

ANTISOCIAL PERSONALITY DISORDER VS. PSYCHOPATHY:  
AN ANALYSIS OF THE LITERATURE

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ANTISOCIAL PERSONALITY DISORDER VS. PSYCHOPATHY:  
AN ANALYSIS OF THE LITERATURE

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THESIS ABSTRACT

ANTISOCIAL PERSONALITY DISORDER VS. PSYCHOPATHY:  
AN ANALYSIS OF THE LITERATURE

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*Antisocial Personality Disorder* and *Psychopathy* are disorders related by their associations with criminal behavior. *Antisocial Personality Disorder* is a pervasive pattern of disregard for the rights of others beginning in childhood and continuing into adulthood. *Psychopathy* is characterized by a variety of affective and behavioral traits, such as impulsivity, lack of remorse or empathy, and irresponsibility. Although their histories are intertwined, some researchers, such as Hare, have considered the disorders separate since 1980 and the inclusion of *Antisocial Personality Disorder* in the *DSM-III*. Yet there are some researchers who still consider these disorders linked, such as being two measurement criteria of the same construct, or two sides of the same coin, so to speak. Assuming *ASPD* and *Psychopathy* were separate disorders, it could be expected for the research literature of each to be also distinctly separate from one another.

This study was an attempt to analyze and define the possible differences between the research literatures for *Antisocial Personality Disorder* and *Psychopathy*. Seventy-seven articles were selected from eight top psychological journals for four specific years covering the last three decades of research to be used for this study. The articles were separated into categories by diagnostic focus and split by their country of origin (American or other country) as well as the association of the publication in which they appeared (American vs. International). Results indicated that there was some overlap between the two research literatures due to the presence of articles using both diagnoses as well as articles using other, alternative diagnoses, such as *Sociopathy*. Also, it was expected that the *ASPD* literature would mostly be associated with American entities, such as authors and journals, and that *Psychopathy* would be concentrated in International journals by International authors. Results showed that, again, there was overlap in this area, as well.

Style manual or journal used: Publication Manual of the American Psychological Association, Fifth Edition (2001)

Computer software used: Microsoft Word Release 10, Statistical Packages for the Social Sciences (SPSS) for Windows Release 12.0, Microsoft Excel Release 10

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## INTRODUCTION

*Antisocial Personality Disorder* is a disorder characterized as a pervasive pattern of disregard for, and violation of, the rights of others (APA, 1994). This pattern should have begun in childhood or early adolescence and continued into adulthood. Individuals diagnosed with this disorder can exhibit a range of behaviors, including: lack of remorse, social irresponsibility, deceitfulness, repeated, or frequent lying, lack of empathy, and aggressiveness, to name a few. According to the *Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> Edition (DSM-IV)*, *Antisocial Personality Disorder*, or *ASPD*, occurs in approximately 3% of males and 1% of females in the population (APA, 1994). People with this disorder also frequently engage in behavior that is illegal or law-breaking, such as destruction of property, stealing, or harassment. Despite their continued participation in illegal activities, *ASPD*-diagnosed individuals are not always in trouble with the police. According to the National Institute of Mental Health's Epidemiologic Catchment Area (ECA) study, only 47% of those in the study who met criteria for *ASPD* had a significant arrest record (Robins, 1991). The ECA study was designed to collect data on the prevalence and incidence of mental illness and was conducted over a five year span, from 1980-1985 (Robins, 1991). However, Black and Larsen (2000) reported that almost 80% of men and 65% of women in U.S. prisons meet the criteria for *ASPD*, meaning that the disorder is prevalent among those who are actively criminal.

*Psychopathy*, a disorder similar in some respects to *ASPD*, has been defined as a constellation of affective, interpersonal, and behavioral characteristics. Some of the traits of a psychopath include, but are not limited to: impulsivity, lack of empathy or guilt, manipulateness, lack of depth of emotion, and a persistent violation of social norms (Hare, 1993). Although these traits seem similar to those listed above for the diagnosis of *ASPD*, Robert Hare, a significant contributor to the literature on *Psychopathy*, has argued that though "...most psychopaths meet the criteria for *ASPD*...most individuals with *ASPD* are not psychopaths," (Hare, 1996). *Psychopathy* has been estimated to occur in about 1% of the population, or in approximately 3 million people (Hare, 1999). Hare recorded in his 1978 book that during the 50's and 60's, the terms *Sociopathy* and *Psychopathy* were used in the research literature and not *Antisocial Personality*. The distinction between *Psychopathy* and *ASPD*, as he saw it, only began to appear in the late 1970's and early 1980's.

The histories of *Psychopathy* and *ASPD* in their development as diagnoses are somewhat intertwined. Philippe Pinel, a noted 19<sup>th</sup> century physician and early psychiatrist, worked with some patients who displayed explosive and irrational outbursts of violence. These individuals, however, did not exhibit the delusions that were typically associated with "insanity" and were, instead, fully aware of their actions and surroundings. Pinel diagnosed these individuals as having *manie sans delire* or "mania without delirium". He continued to use this term to describe patients with violent outbursts who appeared to have no other underlying or accompanying psychopathology (Robinson, 1977). In 1835, James Prichard, a Scottish physician, coined the term *moral insanity* to describe those individuals who "...appear to be incapable of conducting

themselves with decency and propriety...”, but whose intellectual functioning was not impaired due to injury nor showed any other deficits (Black, 1999). German psychiatrists also contributed to this history. In 1891, Koch first used the term ‘psychopathic’ to describe a heterogeneous collection of what is now called personality disorders. Then, in the early 1900’s, Kraepelin used the term *Psychopathic Personality* specifically to describe an immoral or amoral criminal type (Lykken, 1995).

In 1923, Schneider, a German psychiatrist, provided a broader definition of *Psychopathic Personality*. He defined these personalities as “...abnormal personalities who either suffer personally because of their abnormality or make a community suffer for it.” In his work, he described ten varieties of abnormal personality, some of which were similar to concepts included in the *Diagnostic and Statistical Manual of Mental Disorders, 3<sup>rd</sup> edition (DSM-III)* and the *International Classification of Diseases, 10<sup>th</sup> revision (ICD-10)* (Livesley et al., 1994). Also at this time, the term *Sociopath* was introduced by an American psychiatrist, G.E. Partridge, in 1930. Partridge coined the term because he noted that these individuals commonly violated social norms of behavior.

