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Depression and Thoughts of Suicide among Military Personnel and Veterans: Exploring Synthesized Mind-Sets Created By AI, Using Mind Genomics Principles

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ABSTRACT

AI was used to create eight mind-sets of military personnel and veterans who were at risk of depression and suicide. The use of synthetic mind-sets by AI allows the mental health professional, as well as other interested parties, to recognize language and behavior manifestations, which might be signals of deep depression and suicide. The AI synthesis uses Mind Genomics to structure the topic and is presented as an evolving technology to help the learning process. Users can specify aspects, such as the nature of warning language, to generate slogans designed to lift the spirit of the troubled individual. The study is part of a series, which explores topics of mental health by means of AI synthesis.

Keywords

Depression, Military personnel, Mind Genomics, Suicide, Veterans.

Abbreviations

AI: Artificial intelligence; ChatGPT: Chat Generative Pre-Trained Transformer; LLM: Large language model; PTSD: Post-traumatic stress disorder; SCAS: Socrates as a Service.

Introduction

The rising trend of suicides and attempted suicides among active military personnel and veterans highlights a concerning issue in our society today. Military members face unique challenges which can contribute to their mental health struggles, such as exposure to trauma, combat stress, and the demands of military life. Additionally, veterans may experience difficulties transitioning back to civilian life, such as finding employment, re-establishing social support, and managing mental health issues [1-3].

Military and soldier suicide is a complicated problem with many origins. One major reason is the pain and high stress that soldiers go through during deployments, which can cause mental health problems like PTSD and sadness. The shame which surrounds mental health in the military can also keep people from getting help, which, in turn, may make them feel alone and lost. Transitioning back to normal life and getting used to a new schedule can also be hard, which can add to feelings of hopelessness and uncertainty [4-7].

There are many military members who kill themselves, with the military doing a variety of interventions to prevent these efforts. For current duty military and veterans, this includes mental health checks, training on how to avoid suicide, and access to therapy services. Furthermore, service members can call suicide hotlines and join peer support groups. Even with these efforts, however, suicide rates remain a vexing problem [8-11].

It can be very stressful for people whose loved ones have died by suicide. They might be feeling guilty, confused, and sad, and they might be thinking if there were warning signs they missed or things they could have done to stop the tragedy. Friends and family of the person who committed suicide are often left with long-lasting emotional and mental pain. Getting help from therapy, support groups, and other sources can be very helpful when dealing with the difficult feelings and problems that come up after a loved one commits suicide [12-15].

The Contribution of Mind Genomics to Understanding Motives and AI to Synthesizing Mind-Sets

Mind Genomics is a powerful tool that can teach us about mind-sets by identifying patterns in how individuals think and perceive the world around them. Through Mind Genomics, we can gain valuable insights into the diverse perspectives and attitudes which exist within a group of individuals about the topics of the everyday, the world in which we live [16-18]. These perspectives and attitudes are mind-sets, different ways of responding to the same type of information. The insights generated by understanding mind-sets becomes of great importance when we realize that two people can be confronted by the same information, with one person able to cope with the issues raised, whereas in contrast, the other person is unable to cope with the same issues. The insights generated through Mind Genomics and the discovery of different mind-sets revolving around a single topic becomes particularly beneficial when applied to military personnel or retired personnel who are at risk of suicide. To some degree the notion of mind-sets may show why one mind-set is likely to be a suicide-risk, whereas the other mind-set is not [19,20].

AI, specifically LLMs (large language models), can expand the scope of mind-sets by synthesizing different perspectives and attitudes of military personnel or retirees who may be prone to suicide. By analyzing and synthesizing these mind-sets, AI can identify common themes, triggers, and risk factors which may contribute to suicidal thoughts or behaviors. This information can then be used to develop targeted interventions and strategies to support individuals who may be at risk [21-24].

Having a user-friendly system in Mind Genomics, powered by AI, is essential in making this information accessible and actionable. The combination of these technologies, known as SCAS (Socrates as a Service), allows for real-time analysis and interpretation of mind-set data. The result is that researchers, practitioners, and policymakers end up having an easier task when making informed decisions and selecting interventions. This user-friendly approach ensures that the insights gained from mind-set analysis can be adapted to support those in need.

Applying AI and Mind Genomics to Understanding Suicide Mind-Sets

The creation of mind-sets for suicide involves a complex interplay of various psychological and emotional factors which end up leading individuals to consider taking their own lives. These mind-sets can be influenced by a range of internal and external triggers,

including feelings of hopelessness, helplessness, loneliness, and isolation. By asking questions such as “*What are you thinking about?*” or “*Do you feel like there are no solutions to your problems?*” we can gain insight into the thought processes and emotions that may be driving someone towards suicidal ideation. Additionally, questions about possible warning signs such as changes in behavior, mood swings, or giving away possessions can help identify individuals who may be at risk.

Simulation of these mind-sets can be a valuable tool for learning and detecting potential suicidal behavior. By immersing oneself in the perspective of someone experiencing suicidal thoughts, we can better understand the thought processes and emotions that may contribute to such thoughts. This understanding ends up enabling healthcare professionals, counselors, and loved ones to more effectively identify and respond to warning signs. Additionally, simulation can train individuals to ask the right questions and provide appropriate support to those in crisis.

