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Prospectus

Evidence-Based Practice for Managing the Mentally Ill Inmate Population
(Technical Topic)

**Examining Various Users of the Brief Mental Health Screener as Agents of Technological
Change**
(STS Topic)

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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Socio-Technical Problem Frame

Central Virginia is one of the strongest regions in the state as it pertains to resources available to both the mentally ill and lawbreakers. Among the highlights in the area include substance abuse programs such as Region Ten, supervised and unsupervised probation programs facilitated by Virginia Offender Aid Restoration (OAR), and the Virginia Department of Corrections (DOC). All programs work to provide those who break the law a second chance at an improved life. The focal point of the area though is the Albemarle County Regional Jail (ACRJ), which acts as a holding center for offenders, both repeat and first time, for periods of time ranging from overnight to two years. The focus of the technical solution revolves around quantitative analysis from data gathered from Region Ten, Virginia OAR, Virginia DOC, and most importantly ACRJ. As of November 2016, ACRJ had 390 inmates receiving mental health services, 613 hours of service provided, and 86 inmates diagnosed with serious mental illnesses (Virginia Acts of Assembly, 2016). Continued analysis of measurable factors will help our group determine the most significant indicators of serious mental illnesses in offenders in the Central Virginia region. This will in turn help inform the appropriate officials how to best treat the affected population as they make their way through the area's available resources, both before and after incarceration.

The most significant social factors that draw attention to the insufficient use of available data are underrepresentation and awareness of the mentally ill. According to one source, roughly 50 percent of individuals with a severe mental illness are also affected by substance abuse, titled a co-occurring disorder (Saisan & Smith, 2019). The Central Virginia region has done a great job establishing resources that have the ability to work together to combat these dual diagnoses. The difficulty lies in obtaining the proper evidence to convince inmates that it is worth their time to

visit a substance abuse program following their release. This evidence relies on the results of the brief mental health screener, an exam administered at ACRJ upon intake that often acts as the first mental health evaluation inmates have ever experienced. Thus, the mental health screener has benefits that extended beyond simply ACRJ.

By failing to recognize that the brief mental health screener has implications beyond the inmate's sentencing at ACRJ, people may fail to utilize the other resources available in the Central Virginia area. By incorporating technical analysis with a stronger understanding of the mental health screener used, we obtain a more complete picture of the mental health crisis in the area and how it can be solved. This problem is starkly sociotechnical in nature and started after two court cases in 1966 and 1975. *Lake v Cameron* and *O'Connor v Donaldson* were two crucial rulings that ultimately lead to the discharge of tens of thousands of mental health patients onto the streets from state institutions which were found to create a restrictive setting. By placing more responsibility on government agencies rather than state hospitals, court systems decided that it would be more effective to utilize community-based treatments rather than the institutionalization approach previously used (Yohanna, 2013). Although this mental health crisis started as a social issue solved by a new technical approach to treatment, it is clear this is insufficient. Aside from merely using this community-based system, an improved solution revolves around integrating qualitative and quantitative measures. Technically, this paper will outline how qualitative analysis can be leveraged to see general trends in the population. Next, the paper will examine how the brief mental health screener is dynamically adapted by the various users that interact with the artifact. This active relationship with the technology, the mental health screener, helps create a path for treatment following an inmate's release and increases the effectiveness of Central Virginia's available resources.

Technical Problem Frame

The United States leads the world in producing prisoners, with almost a quarter of the globe's inmates despite possessing less than 5 percent of the world's population (Liptak, 2003). While many are jailed for crimes ranging from fraudulent checks to illegal drug use, a large problem remains that seems to be plaguing America's prison system: serious mental illnesses (SMI). To make matters worse, the mentally ill inmate population often has a difficult time getting properly identified upon intake, let alone receiving proper treatment. Jon Ronson (2012), author of *The Psychopath Test*, supports this by writing, "...believed that the psychopaths in his care buried their madness beneath a façade of normality...he'd been tricked so many times by devious psychopaths." (p. 83-84). This inability to identify SMIs often leads to inmates getting exposed to conditions that can worsen rather than help their mental condition. At the moment, the Albemarle County Regional Jail in Central Virginia currently issues an eight-question screening exam in an attempt to determine whether incoming offenders should be categorized as seriously mentally ill. The results of this administered exam are entered (by hand) into a database and only accessed if an inmate screens in for a serious mental illness. In this case, the inmate receives specialized care and attention to best fit the mental illness.

