

Learning from Ai Synthesis of Mind-Sets: Dealing with Patients Injured by Violence in The New York City Subway System

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Abstract

The paper deals with the opportunities presented by combining artificial intelligence (AI) with Mind Genomics thinking. The focus is on what specifically can help the nurse to become a better practitioner when it comes with helping people who have been the victims of violent acts or injured by violence in the New York City subway system. The combination teaches how to deal with patients injured by violence and proposes specific approaches to learning and to action. The combination shows the ease of AI generating relevant information for the nurse on the specific topic, as well as how repeated, easy and affordable iterations of the artificial intelligence effort generate learning for the nurse. Furthermore, with repeated iterations, all done quickly in the short time of minutes, the combination evolves into an 'idea innovation machine'.

Introduction

Crime in the New York City subway system is a rampant issue, with innocent individuals ending up as unwitting victims of violence. The victims having started out on what they believed to be an ordinary subway journey all too often end up as patients brought local hospitals and admitted through the emergency entrance. For novice nurses especially, but also for experienced nurses, it always 'pays' to be prepared. The purpose of this paper is to show an educational approach using AI (artificial intelligence, specifically SCAS, Socrates as a Service) to simulate the mind of the patient who have been involved in violence in the subway system [1-4].

It is a truism that people differ from each other. We might expect that these innocent victims of subway violence differ from each other, first in terms of WHO they are, but second in terms of how they RESPOND to what just happened to them. For example, one victim may feel fearful and vulnerable after the attack, whereas another victim may feel angry and resentful towards their attacker. Some precautions and blame themselves for being in a place that 'somehow' they should have known what would happen, but did not take precautions, and have only themselves to blame. And the list could go on and on. Nurses are taught

to approach each patient with empathy and understanding, acknowledging the patient's emotions and validating their experiences [5, 6]. The question taken up in this paper is the contribution of AI to helping the nurse learn more deeply, by acting as a personal 'Socratic tutor'.

The nurse's ability to help a newly admitted patient depends on the ability to gauge the patient's emotional condition and degree of discomfort. Good practice recommends a variety of simple activities. None of the following is particularly surprising: Make sure the patient feels comfortable enough to talk about their emotions is crucial. Be polite and comforting, speaking openly and compassionately with patients. Pay close attention to what the patient is saying and do what the patient asks for help or advice when asked.

Everyone has their own unique perspective, set of assumptions, and worldview. The nurse must be sensitive to the fact that people have different ways of taking in and making sense of the world around them. Whereas some patients may respond better to direct conversations and instructions, others may need a kinder, more sympathetic touch. One patient may appreciate straightforward chats and directions, whilst another may need a more

gentle and compassionate approach. When nurses acquire these unique skills, they are better able to meet the unique requirements of each patient.

The Emerging Science of Mind Genomics and Its Evolution into AI Synthesis of Mind-sets

Recognizing that everyone has different perspectives and ways of thinking about things is important. Being a member of a certain group or demographic does not guarantee that someone will act in a certain way when circumstances occur. For example, two people of the same age and gender may have opposing viewpoints on how to treat pain or spend their lives. Understanding the different brain functions enables nurses to deliver more personalized care and support to their patients.

Mind Genomics undertakes research to understand why people view and respond to things in such varied ways. These distinctions might be evident preferences, such as colors or foods, or more subtle variations in how people process emotions or make decisions. Researchers in the field of Mind Genomics have revealed some surprising insights about how different people think. This insight might be used to increase trust, communication, and treatment results [7-11].

Mind Genomics has already been used by researchers to understand what patients want, what patients need, and the messaging to which patients will respond. Work on this was reported for the evaluation of different ways that young teenagers wanted to interact with their doctors at the hospital. Further work was done on the types of messaging to which people would respond when discharged from the hospital after treatment for congestive heart failure, CHF. The results of those Mind Genomics studies suggested that the correct messaging based upon the patient's mindset could reduce the within 30-day readmission from a national average of 17% to less than 5%. Finally, Mind Genomics has been shown to double the number of colonoscopies when the messaging was developed to be appropriate for a poor catchment area in the Philadelphia, Pennsylvania region [12, 13].

