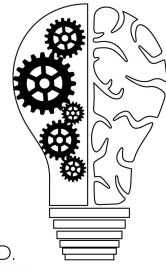


Episode 082: How Does Mental Pain, Meaning in Life & Locus of Control Influence Suicidality?

Steven Kasperek B.S, David Puder, M.D

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There are no conflicts of interest for this episode.

On this episode of the Psychiatry and Psychotherapy Podcast, we talk about meaning, and how it relates to suicide.

This is part 3 of a series of podcasts on suicide. If you haven't listened to the first two episodes, they are here:

[Suicide Epidemiology, Risk Factors, and Treatments](#)

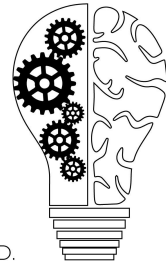
[Genetics and Environmental Factors in Suicide](#)

Here are a few quick facts about suicide from those episodes:

- It's the 10th most common cause of death for adults
- It's the 2nd leading cause of death for persons age 15-24
- There are >45,000 suicides/year in the United States (11/100k people)
- The rate is very high in central/Eastern European Countries—Scandinavia and Hungary (27/100k)
- It's lower in countries with large Catholic or Muslim populations—Latin America/Middle East (6.5/100k)
- About 2/3 of suicide completers are male
- 80% of completed attempts preceded by prior attempts
- Ethanol abuse is common among suicide completers
- They've usually suffered a support system loss
 - Romantic relationships
 - Divorce
 - Widowed
 - Death of a relative
 - Isolation
- They have access to guns
 - More than half of completed suicides in the US are completed by guns

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- 90 % of suicide completers had a major psychiatric disorder at the time of suicide and >1/2 were clinically depressed
- Veterans Health Administration data from 2005 assessing SUD in cohort of 9087 individuals who committed suicide (75.6/100k rate among SUD, compared to 34.7/100k among all veterans, and 11/100k in general population)(Bohnert, Ilgen et al. 2017)
- The average rate of suicide is around 10 per 100,000 people years (~1% of the population dies by suicide).
- If a monozygotic twin committed suicide, in the largest study, there was only an absolute increase in 4% compared to dizygotic twins.
- If you had 4x the risk of committing suicide due to environmental factors, it would still be 40 per 100,000 people years.
- Functional genomics and epigenetics
 - Early-life adversity altered DNA methylation and histone modifications (Turecki, Ota et al. 2014)
 - Suicide is associated with widespread changes in methylation patterns of neurotrophic and neuroprotective factors in the hippocampus and prefrontal cortex (Labonte, Suderman et al. 2013, Schneider, El Hajj et al. 2015)
 - Most people who complete suicide are not seeking mental health treatment at the time of suicide.

We do know that the suicide brain is an unhealthy brain. There are multiple studies on autopsies of these brains, and they don't look like healthy human brains—the pathology is there to support that there is even a physical difference in a suicidal brain.

How Does Meaning Create Behavioral Change?

What we also know is that there is a connection between meaning making and suicidal behaviors. When we feel we have meaning for living, we behave differently. This is evident throughout Viktor Frankl's book, *Man's Search for Meaning*. It's one of my (Dr. Puder) favorite books. Frankl, a psychotherapist, survived the concentration camps in Nazi Germany. His experience led him to observe that people with meaning in their lives—something to hope for, a reason for being—lived longer and helped others throughout their time in the camps.

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This observation led Frankl to develop logotherapy after he left the concentration camps when they were liberated. Logotherapy is based in the idea that people who have meaning and purpose can survive anything.

Likewise, in studies where researchers attempt to convince a group that they have no choice/free will (by having the group read they are just doing things predetermined by their biology, genetics or environment), it leads them to behave differently in the group.

1. They are more likely to cheat ([Vohs, 2008](#))
2. They are more likely to conform to social norms ([Alquist, 2013](#))
3. They demonstrate reduced helping behavior and increased aggression ([Baumeister, 2009](#))
4. They do not slow down after making an error to re-evaluate. ([Rigoni, 2013](#))

Essentially, thinking you have no choice makes you more likely to do things that are not as thoughtful and it decreases your frontal lobe function.

