psychiatry in Clinical Practice, 5,* 111-118.

King, E. A., Baldwin, D. S., Sinclair, J. M. A., & Campbell, M. J. (2001a). The Wessex recent in-patient suicide study, 2. *British Journal of Psychiatry, 178,* 537-542.

King, E. A., Baldwin, D. S., et al. (2001b). The Wessex recent in-patient suicide study, 1. *British Journal of Psychiatry, 178,* 531-536.

King, R. A., Schwab-Stone, M., et al. (2001c). Psychosocial and risk behavior correlates of youth suicide attempts and suicidal ideation. *Journal of the. American Academy of Child & Adolescent Psychiatry, 40*, 837–846.

Koivumaa-Honkanen, H., Honkanen, R., et al. (2001). Life satisfaction and suicide. *American Journal of Psychiatry, 158,* 433-439.

Kondrichin, S. (2001). Regional differences in electoral positions, suicide rates, and violent deaths. *Sociological Research, 40,* 49-73.

Kondrichin, S., & Lester, D. (2001a). Correlates of regional suicide and cancer mortality rates. *Perceptual & Motor Skills, 93,* 338.

Kondrichin, S., & Lester, D. (2001a). Tuberculosis and suicide. *Psychological Reports, 89,* 326.

Kopper, B. A., Osman, A., & Barrios, F. X. (2001). Assessment of suicidal ideation in young men and women. *Death Studies, 25,* 593-607.

Kotler, M., Iancu, I., Efroni, R., & Amir, M. (2001). Anger, impulsivity, social support, and suicide risk in patients with posttraumatic stress disorder. *Journal of Nervous & Mental Disease. 189*(3), 162-167.

Kposowa, A. J. (2001). Unemployment and suicide. *Psychological Medicine, 31,* 127-138.

Kryzhanovskaya, L., & Canterbury, R. (2001). Suicidal behavior in patients with adjustment disorders. *Crisis, 22,* 125-131.

Kunce, M., & Anderson, A. L. (2001). A natural rate of suicide for the U.S., revisited. *Omega, 44,* 215-222.

Kuo, W. H., Gallo, J. J., & Tien, A. Y. (2001). Incidence of suicide ideation and attempts in adults. *Psychological Medicine, 31,* 1181-1191.

Lacourse, E., Claes, M., & Villeneuve, M. (2001). Heavy metal music and adolescent suicide risk. *Journal of Youth & Adolescence, 30,* 321-332.

Lai, K. W., & McBride-Chang, C. (2001). Suicidal ideation, parenting style, and family climate among Hong Kong adolescents. *International journal of Psychology, 36,* 81-87.

Lau, B. W. K., & Pritchard, C. (2001). Suicide of older people in Asian societies. *Australian Journal on Ageing, 20,* 196-202.

Lecrubier, Y. (2001). The influence of comorbidity on the prevalence of suicidal behaviour. *European Psychiatry, 16,* 395-399.

Leenaars, A. A., de Wilde, E. J., Wenckstern, S., & Kral, M. (2001). Suicide notes of adolescents. *Canadian Journal of Behavioural Science, 33,* 47-57.

Lester, B. Y. (2001). Learnings from Durkheim and beyond. *Suicide & Life-Threatening Behavior, 31,* 15-31.

Lester, D. (2001a). The suicide rate in Austrian prisons. *Psychological Reports, 88,* 1222.

Lester, D. (2001b). Association of alcohol use and suicide in 27 nations of the world. *Psychological Reports, 88,* 1129.

Lester, D. (2001c). Gun availability and the use of guns for murder and suicide in Canada. *Psychological Reports, 89,* 624.

Lester, D. (2001d). The military participation rate and suicide rates in Italy, 1864-1913. *Psychological Reports, 89,* 452.

Lester, D. (2001e). Violent versus nonviolent methods for suicide. *Psychological Reports, 89*, 445-446.

Lester, D. (2002). The scientific study of suicide requires accurate data. *Crisis, 23,* 133-134.

Lester, D. (2006). Sex differences in completed suicide by schizophrenic patients. *Suicide & Life-Threatening Behavior, 36,* 50-56.

Lester, D. (2024a). A review of research on suicide in 1998. *Suicide Studies*, 5(2), 2-61.

Lester, D. (2024b). A review of research on suicide in 1999. *Suicide Studies,* 5(3), 2-63

Lester, D. (2024c). A review of research on suicide in 2000. *Suicide Studies,* 5(4), 54-109.

Lester, D., Beck, A. T. & Trexler, L. (1975). Extrapolation from attempted suicides to completed suicides. *Journal of Abnormal Psychology, 84,* 563-566.

Lewinsohn, P. M., Rohde, P., Seeley, J. R., & Baldin, C. L. (2001). Gender differences in suicide attempts from adolescence to young adulthood. *Journal of the. American Academy of Child & Adolescent Psychiatry, 40*, 427-434.

Linsley, K. R., Schapira, K., & Kelly, T. P. (2001). Open verdict v. suicide. *British Journal of Psychiatry, 178,* 465-468.

López, P., Mosquera, F., et al. (2001). Suicide attempts in bipolar patients. *Journal of Clinical Psychiatry, 62,* 963-966.

Lubin, G., Glasser, S., Boyko, V., & Barell, V. (2001). Epidemiology of suicide in Israel. *Social Psychiatry & Psychiatric Epidemiology, 36,* 123-127.

Lund, L. E., & Smorodinsky, S. (2001). Violent death among intimate partners. *Suicide & Life-Threatening Behavior, 31,* 451-459.

Malbergier, A., & de Andrade, A. G. (2001). Depressive disorders and suicide attempts in injecting drug users with and without HIV infection. *AIDS Care, 13,* 141–150.

Malphurs, J. E., Eisdorfer, C., & Cohen, D. (2001). A comparison of antecedents of homicide-suicide and suicide in older married men. *American Journal of Geriatric Psychiatry, 9,* 49-57.

Manetta, A. A., & Wells, J. G. (2001). Ethical issues in the social worker's role in physician-assisted suicide. *Health & Social Work, 26,* 160-166.

Marazziti, D., Dell'Osso, L., et al. (2001). Decreased platelet [^{3}H]paroxetine binding sites in suicide attempters. *Psychiatry Research, 103,* 125-131.

Marshall, R. D., Olfson, M., et al. (2001). Comorbidity, impairment, and suicidality in subthreshold PTSD. *American Journal of Psychiatry, 158,* 1467-1473.

Mazza, J. J., & Eggert, L. L. (2001). Activity involvement among suicidal and nonsuicidal high-risk and typical adolescents. *Suicide & Life-Threatening Behavior, 31,* 265-281.

Mazza, J. J., & Reynolds, W. M. (2001). An investigation of psychopathology in nonreferred suicidal and nonsuicidal adolescents. *Suicide & Life-Threatening Behavior, 31,* 282-302.

McDermut, W., Miller, I. W., et al. (2001). Family functioning and suicidality in depressed adults. *Comprehensive Psychiatry, 42,* 96-104.