AI can evaluate data and find patterns, offering insight into how individuals respond to violence. AI can recognize and categorize distinct thinking types by merging Mind Genomics concepts, resulting in more effective therapies. However, rules and frequent evaluations of nurses' AI usage are required. Researchers should investigate AI-generated ideas to better comprehend human mental processes, therefore enhancing healthcare communication, decision-making, and patient care. This information may be used to develop more individualized treatment plans and crime prevention efforts. This procedure relies heavily on the collection of various data.

AI can use data from various sources to understand how people perceive and respond to violence, such as fear, rage, determina-

tion, or impotence. This information can help nurses tailor care and treatment to each victim's unique needs, potentially leading to faster healing and recovery. For example, analyzing poll results and conversations on a New York City train could help researchers understand abuse victims' brains and develop medications and procedures for faster recovery.

AI synthesis can create a comprehensive library for nurses, enabling them to understand specific mental health conditions. This library, based on data from medical records, questionnaires, and tests, can be accessed and utilized by nurses. Collecting and organizing this data with AI algorithms can ensure its accuracy and completeness. Collaboration with healthcare institutions can further enhance this library.

A 'Worked' Example: Understanding & Treating Victims of Violence Occurring in The Subway

To effectively utilize AI-generated learning, a systematic approach to examining and grading ideas is needed, including specialized training programs for healthcare staff and integrating AI tools into classrooms. Nurses can enhance their understanding of violence victims by incorporating diverse perspectives and understanding their emotional, mental, and behavioral responses. They should identify patterns in their own behavior and cognitive tendencies and evaluate how these factors influence patient care.

Let us look at a hypothetical example. The crime is unspecified violence occurring in the New York City subway system, a situation all too frequent and all too real. The violence is sufficient to cause injury, although the injury is not specified. The victim is brought to the local hospital and admitted directly from the emergency room. The victim sustained a non-life-threatening injury. The victim is able to communicate quite well with the nurse. This is the ingoing information.

The question facing us is how might artificial intelligence coupled with Mind Genomics 'thinking' deal with this situation? When we say deal with this situation, we mean provide guidance for the nurse who is learning how to do her job or his job on the ward. Can we create an easy-to-use website which allows the nurse to input some of the information and come out with suggestions about what the victim might be feeling, what might happen after the injury and after the admission to the hospital, suggestions about educating the nurse, about slogans that the nurse could use as part of the learning, and then, of course, how does the nurse help the victim recover? These are straightforward questions, of course. We're going to put in one little change or one little addition, and that is we're going to say that there are different mindsets, and we are learning not only what to do, what to say, but we're asking AI to tell us recommended action for the different mindsets. The results of this exercise appear in Table 1.

Table 1: Example of the output of a website which can 'coach' the nurse about the patient, based on the mind-set of the patient. It is the job of the nurse to assign the patient to the mind-set. The output shows the suggestions for two mind-sets.

Mind-set: Victim of Assault
Emotional Reaction to Being Assaulted in Subway: The victim may feel shocked, frightened, anxious, vulnerable, angry, and traumatized by the assault.
What Actually Happened Afterwards: The victim may have physical injuries, emotional trauma, financial burdens, fear of using public transportation, distrust in strangers, and psychological impact from the assault.