The emerging value of artificial intelligence in suicide prevention lies in its ability to analyze vast amounts of data to detect patterns and identify individuals at risk. AI can help healthcare professionals and crisis responders quickly and accurately assess an individual’s mental health and provide personalized interventions. By utilizing algorithms and predictive modeling, AI can also help identify trends and risk factors for suicide in communities or populations, allowing for targeted prevention strategies. Additionally, AI-powered chatbots and virtual assistants can provide immediate support and resources to individuals in crisis.

Simulating Eight Possible Mind-Sets of Suicide-Prone Military Personnel

In this next part of the paper, we simulate eight different mind-sets of military personnel contemplating suicide in order to gain a better understanding of the various factors and thought processes that may lead someone to consider taking their own life. These simulations should help us recognize how military culture, mental health problems, personal situations, and ways of dealing can all affect a person’s chance of thinking about suicide.

The simulations comprise a basic request for a mind-set, and then the request for answers to 11 different questions relevant to the mind-set and to the topic of contemplated suicide. Table 1 presents the prompt given to ChatGPT 3.5, embedded in the BimiLeap.com platform (Idea Coach). It is instructive to ask specific questions in this scenario so that we can learn more about the feelings, thoughts, and experiences of each imagined mind-set. By asking specific questions, we can find out what beliefs, fears, and stresses are making someone think about committing suicide. This information can then help us come up with unique and effective solutions, as well as ways to help and tools that are directly related to the person’s problems and concerns.

Now that we have the general prompt to the LLM (see Table 1), the prompt ended up generating the eight different mind-sets shown in Tables 2A–2H. Each of these tables represents the output of one

iteration, requiring about 15-30 seconds for the LLM to generate the information.

The eight tables of mind-sets for military people who are thinking about committing suicide give us important information about the different ways they might think and feel which might affect their choice. Mental health workers, friends, and loved ones can better understand the complicated processes at play in the minds of people who are having suicidal thoughts if they understand these different ways of thinking. For instance, noticing the presence of lost and powerless mind-sets can lead to solutions that give the person a sense of purpose and control over their life again. On the other hand, figuring out how anger or resentment affects your mind can help you deal with deeper problems like ongoing trauma or problems with other people.

The tables can also be used to figure out how likely it is that a military member or soldier is thinking about committing suicide. Mental health workers can figure out how bad someone's emotional problems are by looking at the specific mind-set(s) to which the person might belong, and in turn take actions which may be more effective. For example, someone who feels a lot of guilt or shame might need treatment that focuses on building self-esteem and learning how to deal with problems. Conversely, a person expressing mind-sets centered on feeling trapped or overwhelmed may benefit from practical support in navigating stressful situations or accessing resources.

Additionally, the tables can help identify patterns or triggers that may exacerbate suicidal ideation in military personnel or veterans. By tracking changes in their mind-sets over time, mental health professionals can pinpoint external stressors or internal struggles that contribute to their distress. This knowledge can help people come up with their own safety plans and ways to deal with stress that will lower their risk of suicide. Moreover, understanding the interplay between different mind-sets can shed light on the complex interconnections between thoughts, emotions, and behaviors in individuals contemplating suicide, enhancing our ability to provide effective and targeted support.

In summary, the tables of mind-sets for military personnel contemplating suicide offer a comprehensive framework for understanding the multifaceted nature of suicidal ideation. By looking at the different mind-sets, we can learn more about the unique problems and risks that people in the military community face. This knowledge can inform our approach to intervention and support, paving the way for more effective strategies to prevent suicide and promote mental well-being in this population.

Their Own Stories

This paper ends with a set of simulated stories of individuals of different mind-sets who have attempted suicide (see Table 3). By contrasting the experiences of individuals who tried but failed to commit suicide with those who were successful, readers can gain a deeper understanding of the factors that contribute to both outcomes. This approach allows for a more nuanced exploration of the various motives, triggers, and vulnerabilities that may be present in different individuals contemplating suicide.

Simulated stories give readers a more human and realistic look at a subject, letting them understand the struggles and feelings of the characters. By putting a face on the experiences of people who have had suicidal thoughts, readers can better understand the unique problems each person faces and how their actions affect them and those around them. This method also shows how important it is to get help and support during tough times and how hope and healing can happen even in the worst situations.

Readers are left with a lasting image of the people and their problems because the paper ends with imagined stories. These stories reinforce the lessons and insights learned throughout the paper. It can be very powerful to read these stories because they show how terrible suicide can be and how strong and resilient people are who have been through it. Instead of a more standard talk and conclusion, simulation stories are a more vivid and emotionally powerful way to show how complicated suicide is and how important it is to raise awareness about mental health issues and help people who are struggling.

Table 1: The prompt given to ChatGPT 3.5 to provide 12 specific "pieces of information" for each mind-set.

