Why People Die By Suicide: Further Development and Tests of the Interpersonal-Psychological Theory of Suicidal Behavior

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The interpersonal-psychological theory of suicidal behavior (Joiner, 2005, 2010; Van Orden et al., 2010) posits that the fundamental constituents of suicidal ideation – as distinct from suicidal behavior – are the perceptions that one is alienated from others and that one is simultaneously a burden on others. These two perceptions, “I am hopelessly alienated” and “My death will be worth more than my life to others,” according to the theory, characterize the suicidal mind. Thwarted needs to belong and perceived burdensomeness are subcategories of more general states of emotional pain and hopelessness; low belonging and high burdensomeness are theorized to explain why the parent categories sometimes produce suicidal ideation. Put differently, the theory asserts that mental states such as hopelessness and emotional pain will not eventuate in suicidal ideation unless they involve feelings of alienation and burden.

Suicidal ideation is relatively common, certainly in clinical settings, but also more broadly. However, even among those with severe forms of suicidal ideation, suicide attempts are, relatively speaking, not common, and death by suicide, far less so. Among people with severe suicidal ideation, what differentiates those who attempt or die by suicide from those who do not? The theory’s answer involves fearlessness about physical pain, physical injury, and death itself. Death is inherently fearsome and daunting and it thus takes considerable resolve, intent, and fearlessness to enact. This does not make it laudable, but it does make it difficult.

The following sections take each of the theory’s three constructs in turn, and for each, add more conceptual detail and summarize recent research. It should be emphasized, however, that the theory does not predict a main effect of each of the three constructs on suicidal ideation (although these effects often emerge in empirical work, particularly with regard to low belonging and high burden predicting suicidal ideation). Rather, with regard to the emergence of suicidal ideation, the theory hypothesizes a two-way interaction between (low) belonging and (high)
burdensomeness; with regard to suicide attempts and death by suicide, the theory predicts a three-way interaction between (low) belonging, (high) burdensomeness, and (high) fearlessness about physical threat. Among those who attempt suicide, lethality is proposed to correspond to fearlessness about physical threat. After sections on these three constructs, I close with future directions for conceptual and empirical work on the theory.

**Learned Fearlessness: The Acquired Capability for Death by Suicide**

A woman in Israel has decided on death by suicide at the railway tracks. Security cameras record her as she approaches the track and kneels before an oncoming train, with her head slightly bowed. As the roar of the train approaches, she looks up, and an instant thereafter, a remarkable thing occurs – she throws herself backward just before the train hits her. On the security cameras, a few seconds tick away as the train rushes by, and once it finally passes, the woman stands up and walks away, unharmed.

A woman in the U.S. has also decided on her death, and ingests a full bottle of a powerful household cleaner that contains a 35% solution of hydrochloric acid. Within seconds of ingesting the fluid, she wishes very strongly to survive and calls 911. She is rushed to the hospital, where, a few hours later, she dies from internal injuries caused by the cleaner.

Two women, both so intent on suicide that they do harrowing things to enact it, nevertheless flinch in one way or another in the final moments. They flinch because their bodies, like those of creatures the earth over, are designed to flinch in the face of danger. And flinching can save lives (as in the case of the woman at the tracks) or at least give a chance for survival (as in the case of the woman who ingested the cleaner).

That people flinch under conditions such as these is not very surprising; what is surprising is that some people do not flinch under such conditions. These individuals have
learned fearlessness of mortal danger, a fearlessness that the interpersonal-psychological theory asserts is a necessary precondition for death by suicide.

Death is inherently fearsome and daunting; to enact it therefore requires an undoing of the natural fear we have of physical pain, physical injury, and death itself. This occurs through a process of habituation and the engagement of opponent processes in response to a series of often escalating encounters with various forms of actual or potential physical threat. As we will see, these can come in many guises.

The involvement of fearlessness in suicide sheds light on many disparate phenomena that are otherwise difficult to explain. For example, why, despite the involvement of depression in suicidal behavior, are suicide decedents virtually never described as “down” and “sluggish” in the moments before their deaths, and are frequently described as agitated and keyed up? A possible answer is that the fear of death is too difficult to overcome unless one is highly activated and aroused. Similarly, why do deaths by suicide occur more frequently on Mondays and Tuesdays than on any other days? Possibly because the Monday-Tuesday period is a time of activation following a time of rest. On this logic, suicide rates should peak in the May-June period in the Northern hemisphere and the November-December period in the Southern hemisphere, because those timeframes occur in the respective hemispheres’ spring, and spring is activating. This is indeed the case.