McGee, R., Williams, S., Nada-Raja, S. (2001). Low self-esteem and hopelessness in childhood and suicidal ideation in early adulthood. *Journal of Abnormal Child Psychology, 29,* 281-291.

McGuffin, P., Marušič, A., & Farmer, A. (2001). What can psychiatric genetics offer suicidology? *Crisis, 22,* 61-65.

McKenzie, I., & & Wurr, C. (2001). Early suicide following discharge from a psychiatric hospital. *Suicide & Life-Threatening Behavior, 31,* 358-363.

Miller, J. S., Segal, D. L., & Coolidge, F. L. (2001). A comparison of suicidal thinking and reasons for living among younger and older adults. *Death Studies, 25,* 357-365.

Mohler, B., & Earls, F. (2001). Trends in adolescent suicide. *American Journal of Public Health, 91,* 150-153.

Molnar, B. E., Berkman, L. F., & Buka, S. L. (2001). Psychopathology, childhood sexual abuse and other childhood adversities. *Psychological Medicine, 31,* 965–977.

Moselhy, H. F., & Conlon, W. (2001). Natural history of affective disorders. *International Journal of Psychiatry in Clinical Practice, 5,* 203-206.

Myslobodsky, M., Lalonde, F. M., & Hicks, L. (2001). Are patients with Parkinson's disease suicidal? *Journal of Geriatric Psychiatry & Neurology, 14,* 120-124.

New, A. S., Gelernter, J., et al. (2001). Suicide, impulsive aggression, and HTR1B genotype. *Biological Psychiatry, 50,* 62-65.

Noell, J. W., & Ochs, L. M. (2001). Relationship of sexual orientation to substance use, suicidal ideation, suicide attempts, and other factors in a population of homeless adolescents. *Journal of Adolescent Health, 29,* 31-36.

Nugent, W. R., & Williams, M. (2001). The relationship between the comorbidity of depression with problems in psychosocial functioning and the severity of suicidal ideation. *Social Service Review, 75,* 581-604.

Odagaki, Y., Garcia-Sevílla, J. A., et al. (2001). Cyclic AMP-mediated signaling components are upregulated in the prefrontal cortex of depressed suicide victims. *Brain Research, 898,* 224-231.

O'Leary, D., Paykel, E. Todd, C., & Vardulaki, K. (2001). Suicide in primary affective disorders revisited. *Journal of Clinical Psychiatry, 62,* 804-811.

Olvera, R. L. (2021). Suicidal ideation in Hispanic and mixed-ancestry adolescents. *Suicide & Life-Threatening Behavior. 31,* 416-427.

Ono, Y., Tanaka, E., et al. (2001a). Epidemiology of suicidal ideation and help-seeking behaviors among the elderly in Japan. *Psychiatry & Clinical Neurosciences, 55,* 605-610.

Ono, H., Shirakawa, O., et al. (2001b). Serotonin 2A receptor gene polymorphism is not associated with completed suicide. *Journal of Psychiatric Research, 35,* 173-176.

Oquendo, M. A., Ellis, S. P., et al. (2001). Ethnic and sex differences in suicide rates relative to major depression in the United States. *American Journal of Psychiatry, 158,* 1652-1658.

Oquendo, M. A., & Mann, J. J. (2001). Identifying and managing suicide risk in bipolar patients. *Journal of Clinical Psychiatry, 62*(Supplement 25), 31-34.

Orbach, I., Stein, D., Shani-Sela, M., & Har-Even, D. (2001). Body attitudes and body experiences in suicidal adolescents. *Suicide & Life-Threatening Behavior. 31,* 237-249.

Osgood. N. J., & Manetta, A, A, (2001). Abuse and suicidal issues in older women. *Omega, 42,* 71-81.

Ostamo, A., Lahelma, E. & Lönnqvist, J. (2001). Transitions of employment status among suicide attempters during a severe economic recession. *Social Science & Medicine, 52,* 1741-1750.

Ostamo, A., & Lönnqvist, J. (2001a). Attempted suicide rates and trends during a period of severe economic recession in Helsinki, 1989–1997. *Social Psychiatry & Psychiatric Epidemiology, 36,* 354-360.

Ostamo, A., & Lönnqvist, J. (2001b). Excess mortality of suicide attempters. . *Social Psychiatry & Psychiatric Epidemiology, 36,* 29-35.

Palmer, C. J. (2001). African Americans, depression, and suicide risk. *Journal of Black Psychology, 27,* 100-111.

Pampel, F. C., & Williamson, J. B. (2001). Age patterns of suicide and homicide mortality rates in high-income nations. *Social Forces, 80,* 251-282.

Patja, K., Iivanainen, M., Raitasuo, S., & Lönnqvist, J. (2001). Suicide mortality in mental retardation: a 35-year follow-up study. *Acta Psychiatrica Scandinavica, 103,* 307–311.

Parker, G., Gao, F., & Machin, D. (2001). Seasonality of suicide in Singapore. *Psychological Medicine, 31,* 549-553.

Pillay, A. L., Wassenaar, D. R., & Kramers, A. L. (2001). Non-fatal suicidal behaviour in South Africa. *Journal of Psychology in Africa, 11*(1), 73-87.

Pitchot, W. Hansenne, M., et al. (2001b). Reduced dopamine function in depressed patients is related to suicidal behavior but not its lethality. *Psychoneuroendocrinology, 26,* 689-696.

Pitchot, W. Hansenne, M., et al. (2001c). Alpha-2-Adrenoreceptors in Depressed Suicide Attempters. *Neuropsychobiology, 44,* 91-94.

Pitchot, W. Hansenne, M., et al. (2001d). Role of dopamine in non-depressed patients with a history of suicide attempts. *European Psychiatry, 16,* 424-427.

Pitchot, W., Reggers, J., et al. (2001a). Reduced dopaminergic activity in depressed suicides. *Psychoneuroendocrinology, 26,* 331-335.

Placidi, G. P. A., Oquendo, M. O. et al. (2001). Aggressivity, suicide attempts, and depression. *Biological Psychiatry, 50*, 783-791.

Płocka-Lewandowska, M., Araszkiewicz, A., & Rybakowski, J. K. (2001). Dexamethasone suppression test and suicide attempts in schizophrenic patients. *European Psychiatry, 16,* 428-431.

Price, J. H., Dake, J. A., & Kucharewski, R. (2001). Assets as predictors of suicide attempts in African American inner-city youths. *American Journal of Health Behavior, 25,* 367-375.

Poijula, S., Wahlberg, K. E., & Dyregrov, A. (2001). Adolescent suicide and suicide contagion in three secondary schools. *International Journal of Emergency Mental Health, 3*(3), 163-168.

Polewka, A., Chrostek-Maj, J., & Kroch, S. (2001). Psychosocial aspects of the suicidal attempts of Polish females. *Archives of Psychiatry & Psychotherapy, 3*(2), 51-60.