<p>There is a growing number of suicides of veterans and soldiers in the US military services. We believe that there are mind-sets of these individuals prone to suicide. For each mind-set provide the following:</p> <ol style="list-style-type: none">1. WHY THEY ARE PRONE TO SUICIDE2. WHAT DISTURBS THEM MOST3. HOW DO THEY TALK4. FIRST THING TO TALK ABOUT5. PERSUADING TO SEEK HELP6. WHO THEY ARE7. DESCRIPTION8. RELATIONSHIPS9. WARNING SIGNALS10. Five actionable steps to help this person dealing with severe depression and potential suicidal thoughts11. Phrases this person may use when thinking of committing suicide12. Phrases this person may use when they are back on safe ground and no longer thinking of suicide

Table 2A: Information synthesized for the “MENTAL HEALTH STRUGGLER” mind-set.

<p>A. MENTAL HEALTH STRUGGLER MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: They are prone to suicide because they may feel overwhelmed by their mental health issues such as PTSD, depression, anxiety, or substance abuse.WHAT DISTURBS THEM MOST: They are disturbed most by their negative thoughts, intrusive memories, flashbacks, or an inability to cope with daily stressors.HOW DO THEY TALK: They may talk about feeling hopeless, worthless, or like they are a burden to others. They may also express feelings of being trapped or having no way out.FIRST THING TO TALK ABOUT: The first thing to talk to them about is their mental health and if they have sought professional help or if they are open to doing so.PERSUADING TO SEEK HELP: They can be persuaded to seek help by offering support, understanding, and resources for mental health treatment. Encouraging them to talk to a therapist or counselor can also be helpful.WHO THEY ARE: They can be of any gender, age, income level, or education background. They may live in various locations but may have been raised in a military environment.DESCRIPTION: They may prefer solitary activities or have trouble connecting with others due to their mental health struggles. In public, they may appear distant or withdrawn, with a solemn facial expression and minimal physical gestures.RELATIONSHIPS: They may have strained relationships with their parents, siblings, and friends due to their mental health issues. They may struggle to connect with others emotionally or have difficulty maintaining relationships.WARNING SIGNALS: They may exhibit signs of withdrawal, hopelessness, isolation, changes in mood or behavior, increased substance use, giving away possessions, talking about death or suicide, or expressing feelings of being a burden to others.Five actionable steps to help this person dealing with severe depression and potential suicidal thoughts:<ul style="list-style-type: none">Encourage them to seek professional help from a therapist or counselor.Provide support and understanding, letting them know they are not alone in their struggles.Help them establish a support network of friends, family, or support groups.Encourage healthy habits such as regular exercise, a balanced diet, and enough sleep.Regularly check in on their well-being and encourage open communication about their feelings.Phrases this person may use when thinking of committing suicide:<ul style="list-style-type: none"><i>“I can’t take this anymore.”</i><i>“I feel like there’s no way out.”</i><i>“I’m a burden to everyone around me.”</i><i>“I just want the pain to end.”</i>Phrases this person may use when they are back on safe ground and no longer thinking of suicide:<ul style="list-style-type: none"><i>“I’m starting to see a glimmer of hope.”</i><i>“I’m grateful for the support I’ve received.”</i><i>“I’m feeling more capable of handling my challenges.”</i>
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Table 2B: Information synthesized for the “LONELY WARRIOR” mind-set.

<p>B. LONELY WARRIOR MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: They may feel isolated and disconnected from others, especially after serving in the military.WHAT DISTURBS THEM MOST: The feeling of being misunderstood or not valued by society.TALKING ALERT: They may make comments about feeling like a burden or that no one understands them.FIRST THING TO TALK ABOUT: Ask them how they are feeling and if they have thought about reaching out to someone for support.PERSUADING TO SEEK HELP: Encourage them to talk to a mental health professional or a trusted friend or family member.WHO THEY ARE: Typically male veterans in their 30s–40s, with a moderate income and education level. They may live in a rural area and were raised in a military family.DESCRIPTION: They may enjoy outdoor activities, have a reserved demeanor in public, and exhibit signs of emotional turmoil through facial expressions.RELATIONSHIPS: They may have strained relationships with their parents and siblings, struggle to connect with friends of both genders, and have trouble maintaining relationships with their children or neighbors.WARNING SIGNALS: Sudden withdrawal from social activities, increased alcohol or drug use, expressing feelings of hopelessness or worthlessness, giving away possessions, or talking about death and suicide frequently.Steps to bring the lonely warrior back from severe depression:<ul style="list-style-type: none">Reach out and initiate a conversation with the person, asking how they are feeling and if they have considered seeking support.Encourage them to talk to a mental health professional or a trusted friend or family member for help.Offer to accompany them to their first therapy session or support group meeting.Create a safe and non-judgmental space for the person to express their thoughts and emotions.Check in regularly with the person to see how they are doing and provide ongoing support.Phrases the person may use when thinking of committing suicide:<ul style="list-style-type: none"><i>“I feel like a burden to everyone around me.”</i><i>“I don’t see a way out of this pain.”</i><i>“I feel completely alone and disconnected from the world.”</i><i>“I can’t see a future for myself anymore.”</i>Phrases the person may use when they are back on safe ground, no longer thinking of suicide:<ul style="list-style-type: none"><i>“I am starting to see a glimmer of hope for the future.”</i><i>“I feel like I have a support system that I can rely on.”</i><i>“I am learning healthier coping mechanisms to deal with my emotions.”</i><i>“I am beginning to reconnect with the people around me.”</i>
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Table 2C: Information synthesized for the “LONELY SOLDIER” mind-set.