Several strands of empirical evidence corroborate the theory’s view of the acquired fearlessness construct and its basis in habituation and opponent processes. Self-report measures of the construct correlate in expected ways with gender (males, on average, score higher), age (it tends to heighten with age), occupation (e.g., it is higher in military populations), various indices of laboratory-assessed pain tolerance (those with higher tolerance report greater fearlessness),
and a laboratory self-aggression paradigm (those who report greater fearlessness self-administer higher shock levels). An important piece of discriminant validity is that self-reports of fearlessness do not correlate with suicidal ideation; this is as expected, because the theory predicts a role for acquired fearlessness only under conditions of low belonging and high burdensomeness, and only then a role in suicidal behavior (not ideation). Joiner et al. (2009) affirmed this role, showing that the three-way interaction of fearlessness, low belonging, and high burdensomeness did indeed predict suicide attempts.

*Thwarted Belongingness and Perceived Burdensomeness: Markedly Increased Social Alienation and “Death Worth More Than Life” Mentation Potentially Signal High Suicide Risk*

Mental states such as sadness, depression, emotional pain, and hopelessness are often invoked as explanations of suicidal ideation and behavior, and indeed, virtually every seriously suicidal person displays one or more of these states. A problem, however, is that the majority of people who display one or more of these states do not experience suicidal ideation or exhibit suicidal behavior. In other words, explanations based on general risk factors such as emotional pain and hopelessness face a severe specificity problem. One preoccupation of my own work over the last twenty years has been to propose solutions to this problem.

The concepts of “perceived burdensomeness” and “perceived social alienation,” already alluded to above, have several advantages, including that each is more delimited than concepts such as emotional pain and hopelessness. And the conjunction between burdensomeness and alienation, which the interpersonal-psychological theory proposes is the fundamental cause of serious suicidal ideation is (assuming that alienation and burdensomeness are not perfectly correlated, an assumption borne out by empirical work), by definition, more delimited still. Empirical studies affirm the connection of these concepts to suicide-related outcomes; in such
studies, when the concepts of “burdensomeness” and “alienation” are pitted against emotional pain and hopelessness in their ability to predict suicide-related outcomes, the former concepts win out.

Further still, the reach of the concepts of burdensomeness and alienation outpaces that of emotional pain and hopelessness. By “reach,” I mean the scope of suicide-related phenomena, both core and peripheral, which the concepts can illuminate. Consider suicidal ideation as an example of a core phenomenon. The following description by a person with a long history of suicidal behavior, including a near-lethal attempt, is characteristic of suicidal patients: “I felt my mind slip back into the same pattern of thinking I’d had when I was fourteen [when he first attempted suicide]. I hate myself. I’m terrible. I’m not good at anything. There’s no point in me hanging around here ruining other people’s lives. I’ve got to get out of here. I’ve got to figure out a way to get out of my life” (italics added).

The progression of thought contained in these words is not, in my opinion, coincidental. It begins with negative self-views (e.g., “I’m terrible”), but instead of stopping there, the progression goes on, to an expression of perceived burdensomeness (“There’s no point in me hanging around here ruining other people’s lives”). Immediately after perceived burdensomeness is expressed, so is suicidal ideation. One implication of this anecdote – and one that has been corroborated by empirical studies – is that general expressions of distress (such as emotional pain and hopelessness) do not eventuate in suicidal ideation or behavior unless they produce perceptions of burdensomeness (as in the anecdote) or of social disconnection. Burdensomeness and alienation represent the final common pathway through which general risk factors affect core suicide-related phenomena, such as suicide ideation.
Whereas the role of hopelessness or emotional pain in self-initiated death is quite hard to discern in any natural example but humans, “death worth more than life” calculations are seen across nature, as are connections between social connectedness and death, including self-initiated death. Researchers studying ants infected with a certain fungus stated, “Leaving one’s group to die in seclusion might be an efficient way of minimizing the risk of infecting kin. Anecdotal observations of moribund individuals deserting from their groups exist for several species, including humans, but have rarely been substantiated by quantitative analysis” (in the February 2010 issue of *Current Biology*). The report showed that worker ants of the species *Temnothorax unifasciatus* self-sacrifice under conditions of lethal fungal infection. When ants were infected (and thus not only their survival but that of their nestmates – and their genes in their nestmates – were threatened), they left the nest hours or days before death. For an ant, there could be no more certain way to ensure death. This remarkable ant behavior is reflective of both social alienation’s and burdensomeness’ roles in self-caused death.