Pollock, L. R., & Williams, J. M. G. (2001). Effective problem solving in suicide attempters depends on specific autobiographical recall. *Suicide & Life-Threatening Behavior, 31,* 386-396.

Potter, L. B., Kresnow, M. J., et al. (2001). The influence of geographic mobility on nearly lethal suicide attempts. *Suicide & Life-Threatening Behavior, 32*(Supplement), 42-48.

Powell, K. E., Kresnow, M. J., et al. (2001). Alcohol consumption and nearly lethal suicide attempts. *Suicide & Life-Threatening Behavior, 32*(Supplement), 30-41.

Preti. A., de Biasi, F., & Miotto, P. (2001). Musical creativity and suicide. *Psychological Reports, 89,* 719-727.

Preti. A., & Miotto, P. (2001). Diurnal variations in suicide by age and gender in Italy. *Journal of Affective Disorders, 65,* 265-261.

Preuss, U. W., Koller, G., Soyka, M., & Bondy, B. (2001). Association between suicide attempts and 5-HTTLPR-S-allele in alcohol-dependent and control subjects. *Biological Psychiatry, 50*, 636-639.

Pritchard, C., & Bagley, C. (2001). Suicide and murder in child murderers and child sexual abusers. *Journal of Forensic Psychiatry, 12,* 269-286.

Pritchard, C., & Baldwin, D. (2000). Effects of age and gender on elderly suicide rates in Catholic and Orthodox countries. *International Journal of Geriatric Psychiatry, 15,* 904-910.

Ramstedt, M. (2001). Alcohol and suicide in 14 European countries. *Addiction, 96*(supplement 1), S59-S75.

Rancans, E., Renberg, E. S., et al. (2001). Major demographic, social and economic factors associated to suicide rates in Latvia 1980–98. *Acta Psychiatrica Scandinavica, 103*, 275-281.

Read, J., Agar, K., et al. (2001). Assessing suicidality in adults. *Professional Psychology, 32,* 367-372.

Reinecke, M. A., & DuBois, D. L. (2001). Socioenvironmental and cognitive risk and resources. *Journal of Cognitive Therapy, 15,* 195-222.

Reinecke, M. A., DuBois, D. L., & Schultz, D. M. (2001). Social problem solving, mood, and suicidality among inpatient adolescents. *Cognitive Therapy & Research, 25,* 743-756.

Renberg, E. S. (2001). Self-reported life-weariness, death-wishes, suicidal ideation, suicidal plans and suicide attempts in general population surveys in the north of Sweden 1986 and 1996. *Social Psychiatry & Psychiatric Epidemiology, 36,* 429-436.

Rew, L., Taylor-Seehafer, M., Fitzgerald, M. L. (2001a). Sexual abuse, alcohol and other drug use, and suicidal behaviors in homeless adolescents. *Issues in Comprehensive Pediatric Nursing, 24*, 255-240.

Rew, L., Thomas, N., et al. (2001b). Correlates of recent suicide attempts in a triethnic group of adolescents. *Journal of Nursing Scholarship, 33,* 361-367.

Rietdijk, E. A., van den Bosch, et al. (2001). Predicting damaging and self-harming behaviors in female borderline patients. *Journal of Personality Disorders, 15,* 512-520.

Rogers, J. R., Gueulette, C. M., et al. (2001). Rational suicide. *Journal of Counseling & Development, 79,* 365-372.

Rohde, P,, Noell, J., Ochs, L., & Seeley, J. R. (2001). Depression, suicidal ideation and STD-related risk in homeless older adolescents. *Journal of Adolescence, 24,* 447-460.

Roscoe., L. A., Malphurs, J. E., Dragovic, L. J., & Cohen, D. (2001). A comparison of characteristics of Kevorkian euthanasia cases and physician-assisted suicides in Oregon. *The Gerontologist, 41,* 439-446.

Rossow, I., & Lauritzen, G. (2001). Shattered childhood. *Addiction, 96,* 227-240.

Rowley, J., Ganter, K., & Fitzpatrick, C. (2001). Suicidal thoughts and acts in Irish adolescents. *Irish Journal of Psychological Medicine, 18,* 82-86.

Roy, A. (2001a). Characteristics of cocaine-dependent patients who attempt suicide. *American Journal of Psychiatry, 158,* 1215-1219.

Roy, A. (2001b). Childhood trauma and suicidal behavior in male cocaine dependent patients. *Suicide & Life-Threatening Behavior, 31,* 194-196.

Roy, A. (2001c). Childhood trauma and attempted suicide in alcoholics. *Journal of Nervous & Mental Disease, 189,* 120-121.

Roy, A., Gonzalez, B., Marcus, A., & Berman, J. (2001a). Serum cholesterol, suicidal behavior and impulsivity in cocaine-dependent patients. *Psychiatry Research, 101,* 243-247.

Roy, A., Rylander, G., et al. (2001b). Excess tryptophan hydroxylase 17 779C allele in surviving cotwins of monozygotic twin suicide victims. *Neuropsychobiology,43,* 233-236.

Roy, A., & Segal, N. L. (2001). Suicidal behavior in twins. *Journal of Affective Disorders, 66,* 71-74.

Rubenowitz, E., Waren, M., Wilhelmson, K., & Allebeck, P. (2001). Life events and psychosocial factors in elderly suicides. *Psychological Medicine, 31,* 1193-1202.

Rubio, A., Vestner, A. L., et al. (2001). Suicide and Alzheimer's pathology in the elderly. *Biological Psychiatry, 49,* 137-145.

Rujescu, D., Giegling, I., Sato, T., & Moeller, H. J. (2001). A polymorphism in the promoter of the serotonin transporter gene is not associated with suicidal behavior. *Psychiatric Genetics, 11*, 169-172.

Russell, S. T., & Joyner, K. (2001). Adolescent sexual orientation and suicide risk. *American Journal of Public Health, 91,* 1276-1281.

Sarchiapone, M., Camardese, G., et al. (2001). Cholesterol and serotonin indices in depressed and suicidal patients. *Journal of Affective Disorders, 62*, 217-219.

Sastre, M., Guimón, J., & García-Sevilla, J. A. (2001). Relationships between β- and α_2-adrenoceptors and G coupling proteins in the human brain. *Brain Research, 898,* 242-255.

Savin-Williams, R. C. (2001). Suicide attempts among sexual-minority youth. *Journal of Consulting & Clinical Psychology, 69,* 983-991.

Schapira, K., Linsley, K. R., et al. (2001). Relationship of suicide rates to social factors and availability of lethal methods. *British Journal of Psychiatry, 178,* 458-464.

Schmidt, N. B., Woolaway-Bickel, K., & Bates, M. (2001). Evaluating panic-specific factors in the relationship between suicide and panic disorder. *Behaviour Research & Therapy, 39*, 635-649.

Schneider, B., Philipp, M., & Müller, M. J. (2001). Psychopathological predictors of suicide in patients with major depression during a 5-year follow-up. *European Psychiatry, 16,* 283-288.