Jumping to 1941, Hervey Cleckley originally published *The Mask of Sanity* (Cleckley, 1941), which he later revised four different times. This book played an important role in the history of *Psychopathy*. In his book, Cleckley, a professor of psychiatry and neurology at the Medical College of Georgia, catalogued the disorder in a unique fashion. He offered vignette case studies relating the stories of a variety of individuals he identified as psychopaths. Through these case studies as well as other chapters describing how psychopaths may look in the guise of everyday people, he

defined the traits he felt typified the psychopath. Cleckley characterized the psychopath as lacking the restraining effect of conscience and empathic concern for other people. He attributed this lack of restraint not to a lack of socializing experiences, however, but due to a psychological abnormality that makes socialization difficult for the psychopath. He went on to say that the psychopath does not correctly learn the moral attitudes and inhibitions of behavior that most individuals learn. Cleckley likened this to *semantic aphasia*, a condition that sometimes occurs in patients with a brain injury where they are able to speak coherently, yet seem incapable of comprehending the meaning of their own words.

In 1952, the American Psychological Association published the first edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. *Sociopathic Personality Disturbance* was a diagnostic category within the first edition of the *DSM*. Four subcategories of *SPD* were included, as well: *Antisocial Reaction*, *Dyssocial Reaction*, *Sexual Deviations*, and *Addiction*. There were no actual diagnostic criteria for *Antisocial Reaction* in the *DSM-I*. The term was used to refer to chronically antisocial individuals who were always in trouble, who lacked a sense of responsibility and judgment, and who frequently were callous and emotionally immature as well as some other characteristics. At this time, the concepts of *Psychopathy*, as defined by Cleckley's criteria and *Antisocial Reaction* were, virtually, the same, although the name was different. In fact, in the second edition of his book, *Mask of Sanity* (1955), Cleckley observed that he felt psychiatrists used the slang term of psychopath "...in silent recognition of the absurdities in our official categories..."

The *DSM-II* was published in 1968 and there were some changes to the diagnostic categories. *Dyssocial Reaction* was moved to be listed under ‘conditions without manifest psychiatric disorder’. This was notable because the term ‘dyssocial’ resurfaces later as a diagnosis, *Dyssocial Personality Disorder*, in the *ICD*. Most importantly, *Sociopathic Personality Disturbance* from the *DSM-I* was replaced by *Antisocial Personality* in the *DSM-II*. This concept was not the same as the current diagnosis of *Antisocial Personality Disorder*, which was introduced in the *DSM-III*. At that time, the concepts of *Antisocial Personality* and *Psychopathy* were very similar to one another. *Antisocial Personality* did not, as yet, have any specific diagnostic criteria and instead was still used to refer to individuals who exhibited certain antisocial traits, such as impulsivity and irresponsibility, much like *Psychopathy* used trait-based criteria for diagnosis. As the 70’s approached, though, research began to be conducted that would later provide distinctions between the continuing concept of *Psychopathy* and the new diagnosis of *Antisocial Personality Disorder*.

The Europeans had their own system of classification and, up to this point, there was not much variation between their system and the American system in the *DSM* manuals. The World Health Organization in 1948 adopted the *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*. Like the *DSM-I*, the Europeans had wanted to provide a classification of mental disorders so they added a chapter to the manual and renamed it the *International Classification of Diseases, Injuries, and Causes of Death (ICD-6)* (WHO, 1948). This section of mental disorders consisted of ten categories of psychosis, nine categories of psychoneurosis, and seven categories of disorders of character and behavior (Gruenberg et al., 2005). The

*ICD-7* was published in 1955, but was not internationally accepted so revisions to this text were undertaken by the WHO (Gruenberg et al., 2005). In an effort to improve classification systems, American psychiatrists worked in conjunction with European psychiatrists on the next revision. The *ICD-8* was approved by the WHO in 1966 and published in 1968, the same year as the *DSM-II*. The similarities between the two manuals, such as the inclusion of the diagnostic concept of *Antisocial Personality*, were a direct result of the collaboration of the American and European scientists to upgrade the mental disorder classification system. However, developments in the field would soon create a split between the two.

Lee Robins' research of deviant children published in 1966 strongly influenced later formulations of *Antisocial Personality Disorder*. Robins' study moved away from interpersonal and affective trait-based criteria to a behavioral standard. Robins stated that many in the field thought that these interpersonal and affective traits were difficult to accurately assess, therefore, criteria based on behavior that could be objectively observed was more logical. At the time of the initiation of her research, there were no published diagnostic criteria for the diagnosis of *Sociopathic Personality*. As previously mentioned, the *DSM-I*, the diagnostic manual in use at the time, gave a definition of the disorder listing many interpersonal traits or characteristics of someone with the disorder, but no criteria for diagnosis. As a result of the lack of specific criteria, the Robins' study had to develop a way to accurately assess and diagnose the adults that they interviewed. She identified 19 general life areas of personal behavior representing many facets of life that could be objectively observed for severe or abnormal rates of occurrence and that criteria had to be met in at least five of these areas for a diagnosis to be made. These behaviors

included poor work history, repeated arrests, drug use and/or heavy drinking, sexual promiscuity, use of aliases, and many others. Once a behavior reached the point, or number of occurrences, where it was significant, the level of severity was determined. Some examples of concrete behaviors that characterized the *Sociopathic Personality* were, for instance, 3 or more non-traffic arrests and six or more of the items related to poor work history, as well as evidence of the use of false names and/or drug addiction.

Another important aspect of the Robins study was that it provided evidence of a link between adult and childhood antisocial behaviors. The study was unique in its approach to gathering the subjects for its research. Instead of only interviewing adults and relying on their memory of childhood occurrences of ‘bad’ behavior, the researchers selected children from the old records of a local clinic who were referred for various reasons (minor theft, truancy, etc...), matched them children from a local school, and found these individuals as adults and determined their present state of mental health. The resulting data led Robins to consider *Sociopathic Personality* a ‘unitary syndrome’ that began in childhood (Rutherford et al., 1999). Finally, Robins noted in her book that she used the term *Sociopathic Personality* because the name closely resembled the older, more widely used term of *Psychopathic Personality* about which Cleckley had been writing. However, she stated that the actual construct used in her study closely approximated the subcategory of *Antisocial Reaction* from the *DSM-I*. Robins felt that an emphasis on the antisocial behaviors characteristic of the disorder was necessary and more reliable for assessment, and so created a definition for this concept that moved away from the trait-based definition that Cleckley provided.

