

MENTAL HEALTH ATTITUDES AND OFFICERS PERCEPTIONS OF DANGER AND USE
OF FORCE

by

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ABSTRACT

Law enforcement in the United States have a great deal of discretion when responding to incidents involving people with mental illness. Police officers respond to persons based on their training yet act on their perceptions and assumptions of persons with a mental illness can influence their decisions of use of force. In some cases, persons with a mental illness can be confused as a person under the influence of alcohol or drugs, which can result in an arrest (Bittner, 1967; Lamb et al., 2002; Lamb & Weinberger, 2002; Menzies, 1987; Patch & Arrigo, 1999 Ruiz & Miller, 2004; Teplin, 2000; Teplin & Pruett, 1992; Wells & Schafer, 2006). This study adds to our understanding of how police officers respond in situations where mental illness might be a contributing factor in a police-citizen interaction. Law enforcement ($n = 54$) and undergraduate criminal justice students ($n = 174$) completed a mental health attitudes questionnaire, and those scores were compared to responses to case scenarios. The responses assessed one's perceived level of dangerousness and the recommended use of force. Participants were randomly assigned to one of two conditions, one condition had vignettes that described and individual with signs of mental illness, the other condition included vignettes that described and individual without signs of mental illness. The hypotheses for the current study stated that more negative attitudes toward mental health would be related to officers and students interpreting the scenarios as more dangerous and warranting more use of force. For the law enforcement sample, we did not find a significant mediation effect of perceived dangerousness with police officers' attitudes toward the mentally ill and the use of force in both types of vignettes. The undergraduate sample had a significant relationship between perceived dangerousness and the use of force.

I. INTRODUCTION

The National Institute of Mental Health (2023) estimates that more than one in five U.S. adults have a mental illness (57.8 million). Any mental illness is a mental, behavioral, or emotional disorder that can vary from no impairment to severe impairment. Those with a serious mental illness have a serious functional impairment which can limit daily life activities. In 2021 out of the 57.8 million adults with any signs of mental illness, only 26.5 million (47.2%) received mental illness services in the United States. According to the National Alliance of Mental illness (2021) report, 3,347,000 adults in Texas have a mental health condition, and about 24% experience serious mental illness each year. Of those persons with serious mental illness, one in four has been arrested by the police at some point in their life, leading to over 2 million jail bookings of people with serious mental illness each year. More than half of people with mental health conditions in the U.S. received no treatment. In Texas, 25% of adults with a mental health condition did not receive needed mental health care, mainly because of the insurance cost (National Alliance of Mental Illness, 2021; Mental Health TX, 2021).

Historically deinstitutionalization in the 1960s changed how police interacted with persons with a mental illness; there was an addition of roles for police officers. They had the power and responsibility to protect public's safety and welfare and enforce *parens patriae*, which dictates protection for disabled citizens such as persons with a mental illness (Lamb & Weinberger, 2020; Teplin, 2000; Teplin & Pruett, 1992). The deinstitutionalization movement was based on the assumption that with the development of new medicines such as Thorazine, persons with a mental illness could live in a community-based setting instead of a clinically controlled setting. To show how drastic the funding decreased, one can compare the number of institutional beds in late 1950s - 339 beds per 100,000 population with 2016 – 11.7 beds per

100,000 of the population (Lamb & Weinberger, 2020). The idea of deinstitutionalization was to enable persons with a mental illness to receive effective community treatment interventions by providing housing, medical and psychiatric care, and social services; the problem that arose was the lack of funding for the community health system that was meant to substitute for the clinical approach (Lamb & Weinberger, 2020; Patch & Arrigo, 1999). Some have hypothesized that the failure of deinstitutionalization is one of the leading causes of why persons with a mental illness are funneled into the criminal justice system (Lamb & Weinberger, 2020).

Law enforcement have limited options for responding to calls with persons with a mental illness: the two basic formal ways (arrest or hospitalize), or the informal approach where there is no documentation of any sort, the police may know the persons and have an idea of their characteristics based on past experiences (Teplin, 2000). When police decided on the hospitalization route, they had to deal with the limited number of beds in hospitals, and stringent admission criteria. Alternatively, they could arrest persons with a mental illness if they were not sufficiently disturbed to be admitted to the hospital but dangerous enough to be removed from the community (Teplin, 2000). For instance, Teplin (2000) used examples of individual who exhibited enough symptoms to be admitted, but did not meet the hospital's criteria, and seem to be "too dangerous". In these cases, they were then arrested and charged with disorderly conduct.

Due to the known limitations of the mental hospitals police had to adapt to increased rates of interaction with persons with a mental illness (Patch & Arrigo, 1999). Police, therefore, take on the role of "street-corner psychiatrist," (Lamb et al., 2002; Teplin & Pruett, 1992). Teplin & Pruett (1992) examined how police officers responded to calls for services with persons with a mental illness. If the individual met the symptom disorder checklist, they would categorize the person as someone with a mental illness. Those symptoms on the checklist included

confusion/disorientation, withdrawal/unresponsiveness, and self-destructive behaviors. They then followed the decision of the officer and the rationale behind that decision. They found that persons with a mental illness arrest rates were double the rate than persons without a mental illness because of the known perception of the limitations of the hospitalizations and the perceived danger individuals pose to the community (Teplin & Pruett, 1992).

Law enforcement have a great deal of discretion of who they arrest. Officers act freely and solve problems in whatever way they deem appropriate based on their perceptions and assumptions of the persons with a mental illness; in some cases, those who have a mental illness may seem to the police as alcohol or drug intoxicated which is then followed by arresting the individual (Bittner, 1967; Lamb et al., 2002; Lamb & Weinberger, 2002; Menzies, 1987; Patch & Arrigo, 1999; Ruiz & Miller, 2004; Teplin, 2000; Teplin & Pruett, 1992; Wells & Schafer, 2006). When it comes to responding to persons with a mental illness, there are many plausible outcomes that may not seem to be the appropriate to civilians. Police use discretion and background knowledge to make decisions about how they must keep the peace and whether enforcing the law is necessary (Bittner, 1967).

Perceptions of Mental Health

Wells and Schafer (2006) examined police perceptions of persons with a mental illness and examined the disposition, such as officers choosing to release a person with a mental illness to a family member or providing the persons with referral information. The majority of officers believed that the dispositions options available when responding with a persons with a mental illness need to be improved. Additionally, nearly all officers agreed that it needs to be easier for them to get a person with mental illness into a treatment facility.