<p>How Do I Educate My Nurses: Train them on trauma-informed care, active listening skills, empathy and compassion, provide resources for counseling and support services, educate on victim advocacy programs, and emphasize the importance of empowering the victim in their recovery process?</p>
<p>Give me 6 Slogans to Share With my Nurses and With the Patient of the Mindset.</p> <p>"You are not alone; we are here to support you." "Empathy heals wounds that medicine can't." "Strength in vulnerability, courage in recovery." "One step at a time, we will walk this journey with you." "You are a survivor, not just a victim." "Together we can heal and thrive."</p>
<p>As a Result of my Nursing this Mindset, what can I do as a Nurse to Help this Mindset Recover from the Attack? Provide emotional support and reassurance, assist in seeking professional help, encourage selfcare practices, facilitate a safe environment for recovery, collaborate with other healthcare providers, and empower the patient in their healing journey.</p>
<p>Mindset: Shocked and Scared</p>
<p>Emotional Reaction to Being Assaulted in Subway: The patient may feel overwhelmed and frightened by the sudden attack. They may experience feelings of disbelief and shock. They may feel vulnerable and unsafe in their surroundings. The patient may feel anxious and paranoid about their safety in the future. They may feel angry and violated by the assault. The patient may experience symptoms of posttraumatic stress disorder.</p>
<p>What Actually Happened Afterwards: They suffered physical injuries from the assault. They may have emotional trauma and psychological scars. They may have difficulty trusting others or feeling safe in public spaces. They may experience nightmares and flashbacks of the attack. The assault may have a long-term impact on their mental health and wellbeing. They may require ongoing therapy and support to recover from the trauma.</p>
<p>How do I Educate my Nurses: Provide training on trauma-informed care and the effects of assault on patients? Teach nurses how to provide empathetic and compassionate care to survivors of violence. Offer resources and support for nurses to cope with vicarious trauma. Encourage nurses to practice active listening and validation of the patient's feelings. Provide education on the importance of creating a safe and supportive environment for patients. Promote selfcare strategies for nurses to prevent burnout and compassion fatigue.</p>
<p>Slogans:</p> <p>"Empathy heals wounds." "Together, we can overcome the pain." "Your strength is our inspiration." "Healing starts with understanding." "Courage in the face of adversity." "Nurses, the heart of compassionate care."</p>
<p>As a Result of my Nursing this mindset, what can I do as a Nurse to help this Mindset Recover from the Attack? Offer a safe space for the patient to express their emotions and fears. Provide support and reassurance throughout their recovery process. Collaborate with mental health professionals to create a treatment plan. Advocate for the patient's needs and rights in the healthcare system. Encourage healthy coping mechanisms and selfcare practices. Monitor the patient's progress and adjust the care plan accordingly.</p>

The interesting thing about Table 1 is that it can be generated in a matter of minutes and that it can be done by people with no technical skill. The results in Table 1 emerge from the Mind Genomics platform BimiLeap.com. The idea there is that many of the necessary prompts are either built into the system or can be typed in as the prompts are typed in in Table 1. The prompts in simple English are the ones in all capital letters and in bold underline. These prompts make a great deal of sense. They're written in the language of the nurse, and they provide the necessary information.

Nurses can be educated in their training to create these types of self-teaching queries and practice with AI long before they actually have to use the system for a real incident and for a real patient. This means that part of the education of the nurse is to think of perhaps real situations, but those which may not yet have been experienced by the nurse. AI now returns with this information, informing the nurse to know what to do. The system does not tell the nurse what to do "clinically" but simply

informs the nurse regarding what to do to make the patient feel comfortable as a person, what might be the mindset of the person, and what to say, how to encourage the patient, and so forth.

Ai, Learning, and Deep Thinking for Topic-Related Innovation

One of the benefits of the Mind Genomics system has been the introduction of deep analysis of the results by AI after the results have been obtained. The original deep analysis by AI in the Mind Genomics platform (SCAS), dealt with what could be learned further from looking at messages which scored better in the minds of real people. One of these additional analyses was called "INNOVATIONS". Basing its analysis on the elements scoring well in Mind Genomics, and the mind-set of the respondent, SCAS was instructed to develop innovations, new ways of creating things or doing things based upon the mindset to which the person or the people in a study were open and would probably accept.. The consequence was that within 10 or 15 minutes after the study had been completed and the results tabulated, the

artificial intelligence had a chance to do additional data massage, so to speak, and emerge with a variety of other points of view based upon this empirical data. By keeping the post-study deep analysis but working with ideas created by AI rather than ideas responded to by people, the Mind Genomics platform empowered by AI and by deep analysis evolved into an informal ‘innovation machine’, doing so as a matter of course.