At the same time that Robins was working on her study, another researcher was also making advances in the field, but in a different direction. Robert Hare had been working on *Psychopathy* during the 1960's and had written that he noticed there was not much empirical research regarding *Psychopathy* at that time. In 1970, Hare published his book, *Psychopathy: Theory and Research*, in which he presented his opinion that there were no assessment tools that could accurately measure *Psychopathy*, at that time. With this in mind, Hare compiled a twenty-two item list of personality traits that were based on the traits that Cleckley originally deemed characteristic of the psychopath, such as impulsivity and lack of empathy. Cleckley's work was credited by Robert Hare (1995) as contributing significantly to his work and to the development of *Psychopathy* as a clinical construct defined by a constellation of interpersonal and affective characteristics. Each item on his list was to be scored on a three-point rating scale: 0 if none of the item applied, 1 if there were some areas where the trait was exhibited, and 2 if the trait were demonstrated in many areas of the individual's life. Hare published this scoring system in 1980 as the Psychopathy Checklist (PCL). This list was meant to provide an empirically derived set of characteristics to be used in the diagnosis of *Psychopathy*.

Meanwhile, in 1972, the Feighner criteria, published by a group of psychiatrists at Washington University in St. Louis, were expanding on Robins' idea of using a specific set of behaviors for diagnosis, including a childhood component. The Feighner criteria required the early onset of antisocial behavior. Specifically, one type of antisocial behavior before age 15, such as persistent truancy, had to be present in order for a diagnosis of *Antisocial Personality* to be made. The Research Diagnostic Criteria, RDC (1978), for *Antisocial Personality Disorder*, developed by Spitzer, Endicott, and E.

Robins, continued to refine the behavioral referents that were used as criteria. The RDC required the early onset of at least 3 types of antisocial behaviors before age 18, with at least one of these present before age 15. The next step in the evolution of *ASPD* and *Psychopathy* proved to be the critical one.

The *DSM-III* (1980) and the *DSM-III-R* (1987), heavily influenced by the research of Robins, completed the separation from *Psychopathy* (Hare, 1991). In the *DSM-III*, *Antisocial Personality Disorder* required the presence of 3 or more antisocial behaviors before age 15 and focused on persistent violations of social norms, such as lying, stealing, and arrests (Hare, 1996). The connection between childhood and future adult behavior in Robins' study, as well as the contributions of the Feighner criteria and the RDC, were the impetus for the inclusion of a childhood component as a criterion for *Antisocial Personality Disorder* (Widiger et al., 1996). Personality disorders as a whole were separated from other disorders and assigned to a different level, Axis II, in the multi-axial system that the APA established in the manual. According to Hare et al. (1991), this represented a significant break from clinical tradition as well as from the international nomenclature. The *DSM-III* and *DSM-III-R* now contained specific criteria for the diagnosis of all the disorders therein. The *ICD-9*, however, still gave descriptions of abnormal mental experiences or behavior that would act as a frame of reference for clinicians to use in diagnosis.

Also occurring during this time, Hare revised his Psychopathy Checklist by reducing it to twenty items and published it in 1985 as the Psychopathy Checklist-Revised (PCL-R) with a later version including an instructional manual being published in 1991. He stated that the diagnostic category provided by the *DSM* manuals, while

having good reliability, had dubious validity and "...lacked congruence with the other, well-established conceptions of *Psychopathy*," (Hare, 1996). He stated that the criteria for *Antisocial Personality Disorder* were not appropriate to use in assessing *Psychopathy* because of the absence of personality traits. He, also, stated that this omission of personality traits allowed many antisocial individuals with different attitudes and personalities to receive the same diagnosis. Hare conducted several studies within prison populations in order to show the differences between the rates of diagnosis amongst criminals. The results of these studies indicated that *ASPD* was diagnosed in approximately 65%-75% of the prison population, whereas only 15% met the criteria for *Psychopathy*. To Hare, this was indicative of the lack of trait-based criteria in *ASPD* and highlighted the differences between *ASPD* and *Psychopathy*.

So now, in Hare's opinion, there existed two separate disorders, *ASPD* and *Psychopathy*, each with their own distinct criteria as well as measurement tool, the *DSM-III* and *DSM-III-R* for *ASPD* and the *PCL-R* for *Psychopathy*. But complicating this complete separation from one another was the *ICD* system, which used the term *Dyssocial Personality Disorder* and gave criteria based on descriptions of behavior similar to the *PCL* and *Psychopathy*. However, the *ICD* also listed this disorder as *Antisocial Personality Disorder* as in the *DSM-III*, specifically as *Dyssocial (Antisocial)*, thereby implying its similarity. The *ICD-10* also listed other alternative names for this disorder to include: *Amoral, Asocial, Dissocial, Sociopathic, and Psychopathic Personality Disorder*. However, the criteria necessary for the diagnosis of *Dyssocial*, or *Antisocial, Personality Disorder* has remained relatively constant throughout all the recent editions of the *ICD*, consisting of the various interpersonal and affective

characteristics that have been mentioned previously in this paper. The differences in names for the disorder as well as the constructs as defined by the current criteria for diagnosis of *ASPD* in the *DSM* manuals, *Psychopathy* based on Hare's criteria as defined in the PCL-R, and the *Dyssocial Personality Disorder* in the *ICDs* were important to note because they typify some of the differences between America and the rest of the world regarding the diagnosis of *ASPD* and *Psychopathy*.

The *DSM* was largely considered to be an American manual for the American mental health system. Hare gave voice to this fact in the 1999 *Oxford Textbook of Psychopathology* when he stated that there were two diagnostic traditions for the assessment of *Psychopathy*; one stemming “naturally” from the “rich European and North American clinical tradition” and the other, “closely associated with research emanating from Washington University in St. Louis.” As has been discussed, the rest of the world has mostly used the *International Classification of Diseases* in its various editions, as well as also using the *DSM*. There would seem to be, based on the opinions of some, a point at which the separation of the criteria occurred to create, in fact, two individual disorders and not just two dimensions of the same construct. In other words, the shift towards behaviorally-defined criteria has been argued by some to have actually created a disorder separate from the classical trait-based definition of *Psychopathy*.