<p>C. LONELY SOLDIER MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: Lonely soldiers often feel isolated and disconnected from their fellow service members, leading to feelings of hopelessness and despair.WHAT DISTURBS THEM MOST: The lack of meaningful connections and support from others, as well as the stress and trauma of military service, can weigh heavily on lonely soldiers.HOW DO THEY TALK: Lonely soldiers may express feelings of emptiness, alienation, and despair in their conversations, indicating that they are struggling with deep emotional pain.FIRST THING TO TALK ABOUT: It is important to engage in open and honest conversations about their feelings of loneliness and isolation, and to provide them with emotional support and resources for help.PERSUADING TO SEEK HELP: By emphasizing the importance of seeking professional support and connecting them with resources such as counseling services and support groups.WHO THEY ARE: Lonely soldiers can come from diverse backgrounds but may be more prevalent among younger male veterans with lower income levels and education, who may have experienced trauma and difficulty adjusting to civilian life.DESCRIPTION: Lonely soldiers may appear withdrawn and distant, struggle to maintain friendships, engage in solitary activities, and may exhibit signs of depression such as slumped posture and a lack of energy.RELATIONSHIPS: Lonely soldiers may have strained relationships with their parents, siblings, and friends, feeling disconnected and misunderstood. They may struggle to form meaningful connections with others and may have limited social support.WARNING SIGNALS: Signs of a lonely soldier contemplating suicide may include social withdrawal, sudden changes in mood or behavior, expressing feelings of extreme hopelessness or despair, giving away possessions, and a preoccupation with death or dying. They may also exhibit self-destructive behaviors such as substance abuse or reckless actions.Five steps to help a lonely soldier dealing with severe depression and suicidal thoughts:<ul style="list-style-type: none">Engage in open and honest conversations about their feelings of loneliness and isolation.Provide emotional support and listen actively to their struggles and concerns.Encourage them to seek professional help and connect them with counseling services and support groups.Check in regularly to ensure they are receiving the necessary support and follow-up on their progress.Help them establish a strong support system and encourage healthy coping mechanisms, such as exercise, mindfulness, and stress management techniques.Phrases a lonely soldier might use when contemplating suicide:<ul style="list-style-type: none"><i>“I feel so alone and disconnected from everyone.”</i><i>“I can’t see a way out of this pain and despair.”</i><i>“I don’t think anyone would miss me if I were gone.”</i><i>“I just can’t bear the thought of living like this anymore.”</i>Phrases a lonely soldier might use when back on safe ground and no longer thinking of suicide:<ul style="list-style-type: none"><i>“I’m starting to feel more hopeful and connected with others.”</i><i>“I’m grateful for the support and resources that have helped me through this difficult time.”</i><i>“I’m learning to cope with my emotions and seek help when needed.”</i><i>“I can see a future for myself now and feel more positive about my life.”</i>

Table 2D: Information synthesized for the “BURNED OUT” mind-set.

<p>D. BURNED OUT MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: They feel overwhelmed by their responsibilities and unable to cope with the stress.WHAT DISTURBS THEM MOST: Feeling trapped and having no way out of their current situation.HOW DO THEY TALK: They may express feelings of hopelessness and helplessness, and may mention feeling like a burden to others.FIRST THING TO TALK ABOUT: Ask them about their current stressors and offer support in finding ways to manage them.HOW TO PERSUADE THEM TO SEEK HELP: Encourage them to talk to a mental health professional and assure them that seeking help is a sign of strength.WHO ARE THEY: Typically male veterans in their 30s or 40s, with average income and education levels, living in rural or suburban areas. They were raised in environments where self-reliance and toughness were valued.DESCRIBE THEM: They may withdraw from social activities and appear exhausted or disengaged. They may speak in a monotone voice and avoid eye contact.RELATIONSHIPS: They may have strained relationships with their parents due to unresolved issues from childhood. They may have distant relationships with siblings and struggle to form close connections with friends. Their romantic relationships may also be troubled, leading to feelings of isolation.WARNING SIGNALS: Increased substance abuse, neglecting personal hygiene, giving away possessions, making final arrangements, withdrawing from social interactions, expressing feelings of being trapped or a burden, talking about feeling hopeless or having no reason to live.Five actionable steps to bring this person back from severe depression to talk and deal with the problems:<ul style="list-style-type: none">Reach out to the person and express genuine concern for their well-being.Encourage them to open up about their feelings and stressors in a non-judgmental manner.Offer support and assistance in finding ways to manage their overwhelming responsibilities.Suggest seeking help from a mental health professional and provide resources for them to access support.Follow up regularly to check on their progress and offer ongoing support and encouragement.Four phrases this person may use when thinking of committing suicide:<ul style="list-style-type: none"><i>“I feel like I can’t handle all the stress and pressure anymore.”</i><i>“I feel trapped and like there’s no way out of my current situation.”</i><i>“I don’t see a future for myself, everything looks bleak.”</i><i>“I feel like a burden to everyone around me.”</i>Four phrases when this person is back on safe ground, no longer thinking of suicide:<ul style="list-style-type: none"><i>“I feel like I can manage my responsibilities better now.”</i><i>“I see some hope for the future and feel more optimistic.”</i><i>“I have sought help and am feeling supported in managing my mental health.”</i><i>“I am looking forward to rebuilding my relationships and connecting with others.”</i>
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Table 2E: Information synthesized for the “TRAUMA-INDUCED” mind-set.