Patch and Arrigo (1999) also examined police officers' attitudes before and after Crisis

Intervention Training (CIT). The dispositions of persons with a mental illness often did not match the outcomes officer's desire of getting the person the adequate mental health services they need (Patch & Arrigo, 1999). Regarding CIT before the training session, over half reported they did not adequately know how to meet the needs of persons with a mental illness (Patch & Arrigo, 1999). After the training, a greater percentage of officers reported feeling they could effectively respond to a broader range when answering calls involving persons with a mental illness (Patch & Arrigo, 1999).

Psarra et al. (2008) measured Greek police officers' perceptions when transferring a person with a mental issue to a psychiatric unit. Their goal was to examine the knowledge and opinions of the officers when responding to persons with a mental illness. They hypothesized that police officers have a distorted and unfavorable image of persons with a mental illness because police officers often deal with non-compliant and violent persons with psychiatric disorders. Psarra et al. (2008) found that most of the officers believed that patients escorted to a psychiatric hospital were often or always a public nuisance, cause problems with families, are dangerous to themselves, and have a sloppy appearance, have various symptoms, and are unpredictable. Most officers believed that patients could not overcome situations by themselves and needed medication to control symptoms. More than half of the police officers believed that an ordinary person with a mental illness is more dangerous than a healthy person, and when police are bringing in a person to psychiatric services is equally or more dangerous than a person prosecuted for a criminal act (Psarra et al., 2008).

Across the United States, persons with a mental illness have been killed or seriously injured during police officers' attempts to manage their crisis (Lamb et al., 2002). The Washington Post has a database updated with records of fatal shootings by police in the United

States since 2015. As of April 23rd, 2022, there are a total of 7,219 names included in the database, with approximately 1,000 individuals being shot yearly since 2015. Of those 7,291 individuals, 21.61% had signs of mental illness; out of the individuals with signs of mental illness, 5.39% were unarmed. These are some of the names of those individuals listed in The Washington Post database who had the same fate and common need for intervention. Antonio Zambrano-Montes, Lavall Hall, Charly Leundeu Keunang, Anthony Hill, Daniel Covarrubias, Fridoon Zalbeg Nihad, Adrian Simental, Derek Wolfsteller, Michael Noel, Kevin Matthews, Cristian Rene Medina, Alfred Olango, Daniel D. Rogers, Dustin Robert Pigeon.

Cases involving suicide by police officers, have a ripple effect on the victims and the police officers involved, family members, and public relations with law enforcement (Ruiz & Miller, 2004). The deaths alone have made the communities, law enforcement, and mental health professionals frustrated. Fuller et al. (2015) highlight in their study the lack of government documenting the death of persons with a mental illness and the rise of public databases such as The Washington Post and The Guardian that the risk of being killed during a police incident is 16 times greater for individuals with untreated mental illness compared to other civilians stopped by police.

Dangerousness

Police have the essential role to analyze the level of dangerousness an individual has and must be able to find a suitable path to take (Bittner, 1967; Lamb et al., 2002; Lamb & Weinberger, 2002; Menzies, 1987; Patch & Arrigo, 1999; Ruiz & Miller, 2004; Teplin, 2000; Teplin & Pruett, 1992; Wells & Schafer, 2006). Police see the behaviors of individuals and must determine if this individual is suffering from mental illness and dangerous enough for the mental health hospital (Ruiz & Miller, 2004). Officers must then consider mental hospitals' stringent

policies, the background of individual behavior, and community safety and decide whether the individual needs to be arrested for their safety and the community.

Ruiz and Miller (2004) examined how Pennsylvania police officers responded to calls for service (CFS) when they respond to a call involving persons with a mental illness and the departments' policies for responding to persons with a mental illness. Half the respondents said that the department lacks guidelines for managing a situation with mental illness. Officers fear persons with a mental illness and believe they are unpredictable and dangerous (Psarra et al., 2008; Ruiz & Miller, 2004). Ruiz & Miller (2004) also found that calls for service that typically report with a person with a mental illness are labeled a "disturbance of the peace" or "general disturbance," which most police believe to be the most dangerous because of the expectancy of a hostile person.

Ruiz and Miller (2004) also highlighted how often officers sustained injuries while responding to calls for service and found that most of the responses showed that police officers were either never or seldom injured, and if they did get injured, most of the ones injured did not require medical attention. In Ruiz and Miller (2004) study, there was a difference in outcomes with the number of officers who responded to calls of service involving mental illness and found that when there is only one officer compared to 2-5 present, there is a lower frequency of an injury to an officer. They explained this phenomenon by stating that one officer alone might be more inclined to be patient than more officers together; more forcible compliance could escalate to violence for police and persons with a mental illness.

Police Officers Use of Force

The increased visibility of use of force incidents has brought the question of how to consistently measure the use of force in studies (Hollis, 2018). It is important to note that The

National Institute of Justice (2009) has a use of force continuum. The levels of use of force are within; officer presence where no force is used, verbalization, not physical force, empty hand control where the officer uses bodily force to control a situation, less lethal methods such as blunt impact or chemical. Lethal force, where an officer uses a deadly weapon, most police departments have a similar use of force continuum (Hollis, 2018).

Hollis (2018) conducted a narrative meta-review of 56 studies that measured the use of force. The studies had the similar outcome regarding the use of force (e.g., Ariel et al., 2015), perception of the use of force (Arthur & Case, 1994), use of reasonable, and use of excessive force (e.g., Gerber & Jackson, 2017). There were inconsistencies in how the outcomes were measured throughout the studies, however. Some studies measured the use of force would subtract the level of suspect resistance from the officers' level of force (e.g., Alpert et al., 2004). Garden et al. (2002) measured the use of force as a dichotomous measure measuring whether the force was used or not and analyzed the severity of force on a scale from 1 to 100. Philips (2010; 2015) used police officers' judgment of other officers' use of force in vignettes and reported whether they would report fellow officers. Hollis's (2018) meta-review shows an apparent inconsistency in the literature on the use of force and the need for a subjective collective measure of use of force when researching with police officers.

The meta-review conducted by Hollis (2018) provided some examples of how the use of force measure varies. Some measures included dichotomous responses of whether the use of force was used or not (e.g., Ariel et al., 1994) or the counts of force incidents at the census tract (e.g., Boivin & Obartel, 2017). Hollis (2018) demonstrates the deviation of approaches to measuring the use of force, bringing awareness to the need for a national database or a collective measure of how to measure the outcome of the use of force consistently.

The need for a nationwide database of the use of force within police departments has been publicly demanded by both researchers (Bolger, 2015; Engel, 2015; Fuller et al., 2015; Klahm & Tillyer, 2010; Morabito & Socia, 2015; Pontzer, 2021) and the general public (e.g., The Guardian; The Washington Post). The public has seen an apparent increase of unarmed persons with apparent signs of mental illness be harmed or killed by the police and demand more attention be paid to this.