The development of the *DSM-IV* instigated new research into this area as it included some field trials regarding the criteria for *ASPD*. At that time, there were some proposed changes to the nomenclature. Two proposals were directed specifically at *ASPD*. The first was to provide more emphasis on the traits of *Psychopathy* in the criteria for *ASPD* and the other was to simplify the criteria of *ASPD* without significantly

changing the diagnosis. The results of the field trial while finding that some items could be deleted from the criteria or combined into one item, only found partial support for the proposal to include more traditional traits consistent with the diagnosis of *Psychopathy* (Widiger et al., 1996). Specifically, the results showed that the *Psychopathy* criteria sets as well as the criteria given in the *ICD-10* could be assessed as reliably as the *DSM-III-R* criteria. But, the researchers stated that this would not guarantee that items such as glibness and superficial charm could be reliably assessed in the everyday practice of clinicians without the use of a semi-structured interview. Clinicians would have to use these interviews in order to accurately and reliably assess the construct and that was considered to be unlikely. Ultimately, due to this reliance on the structured interview as well as perceived limitations of the study, such as intersite reliability and the absence of the full criteria list for *Psychopathy* (only a 10-item list was used), decisions were made not to incorporate more of the *Psychopathy* traits into the criteria of *ASPD* (Hare, 1996).

In 1999, Rutherford et al. provided further support for the separation of *ASPD* and *Psychopathy* as distinct disorders. This study examined how 137 cocaine-dependent women would be diagnosed for *ASPD* using the five relevant criteria, the RDC, the Feighner criteria, the *DSM-III*, *DSM-III-R*, and the *DSM-IV* criteria. Also included in this study was the Revised Psychopathy Checklist (Hare, 1991) in order to ascertain if these women would qualify for a diagnosis of *Psychopathy* as well. The study noted important differences between *Antisocial Personality Disorder* and the *Psychopathy* diagnosis according to the Revised Psychopathy Checklist. For instance, it is impossible to get a high *Psychopathy* score on the PCL-R without the presence of such psychopathic personality traits as grandiosity, egocentricity, and lack of empathy. However, none of

those traits need be present for a diagnosis of *ASPD*. Also, a diagnosis of *ASPD* requires the presence of specific early-onset, antisocial behaviors. The Revised Psychopathy Checklist does not require these behaviors in order to make the diagnosis for *Psychopathy*. In the study, over 25% of the women were diagnosed by *DSM* criteria as having *ASPD*, yet only 1.5% of the women were diagnosed with a moderate level of *Psychopathy*. According to the results of the Rutherford study, *ASPD* and *Psychopathy* are not interchangeable terms and are, in fact, very different diagnoses. This study was only one example, though, of the viewpoint that some, such as Hare, had presented; that the criteria for these two disorders were measuring different concepts.

However, even today, there still appears to be some confusion as to the separation of the two disorders. Medline Plus, a service provided by the National Institute of Health and the U.S. National Library of Medicine, lists the following alternative names for *Antisocial Personality Disorder*: *Psychopathic Personality* and *Sociopathic Personality*. The *DSM-IV* also listed *Psychopathy*, *Sociopathy*, and *Dyssocial Personality Disorder* as alternative names for *ASPD*, much like the *ICD-10* does. In David Lykken's 1995 book, *The Antisocial Personalities*, he uses the terms *Sociopath* or *Psychopath* to describe people who could be diagnosed with *ASPD*. In fact, he states that psychopaths and those with *ASPD* are not separate concepts at all, but that the various types of psychopaths are "officially unrecognized subcategories of *Antisocial Personality Disorder*." Lykken (1995) also stated that *Sociopath* reflects the socially learned aspect of these behaviors typically as a result of bad parenting whereas the *Psychopath* is believed to have been born that way. Lykken's studies were important as he was continuing to use the term *Sociopath* that Robins had popularized in her study. Also, Lykken provided four different

subtypes of sociopath and the appropriate traits or behaviors that were characteristic of each type. These traits set *Sociopathy* apart from the two other disorders of *ASPD* and *Psychopathy*. It gave an alternative diagnosis based on a different set of behaviors, or criteria, than those that would enable one to receive a diagnosis of *ASPD*.

Hare (1996) has acknowledged that there is an unfortunate blurring of the distinction between *ASPD* and *Psychopathy*, but that the distinction between the two is of “considerable significance to the mental health and criminal justice systems.” There are some researchers who believe that both diagnostic categories are really two sides of the same coin, or represent two methods for diagnosing one clinical construct. Rutherford et al. as well as the *DSM-IV* field trials concluded, however, that *Psychopathy* and *ASPD* are two different clinical constructs. As *ASPD* and *Psychopathy* are thought to be separate clinical disorders, this should be evident by the presence of separate research literatures.

The purpose of this study was to analyze the differences in the research literature for *ASPD* and *Psychopathy* over the past 30 years as it appears within the American and non-American journals. We should find that the literatures of *ASPD* and *Psychopathy* reflect what has been discussed here from Hare’s perspective; that these are two distinct, separate disorders and that there is no confusion. However, as has been shown in some places, like the *ICD*, there appears to be some overlap between these constructs. Even the latest edition of the *DSM* provides *Psychopathy* as an alternative name for *ASPD*. Despite this overlap, however, we hypothesized that we would find the research literatures of *ASPD* and *Psychopathy* to be distinct and easily separable into their respective categories based on diagnostic focus. In other words, it was hypothesized that most of the articles

would fall either into an *ASPD* category or a *Psychopathy* category. In addition, it was also hypothesized that this division would be noticed along national lines. *ASPD* was hypothesized to be mostly researched by American authors and published in American journals. Oppositely, the International journals and authors would mostly be associated with *Psychopathy* it was hypothesized. Many different characteristics of the articles within these literatures were examined in order to accomplish this.

The researcher hypothesized that there would be a distinct division between those researching *ASPD* and those researching *Psychopathy*. This study primarily examined information, such as diagnostic focus of article, country of origin, country where study was conducted, and journals in which they were published in order to determine if researchers followed the research traditions by nationality. Thus, it was hypothesized that American researchers, in addition to focusing on *ASPD* as a diagnosis, would also conduct their studies in the U.S. and publish in ‘American’ journals. The same was hypothesized to be true for the Europeans, too. It was expected that there would, also, be notable connections between the current researchers of *ASPD* and *Psychopathy* and those who have come before, such as Hare, Cleckley, Spitzer, Robins, etc... In other words, researchers would likely follow in the traditions of those coming before and that those traditions will be split between the “rich European and North American” perspectives and those viewpoints of American research “emanating from Washington University” (Hare, 1999). It was hypothesized that those researchers focusing on *Psychopathy* would likely reference Hare, Cleckley, and the *ICD* more than would those researching *ASPD*. Conversely, it was expected that those researching *ASPD* would reference Robins, Feighner, and the *DSM* more.