Schwartz, R. C., & Cohen, B. N. (2001a). Risk factors for suicidality among clients with schizophrenia. *Journal of Counseling & Development, 79,* 314-319.

Schwartz, R. C., & Cohen, B. N. (2001b). Psychosocial correlates of suicidal intent among patients with schizophrenia. *Comprehensive Psychiatry, 42,* 118-123.

Scocco, P., Meneghel, G., Buono, M. D., & de Leo, D. (2001). Hostility as a feature of elderly suicidal ideators. *Psychological Reports, 88*, 863-868.

Seagal, N. L., & Roy, A. (2001). Suicide attempts and ideation in twins whose co-twins' death were non-suicides. *Personality & Individual Differences, 31,* 445-452.

Seidlitz, L., Conwell, Y., et al. (2001). Emotion traits in older suicide attempters and non-attempters. *Journal of Affective Disorders, 66,* 123-131.

Silverman, J. G., Raj, A., Mucci, L. A., & Hathaway, J. E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight

control, sexual risk behavior, pregnancy, and suicidality. *Journal of the American Medical Association, 286,* 572-579.

Simon, T. R., Swann, A. C., et al. (2001). Characteristics of impulsive suicide attempts and attempters. *Suicide & Life-Threatening behavior, 32*(supplement), 49-59.

Souery, D., van Gestel, S., et al. (2001). Tryptophan hydroxylase polymorphism and suicidality in unipolar and bipolar affective disorders. *Biological Psychiatry, 49,* 405–409.

Sourander, A., Helstelä, L., Haavisto, A., & Bergroth, L. (2001). Suicidal thoughts and attempts among adolescents. *Journal of Affective Disorders, 63,* 59-66.

Spreux-Varoquaux, O., Alvarez, J. C., et al. (2001). Differential abnormalities in plasma 5-HIAA and platelet serotonin concentrations in violent suicide attempters. *Life Sciences, 69*, 647-657.

Stack, S. (2001). Occupation and suicide. *Social Science Quarterly, 82,* 384-396.

Stålenheim, E. G. (2001). Relationships between attempted suicide, temperamental vulnerability, and violent criminality in a Swedish forensic psychiatric population. *European Psychiatry, 16,* 386-394.

Stanley, B., Gameroff, M. J., Michalsen, V., & Mann, J. J. (2001). Are suicide attempters who self-mutilate a unique population? *American Journal of Psychiatry, 158,* 427-432.

Stewart, S. E., Manion, I. G., Davidson, S., & Cloutier, P. (2001). Suicidal children and adolescents with first emergency room presentations. *Journal of the American Academy of Child & Adolescent Psychiatry, 40,* 580–587.

Stirmer, S. W., & Pennebaker, J. W. (2001). Word use in the poetry of suicidal and nonsuicidal poets. *Psychosomatic Medicine, 63,* 517-522.

Stravynski, A., & Boyer, R. (2001). Loneliness in relation to suicidal ideation and parasuicide. *Suicide & Life-Threatening Behavior, 31.* 32-40

Swahn, M. H., & Potter, L. B. (2001). Factors associated with the medical severity of suicide attempts in youths and young adults. *Suicide & Life-Threatening Behavior, 32*(supplement), 21-29.

Taiminen, T., Huttunen, J., et al. (2001). The Schizophrenia Suicide Risk Scale (SSRS). *Schizophrenia Research, 47,* 199-213.

Tanskanen, A., Tuomilehto, J., et al. (2001). Nightmares as predictors of suicide. *Sleep, 24,* 845-848.

Teasdale, T. W. (2001). Suicide after a stroke. *Journal of Epidemiology & Community Health, 55,* 863-866.

Teasdale, T. W., & Engberg, A. W. (2001). Suicide after traumatic brain injury. *Journal of Neurology, Neurosurgery, & Psychiatry, 71,* 436–440.

Tomori, M., Kienhorst, C. W. M., de Wilde, E. J., & van den Bout, J. (2001). Suicidal behaviour and family factors among Dutch and Slovenian high school students. . *Acta Psychiatrica Scandinavica, 104,* 198-203.

Tortollero, S. R., & Roberts, R. E. (2001). Differences in nonfatal suicide behaviors among Mexican and European American middle school children. *Suicide & Life-Threatening Behavior, 31,* 214-223.

Townsend, E., Hawton, K., et al. (2001). Substances used in deliberate self-poisoning 1985–1997. *Social Psychiatry & Psychiatric Epidemiology, 36,* 228-234.

Turecki, G., Zhu, Z., et al. (2001). TPH and suicidal behavior: a study in suicide completers. *Molecular Psychiatry, 6,* 98-102.

Tyssen, R., Vaglum, P., Grønvold, N. T., & Ekeberg, Ø. (2001). Suicidal ideation among medical students and young physicians. *Journal of Affective Disorders, 64,* 69-79.

Van Heeringen, C. (2001). Suicide, serotonin, and the brain. *Crisis, 22,* 66-70.

van Houwelingen, C. A. J., & Beersma, D. G. M. (2001). Seasonal changes in 24-h patterns of suicide rates. *Journal of Affective Disorders, 66*, 215-223.

Verdoux, H., Liraud, F., et al. (2001). Predictors and outcome characteristics associated with suicidal behaviour in early psychosis. *Acta Psychiatrica Scandinavica, 103,* 347–354.

Verona, E., Patrick, C. J., & Joiner, T. E. (2001). Psychopathy, antisocial personality, and suicide risk. *Journal of Abnormal Psychology, 110,* 462-470.

Vollum, S., & Titterington, V. (2001). Gender, attribution styles, and direction of lethal violence. *Homicide Studies, 5,* 227-252.

Walrath, C. M., Mandell, D. S., et al. (2001). Suicide attempts in the "Comprehensive community mental health services for children and their families" program. *Journal of the American Academy of Child & Adolescent Psychiatry, 40,* 1197-1205.

Walsh, W., Harvey, K., et al. (2001). Suicidal behaviour in psychosis. *British Journal of Psychiatry, 178,* 255-260.

Watt, T. T., & Sharp, S. F. (2001). Gender differences in strains associated with suicidal behavior among adolescents. *Journal of Youth & Adolescence, 30,* 333-348.

Weinberger, L. E., Sreenivasan, S., Sathyavagiswaran, L, & Markowitz, E. (2001). Child and adolescent suicide in a large, urban area. Journal of Forensic Sciences, 46, 902-907.

Weller, R. A., Weller, E. B., Fristad, M. A., & Bawa, P. K. (2001). Suicidal behavior and parental psychopathology in hospitalized depressed children. *Depression & Anxiety, 14,* 183-185.

Westefeld, J. S., Maples, M. R., Buford, B., & Taylor, S. (2001). Gay, lesbian and bisexual college students. Journal of College Student Psychotherapy, 15, 71-82.

Westrin, Å., Ekman, R., Regnéll, G., & Träskman-Bendz, L. (2001). A follow up study of suicide attempters. *European Neuropsychopharmacology, 11*, 135-143.