<p>E. TRAUMA-INDUCED MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: They may be experiencing symptoms of trauma such as flashbacks, nightmares, and hyperarousal that make it difficult to function.WHAT DISTURBS THEM MOST: Reliving traumatic events and feeling unable to escape the memories that haunt them.HOW DO THEY TALK: They may talk about feeling numb or disconnected from reality or may struggle to communicate their feelings.FIRST THING TO TALK ABOUT: Address their trauma and encourage them to seek therapy specifically for PTSD or trauma-related issues.HOW TO PERSUADE THEM TO SEEK HELP: Help them understand that seeking treatment for trauma can lead to healing and a better quality of life.WHO ARE THEY: They can be male or female veterans of any age, with varying income and education levels, living in diverse environments. They may have experienced combat or other traumatic events during their service.DESCRIBE THEM: They may exhibit signs of hypervigilance, startle easily, and have a guarded or defensive demeanor. They may struggle with intimacy and trust in relationships.RELATIONSHIPS: They may have strained relationships with family members and have difficulty forming deep connections with others due to trust issues. They may avoid social events and isolate themselves from loved ones.WARNING SIGNALS: Sudden mood swings, intense emotional reactions, avoidance of triggers, frequent nightmares, self-destructive behaviors, difficulty concentrating or sleeping, feelings of guilt or shame.Five actionable steps to help bring this person back from severe depression towards talking and dealing with their trauma-induced issues:<ul style="list-style-type: none">• Encourage them to seek therapy specifically for PTSD or trauma-related issues.• Support them in understanding the benefits of treatment for trauma and how it can lead to healing and a higher quality of life.• Help them establish a routine that includes self-care activities such as exercise, mindfulness, and relaxation techniques.• Encourage them to connect with support groups or other individuals who have experienced similar trauma.• Create a safety plan with them that includes coping strategies for managing triggers and thoughts of suicide, as well as a list of emergency contacts.Phrases this person may use when thinking of committing suicide:<ul style="list-style-type: none">• <i>“I just can’t escape the memories and pain.”</i>• <i>“I feel so numb and disconnected from everything.”</i>• <i>“I don’t see a way out of this darkness.”</i>• <i>“It’s too much to bear, I feel like giving up.”</i>Phrases this person may use when back on safe ground, no longer thinking of suicide:<ul style="list-style-type: none">• <i>“I feel like I’m finally starting to heal.”</i>• <i>“I can see a future for myself now.”</i>• <i>“I’m learning to cope with my trauma and move forward.”</i>• <i>“I’m grateful for the support and help I’ve received.”</i>
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Table 2F: Information synthesized for the “ISOLATED” mind-set.

<p>F. ISOLATED MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: They feel disconnected from others and lack a support system to turn to during times of crisis.WHAT DISTURBS THEM MOST: The feeling of being alone in their struggles and having no one to confide in.HOW DO THEY TALK: They may express feelings of loneliness, worthlessness, and emptiness, and may talk about feeling invisible or forgotten.FIRST THING TO TALK ABOUT: Discuss their feelings of isolation and work on building a network of support through therapy, support groups, or community resources.HOW TO PERSUADE THEM TO SEEK HELP: Help them realize that reaching out for help does not make them weak and that there are people who care about their well-being.WHO ARE THEY: They can be individuals of any gender, age, income, or education level, living in urban or rural areas. They may have experienced significant loss or rejection in their lives.DESCRIBE THEM: They may distance themselves from social interactions, appear withdrawn or quiet in group settings, and struggle to initiate conversations with others.RELATIONSHIPS: They may have strained relationships with family members or have no contact with them. They may have few friends or acquaintances and struggle to form deep connections with others.WARNING SIGNALS: Social withdrawal, avoidance of social events, lack of communication with loved ones, neglecting personal relationships, expressing feelings of being invisible or unimportant, giving away prized possessions, engaging in risky behaviors.Steps to help bring a person back from severe depression and thoughts of suicide:<ul style="list-style-type: none">• Reach out and offer emotional support to the person.• Encourage them to talk about their feelings and struggles.• Help them connect with a therapist or support group for professional help.• Assist them in building a network of support through community resources.• Encourage them to seek help and reassure them that reaching out does not make them weak.Phrases this person might use when thinking of committing suicide:<ul style="list-style-type: none">• <i>“I feel like there’s no point in living anymore”</i>• <i>“I just want all this pain to end”</i>• <i>“I feel like everyone would be better off without me”</i>• <i>“I can’t see a way out of this darkness”</i>Phrases this person might use when back on safe ground and no longer thinking of suicide:<ul style="list-style-type: none">• <i>“I’m starting to see a glimmer of hope”</i>• <i>“I’m feeling more connected to others and less alone”</i>• <i>“I’m learning to cope with my struggles and find joy in life again”</i>• <i>“I’m grateful for the support and help I’ve received”</i>

Table 2G: Information synthesized for the “MENTALIZATION” mind-set.