Additionally, the researcher also hypothesized that the research literature will show two different patterns of research being conducted for *ASPD* and *Psychopathy* since the early 1970's. According to Blashfield and Intoccia (2000), the research literature for *Antisocial Personality Disorder*, while being extensive and large in number, has shown relatively little growth over the last three decades. The literature on *ASPD* should show an increase in research following the work of Robins, Feighner, and Spitzer culminating in the "break from tradition" as Hare (1991) classified it and the publishing of the *DSM-III* with *ASPD* as a formal diagnosis. This research should peak within a couple of years after this publication and then show a steady decline as it approaches the present. *Psychopathy*, conversely, should show a consistent, small but steady increase over the same period of time, although the literatures are not comparable in number with *ASPD* having a large number of articles published per year. But, even this may be misleading due to the intermingling of the terms 'antisocial personality' and 'psychopathic personality'. The study sampled articles from different journals in different, specific time periods and examined each closely for the criteria used for diagnosis as well as the language or terminology about the disorders within the article in order accurately assess the amount of research focused on each disorder separately.

## METHOD

### Overview

The goal of this study was to analyze the current usage of the terms *ASPD* and *Psychopathy* in the research literature, who was researching each disorder, where were they conducting their studies, and in what journals were they being published, as well as

to investigate the presence of any trends in the number of research articles for *Antisocial Personality Disorder* and *Psychopathy* since 1972. Of particular interest to this study were the differences, if any, between the research articles about these two topics published within American journals versus the research published in British and other non-American journals. Specifically, this study searched for differences regarding the use of these diagnoses, such as the manuals referenced for criteria and the country where the study was completed, in studies published in American and British journals. This study also searched for any possible relationship between the authors of the studies and the identified major contributors to these diagnoses, namely, Lee Robins, Cleckley, and Hare. Specifically, the number of references to each individual as well as references to the diagnostic manuals, the *DSM* and *ICD*, were counted and compared. The objects in this study were the individual journal articles selected by the researcher. For this purpose, the researcher created a specific set of criteria that was used for the article selection process. Once the articles had been chosen for inclusion in the study, certain information was extracted from the articles and catalogued.

### Sample

In order to select a manageable sample representing the literature on *ASPD* and *Psychopathy* within American and British publications, the number of journals from which articles would be drawn was restricted to the following:

|   |                        |
|---|------------------------|
| Archives of General Psychiatry                | (American, psychiatry) |
| American Journal of Psychiatry                | (American, psychiatry) |
| Journal of Consulting and Clinical Psychology | (American, psychology) |
| Journal of Abnormal Psychology                | (American, psychology) |
| Journal of Personality Disorders              | (International, both)  |
| British Journal of Psychiatry                 | (British, psychiatry)  |
| Psychological Medicine                        | (British, psychiatry)  |

British Journal of Clinical Psychology (British, psychology)

According to a study conducted by Blashfield and Wells (1996), these journals contained most of the personality disorder literature during a search using the MEDLINE and PsychINFO databases. These journals are also considered to be the top journals in their respective areas within their countries. In other words, research published within these journals most often has a higher impact upon the field than research found within other journals.

To further narrow the sample, articles were initially selected for inclusion only from the following years: 1972, 1982, 1992, and 2002. These years were chosen to represent equally spaced time intervals that would include recent publications of the *DSM* and the *ICD*. During this time span, three editions of the *ICD* have been in existence (*ICD-8*, *ICD-9*, *ICD-10*) as well as four editions of the *DSM* (*DSM-II*, *DSM-III*, *DSM-III-R*, *DSM-IV*).

The final criteria used to determine an article's inclusion within the study was the presence of one of several key words within either the title of the article or the abstract. These keywords included: "antisocial," "antisocial behavior", "psychopathic behavior", "psychopathy", "sociopathy", and other variations. Only articles containing one of the key words and appearing in one of the pre-selected journals from the aforementioned time periods were collected by the researcher for further examination. During the initial database search, if an article contained one of the keywords in either the title or abstract and it was published in one of the aforementioned journals during the selected time periods, then it was held for further examination by the researcher. The researcher read each article individually at that point in order to determine if it met all the criteria for

inclusion. In order to be included, the article had to use *ASPD*, *Psychopathy*, etc... as a diagnosis within the article. Meaning that, only those articles where the subjects were either diagnosed as part of the study, previously diagnosed, or the diagnosis was otherwise studied, such as etiological causes, were kept for the study. Finally, only articles presenting empirical data were kept. No editorials, commentaries, or other non-research articles were included.

### Measures

Data was extracted from each article selected for inclusion in the study and coded using a system created by the researcher. Many variables reflecting information from each section of an article was gathered and recorded first on a data sheet created by the researcher. Information to be extracted from the title page of each article was as follows:

- Name of each author in the article
- Total number of authors
- Type of degrees represented, i.e., Ph.D., MD., etc...
- Term used in the title, for example, “antisocial” (or some related term – i.e., “antisocial personality”) or *Psychopathy* (or related term – i.e., “psychopathic”)
- Use of any other term related to these conditions (e.g., “dissocial personality”, “sociopath”, “criminal personality”) in the title

The next section to be coded was the abstract. Information that was coded from this section:

- Use of the term “antisocial” (or some related term as stated above) in the body of the abstract

- Use of the term *Psychopathy* (or some related term) in the body of the abstract
- Use of any other related term in the abstract

Information was next coded from the Method section. Some data were collected from each sub-section, such as participants, procedure, etc..., and coded.