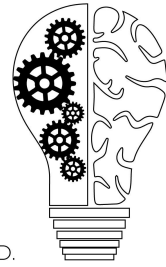
The Increase in Suicidality

Data indicate suicide as the 10th leading cause of death in the United States for all ages ([Hedegaard, 2020](#)). It is tragic that suicide is the second leading cause of death for ages 10-34 and fourth leading cause of death for ages 35-54 ([Hedegaard, 2020](#)). As one of the leading causes of death for these ages, not only does suicide rob our communities of their exuberance and optimism for the future, but also their steady foundation and productivity.

Also, over the ten-year time period from 1999 to 2018, the suicide rate increased 35% from 10.5 per 100,000 to 14.2 ([Hedegaard, 2020](#)).

How do we account for the increase of suicide? Is it the loss of meaning society wide? And how do we change that?

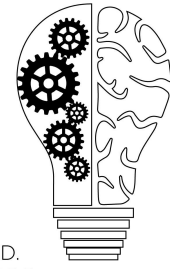
The Two Factors: Locus of Control and Meaning



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In her [2019](#) study, Aviad-Wilchek had the goal of elucidating factors for use in a salutogenic model—essentially, a model with an emphasis on cultivating wellness and resilience to stress rather than one with a focus of risk factor avoidance.

Measurement of suicidal tendency relied on Zung's ([1974](#)) Index of Potential Suicide. The author studied the relationship between locus of control and suicidal tendency. The goal was to discern whether meaning in life acts as the connection between the covariance in locus of control and suicidality.

What is a locus of control?

- An internal locus of control indicates an individual's belief the outcomes and circumstances that exist in his or her life are the result of that individual's own actions.
- External locus of control indicates the individual believes factors outside his or her control have determined outcomes and circumstances ([Rotter, 1966](#)).

What is meaning?

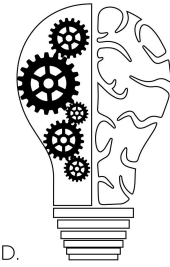
- Frankl ([1984](#)) characterized meaning in life as a person's appreciation for their life's unique significance.
- Meaning in life results from embracing one's responsibility to recognize their life's purpose ([Frankl, 1984](#)).
- Meaning is the central motivating force for people—analogous to Freud's assertion that pleasure or Adler's assertion that power were central motivating forces ([Klinger, 1978](#)).

How do people find meaning?

- According to Frankl ([1984](#)), a person may find meaning by enriching their life with the creativity and productivity that results from pursuit of work and leisure activity.
- The experience of suffering may also result in one finding meaning in their life—in particular, by discovering the ability to overcome adversity to continue toward one's realization of their purpose ([Frankl, 1984](#)).
- Experiencing dissatisfaction with one's life may induce a search for meaning ([Frankl, 1984](#)).
- According to Kekes, searching for and finding meaning may require one to recognize a reason for living—a purpose for their life ([1986](#)).
- As a corollary to this, Kekes asserted the importance of an environment conducive to an individual's purpose. In particular, this is an essential component to cultivating an internally-oriented locus of control ([1986](#)).

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- Frankl asserted hope for the future as crucial in a person's search for meaning in life ([2000](#)).
- Individuals consumed by the past or struggling to see beyond the immediate present, thus, likely experience difficulty in recognizing meaning in their lives ([Frankl, 2000](#)).

In one study, the study group contained 59 men and women coping with mental illness, and the control group was 65 men and women without mental illness ([Aviad-Wilchek, 2019](#)). In both the control group and the patient group, Aviad-Wilchek found meaning in life to act as mediator for the negative correlation between locus of control and suicidal tendency ([2019](#)). **Specifically, a higher locus of control correlated with higher meaning in life, and then higher meaning was correlated with lower potential suicide.** The authors found decreased meaning in life correlated with risk of suicide (-0.82 , $p \leq 0.001$) and locus of control (-0.49 , $p < 0.001$) ([Aviad-Wilchek, 2019](#)).

There's a Positive Association Between Internal Locus of Control and Meaning

Importantly, a positive association between internal locus of control and meaning of life was confirmed ([Aviad-Wilchek, 2019](#)).

Those who believe they cause their own outcomes in life actively seek meaning in their life ([Aviad-Wilchek, 2019](#)).