It is not just in ants (or in the many other non-human species for which these kinds of behaviors have been documented); much the same processes precede death by suicide in humans. A growing number of empirical reports documents the involvement of these two processes in human suicidal behavior (e.g., Conner, Britton, Sworts, & Joiner, 2007; Van Orden, Lynam, Hollar, & Joiner, 2006); some of these studies have directly tested and corroborated the interpersonal-psychological theory’s predictions that the two processes would interact to predict suicidal ideation (e.g., Van Orden et al., 2008) and that the two would be involved in a three-way interaction with fearlessness of physical threat to predict suicide attempt (Joiner et al., 2009).

*Future Directions*

*Inter-Relations of the Theory Constructs*
Notice that in the study on ants alluded to above, the sequencing suggested a specific causal chain in which perceptions of burdensomeness lead to isolation behaviors which in turn lead to death. Might this same chain apply to death by suicide in people?

The following description of experiences with alcoholism and suicidal behavior suggest possibly so: “… the reason [for suicide] is the conviction that you deserve your loneliness, that no one needs to be cast out more than you do” (January 2011 issue of Harper’s Magazine, Clancy Martin). This possible sequencing would be of more than just theoretical interest; if it were the case that the chain ran from perceived burdensomeness → social isolation → suicidal ideation, the emergence of perceived burdensomeness could be viewed clinically as a kind of early warning system, analogous to a tornado watch. By the same logic, extreme states of social isolation could be viewed as clinically ominous, analogously to a tornado warning.

The possible causal inter-relations between the fearlessness aspect of the theory, on the one hand, and burdensomeness and alienation experiences, on the other hand, are also a promising avenue for future research. For instance, there is some evidence that social isolation can increase pain tolerance (an important aspect of the fearlessness substrate postulated as key in suicidal behavior by the interpersonal-psychological theory). As another example, might stoicism – a psychological dimension of the fearlessness substrate according to the theory – make judgments of one’s burdensomeness harsher?

**Final Common Pathway Claim**

The interpersonal-psychological theory of suicidal behavior makes the ambitious claim that all documented risk factors for suicidal behavior – they are legion, ranging from the molecular to the cultural levels – exert influence on suicidal outcomes *because* they exert influence on fearlessness of physical threat, perceived burdensomeness, and/or thwarted
belongingness. Evidence to date suggests that this is likely the case regarding general factors like emotional pain, but future research would benefit from testing the theory against rival accounts with a similar level of specificity as the interpersonal-psychological theory. Currently, the best candidate in this regard is a model that emphasizes feelings of entrapment as a causal mechanism in suicidal behavior. The model is complex, but it poses psychological processes such as suboptimal coping abilities leading to an individual feeling that he or she has no options and no way to escape from painful situations; to escape these feelings of entrapment, the individual resorts to suicidal behavior.

Feelings of entrapment may be a general factor, much like hopelessness and emotional pain, that do not culminate in suicidal thinking unless the entrapment is characterized by themes of burdensomeness and social alienation. Or, entrapment may fit as an additional node in the causal sequence involving burdensomeness and alienation. These possibilities would be compatible with the interpersonal-psychological theory of suicidal behavior. Of course, it is possible, contrary to the latter theory, that burdensomeness and social alienation will fall away as predictors of suicidal ideation, once entrapment is accounted for. Work is in the preliminary stages that will empirically arbitrate these very questions.

Is It Worse To Be a Burden on Others or on Oneself?

The interpersonal-psychological theory was developed with burdensomeness on others as the focus. This was based partly on clinical experience, but also on evidence from other species in which self-sacrifice is based on inclusive fitness calculations along the lines of “My death will be worth more than my life to my genes.” However, based in part on sociometer theory (which views self-esteem as a gauge for social standing; Leary, Terdal, Tambor, & Downs, 1995), I have pondered whether burden on self may be as much as or more fundamental in leading to suicidal
thought than burden on others. The jury is out on this question, but we do have mounting data from multiple studies that appear to support this view.