The demands by the public for such a database seemed to be heard with the recent National Use of Force Data collection submitted to the Federal Bureau of Investigation (FBI). Use of force incidents is defined in the data as incidents that "occur when a law enforcement officer takes an action that results in someone's death or serious injury. Use of force incidents also include when a law enforcement officer fires a weapon at or in the direction of someone, even if that person isn't seriously harmed." For this data collection, the definition of serious bodily injury is "based in part on Chapter 18 United States Code Section 2246 (4) and means, 'bodily injury that involves a substantial risk of death, unconsciousness, protracted and obvious disfigurement, or protracted loss or impairment of the function of a bodily member, organ, or mental faculty.'" (National Use-of-Force Data Collection, 2019).

The National Use-of-Force Data Collection of voluntary data submitted to the FBI; began on January 1st, 2019, since all the recent high-profile cases and the mistrust that is gained based on the absence of information from police departments information on the use of force (Federal Bureau of Investigation Crime Data Explorer, 2021; Pontzer, 2021). As of 2022, 8,482 out of the 18,514 federal, state, local, and tribal law enforcement agencies volunteer to report use-of-force data (Federal Bureau of Investigation Crime Data Explorer, 2021). The FBI encourages agencies to participate by making the process as user-friendly as possible. With the data collection, the

public can download reports and see the input provided by the agencies. It will allow agencies' participation to help build a more transparent relationship with the public. The data collection is at the 40% threshold, which allows the FBI to release the first participant's collection of data they have received (National Use-of-Force Data Collection, 2019). The National Use-of-Force Data Collection (2019) will help fill gaps in the literature to understand better the use of force with police (Bolger, 2015; Engel, 2015; Fuller et al., 2015; Klahm & Tillyer, 2010; Morabito & Socia, 2015; Pontzer, 2021).

The Present Study

To have a better understanding of police perceptions with persons with a mental illness we ought to identify police officers' attitudes and how that impacts perceived dangerousness and predicted the use of force behavior. Additionally, we compared the attitudes of undergraduate college students in the Criminal Justice Department at Texas State University with the Law enforcement sample and explore potential differences across population samples to have a fresher perspective and since literature suggest majority of students who are in the criminal justice degree prefer a position with federal law enforcement (Collica-Cox & Furst, 2019). The study's findings may help highlight need for updates with current training with CIT (Browning et al., 2011; Mulay et al., 2016; Patch & Arrigo, 1999) and academic approaches when dealing with people with mental illness.

Results will answer the two following questions:

RQ 1. Do police officers' attitudes toward persons with a mental illness relate to their perceptions of dangerousness in citizen-police interaction, and does that impact their decisions about the types of force used?

RQ 2. Does this relationship differ among undergraduate students majoring in criminal

justice compared to law enforcement officers?

The hypothesis for the first research question is that more negative attitudes toward persons with a mental illness would be related to officers interpreting the scenarios as more dangerous and warranting more use of force. For the second question, the hypothesis is that students would have similar results to police officers' perceptions of dangerousness and use of force decisions.

II. METHODS

Participants

Student participants for this study initially included only Texas State University senior students enrolled in the capstone course of the Criminal Justice and Criminology Department and Law enforcement who voluntarily answered the survey sent via email recruitment using a Qualtrics link. However, it was later amended to include all Criminal Justice (CJ) undergraduate students who received research credit for course requirements. Additionally, participants were given the opportunity to be included in a raffle to win one of two \$25 Amazon gift cards. Participants were recruited then through the Student Research Participation (SONA) system. Participants were undergraduate students at Texas State University; no specific participant demographics are the focus of this study. Data were collected from a total of 174 criminal justice undergraduate participants ($M_{age} = 19.75$, $SD = 1.83$). Additional descriptive statistics for criminal justice undergraduate participants can be found in Table 1.

Law enforcement was recruited through the Advanced Law Enforcement Rapid Response Training (ALERRT) newsletter at Texas State University. ALERRT has a variation of training such as The Civilian Response to Active Shooter Events and Active Attack Integrated Response courses are meant to provide strategies and guidance to be able to generate plans to survive active shooting events using empirical research (Martindale & Blair, 2019). Officers enlisted in this newsletter have completed training relevant to interacting with persons with a mental illness. Recruitment was successful through a public post solicitation for this survey with the support of the Director of Research at ALERRT, Dr. Hunter Martindale. The newsletter was sent to the ALERRT mailing consisting of first responders that have been through ALERRT training; Newsletter recipients are from all 50 states and represent a wide spectrum of job duties.

Participants were given the opportunity to be included in a raffle to win one of ten \$25 Amazon gift cards. Data were collected from a total of 54 law enforcement participants ($M_{age}= 49.00$, $SD = 9.81$). Additional descriptive statistics for law enforcement participants can be found in Table 2.

Participants that were excluded from the analysis failed the attention check (i.e., “I read Instructions carefully. To show that you are reading these instructions, please leave this question blank”) based on recommendations of Maniaci and Rogge (2014) and Brühlman et al. (2020). Additionally, participants who completed less than 70% of the survey meaning that they answered less than 5 questions were excluded.

Material and Design

The study's single factor, between-subjects design included self-report surveys with random assignments to two conditions; the control condition consists of three vignettes that did not involve signs of mental illness. The second condition consisted of three vignettes with signs of mental illness (see Appendix). The measures included demographic questions, perceived dangerousness, use of force response, the Police Officers' Attitudes Towards Mental Illness Scale (Psarra et al., 2008), and additional training questions.

Demographic Questions

Basic demographics sought from sample, including age, gender (female/ male/ transgender/ another identity), and ethnicity (White or Caucasian/ Hispanic or Latino/ Black or African American/ Asian or Asian American/ American Indian or Alaskan Native / Other race. Law enforcement were additionally asked questions about years of experience, education, the type of area they patrol (urban, suburban, or rural), and an estimation of the population that they patrol. Criminal justice undergraduate students were asked basic demographic questions with the

addition of overall college completed credits, and whether they were graduating this semester.

Perceived Dangerousness and Use of Force

Vignettes were created using The Washington Post raw data set; I analyzed the 1,529 individuals with signs of mental illness and filtered the search to the 85 individuals with signs of mental illness and were unarmed. Within The Washington Post, most names had news clippings underneath the description of the situation; names were then confirmed and searched. The stories that had no news were then searched into Google by using the information given in the raw data set, searched with the keywords of name, location, and date of the individuals' report. Once I read about the scenes and the situations of the 85 individuals, I noted the behaviors and established patterns within the stories and recreated six vignettes with similar behavior, 911 service calls, and environments across the stories.