- Diagnosis of participants, either antisocial, psychopathic, or some related disorder, e.g., sociopath.
- Criteria used for diagnosis, for example, *DSM-III* criteria or *ICD-10*
- Country where participants were gathered

The Reference section was the last section to be coded. Information coded from this section included:

- Number of articles referenced
- Number of references to Robins, Cleckley, Hare, and Feighner
- Number of references to the *DSM* (all editions) and the *ICD* (all editions)

### Procedure

MEDLINE and PsychINFO were the search engines used to conduct the search for articles to be included in this study. A hard copy of an article identified by the search engine was obtained if the article met one of two criteria: (1) one of the previously mentioned terms (“antisocial”, *Psychopathy*, etc...) appeared in the title or abstract or (2) the subjects or participants in the study were diagnosed, either prior to inclusion in the study or as a result of the experiment, with *Antisocial Personality Disorder*, *Psychopathy*, or some related disorder. In addition, only those articles that were published in one of the eight journals previously listed for the specified time periods were kept. Review papers,

book reviews, editorials, and commentaries were not kept for inclusion in this study. Once the full article had been obtained, the researcher inspected the study to determine its fit within this study. Only articles that used “antisocial”, “psychopathy”, or some other related term as a diagnosis within their study, not as an aspect of a participant’s personality, were included in this project. If the article met this criterion, the necessary information was extracted from each section of the articles, coded according to the researcher’s system, and organized into an Excel file.

## RESULTS

Articles were collected for use in this study by using the PsychINFO and MEDLINE search engines. This study examined articles from four specific years, in order to provide a wide time frame as a sample. Those years were 2002, 1992, 1982, and 1972. Also, only articles from the following eight journals were selected: *American Journal of Psychiatry*, the *Journal of Consulting and Clinical Psychology*, the *Archives of General Psychiatry*, the *Journal of Abnormal Psychology*, the *Journal of Personality Disorders*, the *British Journal of Psychology*, *Psychological Medicine*, and the *British Journal of Clinical Psychology*. All other articles not published in one of these journals were excluded from this study. Literature searches were conducted using a variety of the main terms used in this study, such as antisocial, *Psychopathy*, psychopathic, or sociopathic. Table 1 reports the number of articles identified by PsychINFO and MEDLINE when using the terms ‘antisocial’, ‘psychopathy’, and ‘sociopathy’ as keywords only.

Further searches were conducted using other terms as the keyword. The second table reports the results of the number of articles identified by PsychINFO and MEDLINE when using the terms ‘psychopathic’, ‘sociopathic’, or ‘dissocial’ as keywords only. These terms were selected due to their use within the name of a specific diagnosis, such as *Psychopathic* or *Sociopathic Personality Disorder*. Also, the results for articles identified using the term ‘dissocial’ includes the number of articles identified when spelling the name as ‘dyssocial.’ Table 2 presents these results. During the literature searches, only those specific terms with spellings shown above were used to identify articles. The researcher used these terms as keywords only and set no other parameters for the searches, except for the limitation of year. The terms were not exploded by the search engine during the search nor were the keywords limited only to title or abstract.

According to the results given in Table 1, a total of 1,144 articles were identified that used the term ‘antisocial,’ a total of 524 articles were identified using the terms ‘psychopathy’ or ‘psychopathic,’ a total of 80 articles were identified using the terms ‘sociopathy’ or ‘sociopathic,’ and a total of 17 articles were identified using the terms ‘dissocial,’ or ‘dyssocial.’ The numbers of articles presented in the tables above are comprehensive. That is, these are the total numbers given by the search engines after the basic search. It was assumed that there would be overlap during the searches; that some articles would be identified more than once through the different searches. These numbers reflect the total articles identified without subtracting those that appeared in more than one search.

During the searches, information provided by the search engine, such as title, abstract, or full text, if available, was examined by the researcher for every article identified in order to determine inclusion as well as overlap. In those cases where an abstract was not provided, mostly for older articles, e.g. 1972, these article titles were recorded so that the researcher could examine a physical copy of the article obtained from the Ralph Brown Draughon Library. After examining those articles identified by the computer and physical copy searches in order to check that they were published in one of the eight journals and during one of the four target years, a total of 128 articles remained for the next stage of examination.

In order to insure that all possible articles fitting the criteria had been obtained, the researcher next engaged in physical searches of the journals located within the Ralph Brown Draughon Library. The researcher studied every issue of each of the eight journals for each of the criterion years in search of articles that would meet the criteria for inclusion, but that had not been previously identified by the computer search through PsychINFO and MEDLINE. Using this method, the researcher identified an additional 19 articles that met the initial criteria of being published within one of the eight journals and also had one of the keyword terms present in either the title or the abstract. The total number of articles at this point was 147.

Table 3 details the number of articles that were identified in each journal using the different methods as described previously. The first column gives the number of articles found by journal when using “antisocial,” “psychopathic”, or “psychopath” as the search criteria. The next two columns give the same information according to their respective search criteria. The given numbers are presented by the search criteria, for instance, in

column 1 for the *Archives of General Psychiatry*, “29/0” means that there was a sum total of 29 articles identified by using “antisocial” and 0 articles identified by using “psychopathy” and “psychopathic” as keywords during the four years of the study. At this point, a total of 147 articles had been collected to be examined by the researcher to determine their specific inclusion within the study. Each of these 147 articles met the initial criteria of having one of the keywords located within either the title or the abstract.

Editorials, commentaries, case studies, and other such articles were excluded. All of the articles considered for inclusion in this study had to be presenting empirical research related in some way to the diagnosis of *ASPD* and/or *Psychopathy* and its variants. The subjects had to either have a prior diagnosis of one of the key word terms, *ASPD*, *Psychopathy*, etc., or the subjects must be receiving such a diagnosis as part of the experiment.

For example, Brooner’s study (1992) explored the rates of *ASPD* diagnosis among intravenous drug users. In this type of article, the diagnosis was made as part of the study. In other articles, the diagnosis existed in the individual prior to the onset of the research, such as in the study conducted by Moss (2002). He examined family functioning and peer affiliation in children. *ASPD* was a diagnosis in some of the parents of the children that he studied. Both of these articles were included in the study because *ASPD* was a clinical entity in these experiments, whether as a previously diagnosed disorder, as with the parents in Moss’ article, or it was a diagnosis made during the course of the study, as with Brooner’s research.

An example of an article that did not fit this criterion would be Gesch’s research published in the *British Journal of Psychiatry* in 2002. Gesch examined the influence of

supplementary vitamins and minerals on the antisocial behavior of young adult prisoners. However, antisocial behavior was not used as a clinical diagnosis in this study, but was used instead as an adjective describing the nature of the behavior being studied.