<p>G. MENTALIZATION MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: They are prone to suicide because they struggle with understanding and processing their own emotions and thoughts, leading to feelings of hopelessness and helplessness.WHAT DISTURBS THEM MOST: The feeling of being misunderstood or invalidated by others, causing them to feel isolated and alone.HOW DO THEY TALK: They may talk in a detached or emotionless manner, avoid discussing their own feelings, or make self-deprecating remarks.FIRST THING TO TALK ABOUT: The first thing to talk to them about is their feelings and emotions, showing them empathy and understanding.PERSUADING TO SEEK HELP: They can be persuaded to seek help by offering support and encouragement to seek therapy or counseling.WHO THEY ARE: They can be of any gender, age, income level, and educational background, but typically live in urban or suburban areas and were raised in environments where emotional expression was not encouraged.DESCRIPTION: They may be introverted and prefer solitary activities, such as reading or art. They may speak softly and avoid eye contact, appearing distant or preoccupied. They may exhibit physical signs of distress, such as fidgeting or pacing.RELATIONSHIPS: Their relationships with their parents may be strained, with unresolved conflicts or unmet emotional needs. Their relationships with siblings may be distant or competitive. Their friendships may be superficial or lack emotional depth. They may struggle to connect with others on an intimate level.WARNING SIGNALS: Warning signals may include sudden changes in behavior or mood, withdrawing from social interactions, expressing feelings of worthlessness or despair, engaging in risky behaviors, or giving away prized possessions. They may also make references to death or suicide in conversation or on social media.To bring this person back from severe depression and help them talk and deal with their problems, you can follow these five actionable steps:<ul style="list-style-type: none">Listen actively and non-judgmentally to their feelings and emotions.Encourage them to seek professional help from a therapist or counselor.Offer support and encouragement in their journey towards healing and recovery.Help them establish healthy coping mechanisms and self-care practices.Stay connected and check in regularly to ensure they are receiving the support they need.Four phrases this person may use when thinking of committing suicide:<ul style="list-style-type: none"><i>“I can’t see a way out of this pain.”</i><i>“I feel like a burden to everyone around me.”</i><i>“It would be better if I weren’t here.”</i><i>“I just want the pain to stop.”</i>Four phrases this person may use when they are back on safe ground, no longer thinking of suicide:<ul style="list-style-type: none"><i>“I am starting to see a glimpse of hope for the future.”</i><i>“I am grateful for the support and love I have received.”</i><i>“I am learning to cope with my emotions in a healthier way.”</i><i>“I am looking forward to the journey ahead towards healing and recovery.”</i>
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Table 2H: Information synthesized for the “MENTAL ILLNESS” mind-set.

<p>H. MENTAL ILLNESS MIND-SET</p> <ol style="list-style-type: none">WHY THEY ARE PRONE TO SUICIDE: They are prone to suicide because of the overwhelming feelings of hopelessness, despair, and emotional pain that often accompany mental illnesses such as depression, PTSD, anxiety disorders, and bipolar disorder.WHAT DISTURBS THEM MOST: The feeling of being a burden to others, the sense of isolation and loneliness, and the inability to see a way out of their suffering.HOW DO THEY TALK: They may talk about feeling like they have no purpose in life, expressing thoughts of not wanting to live anymore, or making statements about feeling like there is no point in trying anymore.FIRST THING TO TALK ABOUT: The first thing to talk to them about is their feelings and emotions, letting them know that you are there to listen and support them without judgment.PERSUADING TO SEEK HELP: They can be persuaded to seek help by encouraging them to speak to a mental health professional, offering to accompany them to appointments, and reminding them that seeking help is a sign of strength, not weakness.WHO THEY ARE: They can come from any gender, age, income level, or education background. They may live in various locations and were raised in different environments.DESCRIPTION: They may appear withdrawn, sad, or disinterested in activities they once enjoyed. In public, they may seem distant, distracted, or disconnected from others. They may display physical signs of distress such as changes in appetite, sleep patterns, or hygiene.RELATIONSHIPS: Their relationships with their parents, siblings, and friends can be strained due to their mental health struggles. They may feel like a burden to their loved ones and isolate themselves from social interactions.WARNING SIGNALS: Warning signals that they may give out include talking about feeling trapped or helpless, expressing thoughts of suicide or self-harm, giving away prized possessions, withdrawing from social interactions, and showing sudden changes in behavior or mood.To bring this person back from severe depression and help them talk and deal with their problems, you can follow these five actionable steps:<ul style="list-style-type: none">None suggested by AIPhrases indicating suicide ideation:<ul style="list-style-type: none"><i>“I feel like there’s no way out of this pain.”</i><i>“I just don’t see the point in living anymore.”</i><i>“I feel like I’m a burden to everyone around me.”</i><i>“I wish I could just end it all.”</i>Phrases indicating a shift away from suicide ideation:<ul style="list-style-type: none"><i>“I’m starting to see a glimmer of hope for the future.”</i><i>“I’m feeling more connected to my loved ones.”</i><i>“I’m actively seeking help and working on improving my mental health.”</i>
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Table 3: The “Human Angle” — Simulated stories about suicides which failed versus which succeeded.