Qualtrics was set to randomize the vignettes there were 2 sets with 3 vignettes one set had signs of mental illness and the second set had no signs of illness. Descriptions of the vignettes were meant to be ambiguous in terms of other suspect characteristics such as race, gender and age. Vignettes were then followed by a 7-point Likert scale of level that they would rate the dangerousness of the individual participants were asked to what extent was the individual dangerous? With a 4-points Likert scale from Not dangerous (1) at all to very dangerous (4). The level of the use of force needed based on the facts of the scene participants were asked How likely is it that you would respond to this scenario in the following way? Responses included the criteria for the Use of Force continuum from the National Institute of Justice (2009) participants would indicate from extremely unlikely to extremely likely how they would respond to being present at the scene, verbal commands, bodily force to gain control of situation, less lethal technologies to gain control of the situation (blunt impact, chemical, conduct energy

device/taser), and lastly use lethal force. Additionally, participants were asked what gender do you think the individual was? Responses included male, female, not know and other which included a text entry option.

Police Officers' Attitudes Towards Mental Illness Scale

The Police Officers' Attitudes Towards Mental Illness Scale (POATMI; Psarra et al., 2008) has five subscales with 28 items total measured on a 5-point rating scale ranging from never (1) always (5), and do not know (NK) response. When analyses was conducted only the means between never (1) and always (5) were used, the variable of do not know was coded as missing. Original subscales had title include "policeman" based on the scale title policeman was replaced with police officers. The five subscales included: (1) police officers' answers concerning the mentally ill persons they accompany (e.g., present violent, dangerous, and threatening behavior to other people) which had a good internal consistency ($\alpha = .87$). (2) police officers' beliefs about people with grave psychiatric illness (e.g., can overcome their situation by themselves) which had an unacceptable internal consistency ($\alpha = .45$). (3) police officers' opinions about the dangerousness of the mentally ill (e.g., an ordinary person with mental illness is more or less dangerous as compared to a person who doesn't suffer from mental illness) which had a good consistency ($\alpha = .77$). (4) police officers' beliefs about the abilities of persons with mental illnesses (e.g., get married and have children) which had a good consistency ($\alpha = .92$). Lastly (5) police officers' answers concerning the transfer of the mentally ill (e.g., how often did you feel threatened) which had a questionable consistency ($\alpha = .69$). The items within each subscale were set to be displayed in random orders. Higher scores indicated more negative attitudes toward person with mental illness, lower scores indicated more positive attitudes. The subscales were presented in order as listed above but the items within the subscales were

randomized throughout survey. For frequency percentage tables of all subscales and details about which items were reverse coded see Appendix.

Psarra et al. (2008) scale demonstrated good internal consistency ($\alpha = .73$). For the current study, the internal consistency for all 28 items had good consistency ($\alpha = .81$).

Additional Demographic Questions About Training on the Job Regarding Mental Illness

After the Police Officers' Attitudes Towards Mental Illness Scale, participants responded to additional demographic questions. Police surveys asked three questions, “have you had recent training with Crisis Intervention Training (CIT),” “Has the current training helped you when dealing with people with mental health issues” and if they “would find more training in dealing with people with mental health issues helpful?” Students were asked two similar questions; however, they were be asked about courses about mental illness such as “would more courses relating to mental health issues be more helpful?”

III. PROCEDURES

Law enforcements were recruited via the ALERRT newsletter with the chance to enter a raffle for a chance to win one of the ten \$25 gift cards. The survey was voluntary and was accessible on any device with the use of Qualtrics.

Texas State University senior students enrolled in the capstone course of the Criminal Justice and Criminology Department were recruited by contacting the professors teaching the course. Professors were able to share the link of Qualtrics through Student Research Participation (SONA) system.

The first page of the survey included the informed consent with the IRB-approved ID #8250. Upon consent, participants were directed to the next page for them to complete the survey. After completion of the survey, student participants will automatically receive one research credit toward the research participation requirement for their Special Problems in CJ course within the School of Criminal Justice and Criminology. Both law enforcement and students had a message at the end asking if they would like the summary findings of the study and if they want to be added to the raffle of Amazon Gift cards if they do, they can provide an email address that will not be linked to the study.

Data Analysis

Preliminary data analysis ensured that all assumptions are met for statistical tests. Four simple mediation analyses were conducted to test the relationship between attitudes toward persons with a mental illness and the use of force while accounting for perceptions of dangerousness for a conceptual model of the analysis, see Figure 1. The analysis was based on the population sample and the presence or absence of signs of mental illness in the vignettes. For a simple mediation, a priori power analysis was conducted in G*Power (Faul et al., 2009) based

on the assumption of an effect size of $d = .02$, power = .80; this study required a minimum sample size of 311 to detect a significant effect for each sample. Effect size was set to small due to the lack of literature including effect sizes in similar studies (Hollis, 2018; Bolger, 2015).

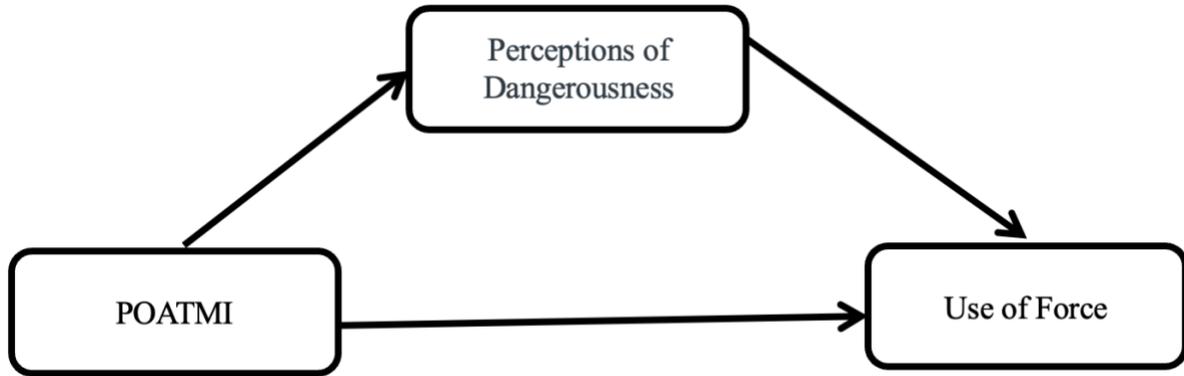


Figure 1

Conceptual Model for Simple Mediation

Note. POATMI = Police Officers' Attitude Toward the Mentally Ill

1. POATMI → Perception of Danger → Use of Force with the presence of signs of mental illness with Law Enforcement sample
2. POATMI → Perception of Danger → Use of Force with the absence of signs of mental illness with Law Enforcement sample
3. POATMI → Perception of Danger → Use of Force with the presence of signs of mental illness with undergraduate sample
4. POATMI → Perception of Danger → Use of Force with the absence of signs of mental illness with undergraduate sample

IV. RESULTS

Demographic Data

Numeric values for both samples are shown in *Table 1* and *Table 2* with their respected sample size (*N*). Exclusions for the analysis included participants that failed attention check (*n* = 34) and progress rate of survey was less than 70% (*n* = 23) that left the study with a total of 233 participants.