“Antisocial” behavior was described as fighting, committing crimes, etc..., but was not established as a clinical diagnosis using the *DSM*, *ICD*, or other criteria. Another example of articles not included in the study were several articles commenting on the possibility of Samson (from the Bible) being diagnosed with *ASPD*. There was a series of articles debating this issue published in 2001 and 2002 in the *Archives of General Psychiatry*. Although these articles did use *ASPD* as a diagnosis, they were not empirical papers.

The researcher read each of the 147 articles individually in order to make the determination of fit based on the criteria presented above. After this process, there were a total of 77 articles that met all criteria to be used within this study.

The breakdown of articles by year of publication is as follows: 5 – 1972, 15 – 1982, 22 – 1992, and 35 – 2002. Out of these 77 articles, 43 were from the 4 journals classified as American and 34 from the 4 journals classified as International. The subjects from the 77 studies were drawn from 9 different countries. Forty-nine studies took place, or used subjects, within the United States. The other twenty-eight studies used subjects spread out over 8 countries; fourteen conducted in England, and the remaining fourteen were conducted in Sweden, Canada, Denmark, Finland, Ireland, Belgium, and Australia. However, the country of where study was conducted did not always align to being published in a journal from that country, such as a U.S. study being published in an International journal.

### Analysis of Core Articles (n=77)

Since the main goal of this analysis of the journal literature was to compare studies focused on *Antisocial Personality Disorder (ASPD)* versus studies that focused on *Psychopathy (P)*, the initial decision was how to classify articles into these categories. If an article used the term “antisocial personality” or “antisocial personality disorder” in the title, abstract and/or introduction plus used *ASPD* as the diagnosis of the patients in the study, then the article was classified under the heading of *ASPD*. Of the original 77 articles, 34 were classified as *ASPD*. If the article used the term *Psychopathy* in the title, abstract and/or introduction plus used *Psychopathy* as the basis for diagnosing the patients in the study, then the paper was classified under the heading of P (*Psychopathy*). There were a total of 10 articles which were classified under *Psychopathy (P)*. For the remaining 33 articles, there were 16 articles that were considered to be “mixed” (e.g., they used both terms in the title or they used one term in the title, but used the other when diagnosing patients, etc.). There were another 17 articles that stuck with one diagnostic term, but the term was neither *ASPD* nor *Psychopathy* (e.g., the patients were diagnosed as being sociopaths or the article was about “*Adult Antisocial Behavior,*” a new, *ASPD*-subtype diagnosis discussed later).

In terms of the journals in which these articles were published, there were interesting differences. The clear majority of *Psychopathy* articles (7 of 10) were in the *Journal of Abnormal Psychology*. For the 34 *ASPD* articles, only one was published in the *Journal of Abnormal Psychology*. Most of the *ASPD* articles, in contrast, were published in the *American Journal of Psychiatry* (n=8), *Journal of Personality Disorders* (n=8), and the *Archives of General Psychiatry* (n=6).

The articles in this study were selected from four specific years: 1972, 1982, 1992, and 2002. The *Psychopathy* articles showed an uneven spread across the time span. There was only one *Psychopathy* article published in 1972, 3 in 1982, 1 in 1992, and 5 articles published in 2002. Half of the *ASPD* articles were published in 2002 (n=17). There were 12 articles published in 1992 and 5 in 1982. No *ASPD* articles published in 1972 were selected in this study.

Next, the researcher examined the average number of authors for an article as divided by the diagnosis. The 34 *ASPD* articles had an average number of 3.7 authors per article with a range of 1 to 11. The 10 *Psychopathy* articles, on the other hand, had an average of 2.7 authors per article with a range of 1 to 7.

Another area for comparison was the type of degrees that the authors held for each type of article. Out of the 126 different authors of the *ASPD* articles, most of them had a PhD only (n=45), a smaller number were MDs (n=18), and a few were both (n=7). In addition, there were some authors with either a Bachelor's or a Master's degree (BA=2, MA=2). Lastly, there were only 14 of the remaining authors for whom a degree could be found, in other words, there were only listed degrees for 14 of the remaining authors. Of these 14, 4 held PhDs as well as other degrees. The types of the other degrees were unknown to the researcher, such as an MRCPsych, and are therefore not reported. Degrees were not reported for 37 authors of the *ASPD* articles. For the *Psychopathy* articles, the breakdown was much simpler. There were 16 PhD only authors, 2 MDs, and 2 with degrees that are unidentifiable at this time. In this category, there were 7 authors for whom degrees were not reported.

One important piece of information that was examined was the country in which the studies were conducted. Twenty-three of the thirty-four *ASPD* articles were completed in the United States. The other 11 articles, or studies, were actually conducted in countries other than the U.S.; five were done in England and the other six in varying countries, such as Belgium and Sweden. Conversely, 3 of the *Psychopathy* articles were completed in England, 2 in Canada, and 5 of the ten articles were conducted in the United States.

One final area for comparison was the number of articles referenced by papers in each category. For those articles classified as *ASPD*, the average number of references per article was fairly high at 38.9 references. Surprisingly, the average number of references for the *Psychopathy* articles was close to this number at 34.1 references. The range for the *ASPD* articles was 5-96, whereas the range for the *Psychopathy* articles was 7-64.

There are some other notable finds within the referenced articles. For the 34 *ASPD* articles, Cleckley was referenced a total of 2 times, L. Robins was referenced 27 times, R.D. Hare a total of 15 references, and J.P. Feighner was referenced 4 times. In contrast among the ten *Psychopathy* articles, Cleckley was referenced 6 times and R.D. Hare was referenced 33 times. L. Robins and J.P. Feighner were not referenced at all by any of the articles classified as *Psychopathy*.

In addition to the number of references to certain individuals, the number of references to the *DSM*, typically associated with the American diagnostic classification system, and the *ICD*, the manual used for international classification and diagnosis, were also counted. For the *ASPD* articles, there were a total of 63 *DSM* references (*DSM-I* &

*DSM-II* = 2, *DSM-III* & *DSM-III-R* = 48, *DSM-IV* = 13) and 3 *ICD* references.

Conversely, the numbers for the *Psychopathy* articles were very low. There was a total of 7 *DSM* references (*DSM-I* & *DSM-II* = 2, *DSM-III* & *DSM-III-R* = 4, *DSM-IV* = 1) and zero *ICD* references.