Enhanced Connectedness and Reduced Burdensomeness as Mechanisms of Recovery

The interpersonal-psychological theory predicts that as suicidal crises resolve, they do so largely as a function of increasing connection to others as well as an improved sense of meaningful contribution to others (viewed as the opposite of perceived burdensomeness). An interesting possibility in this regard involves the “Hope Box,” which is literally a box (e.g., a shoe box) in which the patient collects mementos, objects, photos, letters, and the like, all of which, at times of crisis, remind the patient of reasons for living and for hope (work is underway on the “Virtual Hope Box,” a version for smartphone platforms). As the name implies, the proposed mechanism of action for this approach is the restoration of hope. Given this, it would be substantial evidence in favor of the theory if enhanced connection and contribution accounted for the meditational effects of restored hope.

The Continuum of “Habituators” that Facilitate Acquisition of Fearlessness

In talks I give to general audiences on this theory and its relevance to suicide prevention, the following question almost always comes up: “Can exposure to violent video games and movies and the like significantly increase someone’s fearlessness about suicide?” My usual way of answering this question is to imagine a scale that runs from 0 to 10, with 10 being the strongest habituator of all. At 10 would reside a recent past suicide attempt in which intent was high, lethality considerable, and relief at surviving minimal. At 9 would be a less serious attempt; at 8, non-suicidal self-injury; at 7, injuries sustained in an accident or as part of work duties (e.g., as a police officer); and so on. With regard to the effects of media violence, I then reply that I believe their effects are above 0, and probably less than 5, but I await future research
to determine where exactly to locate those effects on the continuum.

There is accruing evidence that this continuum contains a diverse array of experiences. For example, Anestis and Bryan (in press) found that the mental re-experiencing of combat trauma was predictive of fearlessness about suicidal behavior in military traumatic brain injury patients, and this was over and above parameters of the experience itself such as whether the injury was from an explosive blast or not, and duration of loss of consciousness. As another and quite different example, we have evidence that: (a) anorexia nervosa is highly associated with death by suicide (as distinct from death caused by self-starvation, which occurs as well but more rarely than suicide); (b) some of the reason for this association is that people with anorexia have taught themselves fearlessness of bodily travail through self-starvation; (c) some of this fearlessness is also learned through extremely hard bouts of exercise.

Delineating the range of habituators, as well as their relative power, is an important part of the research agenda for the future. Additionally, as described in the next section, differentiating experiences that serve to habituate, vs. those that instill fear, represents a potentially intriguing future direction.

Why Does Exposure to Suicide Sensitize Some and Habituate Others?

A psychiatrist who worked in inner city and prison settings observed, “Many of my patients explain their bad behavior, for example their violence to women, by the fact that they had witnessed such behavior at home from the earliest age; others recoiled in horror from the very idea of violence to women for precisely the same reason” (Dalrymple, 2007, p. 94). Much the same observation can be made about those close to a suicide decedent (though I think it can be problematic to equate “bad behavior” with suicidal behavior). Some are sensitized by the event and resolve never to go through such an ordeal themselves and never to put their friends
and families through it. Others are desensitized by the very same kind of event, as may occur in suicide clusters. It is very likely that such reactions are determined in part by genetically based temperamental factors, but this does not explain all outcomes. More research is needed to determine who becomes sensitized vs. habituated in response to exposure to suicide, and whether aspects of the incident (e.g., closeness to decedent; whether the person discovered the decedent’s body; etc.) are systematically predictive of response type.

Conclusion

Mounting evidence from diverse perspectives corroborates the claims of the interpersonal-psychological theory of suicidal behavior. It has survived “risky tests,” but more such tests are welcome (including those that specifically pit rival claims against the theory). One criterion for a vibrant research paradigm is that it is advancing by creating new frontiers of inquiry (as opposed to reacting and changing its claims in response to criticism; cf. Lakatos, 19xx). Such frontiers include the nature of “habituatators,” mechanisms of recovery, and the like, and extend to topics not covered here, such as the neurobiology of the fearlessness dimension emphasized by the theory. Further articulations and tests of these conceptual frontiers will, it is hoped, point to advances in intervention and prevention, and, given that suicide is by definition a life-or-death topic, illuminate aspects of human nature, such as the will to live and reasons for living, such as contributing (rather than being a burden) and connecting (rather than being isolated and alienated).
References


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