Table 1

Descriptive Characteristics of Texas State University Sample Using Frequency and Percent

Characteristics	Frequency	Relative Percent (%)
Gender		
Female	129	71.3
Male	49	27.1
Other	3	1.7
Age		
18 – 20	125	71.4
21 – 25	48	27.4
26 – 30	2	1.1
Race		
White or Caucasian	76	42.5
Hispanic or Latino	78	43.6
Black or African American	20	11.2
Asian or Asian American	3	1.7
Other Race	1	0.6
Completed Credits		
0 – 40	79	44.7
41 – 60	19	10.9
61 – 100	34	19.4
100 +	12	6.9
Unknown	35	19.9
Graduating		
Yes	9	5.1
No	169	94.9

Note. *N* = 179

Table 2***Descriptive Characteristics for Law Enforcement Sample Using Frequency and Percent***

Characteristics	Frequency	Relative Percent (%)
Gender		
Female	4	7.1
Male	49	87.5
Other	3	5.4
Age		
20 – 30	2	3.8
31 – 40	9	17.3
41 – 50	15	28.8
51 – 60	20	38.5
61 – 70	6	11.5
Race		
White or Caucasian	49	90.7
Hispanic or Latino	3	5.6
American Indian or Alaskan Native	1	1.9
Education		
High School Graduate	2	3.7
Some College	10	18.5
2 Year Degree	8	14.8
4 Year Degree	20	37.0
Professional Degree	12	22.2
Doctoral	2	3.7
Experience Years		
0 – 10	8	14.8
11 – 20	16	29.6
21 – 30	19	35.2
31 – 40	7	13.0
40 +	4	7.4
Patrol Population		
0 – 20,000	12	22.3
20,001 – 40,000	6	11.1
40,001 – 60,000	6	11.2
60,001 – 80,000	4	7.5
90,001 – 100,000	3	5.6
100,001 +	23	42.6
Description of Patrol Area		
Urban	19	35.2
Suburban	17	31.5
Rural	18	33.3

Note. N = 54

Preliminary Results

Data were analyzed using the extension of PROCESS on the (SPSS) software (IBM Corp, 2020). There was no violation of multivariate normality, homoscedasticity, linearity, and multicollinearity based on the histogram, P-Plot, scatterplot, and the collinearity statistics tolerance was above .4 and less than 10 for VIF. See Table 3 for descriptive statistics and correlations of the variables in the analysis.

In the bivariate correlations there was an overall significance within dangerousness and use of force when there was an absence in the vignettes of signs of mental illness. Additionally, there was a significance with perceptions with the Police Officers' Attitude Toward the Mentally Ill and use of force when there was presence of in the vignettes of signs with mental illness.

Table 3

Descriptive Statistics and Correlations Among Study Variables

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Danger – Absent	115	2.88	.37	-	.244*	.000	+	+	+
2. Use of Force – Absent	115	2.69	.38	.244*	-	.112	+	+	+
3. POATMI	233	3.08	.36	.000	.112	-	+	+	+
4. Danger – Present	118	2.98	.38				-	.105	-.110
5. Use of Force – Present	118	2.59	.48				.105	-	.216*
6. POATMI	233	3.08	.36				-.110	.216*	-

Note. *n* = Valid Participants. *M* = Mean; *SD* = Standard Deviation; POATMI = Police Officers' Attitude Toward the Mentally Ill. + = Separation of those who received vignettes with the signs of mental illness and those who received the vignettes with no signs of mental illness.

**p* < .05.

Primary Results

There will be 4 simple mediations analyzed based on the conceptual model in Figure 1.

Below are the paths, mental illness vignettes presence and specific population.

1. Police Officers' Attitude Toward the Mentally Ill → Perception of Danger → Use of Force with the presence of signs of mental illness with Law Enforcement sample.

2. Police Officers' Attitude Toward the Mentally Ill → Perception of Danger → Use of Force with the absence of signs of mental illness with Law Enforcement sample.
3. Police Officers' Attitude Toward the Mentally Ill → Perception of Danger → Use of Force With the presence of signs of mental illness with Texas State University undergraduate sample.
4. Police Officers' Attitude Toward the Mentally Ill → Perception of Danger → Use of Force With the absence of signs of mental illness with Texas State University undergraduate sample.

The mediation analysis was ran using an SPSS macro, PROCESS model 4, using 5,000 bootstrap samples for bias correction and to establish 95% confidence intervals. The first and second hypotheses stated that more negative attitudes toward mental health would be related to officers and students interpreting the scenarios as more dangerous and warranting more use of force, respectively. This hypothesis was not supported. Detailed numerical results of the mediation analysis are located in Table 4 and Figure 2.

For model 1, there was not a significant total effect of use of force on perceived police officers' attitudes toward mentally ill ($p = .82$, $R^2 = .00$). For path a, there was not a significance between perceived police officers' attitudes toward mentally ill and perceived dangerousness ($p = .15$). For path b, there was no significant relationship between perceived dangerousness and use of force ($p = .16$). When accounting for the mediator of perceived dangerousness, the direct effect of perceived police officers' attitudes toward mentally ill on use of force (c'path) was not significant ($p = .82$). Overall, the indirect effect was not significant 95% CI [-.34, .06].

For model 2, there was not a significant total effect of use of force on perceived police officers' attitudes toward mentally ill ($p = .80$, $R^2 = .00$). For path a, there was not a significance

between perceived police officers' attitudes toward mentally ill and perceived dangerousness ($p = .87$). For path b, there was no significant relationship between perceived dangerousness and use of force ($p = .33$). When accounting for the mediator of perceived dangerousness, the direct effect of perceived police officers' attitudes toward mentally ill on use of force (c'path) was not significant ($p = .78$). Overall, the indirect effect was not significant 95% CI [-.10, .12].

For model 3, there was not a significant total effect of use of force on perceived police officers' attitudes toward mentally ill ($p = .08$, $R^2 = .03$). For path a, there was not a significance between perceived police officers' attitudes toward mentally ill and perceived dangerousness ($p = .33$). For path b, there was no significant relationship between perceived dangerousness and use of force ($p = .45$). When accounting for the mediator of perceived dangerousness, the direct effect of perceived police officers' attitudes toward mentally ill on use of force (c'path) was not significant ($p = .07$). Overall, the indirect effect was not significant 95% CI [-.07, .03].