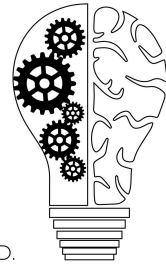
Therefore, a positive feedback loop results whereby individuals discern meaning in their lives as a result of their efforts ([Aviad-Wilchek, 2019](#)). In contrast, however, those with an external locus of control do not feel a sense of control of the outcomes in their lives ([Aviad-Wilchek, 2019](#)). Thus, these individuals are less likely to seek meaning ([Aviad-Wilchek, 2019](#)).

The Meaning in Life (MLQ) questionnaire, developed by Steger ([2006](#)) is distinct from that used in Aviad-Wilchek ([2019](#)). Notably, the MLQ measures the presence of meaning and the search for meaning ([Steger, 2006](#)).

In work by Brassai ([2012](#)), the relationship between meaning in life and outlook on life, aggressive and antisocial behavior, and healthy lifestyle were studied in 432 Eastern European

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adolescents. Interestingly, Brassai accounted for *both* the presence of meaning and the search for meaning ([2012](#)).

- Hopelessness was negatively correlated with both the presence of meaning ($r = -0.35$, $p < 0.001$) and the search for meaning ($r = -0.38$, $p < 0.001$) ([Brassai, 2012](#)).
- Presence of meaning was negatively correlated with aggressive and antisocial behavior ($r = -0.24$, $p < 0.001$) and irresponsible academic/work behavior ($r = -0.21$, $p < 0.001$) ([Brassai, 2012](#)).
- Interestingly, Brassai confirmed the frequently seen positive association between meaning in life and academic performance of students with the negative correlation between presence of meaning in life and careless academic behavior ($r = -0.28$, $p < 0.001$) ([2012](#)).
- Brassai hypothesized the presence of meaning in students' lives may correspond with greater emphasis on academic success.
- Similarly, search for meaning was negatively associated with lackluster academic performance ($r = -0.27$, $p < 0.001$) ([Brassai, 2012](#)).
- Presence of meaning was positively correlated with healthy eating ($r = 0.17$, $p < 0.001$) and physical activity ($r = 0.18$, $p < 0.001$) ([Brassai, 2012](#)).

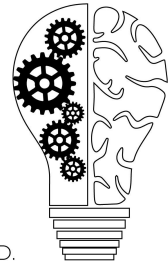
Borderline Personality Disorder, Meaning and Locus of Control

Marco and colleagues ([2017](#)) studied meaning in life in the context of borderline personality disorder (BPD). The clinical features of BPD (unstable emotions, self-image, and relationships) are hypothesized to negatively impact one's sense of meaning in life. This is relevant because BPD patients have a probability of suicide 50x higher than that of the general population, and an incidence for completed suicide of 10%.

The inability to manage emotional responses characteristic of BPD has been hypothesized to drive individuals with BPD to self-harm and suicidality. The rationale behind it is that these behaviors are attempts to leverage control over one's emotions and environment. The data from this study are strong: **BPD symptoms negatively correlated with the sense of purpose in life (-0.73 , $p < 0.01$), level of satisfaction and meaning in life (-0.76 , $p < 0.01$), and presence of life goals and purposes (-0.57 , $p < 0.01$).**

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How can Mental Health Professionals Help?

We know that most suicide completers are not in ongoing therapy during their suicide completions. However, if we can encourage depressed or suicidal patients that we do have to pursue meaning and locus of control, we could help them find healing in the process.

When we look at the Aviad-Wilcheck studies, we can see that we can follow the model of cultivating wellness and resilience to stress. This is substantially different from traditional models, which focus on avoiding risk factors and preventing pathology.

In particular, we can help our patients discern what they have control over in their lives—help them understand the outcomes of their actions will affect their lives. We can also help them find meaning in their lives.

Genetics and environment are important contributors to different mental illnesses, of course, but there is a huge gap where we can help people who struggle with suicide. Sometimes the most soothing thing for loved ones of someone who died by suicide is to hear about the sick brain, how there was no prevention, how genetics and environment effect it.

But with people who are struggling with suicide, we need to impart the understanding that they do have control over their lives and their choices.

For some, joining religious organizations could be helpful if the leader is warm, caring and not controlling. For others, finding causes they feel passionate about is helpful. When peoples' monumental focus is on ourselves, it can be detrimental to us. As Frankl noted, sometimes encouraging patients to serve or help others (so they can find meaning) would be helpful.

Ask your patients where they have found meaning and purpose in the past. Encourage your patients to change their lifestyle so they can reignite their locus of control. Also recommend and encourage day programs.