However, the population remains largely unidentified and unaddressed. Institutions in Central Virginia such as Region Ten Center for Substance Abuse, Virginia OAR, and the Virginia Department of corrections all possess valuable data that can make an impact on how the mentally ill are treated both during incarceration and following their release. One 2009 study found that community service boards (CSBs) provided over 61 percent of the 15 thousand treatment hours issued in the state of Virginia, supporting the enormity of these datasets (Department of Criminal Justice Services, 2010). These datasets are currently sitting in servers

gathering dust as the local area and their institutions fail to make the necessary hires that would lead to the proper data analysis. The state has fundamentally failed in neglecting to utilize the thousands of columns of data available to better inform Charlottesville, Albemarle, and Virginia representatives. Assuming an investigation of available datasets would produce significant findings, the local and state governments in Virginia would be called to action and asked to allocate funds to better address the population. Thus, even after better characterizing and understanding the seriously mentally-ill population, there is no guarantee that all or even some of the necessary actions will be taken. Regardless of any legislature passed to better aid the mentally ill, analysis and attention given to the issue is a strong positive step moving towards proper treatment for an underrepresented group.

Many of the tactics currently being used to combat mental health in institutions similar to ACRJ are qualitative and focus on improving the conditions and care that they receive while incarcerated. The technical aim of this project is to take a quantitative approach with statistical analysis to see whether there are factors that act as high indicators of a serious mental illness. The main assertion from the project revolves around the understanding that analysis performed on a dataset containing valuable mentally-ill identifiers will positively impact the population and work towards possibly reducing over-crowding in state and regional institutions. By combining datasets from institutions around the Central Virginia area, our team hopes to use computing methods to better understand and predict mental illness and ultimately work towards its reduction. My team will take an analytical approach taken to multiple data sources and describe most notable indicators of a serious mental illness based on hundreds of attributes. Programs such as Python, R, Excel, and SQL will be utilized to maximize capabilities while working with the aforementioned datasets.

STS Problem Frame

The United States prison system has long been aware of the linkage between inmates and mental health problems; Department of Justice reports from 2006 explain that 64 percent of jail inmates had a mental health problem, including over 705,600 inmates in state prisons (Department of Justice, n.d.). Additionally, one source states that 32.5 percent of inmates with a serious mental illness were identified at intake (Teplin, 1990). In an attempt to combat this issue, prisons and jails nationwide now utilize a brief 8-question mental health screener, administered upon intake.

One institution in particular, the Albemarle County Regional Jail (ACRJ), has incorporated this screener with the presumed intent of providing better support for inmates during their sentence. This short questionnaire featured simple yes or no questions and, in the case of ACRJ, was initially administered by police officers to people during intake. This is exactly how the brief mental health screener was initially designed to be used: upon intake, by police officers, and for the exclusive benefit of ACRJ. However, there were numerous problems with this usage. Because inmates were not engaging sufficiently with the questionnaire, ACRJ switched the user from police officers to nurses and found significantly higher engagement rates during administration of the exam. In the same vein, after implementing the brief mental health screener, there were far more users, interacting with the exam in ways they had never expected. Oudshoorn (2003) supports the idea that technologies have various possible uses by writing, "...There may be one dominant use of a technology...but there is no one essential use that can be deduced from the artifact itself." (p. 1-2). This can be seen in the many different ways that unintended users interact with the mental health screener. For one, the psychiatrists on site at the jail began using the screener as a way to give a more personalized diagnosis. Additionally, the

court system utilizes the mental health screener as a way to better recommend or mandate treatments for an inmate following their release from ACRJ. Consequently, by failing to see the multifaceted and dynamic nature of the mental health screener, the inmate and ACRJ only use it as a means for treatment while incarcerated. In actuality, the active relationship that the screener has with all users it comes into contact with allows it to benefit the inmate far beyond incarceration and through release from ACRJ. Treatment can continue through involvement in rehabilitation and probation programs thanks to results from the screener.

By analyzing the brief mental health screener implemented at ACRJ, I will explore ways in which the users create dynamic relationships with the artifact, constantly interacting with it in ways not originally intended by the designer. I propose that the mental health screener is being utilized systematically throughout the inmate's experience in unique ways by each user that comes into contact with it. While originally developed to assist only with inmates' treatment during their time at ACRJ, the users have found ways to benefit all parties by associating the screener with resources outside of ACRJ including Region Ten, OAR, and the Central VA Housing Coalition.

Users as agents is an STS framework that explains how users engage with a technology in ways that extend beyond its original or intended purpose. Kline and Pinche (1996) describe this with the Ford Model T writing, "...farm families started to define the car as more than a transportation device...running a corn sheller, an ensilage cutter, or doing light grinding," (p. 775). In the case of the screener, inmates, nurses, psychiatrists, courts, and treatment providers all use the questionnaire in ways that transcend its original purpose to provide extended care for mentally ill inmates both in and out of prison.

Conclusion

The technical portion of the project focuses on using data gathered from community services boards such as Region Ten and Virginia Offender Aid and Restoration (OAR). The STS portion of the project will work to demonstrate how users of the mental health screener at ACRJ expresses agency in their varied applications of it to inmates both in and out of prison. These two projects in conjunction will increase effectiveness of the brief mental health screener while simultaneously investigating indicators for mental illness that may not currently be apparent. The quantitative data analysis paired with qualitative exploration of the brief mental health screener will work to encompass a wide variety of socio-technical aspects that plague the Central Virginia support network both through mental illness and lack of awareness.

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