For model 4, there was not a significant total effect of use of force on perceived police officers' attitudes toward mentally ill ($p = .22$, $R^2 = .02$). For path a, there was not a significance between perceived police officers' attitudes toward mentally ill and perceived dangerousness ($p = .97$). For path b, there was a significant relationship between perceived dangerousness and use of force ($p = .005$). Such that the more perceived dangerousness the higher the perceived use of force. When accounting for the mediator of perceived dangerousness, the direct effect of perceived police officers' attitudes toward mentally ill on use of force (c'path) was not significant ($p = .19$). Overall, the indirect effect was not significant 95% CI [-.10, .06].

Table 4***Regression Coefficients from Mediation Analysis***

Effect (Path)	n	B	SE	LLCI	ULCI
Model 1	28				
POATMI → Force (c)		.06	.24	-.44	.56
POATMI → Danger (a)		-.37	.25	-.87	.14
Danger → Force (b)		.28	.19	-.12	.67
POATMI → Force (c')		.16	.25	-.35	.67
Model 2	26				
POATMI → Force (c)		-.05	.20	-.45	.35
POATMI → Danger (a)		.04	.26	-.50	.59
Danger → Force (b)		.15	.15	-.16	.46
POATMI → Force (c')		-.06	.20	-.46	.35
Model 3	90				
POATMI → Force (c)		.24	.14	-.03	.52
POATMI → Danger (a)		-.11	.11	-.33	.11
Danger → Force (b)		.10	.13	-.16	.36
POATMI → Force (c')		.25	.13	-.02	.53
Model 4	89				
POATMI → Force (c)		.14	.11	-.08	.35
POATMI → Danger (a)		-.00	.10	-.21	.20
Danger → Force (b)		.31*	.11	.09	.53
POATMI → Force (c')		.14	.11	-.07	.35

Note. *n* = Valid Participants, POATMI = Police Officers' Attitude Toward the Mentally Ill, Force = Perceived Use of Force, Danger = Perceived Dangerousness. LLCI = Lower limit Confidence Intervals, ULCL = Upper-Level Confidence Interval, B = Unstandardized Coefficient. SE = Standard Error.

1. Presence of signs of mental illness with Law Enforcement sample
2. Absence of signs of mental illness with Law Enforcement sample
3. Presence of signs of mental illness with undergraduate sample
4. Absence of signs of mental illness with undergraduate sample

**p* < .05.

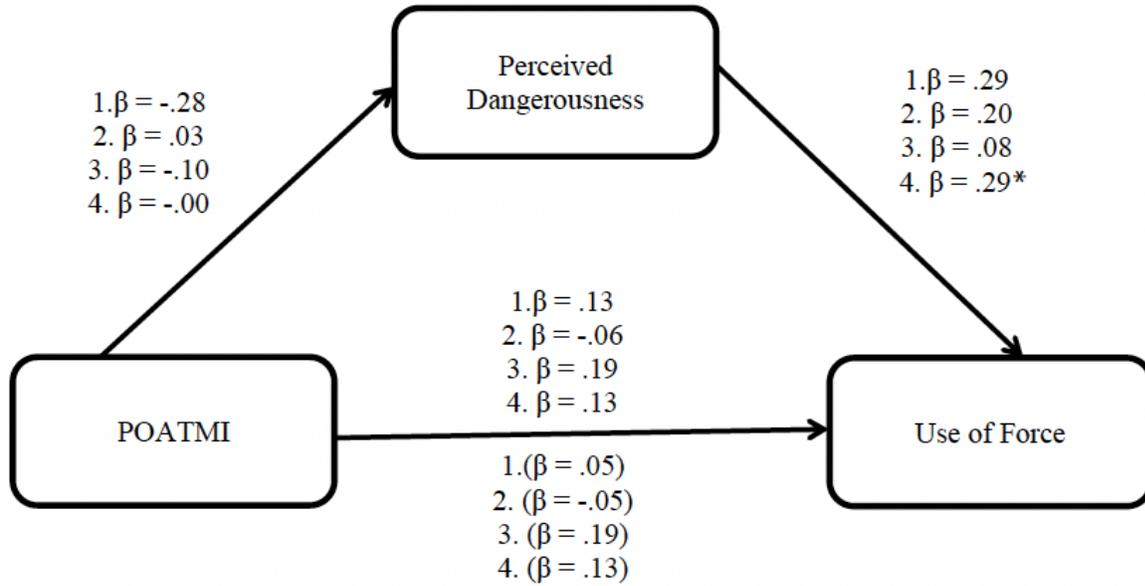


Figure 2

Mediation Effects of Perceived Dangerousness on the Relationship Between Police Officers' Attitude Toward the Mentally Ill and Use of Force.

Attitude Toward the Mentally Ill and Use of Force.

Note. Note. POATMI = Police Officers' Attitude Toward the Mentally Ill. The number in parathesis is the effect of the predictor variable on the criterion variable with the mediation in the model. This figure displays the mediating effects of perceived dangerousness on the relationship between Police Officers' Attitude Toward the Mentally Ill and use of force.

* $p < .05$

1. Presence of signs of mental illness with Law Enforcement sample
2. Absence of signs of mental illness with Law Enforcement sample
3. Presence of signs of mental illness with undergraduate sample
4. Absence of signs of mental illness with undergraduate sample

V. DISCUSSION

The hypotheses for the current study stated that more negative attitudes toward mental health would be related to officers and students interpreting the scenarios as more dangerous and warranting more use of force, respectively. The results did not support the hypothesis. However, the study find that the criminal justice undergraduate sample had a significant relationship between perceived dangerousness and the use of force, meaning that the more perceived dangerousness, the higher the perceived use of force. The cause for the significance can include a variety of factors, such as the openness of participants, years of experience, age differences, education levels, and gender can be some of the factors that impacted the level of significance. Most student sample demographics were females, 18-20 years old, Hispanic, and had overall credits from 0-40, indicating that they would be classified as first- or second-year students based on the university degree plan. The law enforcement sample was male, from 51-60 years old, white or Caucasian, with a professional degree, 21-30 years of experience, with a patrol population size of 100,001+, mainly urban patrol areas.

There was a significant correlation within the overall dangerousness and use of force when there was an absence in the vignettes of signs of mental illness. As well as was a significance with perceptions with the Police Officers' Attitude Toward the Mentally Ill and use of force when there was presence of in the vignettes of signs with mental illness. Indicating that there is a correlation within these variables overall, but the division of the samples had an impact on the specific significance.