Weyrauch, K. F., Roy-Byrne, P., Katon, W., & Wilson, L. (2001). Stressful life events and impulsiveness in failed suicide. *Suicide & Life-Threatening Behavior, 31,* 311-319.

Wissow, L. S., Walkup, J., et al. (2001). Cluster and regional influences on suicide in a Southwestern American Indian tribe. *Social Science & Medicine 53,* 1115–1124.

Wong, A., Escobar, M., et al. (2001). Are UN peacekeepers at risk for suicide? *Suicide & Life-Threatening Behavior, 31,* 103-112,

Wunderlich, U., Bronisch, T., Wittchen, H. U., & Carter, R. (2001). Gender differences in adolescents and young adults with suicidal behaviour. *Acta Psychiatrica Scandinavica, 104,* 332-339.

Yang, B., & Lester, D. (1991). Is there a natural suicide rate for a society? *Psychological Reports, 68,* 322.

Yang, B., & Lester, D. (2001). Suicide as an indicator of the quality of life. *Perceptual & Motor Skills, 93,* 95-96.

Yip, P. S. F. (2001). An epidemiological profile of suicides in Beijing, China. . *Suicide & Life-Threatening Behavior, 31,* 62-70.

Suicide Studies, 2024, 5(4), 206-208

ELDERLY SUICIDE AND THE RELIGION OF THEIR COUNTRY

David Lester

Abstract: In an analysis of data presented by Pritchard (2002), Catholic and Orthodox countries have relatively higher suicide rates in the elderly than non-Catholic/Orthodox countries. This effect is stronger for men than for women, and it is the elderly suicide rate that determines the size of the ratio.

Pritchard (2002) argued that countries that have majority Catholic and Orthodox religious adherents should have lower suicide rates for the elderly.[28] Pritchard thought that these countries more often have extended families so that the elderly live with their offspring, and these countries have more reverence for the elderly. It has been debated since the publication of Durkheim's (1897) book on suicide whether Catholic and Orthodox countries have lower suicides rates than Protestant countries (Pope & Danigelis, 1981), but Pritchard was focusing on relative rates, that is, the suicide rate of the elderly compared to the suicide rate of the general population.

Pritchard found, to his admitted surprise, that the ratio of the elderly suicide rate to the suicide rate of the general population was higher in Catholic and Orthodox countries than in non-Catholic-Orthodox countries.

Pritchard put his raw data into his article, thereby permitting others to analyze the data further, which is the aim of this paper.

Method

Pritchard presented the suicide rate of the general population and of the elderly (>75) for 35 countries and calculated the elderly suicide rate divided by the general population suicide rate.

[28] A version of this article was also published by Pritchard and Balwin (2000).

The Present Results

Obviously, the present results confirm the results reported by Pritchard, but Pritchard simply coded the countries for high versus low ratios of elderly and general population suicide rates, and the ratio of the elderly suicide rate to the suicide rate of the general population was higher in Catholic and Orthodox (CO) countries than in non-Catholic-Orthodox (NCO) countries. For the males, the differences in ratios was significant, but for the females the difference was only a tendency ($p<0.10$).

Let us look at the data in more detail. Table 1 presents differences between the two groups of countries using t-tests. It is clear that now the effect found by Pritchard is significant for both males and females. We can also notice that the elderly suicide rate is higher in CO countries than in NCO countries, significant for males and a tendency for female.

Table 1: Differences between CO countries and non-CO countries

	CO countries Mean (SD) n=22	non-CO countries Mean (SD) n=13	t(df=33)	p
Males				
suicide rate	304 (200)	288 (203)	0.22	ns
elderly suicide rate	755 (445)	456 (297)	2.14	.04
ratio	2.90 (1.04)	1.70 (0.60)	3.29	<.001
Females				
suicide rate	85 (44)	80 (39)	0.34	ns
elderly suicide rate	209 (143)	126 (108)	1.82	.08
ratio	2.42 (0.81)	1.44 (0.61)	3.78	<.001

The next question is are the male and female ratios in the countries associated. The correlation is 0.77 (two-tailed $p <.001$). However, the male ratios are significantly higher than the female ratios (Table 2).

Table 2: Mean ratios for males and females: paired comparisons (n-35)

	Mean	SD	
Males	2.45	1.07	t=3.40 (p<.002)
Females	2.06	0.88	

Finally, what has a stronger impact on the ratio, the general suicide rate or the elderly suicide rate? The correlations are shown in Table 3.

Table 3: correlations between the variables

	Males	Females
ratio &		
general suicide rate	-0.29*	+0.27
elderly suicide rate	+0.32*	+0.66**

* p<0.10 ** p< .001

From Table 3, it appears that the elderly suicide rate has a stronger impact on the ratio than the suicide rate in the general population, especially for females.

Discussion

The present analyses confirm the finding reported by Pritchard (2002) that Catholic and Orthodox countries have relatively higher suicide rates in the elderly than non-Catholic/Orthodox countries. It is the elderly suicide rate that determines the size of the ratio. It appears, therefore, from the prevention point of view, it is elderly men who require the more intensive suicide prevention services.

References

Durkheim, E. (1897). *Le Suicide*. Paris, France : Felix Alcan.

Pope, W., & Danigelis, W. (1981). Sociology's one law. *Social Forces, 60,* 495-516.

Pritchard, C. (2002). Suicide amongst the elderly in 'Catholic and Orthodox' and 'Non-Catholic-Orthodox' countries. *Archives of Suicide Research, 6,* 391-397.

Pritchard, C., & Baldwin, D. (2000). Effects of age and gender on elderly suicide rates in Catholic and Orthodox countries. *International Journal of Geriatric Psychiatry, 15,* 904-910.

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SUICIDE AS A POLITICAL ACT[29]

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Protesting tyranny has a long history, and individuals occasionally die by suicide (without harming others) to protest government policies (Coleman, 1987). Thich Quang Duc, a Buddhist monk set fire to himself in South Vietnam on June 11, 1963, at the age of 66, to protest the persecution of Buddhists by the President, Ngo Dinh Diem. Norman Morrison, 31 years old, set fire to himself on November 2, 1965, outside the Pentagon office of Robert McNamara (Secretary of Defense for the United States) to protest the Vietnam War. Jan Palach, a 20-year-old Czech student, set fire to himself in Prague on January 16, 1969, to protest the Soviet invasion of Czechoslovakia.

However, suicide can be conceptualized more broadly as a political act, using the word 'politics' in the sense that Laing (1967) uses the word to describe any behavior in which one or more people exert power over others. Writers such as Haley (1969) and Laborit (1970) have argued forcefully that the desire for power and for dominating others may be one of the more powerful desires motivating human behavior, and its effects can be documented quite clearly in suicidal behavior where the suicidal act can easily change the power balance in relationships.