Please write six stories, each story in a paragraph of at least seven sentences. In that story, talk about a military-related suicide or attempted suicide. Talk about the person who attempted or who did do the suicide. What were they thinking. What happened. Why did it happen. What was the effort, if any, to prevent the suicide. Make the story personal, with quotes. Make the story realistic, memorable, teaching us. Give the story a sense of reality.

Story 1

John, a young Marine who had just returned from a grueling deployment in Afghanistan, was struggling with PTSD. He felt overwhelmed by the memories of combat and could not shake the feeling of guilt for not being able to save his friends who had died in battle. One night, John found himself alone in his barracks room, contemplating taking his own life. “I just couldn’t see a way out of the darkness,” he later admitted. As he held a bottle of pills in his hand, he thought about how his pain would finally end if he just swallowed them all. Suddenly, his phone buzzed with a text from a buddy saying, “Hey man, you ok? Let’s grab a drink.” That message was the lifeline John needed to reach out for help. He eventually sought therapy and found support within his unit to cope with his trauma.

Story 2

Maria, a dedicated Army nurse, was feeling overwhelmed by the constant stream of wounded soldiers coming into her field hospital. She was haunted by the faces of the young men and women she couldn’t save and felt like she was failing her patients. One day, Maria locked herself in a supply closet and held a scalpel to her wrist, contemplating the end of her suffering. “I just felt so helpless and exhausted,” she recalled. But just as she was about to make a fatal cut, the sound of a familiar voice calling her name caused her to pause. It was a fellow nurse who had come looking for her. Tears streaming down her face, Maria dropped the scalpel and collapsed into her friend’s arms. With the support of her colleagues, Maria sought counseling and learned healthy coping mechanisms to deal with the stress of her job.

Story 3

Chris, a decorated Air Force pilot, was struggling with survivor’s guilt after a mission where his co-pilot was killed in action. He couldn’t shake the feeling that he should have been the one to die instead. One night, Chris sat alone in his apartment with a loaded gun in hand, ready to end his own life. “I didn’t see any reason to go on living,” he later admitted. But as he stared down at the barrel of the gun, a sudden memory of his daughter’s laughter flashed in his mind. That image was enough to make him put the gun down and pick up the phone to call a crisis hotline. With the help of a therapist, Chris worked through his grief and eventually found healing through connecting with other veterans who understood his pain.

Story 4

Michael, a Navy SEAL with a stellar record of service, was struggling with the aftermath of a traumatic brain injury he sustained during a mission. He felt like he had lost a part of himself and couldn’t cope with the constant pain and confusion. One night, Michael stood in front of a mirror, holding a razor blade to his wrist, contemplating ending his suffering. “I just wanted the pain to stop,” he tearfully admitted. But as he pressed the blade against his skin, a sudden memory of his training kicked in, reminding him of the resilience he had within him. Michael dropped the blade and reached out to his commanding officer for help. With the support of his unit, Michael received specialized medical care and therapy to address his traumatic brain injury and found ways to manage his pain.

Story 5

Sergeant Jake Thompson had always been the life of the party, the one who could make everyone laugh even in the toughest of times. But behind his infectious smile, he was battling demons that he could no longer keep at bay. He felt overwhelmed by the constant stress of deployment and the guilt of not being there for his family. One day, he decided he couldn’t take it anymore and made the heartbreaking decision to end his own life. As he stood on the edge of the bridge, looking down at the rushing river below, his mind was filled with memories of his fellow soldiers and the pain of missing them. “I just can’t do this anymore,” he whispered to himself, tears streaming down his face. Despite the efforts of his friends and family to reach out and offer support, Jake felt utterly alone in his struggle. He climbed over the railing and let himself fall, feeling a brief moment of freedom before the darkness consumed him. The news of Jake’s suicide spread quickly through his unit, leaving his comrades in shock and disbelief. They had never imagined that someone as strong and resilient as Jake could succumb to such despair. As they gathered to honor his memory, they vowed to never forget the toll that military service can take on a person’s mental health. Jake’s death served as a tragic reminder of the importance of seeking help and reaching out to those in need before it’s too late.

Story 6

Sgt. Miller had always been the rock of his unit, leading them through countless missions and battles with courage and determination. But behind his stoic facade, he was battling demons that no one knew about. One night, after a particularly grueling mission, Sgt. Miller locked himself in his quarters and ended his own life. His last words in a letter left behind read, “I can’t bear to live with the memories anymore. I’m sorry.” Despite the efforts of his fellow soldiers to reach out and offer support, Sgt. Miller’s inner turmoil was too much to bear.

Discussion and Conclusions

Studying the mind-sets of military personnel and veterans who are interested in suicide can provide valuable insights into the factors that contribute to suicidal thoughts and behaviors in this population. We learn that individuals may experience a sense of hopelessness, guilt, and emotional distress due to traumatic experiences and the challenges of transitioning back to civilian life. Understanding these unique stressors can help us develop more targeted interventions and support systems for individuals at risk of suicide.

This information can serve as a “living reference” for people to learn about suicide and mental health in military personnel and

veterans. By leveraging AI technology, we can probe more deeply into the minds of individuals in precarious states of mental health and offer personalized support and resources. By analyzing patterns and identifying risk factors, AI can assist in early detection and intervention, ultimately saving lives and enhancing mental health outcomes. This approach can help bridge the gap in mental health care and reach individuals who may be hesitant to seek help.