There have been various ways the use of force has been analyzed as an outcome in literature, considering correlations of encounter, suspect, officer, and community characteristics (Bolger, 2014; Hollis, 2018). However, these studies findings have been contradicting and hard to

replicate due to methodological weaknesses, differences in the use of force definitions (Bolger, 2014).

Additionally, the current study's findings had similarities with Psarra et al. (2008) Police Officers' Attitudes Towards Mental Illness Scale. When law enforcement answered that mentally ill persons, they accompany present violent, dangerous, and threatening behavior to other people, 50% said quite often. Furthermore, the mentally ill persons you accompany are dangerous to themselves, 51.9% said quite often. There were differences when asked: an ordinary person with mental illness is more or less dangerous as compared to a person who doesn't suffer from mental illness present study, 55.6% answered about the same, whereas in Psarra et al. (2008) majority answered more. When asked whether the mentally ill received medication or not, they are equally dangerous; in the present study majority said about the same (35.8%), whereas Psarra et al. (2008) majority of their sample said much less (42.3%). Differences could be explained by the variability of samples Psarra et al. (2008) had Greek police officers who handled the transfer procedure of individuals to emergency departments of a psychiatric hospital and primarily dealt with non-compliant and violent individuals with psychiatric disorders (Psarra et al., 2008). On the contrary, the current sample had a broader law enforcement sample with various demographics, patrol sizes and years of experience.

The participants were asked what gender do you think the individual was. Responses included male, female, not know and other which included a text entry option. Within the overall participants of the study, majority responded to males in all scenarios except for the third vignette with signs of mental illness. The third scenario with signs of mental illness included “acting erratically,” shouting irrationally, throwing and breaking stuff around the apartment, and shouting “I want to die” multiple times. For that specific vignettes majority said not know, and

female, the male option was the lowest one for males. For all vignettes used in the study please refer to the Appendix.

Including undergraduate criminal justice students in the current study gives a fresher perspective of students' perceptions of individuals with mental illness. Tontodonato (2006) discussed some of the reasons students take on a criminal justice as a major the top three reasons were being interested in the subject, because of career plans and being interested in the law or law school in addition the other reasons why students were in the CJ path was because they were interested in policing and wanted to help others. Collica-Cox and Furst (2019) found that undergraduate criminal justice students preferred federal law enforcement as the most desirable position in the criminal justice field followed by attorneys and local law enforcement.

Most criminal justice education focuses on topics such as cops, courts, and corrections with the requirements of research methods, statistics, theory, criminal law, ethics, and juvenile justice (Mulvey & Larson, 2017). However, a review from Mulvey & Larson, 2017 found that 6.25% of 641 undergraduate criminal justice programs throughout the country offered a course on the intersection of mental illness and the criminal justice system in 2016 based on handbooks, course catalogs, and class descriptions. In the current study, undergraduate criminal justice students were asked if they had taken courses that would help deal with people with mental health issues, the majority said no (60.9%). When asked if they would find more courses related to mental health issues more helpful, the majority responded strongly agree (63.7%). Findings can help fill the gap in studies examining students' and professionals' attitudes toward mental illness (Mulvey & Larson, 2017; Scollione & Holdan, 2020).

Limitations

Since the current study had more of a subjective approach with the inclusion of the hypothetical vignettes perhaps a more objective analysis would have benefitted the current study, including analyzing data from the National Use of force collection now that more agencies have volunteered to submit use-of-force data (National Use-of-Force Data Collection, 2019). Taking a more objective approach could also help with limited resources, but that would be more facile and robust than attempting to recruit law enforcement into participating in surveys which have historically been a challenging population to sample. Furthermore, a question could have been added after the survey asking law enforcement if this scenario was interpreted as a possible call when responding to calls for service with a person with mental illness.

Additionally, the sample size for law enforcement is relatively small, and the conditions limit our sample, leading to not having a representative sample of law enforcement. The current study between subject design involved random assignment participants in one of two conditions, needed a larger sample size to draw significant conclusions from the analysis.

Law enforcement that participated in the training were from a training site at Texas State University. Those accessing the ALERRT newsletter even though it is a convenience sample because of the available resources this could have led to sampling bias for the training that is covered in the courses and the material that is covered such as active shooters. For instance, 52.8% would find more training when dealing with people with mental health issues helpful. This could also add to social desirability bias where both law enforcement and criminal justice students answered in a manner that looks favorable to them.

Future Studies

Future studies need to examine the FBI National Use-of-Force Data Collection and analyze differences and similarities of use of force instances and individuals' characteristics since recent police departments are providing these incidents to the public and see if that correlates with literature that has used of force as a predictor or dependent variable. There is a need to examine the current intersection of criminal justice and psychology courses within the criminal justice department because there is a desire to learn more about individuals with mental health which can then impact decision-making if they do end up going the law enforcement path.

Alternatively, another approach could be using a different case of individuals that had shown signs of mental illness from the Washington Post database and using body camera footage and measure biometric measures such as blood pressure and heart rate and compare those findings with self-report studies measuring perceptions of persons with a mental illness. Doing this could examine the intersection between mental illness, gender, and race, and there could be apparent differences between age and years of experience in law enforcement. Adding scales that could detect deceptions and selective bias would also increase the reliability and validity of future studies.

APPENDIX

Mental Health Scenarios with Signs of Mental Illness

Scenario 1

911 operator took a disturbance call from a nearby residence; the roommate told the call taker that they needed help removing an individual from the household. The individual also stated that the roommate was destroying property by throwing plates, punching walls, was also shouting obscenities and the individual was concerned for their safety. The roommate was also shouting that “people were out to get them” and making growling sounds, threatening to hurt themselves.

Scenario 2

911 operator took a disturbance call; the caller stated that an individual at Stoneridge Park was shirtless, acting “very high, or extremely drunk” and suspicious. The individual also appeared to be upset and would start crying in the middle of the street, and then they would get agitated and start screaming and shouting at everyone passing. The caller also stated the individual started urinating by the trees to “keep people away.”

Scenario 3

911 operator took a disturbance call; from a nearby residence; 911 caller identified themselves as an apartment manager calling because a tenant was “acting erratically” The individual was shouting irrationally, throwing, and breaking stuff around the apartment, the caller could hear the individual shouting “I want to die” multiple times.

Mental Health Scenarios Without Signs of Mental Illness

Scenario 1

911 operator took a disturbance call from a nearby residence; the roommate told the call taker that they needed help removing an individual from the household. The individual also stated that the roommate was destroying property by throwing plates, punching walls, was also shouting obscenities, and making growling sounds the individual making the call was concerned for their safety.