Table 2 shows various innovations suggested by AI during the deep analysis, after the study was completed. These ideas were returned in the ‘Idea Book’. The user typically received an email within 30 minutes of the closing of the study, the ‘innovation section’ done for each iteration. The ‘innovative ideas’, or at least suggestions shown in Table 2 emerged from seven iterations done at the start of the study.

Table 2: Iterations provided by AI (SCAS, Socrates as a Service), and created after the study iterations were completed, and the Mind Genomics studied closed by the user.

A Nurse Learning Kits	
1.	Cultural Sensitivity Training: Provide cultural sensitivity training for nurses and healthcare professionals working with victims of subway assaults to ensure respectful and effective care.
2.	Trauma Recovery Kits: Include resources such as coping strategies, self-care tools, and information on local support services, to empower survivors in their healing journey.
3.	Self-care Resources: Develop self-care resources and strategies for nurses and caregivers to prevent burnout and support their own mental well-being while caring for victims of assault.
4.	Simulation Training Programs for Nurses: Simulate scenarios of assisting assault survivors in a hospital setting, providing them with practical experience and knowledge on how to provide trauma-informed care.
5.	Trauma-informed Care Training Program: A comprehensive training program for healthcare professionals to educate them on trauma-informed care practices and the impact of trauma on survivors. This program could include workshops, seminars, and online courses
B Improve Protocols in Hospitals	
1.	Collaborative Care Model Which Involves Nurses, Psychologists, and Social Workers: Show the way to work together in order to provide comprehensive support for survivors of assault.
2.	Communication Skills Workshop: A workshop designed to improve healthcare professionals' communication skills when interacting with survivors. This workshop could focus on active listening, empathy, and non-verbal communication. It will help professionals better connect with survivors and provide compassionate care.
3.	Create Trauma-Informed Work Environments in Healthcare Settings: Promote a culture of empathy, sensitivity, and empowerment for both staff and survivors.
4.	Implement Trauma-Informed Care Protocols in Healthcare Settings: Ensure that all staff are equipped to provide sensitive and supportive care to survivors of trauma
5.	Integrate Trauma-Informed Care Principles into Policies and Procedures at Healthcare Facilities: Ensure that the needs of traumatized survivors are consistently considered and addressed.
6.	Trauma Recovery Centers; Offer a multidisciplinary approach to treatment, combining medical care, counseling, and advocacy services
7.	Trauma-Informed Workplace Policies and Practices: Support nurses and healthcare professionals in managing their own emotional well-being while caring for traumatized patients
C Patient & Family Coping	
1.	Trauma Recovery Kits: Include resources such as coping strategies, self-care tools, and information on local support services, to empower survivors in their healing journey.
2.	Empowerment Workshops: Host workshops focused on empowerment and resilience-building for individuals with a Victim Mentality.
3.	Family Support Programs: Offer education on how to best support traumatized loved ones and provide resources for family members to access mental health services.
4.	Legal Aid Services: Offer free or low-cost legal aid services for victims of assault to navigate any legal concerns or issues which may arise.
5.	Online Support Groups and Virtual Therapy Sessions for Survivors of Trauma: Offer a convenient and accessible way for individuals to receive ongoing care and support.
6.	Survivor Healing Retreats: Retreats designed specifically for survivors of violence to provide a safe space for healing, relaxation, and connection with others who have experienced trauma. These retreats could incorporate therapy, mindfulness practices, art therapy, and outdoor activities to promote healing and self-discovery.
7.	Trauma-Informed Yoga and Mindfulness Classes: These promote relaxation, reduce anxiety, and improve emotional well-being
8.	Victim Mentality Support Program: A specialized program designed to provide tailored support and resources for individuals struggling with a Victim Mentality.