Attempted suicide has long been seen as a manipulative act (Sifneos, 1966; Lester, 1968). The individual who attempts suicide is often trying to force certain responses from significant others. Perhaps the lover about to leave will stay? Perhaps he will pay attention to one's distress? A threat of suicide can have equally powerful effects on significant others in changing their immediate response to the threatener. Yang and Lester (2011) showed how suicides can use their suicide note to present a particular image of themselves and to have an impact on their friends and family members, for example, shaming them or reassuring them.

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[29] The section was part of a chapter submitted for a book, but the editor requested that it be removed because another chapter in the book dealt with this issue.

Menninger (1938) described three motives in the suicidal act: to die, anger directed toward oneself, and anger directed toward others. This latter motive is often apparent in obvious efforts to exert power over others. The person who forces others to witness the suicidal act clearly wants to traumatize them and shape the memory they have of him, for example, by shooting oneself in the presence of others. The person may be trying to leave the survivors with guilt, and the stigma that attaches to the survivors of suicides adds to their trauma (Rudestam, 1977).

The efforts of the suicidal individual may not always be directed to causing others pain. Antigone, in Sophocles' play of the same name, is trying to restore honor to the name of her family and glory to herself by her suicidal actions (Faber, 1970). Japanese officials who died by suicide after Japan was defeated in the Second World War often did so for similar reasons of honor. By trying to shape how others will experience them, they are behaving politically in Laing's sense of the word.

Counts (1988) has also documented how suicide may be used to change one's image in the social group. In Papua, New Guinea, suicide often acts as a form of social sanction- It has consequences for the surviving kin and for those who are held responsible for the events precipitating the suicide. Counts described the case of Agnes, a woman who tried to seduce Victor into marriage. The whole village turned against Agnes. Victor's family rejected her as a bride, and she killed herself. Her suicide changed the feeling in the village, and now Victor and his family were seen to be at fault. Whereas Victor's family had refused to pay Agnes a bridal fee, they were now willing to pay her kin compensation. Victor's kin now faced both the disgrace of having caused Agnes' death and the financial loss. Agnes also removed her shame by killing herself. This case shows nicely the dual aspects in the suicidal act of freeing oneself while oppressing others. Freeing oneself may be the underlying motive in cases of fatalistic suicide as described by Durkheim (1897).

In another vein, Meerloo (1962) has described psychic homicide in which a person commits murder by getting someone else to die by suicide. More recent instances have been described by Richman (1986) in his cases of suicide taking place in the context of a family, in which members covertly and sometimes overtly communicate and “force” one family member to kill him.

In the many ways described here, suicide may be conceptualized as a political act in which the suicidal person seeks to change the balance of power in his social group or, more widely, in the society.

References

Counts, D. A. (1988). Ambiguity in the interpretation of suicide-female death in Papua New Guinea. In D. Lester (Ed.), *Why women kill themselves* (pp. 87–110). Springfield, IL: Charles C Thomas.

Faber, M.D. (1970). *Suicide and Greek tragedy*. New York: Sphinx.

Haley, J. (1969). *The power tactics of Jesus Christ and other essays*. New York: Grossman.

Laborit, H. (1970). *L'homme imaginant*. Paris, France: Union General d'Editions.

Laing, R.D. (1967). *The politics of experience*. New York: Pantheon.

Lester, D. (1968). Attempted suicide as a hostile act. *Journal of Psychology*, 68(2), 243-248.

Meerloo, J.A.M. (1962). *Suicide and mass suicide*. New York: Grune & Stratton.

Menninger, K. (1938). *Man against himself*. New York: Harcourt Brace & World.

Richman, J. (1986). *Family therapy for suicidal people*. New York: Springer.

Rudestam, K.E. (1977). Physical and psychological responses to suicide in the family. *Journal of Consulting & Clinical Psychology*, 45(2), 162-170.

Sifneos, P. (1966). Manipulative suicide. *Psychiatric Quarterly*, 40(3), 525-537.

Yang, B., & Lester, D. (2011). The presentation of the self: an hypothesis about suicide notes. *Suicidology Online*, 2, 75-79.

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SUICIDE AND THE MENSTRUAL CYCLE

David Lester

In the past (circa the 1980s), there was much interest in explaining why women attempt suicide more than men do while men die by suicide more than women do (e.g., Lester, 1988b; Canetto & Lester, 1995). We never came to any great conclusions, and researchers and theorists lost interest in this puzzle.

One topic that was investigated, and still is occasionally, is the variation of behavior in women over the menstrual cycle. If behavior does show such a variation, the variation may support psychological theories about the cause of the behavior, since the variation can be attributed to variations in mood over the menstrual cycle. However, it may also support physiological theories about the cause of the behavior since the levels of circulating hormones vary over the menstrual cycle. This essay reviews this research focusing on suicide rather than attempted suicide.

In particular, the premenstrual syndrome. a combination of hormonal and mood changes that occur prior to the bleeding phase of the menstrual cycle, has long been thought to be important in determining behavior. Whether the hormonal changes or the psychological changes are emphasized (or whether indeed the syndrome is viewed as simply a product of societal expectations and labelling) changes with the era.

Before beginning, it must be noted that researchers have not divided the menstrual period of 28 days into agreed upon (standardized) phases which makes it difficult to combine the results of different studies for a meta-analysis. Research reviewed here does not take into account the fact that women's menstrual cycles are not always 28 days in length, nor that some women have amenorrhea (the absence of a menstrual cycle).

Studies with Control Subjects

MacKinnon, et al. (1959; MacKinnon & MacKinnon, 1956) carried out necropsies on women in England who had killed themselves, died from accidents or died from natural causes and found that the suicides were most common during

the mid-luteal phase of the cycle (days 17-23: 68%). (Similar distributions were found, however, for women who died from accidents [40%] and natural causes [59%].)

Dogra, et al. (2007) conducted necropsies on 217 women who had died by suicide and 217 controls (of whom 57% had died in traffic accidents). Seven percent (6.91%) of the suicides were pregnant as were 11.39% of the controls. Of the remaining women, 54.46% of the suicides were menstruating (days 1-4) as compared to 7.62% of the controls, a significant difference.[30]

Vanezis (1990) compared suicides with homicide victims and accidental deaths. Overall, the chi-square test did not indicate statistical significance (chi-square=10.22, df=6, p=0.12). However, 52.3% of the accidental deaths occurred during days 16-19, as did 36.0% of the suicides, the peak period for both groups (with 28.5% during days 16-19). The homicide victims were spread evenly over the four phases that Vanezis used.[31]

Reviews

Saunders and Hawton (2006) reviewed 13 studies on suicide and the menstrual cycle and concluded:

Comparison of the studies is difficult, especially as those reporting a relationship between suicide and menstrual cycle phase lacked methodological information. In addition, most studies had small sample sizes. Overall, it can be concluded that an association between suicide and the phase of the menstrual cycle has not been proven. (p. 903)

Let us look at their data.

[30] The percentage in the published paper appears to be incorrect.
[31] The time periods that Vanezis used do not match the time periods that other researchers used.