Scenario 2

911 operator took a disturbance call; the caller stated that an individual at Stoneridge Park was shirtless, acting “very high, or extremely drunk” and suspicious. The individual also appeared to be upset and would start crying in the middle of the street, and then they would get agitated and start screaming and shouting at everyone passing by.

Scenario 3

911 operator took a disturbance call; from a nearby residence; 911 caller identified themselves as an apartment manager calling because a tenant who was “acting erratically” The individual was shouting irrationally, throwing, and breaking stuff around the apartment, the caller could hear the individual shouting profanities across his room.

Table A1

Police officers answers concerning the mentally ill persons they accompany.													
The mentally ill persons who you accompany	Never %		Rarely %		Quite Often %		Almost Always %		Always %		NK %		
	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST	
1.1 Present violent, dangerous and threatening behavior to other people	-	20.7	48.1	42.5	50.0	21.2	1.9	3.9	-	2.8	-	8.9	
1.2 Commit crimes	-	17.4	53.8	57.3	38.5	78.7	-	2.8	-	1.1	7.7	17.4	
1.3 Are public nuisance	-	19.7	26.9	32.0	55.8	24.7	13.5	5.6	1.9	1.7	1.9	16.3	
1.4 Cause problems to their families	-	6.7	-	23.5	57.7	36.3	38.5	15.6	1.9	5.0	1.9	12.8	
1.5 Are dangerous to themselves	-	7.3	34.6	22.9	51.9	34.1	11.5	20.1	-	7.3	1.9	8.4	
1.6 Have sloppy and dirty appearance	-	8.9	32.7	41.9	55.8	26.8	9.6	6.7	-	1.1	1.9	14.5	
1.7 Suffer from various symptoms (e.g. hear voices or talk to themselves)	-	16.3	19.2	26.4	65.4	28.1	9.6	12.4	3.8	5.1	1.9	11.8	
1.8 Are unpredictable	-	2.2	13.5	15.7	50.0	38.8	30.8	24.2	5.8	11.8	-	7.3	
*1.9 Have insight to their situation and can make rational decisions concerning their life	1.9	4.5	55.8	32.8	38.5	28.8	1.9	23.2	1.9	2.8	-	7.9	

Note. LE= Law Enforcement, ST= Students.

N for Law Enforcement = 54

N for Students = 179

* Reverse coded

Table A2

Police officers beliefs about people with grave psychiatric illness												
Do you believe that individuals with grave psychiatric illness	Never %		Rarely %		Quite Often %		Almost Always %		Always %		NK %	
	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST
*2.1 Can overcome their situation by themselves	30.8	19.0	63.5	58.1	3.8	10.6	-	5.6	-	1.7	1.9	5.0
2.2 Need absolutely doctors medication to control their symptoms	-	1.7	9.4	8.9	52.8	45.3	22.6	25.1	7.5	8.9	7.5	10.1
2.3 Can be treated successfully as outpatients with the help and observation of special doctors and services	1.9	1.7	18.9	10.1	49.1	39.3	22.6	31.5	-	12.4	7.5	5.1
2.4 Need hospitalization only during the acute phase of the symptoms	-	2.2	15.1	21.2	34.0	40.2	32.1	17.9	13.2	2.8	5.7	15.6
2.5 Need continuous hospitalization	-	6.8	54.7	28.8	26.4	36.2	9.4	11.9	3.8	3.4	5.7	13.0
2.6 Their situation deteriorates gradually in time	1.9	2.8	1.9	30.7	64.2	31.3	20.8	17.0	7.5	3.4	3.8	14.8

Note. LE= Law Enforcement, ST= Students.

N for Law Enforcement = 54

N for Students = 179

* Reverse Coded

Table A3

Police officers opinions about the dangerousness of the mentally ill												
Based on your opinion	Much Less %		Less %		About the Same %		More %		Much More %		NK %	
	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST
*3.1 An ordinary person with mental illness is more or less dangerous as compared to a person who doesn't suffer from mental illness	-	1.1	5.6	8.9	55.6	44.1	25.9	36.3	1.9	2.8	11.1	6.7
3.2 Especially a person brought in a psychiatric service is more or less dangerous than a person who is prosecuted for a criminal act	1.9	7.3	14.8	34.6	55.6	34.6	7.4	11.7	1.9	1.7	18.5	10.1
3.3 Whether the mentally ill receive medication or not, they are equally dangerous	7.5	13.4	30.2	34.1	35.8	27.4	7.5	9.5	-	1.1	18.9	14.5

Note. LE= Law Enforcement, ST= Students.

N for Law Enforcement = 54

N for Students = 179

* Reverse Coded

Table A4

Police officers beliefs about the abilities of persons with mental illnesses												
Do you believe that the mentally ill are able to	Never %		Rarely %		Quite Often %		Almost Always %		Always %		NK %	
	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST
4.1 Work	-	.6	9.3	9.0	42.6	33.3	37.0	29.4	11.1	27.1	-	.6
4.2 Get married and have children	-	.6	9.3	8.4	48.1	24.6	27.8	30.2	11.1	33.5	3.7	2.8
4.3 Live autonomously	-	-	9.3	13.5	59.3	32.0	22.2	27.0	9.3	22.5	-	5.1
4.4 Have friends	-	-	7.4	5.0	31.5	23.5	40.7	32.4	20.4	37.4	-	1.7
4.5 Be creative	-	-	3.7	3.9	38.9	18.0	37.0	33.1	20.4	43.8	-	1.1

Note. LE= Law Enforcement, ST= Students.
 N for Law Enforcement = 54
 N for Students = 179

Table A5

Police officers answers concerning the transfer of the mentally ill													
During the transfer of the mentally ill	Never %		Rarely %		Quite Often %		Almost Always %		Always %		NK %		
	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST	LE	ST	
5.1 How often did you feel threatened	3.7	11.2	75.9	43.0	14.8	17.9	3.7	2.8	-	.6	1.9	24.6	
5.2 How often did you feel that there is danger of the persons committing suicide or hurting themselves	-	2.8	28.3	15.2	56.6	38.8	11.3	19.7	1.9	5.6	1.9	18.0	
5.3 How often the use of violence is needed in order for the persons to be transferred	1.9	9.6	79.6	48.3	18.5	18.5	-	2.8	-	1.1	-	19.7	
5.4 Is it necessary to conduct body search in order to remove dangerous objects	-	2.3	14.8	6.2	11.1	27.1	11.1	22.6	59.3	31.1	3.7	10.7	
5.5 The use of handcuffs is/becomes necessary	-	6.2	11.1	31.5	46.3	30.3	18.5	13.5	22.2	3.4	1.9	15.2	

Note. LE= Law Enforcement, ST= Students.
 N for Law Enforcement = 54
 N for Students = 179

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