As we move forward, it is crucial to continue expanding our understanding of the complex psychological dynamics at play in military personnel and veterans who are at risk of suicide. By further exploring the intersection of trauma, PTSD, and suicide risk, we can develop more effective strategies for prevention and

support. Collaborating with experts in psychology, psychiatry, and AI technology will be essential in creating innovative solutions that address the needs of this vulnerable population. By integrating AI into mental health care, we can revolutionize the way we approach suicide prevention and provide tailored interventions that are evidence-based and person-centered.

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References

1. Nock MK. A soldier's suicide: Understanding its effect on fellow soldiers. *Psychiatry*. 2011; 74: 107-109.
2. Nock MK, Millner AJ, Joiner TE, et al. Risk factors for the transition from suicide ideation to suicide attempt Results from the Army Study to Assess Risk and Resilience in Servicemembers Army STARRS. *J Abnorm Psychol*. 2018; 127: 139-149.
3. Sher L. The uncounted casualties of war: suicide in combat veterans. *QJM*. 2004; 117: 163-167.
4. Bryan CJ, Hernandez AM, Allison S, et al. Combat Exposure and Suicide Risk in Two Samples of Military Personnel. *J Clin Psychol*. 2013; 69: 64-77.
5. Bryan CJ, Morrow CE, Etienne N, et al. Guilt, shame and suicidal ideation in a military outpatient clinical sample. *Depress Anxiety*. 2013; 30: 55-60.
6. Moradi Y, Dowran B, Sepandi M. The global prevalence of depression suicide ideation and attempts in the military forces: a systematic review and Meta-analysis of cross sectional studies. *BMC psychiatry*. 2021; 21: 510.
7. Pompili M, Sher L, Serafini G, et al. Posttraumatic stress disorder and suicide risk among veterans: A literature review. *J Nerv Ment Dis*. 2013; 201: 802-812.
8. Dempsey CL, Benedek DM, Nock MK, et al. Social closeness and support are associated with lower risk of suicide among US Army soldiers. *Suicide Life Threat Behav*. 2021; 51: 940-954.
9. Martin J, Ghahramanlou-Holloway M, Lou K, et al. A comparative review of US military and civilian suicide behavior: Implications for OEF/OIF suicide prevention efforts. *Journal of Mental Health Counseling*. 2009; 31: 101-118.
10. Pietrzak RH, Pitts BL, Harpaz-Rotem I, et al. Factors protecting against the development of suicidal ideation in military veterans. *World Psychiatry*. 2017; 16: 326-327.
11. Warner CH, Appenzeller GN, Parker JR, et al. Suicide prevention in a deployed military unit. *Psychiatry*. 2011; 74: 127-141.
12. Jamieson SK, Cerel J, Maple M. Impacts of exposure to suicide of a military colleague from the lived experience of veterans Informing postvention responses from a military cultural perspective. *Death Stud*. 2024; 48: 688-697.
13. Jamieson SK, Cerel J, Maple M. Social and cultural dimensions of loss of a military colleague by suicide or traumatic death a retrospective veteran study. *SSM-Qualitative Research in Health*. 2022; 2: 100160.
14. Miklin S, Mueller AS, Abrutyn S, et al. What does it mean to be exposed to suicide. Suicide exposure, suicide risk and the importance of meaning-making. *Social Science and Medicine*. 2019; 233: 21-27.
15. Putri AK, Armstrong G, Setiyawati D, et al. Unveiling studies on self-healing practices for suicide loss survivors A scoping review. *Death Stud*. 2024; 23: 1-14.
16. Milutinovic V, Salom J. Introduction to Basic Concepts of Mind Genomics. In *Mind Genomics*. Springer. 2016; 1-29. https://doi.org/10.1007/978-3-319-39733-7_1
17. Moskowitz HR. Mind genomics: The experimental, inductive science of the ordinary and its application to aspects of food and feeding. *Physiol Behav*. 2012; 107: 606-613.
18. Moskowitz HR, Gofman A. *Selling blue elephants: How to make great products that people want before they even know they want them*. Pearson Education. 2007.
19. Mullarkey MC, Schleider JL. Contributions of fixed mindsets and hopelessness to anxiety and depressive symptoms A commonality analysis approach. *J Affect Disord*. 2020; 261: 245-252.
20. Schleider JL, Weisz JR. Parent expectancies and preferences for mental health treatment the roles of emotion mind-sets and views of failure. *J Clin Child Adolesc Psychol*. 2018; 47: S480-S496.
21. Jarrahi MH, Askay D, Eshraghi A, et al. Artificial intelligence and knowledge management A partnership between human and AI. *Business Horizons*. 2023; 66: 87-99.
22. Korteling JH, Van de Boer-Visschedijk GC, Blankendaal RA, et al. Human-versus artificial intelligence. *Front Artif Intell*. 2021; 4: 622364.
23. McClelland JL, Hill F, Rudolph M, et al. Extending machine language models toward human-level language understanding. *arXiv*. 2019.
24. Sun C, Yang K, Reddy RG, et al. Persona-DB: Efficient Large Language Model Personalization for Response Prediction with Collaborative Data Refinement. *arXiv*. 2024.