9.	Victim Support Hotline: A dedicated hotline for victims of subway assaults to access immediate support and resources.
10.	Virtual Reality Therapy: Help victims gradually confront and cope with their traumatic experiences in a controlled environment.
11.	Virtual Support Group Platform: Connect trauma survivors with peers who can offer understanding, validation, and coping strategies
D Wearable Device, Apps, Websites	
1.	Mobile App Which Tracks Subway Safety Incidents: Provides tips on staying safe while using public transportation.
2.	Mobile Apps or Websites Which Provide Information on Available Resources: Covers counseling services, support groups, and legal aid.
3.	Survivor Support App: An app designed to provide survivors with easy access to resources, support services, and information on coping strategies. The app could also include features such as a journal for survivors to track their progress, meditation exercises, and a community forum for connecting with other survivors.
4.	Trauma-Informed Therapy App: A mobile app which provides resources, tools, and support for individuals dealing with trauma. This app could offer coping strategies, mindfulness exercises, and access to therapists for virtual sessions.
5.	Wearable Safety Devices or App: The device alerts authorities or loved ones in case of an emergency, helping to prevent assault incidents in the subway APP to help trauma patients
E External Society	
1.	Community Outreach Programs: Address the root causes of assault and promote a safer environment for all individuals, particularly those who may be vulnerable to violence.
2.	Trauma-informed Public Safety Initiatives: Implement programs in public spaces, like subway systems, which focus on promoting safety and security for all individuals. This could include increased surveillance, emergency call buttons, and community outreach initiatives to raise awareness about reporting assault incidents.
3.	Increased Visibility and Security Measures in Public Transportation Systems: Install as more security cameras and emergency call buttons.
4.	Policy Advocacy Efforts to Implement Mandatory Anti-Violence Training for Subway Employees: Increase security measures in high-risk areas.
5.	Public Awareness Campaigns and Workshops Aimed at Educating Individuals: Help recognize and prevent assault in public spaces, promote bystander intervention and reporting mechanisms.
6.	Safe Space Initiative: Create designated safe spaces on subway platforms and trains for victims of assault to seek help or support
7.	Trauma-Informed Advocacy Campaigns: Launch public awareness campaigns which address stigma and shame surrounding trauma. These campaigns could include testimonies from survivors, educational materials on trauma, and resources for individuals seeking help. Additionally, advocacy efforts could focus on promoting policies and protocols to better support victims of trauma.

Discussion and Conclusions

We finish this paper with a short note about the potential of incorporating a combination of Mind Genomics and AI thinking into a system to help nurses understand the minds of their patients. Education today is often presented as general principles of what should be done, so-called 'best practices.' We suggest that the era of AI and the thrust of Mind Genomics present the nurse, and indeed all of the helping professions, to deal with the 'specifics'. Clearly, an experienced individual in the helping professions should 'know' what to do. Yet, no everyone is experienced. We are accustomed to having people consult with each other to do the best thing for their patients.

We further propose that the system being suggest use AI, not slavishly, but as a heuristic to get to a usable direction. We also suggest that, in the words of the famous philosopher Voltaire, that the perfect should not be the enemy of the good. That is to say, we are not looking for perfection, we're not looking for the ultimate publishable analysis of the limited number of mind-sets of people who experience violence in the subway system.

Rather, we are proposing a dynamic system to help teach, both at the start of the nurse's learning about the specific topic, but also teaching as coaching during an entire career, when it is simply easier to describe a problem to AI and get some preliminary thoughts. We do not mean that the human being is superfluous and has been outdone by AI. No, we do not believe that at all. We believe that the emergence of easy-to-access AI through SCAS (the aforementioned Socrates as a Service) provides a new opportunity for nurses, and indeed for the medical profession and other helping professions. That opportunity is AI as a coach, tutor, teacher, and perhaps even intellectual sparring partner.

As a closing note and thought, it is interesting to realize that so much of the information presented here has been generated in what is truly a very quick turnaround, minutes, not days, not months. We should refrain from criticizing speed as an inevitable reason something should not be considered. There is the temptation to believe that unless something is sweated over and gained with a great deal of effort and pain and emotional investment, that thing is not worth very much. That it is the investment time

and effort which makes something valuable. In today's age of computer-aided information and artificial intelligence, time expended is absolutely not a determiner of value. The knowledge is there, the synthesis is there, the outcomes may be extremely valuable. The system should not be downvoted and looked at askance simply because anyone can use it. To paraphrase Voltaire, the easy-to-do should not be the enemy of perceived value.

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