Study	N	% menstruating
Heller (1900)[32]	50	50%
Ollendorf (1909)	48	35%
Pilez (1905)	155	15%
		34%
Slavik (1909)	474	33%
Sachwiz (1927)	40	47%
Elo (1931)	147	29%
Babin (1933)	17	29%
Bruchter	86	23%
Krugelstein	107	100%
MacKinnon, et al. (1959)	23	not given
Ribeiro (1962)	22	86%
Helweg-Larsen & Hestbech (1985)	35	not given
Vanezis (1990)	171	not given

It is interesting to note how few studies there are up to 2006 for Saunder and Hawton to review, and only 4 of the studies were after the Second World War. One note. Helweg-Larson and Hestbech (1985) had only 7 suicides plus 7 suicides/accidents (i.e., Helweg-Larson and Hestbech were not sure), and 21 accidents, and so their entry in the table above is incorrect.

Since the bleeding phase of the menstrual cycle is typically days 1-4 (although some researchers use days 1-5), this means that, by chance, 14.29% of suicides should occur during this phase. All of the percentages in the table provided by Saunders and Hawton are above this percentage. Therefore, according to their table, there are more suicides during the bleeding phase than expected.

Alnashwan, et al. (2023) in their meta-analysis located five articles.

[32] Not all references for these studies were included in their paper, but the ones that were included are in the references below. The references for Bruchter, Krugelstein, Ollendorf and Pilez were omitted from their article.

Study	% menstruating
Jeevagan, et al. (2020)	30.7%
Vanezis (1990)	20.0%
Balaram, et al. (2018)	5.3%
Behera, et al. (2019)	12.8%
D'Souza, et al. (2017)	20.5%
Overall	17.5%

I endeavored to locate the articles in foreign languages. Either the article was not listed in abstract services or no abstract was given. Let me create a table for the articles that I could locate. As noted earlier, Ribeiro (1962) found that 23 of the 24 non-pregnant women were menstruating (95.8%). MacKinnon, et al. (1959) found that 1 out of 38 suicides were menstruating (2.6%).

	sample size	percent in bleeding phase	
1 MacKinnon, et al (1959)	38	2.6%	England
2 Ribeiro (1962)	24	95.8%	Kenya
3 Helweg-Larson&Hestbech (1985)[33]	7	14.3%	Denmark
4 Dogra, et al. (2007)	202	54.5%	India
5 Leenaars, et al. (2009)	43	32.6%	India
6 D'Souza, et al. (2017)	44	20.5%	India
7 Balaram & Saritha (2018)	95	5.2%	India
8 Behera, et al. (2019)	86	12.8%	India
9 Vanezis (1990)	50	20.0%	England

There are several features of this table that are of interest. First, why is it that India seems to be the main country whose researchers are interested in this topic? Several of the articles are in Indian journals, making it difficult to locate and download the articles, and they are often not in databases.

The second feature is the range of estimates, from 2.6% to 95.8%, with a median percentage of 20.0%. Something is odd about these studies, because the range of scores is so great.

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[33] This study had a category for the menstrual cycle which translates as ***unsuitable***. Four of the 7 suicides and 3 of the suicide/accidents were labelled unsuitable!

Some of the studies broke the period into phases.[34]

	Days	Study listed above as number 1
Bleeding	1-4	1
Follicular	5-14	3
Early Luteal	15-16	4
Mid-luteal	17-23	26
Late luteal	23-28	4
Total		38

Study	1	5	6	8	7	9
Bleeding (1-4)	1	14	9	11	5	10
Follicular (5-14)	3	7	23	26	43	18
Luteal (15-28)	34	22	12	49	44	32
Early (15-16)	4					
Mid-luteal (17-23)	26					
Late luteal (23-28)	4					
Total	38	43	44	86	92	50

An important comment here. Most research into the menstrual cycle reviewed above has focused on the bleeding phase and the luteal phase. However, in psychological research on the menstrual cycle, it is the *pre-menstrual phase* that is considered to produce unique emotions. That has not interested the researchers reviewed above, perhaps because, this research on suicides requires autopsies and detailed physiological investigation. Therefore, the research is not carried out by psychologists who might be more interested in the premenstrual phase. The pre-menstrual phase would be the late luteal period, days 24-28.

Many of the studied mentioned above did not divide the menstrual period into sufficient phases. According to MacKinnon, et al. (1959), the early and late luteal phases did not seem important. In their study, the mid-luteal phase seemed more important. Data for this phase is not available in most of the published studies.

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[34] The follicular phase is also called the proliferative phase, and the luteal phase is also called the secretory phase.

Also of note is that ovulation typically occurs around day 14 of the menstrual cycle (close to the early luteal phase), but this period does not seem to have interested the physiological researchers.

Explanations

During the bleeding phase of the menstrual cycle, the levels of circulating estrogen and progesterone are low (see, for example, Guyton, 1959), and during the mid-luteal phase the levels of circulating estrogen and progesterone are high. Perhaps the level of these hormones is important in the timing of suicide attempts?

This raises several interesting research questions. First, what is the suicide rate during pregnancy (when the estrogen level is low)? Marzuk, et al. (1997) studied suicides in New York City for the period 1990-1993 and calculated that the suicide rate for pregnant women was one third of that expected. (The standardized mortality ratio for suicide during pregnancy was 0.33.) Samandari, et al. (2011) studied suicides in North Carolina for 2004-2006 among women aged 14-44. They calculated that the suicide rate for pregnant women was 27% of the rate for non-pregnant and non-post-partum women.

A second interesting question is the suicide rate of women on the pill. Lester (1969) suggested that the birth control pill could have an ameliorative effect on suicidal behavior in females but had no evidence to support such a hypothesis. In a review of research on this topic, Amarasekera, et al. (2020) found three studies that showed no significant difference in the suicide rate among anti-conceptive pills and other contraceptive tactics. Two studies, however, did find an increased risk of suicide, with hazard ratios of 3.08 (Skovlund, et al., 2018) and 1.41 (Charlton, et al., 2014).

A third question is whether the hormonal changes accompanying menopause affect the incidence of suicide. Interestingly here, completed suicide rates for women do peak in middle age, and thereupon drop, while completed suicide rates in men continue to rise with age.

Winston (1969) noted that disturbance in the tryptophan metabolism along the kynurenine pathway were associated with mood changes (Dewhurst, 1968) and that these disturbances occur just prior to the onset of menstruation. He speculated

that this may be the mechanism underlying the association between suicidal behavior and the phase of the menstrual cycle. However, this hypothesis requires evidence that the sex hormones affect the tryptophan metabolism.

Lester (1988b) proposed a dopaminergic theory of suicide based upon a theory of depression put forward by Skutsch (1981) in which depression is caused by high levels of dopamine in the central nervous system. Skutsch hypothesized that estrogen suppresses dopamine release, leading to low levels of dopamine. Thus, when the level of circulating estrogen is low, depression and therefore suicide should be more likely, which is the case during the premenstrual and bleeding phases of the menstrual cycle.

Broverman, et al. (1968) argued that estrogens tend to increase the activity of the sympathetic division much more than androgens do. The sympathetic division has a mobilizing function and prepares the organism for action. (The parasympathetic division works toward protection, conservation and relaxation of the organism when action is not required.) Eysenck (1967) sees sympathetic activity as the basis for neuroticism, and thus we might argue that the level of circulating estrogens affects the degree of neuroticism. Since the level of circulating estrogen is highest during the luteal phase of the menstrual cycle, suicide might be more common during this phase.

At a more general level, sex hormones have been implicated in aggressive behavior (Berkowitz, 1962), and Lester (1987) has discussed the evidence that suicide can be seen as an aggressive behavior. Scott and Fredericson (1951) have suggested that the sex hormones may have an effect by changing the sensitivity of organism to painful stimuli and thus their response to these stimuli.

Of course, psychological explanations of the variation in suicidal behavior over the menstrual cycle can be proposed. However, the possibility remains strong that the sex hormones do exert a physiological influence on the suicidal behavior, though the mechanism by which they do so remains unclear.

One final caveat is warranted here. It is important to show that the sex hormones affect suicidal behavior in particular rather than psychological disturbance in general. It will be of less interest if estrogens, for example, raise the level of general psychological or psychiatric disturbances as is proposed in the Eysenck/Lester hypothesis discussed above rather than having a specific impact on suicidal behavior.

Discussion

Although psychological explanations can be proposed for the sex difference in suicidal behavior, these explanations, if valid, do not eliminate the possibility that the sex hormones may have a direct physiological role to play in explaining the sex differences in suicidal behavior. We have seen in this essay that suicide may vary in frequency over the menstrual cycle and that possible physiological mechanisms involving estrogens, in particular, are quite compatible with physiological theories of depression and suicide.

References

Alnashwan, Y. A., Rashid, A. M., et al. (2023). Incidence and comparison of suicide in various phases of the menstrual cycle. *Acta Informatica Medica, 31*(1), 76-83.

Amarasekera, S., Catalao, R., Molyneaux, E., & Fuhr, D. C. (2020). Hormonal contraceptive use and risk of attempted and completed suicide. *Psychiatric Quarterly, 91,* 1075-1087.

Babin, E. (1933). *Der Selbstmord der Frau in Beziehung zur Menstruation und Gravidität*. Breslau, Poland: Bleucher Druckerei.

Balaram, N. A., & Saritha, S. R. (2018). Role of menstrual cycle and other predisposing factors in female suicide: an autopsy study. *Indian Journal of Forensic Medicine & Toxicology, 12,* 179-85.

Behera, C., Sikary, A. K., et al. (2019). Association of menstruation cycle with completed suicide: a hospital-based case-control study. *Archives of Women's Mental Health, 22,* 771-777.

Berkowitz, L. (1962). *Aggression*. New York: McGraw-Hill.

Broverman, D. M., Klaiber, E. L., Kobayashi, Y., & Vogel, W. (1968). Roles of activation and inhibition in sex differences in cognitive abilities. *Psychological Review*, 75, 23-50.

Canetto, S. S., & Lester, D. (Eds.) (1995). *Women and suicidal behavior*. New York: Springer.

Charlton, B. M., Rich-Edwards, J. W., et al. (2014). Oral contraceptive use and mortality after 36 years of follow-up in the nurses' health study. *British Medical Journal, 349*, g6356-g6356.

D'Souza, H. L, Bhagavath, P., et al. (2017). Histopathological study to correlate fatal deliberate self-harm and phases of the menstrual cycle. *Journal of South India Medicolegal Association, 9*(1), 38-43.

Dogra, T. D., Leenaars, A. A., et al. (2007). Menstruation and suicide. *Psychological Reports, 101*, 430-434.

Elo, O. (1931). Suicide and suicides in Finland [in German]. Deutsche *Zeitschrift für die Gesamte Gerichtliche Medizin 17,* 348.

Eysenck, H. J. (1967). *The biological basis of personality.* Springfield, IL: Charles Thomas.

Heller, A. (1900). A study of suicide based on 300 autopsies [in German]. *Münchener Medizinische Wochenschrift 47,* 1653–1658.

Helweg-Larsen, K., & Hestbech, J. (1985). Selvmord og ulykkesbetingede dødsfald I relation til menstruateionscyklus. *Ugeskrift for Læger, 147*(4), 318-321

Jeevagan M. A study of menstrual phases in suicidal deaths autopsied at Government Kilpauk Medical College and Hospital, Chennai. 2020, Dissertation, Kilpauk Medical College, Chennai. 21.

Leenaars, A. A., Dogra, T. D., et al. (2009). Menstruation and suicide. *Crisis, 30,* 202-207.

Lester, D. (1969). The antisuicide pill. *Journal of the American Medical Association*, 208, 1908.

Lester, D. (1987). Murder and suicide: are they polar opposites? *Behavioral Sciences & the Law*, 5, 49-60.

Lester, D. (1988a). Lester, D. A physiological theory of sex differences in suicide. *Medical Hypotheses, 25*(2), 115-117.

Lester, D. (1988b). *Why women kill themselves*. Springfield, IL: Charles Thomas.

MacKinnon, I. L., MacKinnon, P., & Thomson, A. D. (1959). Lethal hazards of the luteal phase of the menstrual cycle. *British Medical Journal*, 1, 1015.

MacKinnon, P. C. B., & MacKinnon, I. L. (1956). Hazards of the menstrual cycle. *British Medical Journal 1,* 555.

Marzuk, P. M., Tardiff, K., et al. (1997). Lower risk of suicide during pregnancy. *American Journal of Psychiatry, 154,* 122-123

Ribeiro, A. L. (1962). Menstruation and crime. *British Medical Journal*, 1, 640.

Sachwiz , A. (1927). Reasons for suicide [in German]. *Deutsche Zeitschrift für die Gesamte Gerichtliche Medizin 10,* 312–321.

Samandari, G., Martin, S. L., et al. (2011). Are pregnant and postpartum women: at increased risk for violent death? *Maternal & Child Health Journal, 15,* 660-669.

Saunders, K. A., & Hawton, K. (2006). Suicidal behaviour and the menstrual cycle. *Psychological Medicine, 36,* 901-912.

Scott, J. P., & Fredericson, E. (1951). The causes of fighting in mice and rats. *Physiological Zoology*, 24, 273-309.

Skovlund, C. W., Mørch, L. S., et al. (2018). Association of hormonal contraception with suicide attempts and suicides. *American Journal of Psychiatry, 175,* 336-342.

Skutsch, G. (1981). Manic depression. *Medical Hypotheses*. 7, 737-746.

Slavik, W. (1909). Menstrual psychosis: its relationship to penal law and the frequency of suicides in women [in German]. *Revue de Médecine Tcheque, 2*(1), 12 –113.

Vanezis, P. (1990). Deaths in women of reproductive age and relationship with menstrual phase, an autopsy study of cases reported to the coroner. *Forensic Science International 47,* 39–57.