Once these comparisons between the “pure” categories were made, the other categories were examined in the same manner. There were two other divisions of articles made by the researcher. The first was a “mixed” category. In this type, both terms were used in the article. Second are the “other” category consisted of articles in which only a single diagnostic term was used, but the term was not *Psychopathy* or *ASPD* (*Sociopathy*, *Adult Antisocial Behavior*, or *Adult Conduct Disorder*). There were 16 articles in the “mixed” category and 17 articles in the “other” category.

Some discussion of these other two categories should be made at this point. First, those articles that were placed in the “other” category mainly used a single diagnosis within, but it was not *ASPD* or *Psychopathy*, as was detailed in the opening paragraph of this section. Seven of the seventeen “other” articles used *AAB*, *Adult Antisocial Behavior*, as a diagnosis. These articles were mainly focused on providing evidence for the inclusion of a new diagnostic term within the *DSM*. The researchers argue that there should be a new disorder, *AAB*, whose criteria for diagnosis would consist of only criterion A of *Antisocial Personality Disorder* and would not require the presence of *Conduct Disorder* with onset before 15 years of age. Characteristically, most of these articles are more recently published, five of the seven were published after 1992, and most were conducted by researchers from the U.S. The other ten of these articles were older and used *Sociopathy* as a diagnosis. Typically, these articles were using Lee

Robins' work and her definition of *Sociopathy*. Seven of the "other" articles in this category were published in International journals, such as the *British Journal of Psychiatry*, but most of the articles were conducted by American researchers working in the U.S. and published in American journals.

The "mixed" category is somewhat more complicated. None of the articles in this category that were included in the study were published before 1992. In fact, nine of the sixteen studies were published in 2002. As previously described, this category includes articles that have intertwined the use of more than one diagnosis. For instance, one disorder was mentioned in the title, yet a different one used for diagnosis, or there was some other combination of different, assumedly separate diagnoses. One article in which this occurred was Cale's 2002 article in the *Journal of Personality Disorders*. In this study, Cale argued that *Histrionic Personality Disorder* and *Antisocial Personality Disorder* are simply gender-specific sub-types of *Psychopathy*. The term *Psychopathy* was used in the title as was *ASPD*. Also, the two disorders were discussed as one being a sub-type of the other, as previously mentioned. Therefore, this article was placed in the "mixed" category. Articles of this nature were placed in this category, as well. Nine of these articles appeared in International journals, with seven published in "American" journals. Interestingly, eight of these studies were conducted in countries other than the U.S., such as England, Canada, and Australia, and were in completed in the U.S.

For these two categories of articles, there was a similarity in the journals in which they were published. For each category, the majority of the articles were published in the *Journal of Abnormal Psychology* and the *British Journal of Psychology*. For the "other" category, the number of articles published in the *JAP* was 5 and for the *BJP*, 4. Similarly,

in the “mixed” category, 3 of the 16 articles were published in each the *JAP* and the *BJP*. Also, each category had 2 articles published in the *Archives of General Psychiatry* and *Psychological Medicine*.

The year of publication showed a different trend for one of these categories than was seen in the previous two categories. The “mixed” category followed an upward trend like what was seen with the other publications, with no articles published in 1972, few in 1982 (n=2), more in the next year, 1992 (n=5), and the largest amount published in 2002 (n=9). However, the “other” category showed a more balanced publication trend. Among its 17 articles, 4 were published in 1972, 5 in 1982, 4 in 1992, and 4 in 2002.

These two categories of articles, “mixed” and “other”, showed similar numbers to the *ASPD* and *Psychopathy* articles when examining the number of authors listed for each, although there were some differences. For example, the “mixed” articles had an average number of 3.1 authors per article. The range consisted of 1-8 authors. Five of the seventeen articles had only author. These numbers closely resemble the statistics for the *Psychopathy* group. On the other hand, the “other” group had statistics that were similar to those found for the *ASPD* group. There was an average of 4.1 authors per article in this group and a range of 1-11.

The countries in which these studies were conducted were also examined. Ten of the studies in the “other” category were conducted using subjects in the United States. Four articles used English subjects, one was conducted in Denmark, and two were completed in Canada. For the “mixed” category, 8 of these studies were held in the U.S. There were two completed in England, two in Canada, one in Sweden, one in Australia, and two from Ireland.

As with the first two groups, the reference section was also examined for any similarities or differences. The “other” group had an average of 32.1 references per article with a range of 3-96. The “mixed” group showed virtually no difference with an average of 31.5 references per article with a range of 14-74.

The specific references to the four authors mentioned above, Cleckley, Hare, Robins, and Feighner, were counted. For the seventeen articles in the “other” group, there were a total of 7 references to Cleckley, 14 references to L. Robins, 13 references to Hare, and 4 references to Feighner. The “mixed” group showed comparable numbers. Cleckley was referenced 7 times in these 16 articles, L. Robins had 6 references, R.D. Hare had a total of 44 references and J.P. Feighner had no references in any of these articles.

Finally, the references to the *DSM* and the *ICD* for these sets of articles were tallied. In the “other” set, there were only 18 references to the *DSM* and no references to the *ICD*. Oddly, the “mixed” articles showed the highest number of references to the *ICD* ( $n = 9$ ) and a large number of references to the *DSM*, as well ( $n = 29$ ). This group has the second lowest number of articles of any group in the study, yet had the second highest number of references to the *DSM* and the highest number of references to the *ICD*.

One of the hypotheses of this study was that there would be no overlap of authors between the different sets of articles. In other words, the researcher did not expect to find any authors working on more than category of article. There were a total of 262 authors for the 77 articles used in this study. Out of these 262, 33 researchers appeared as authors for more than one article. The breakdown is as follows: 28 researchers authored 2 articles, 4 researchers authored 3 articles, and 1 researcher worked as an author on 4

different articles. Of the 38 researchers authoring at least 2 articles, 10 worked on articles within the same category, for example, the researcher authored two *ASPD* articles.

The 17 researchers left in this section had an interesting breakdown of articles in which they appeared as authors. Fourteen of these wrote one article with *ASPD* as a diagnosis and one article with a diagnosis other than *ASPD*. Two of the 17 authors wrote an article in the *Psychopathy* category as well as one article using a diagnosis that was not *Psychopathy*. Of those who authored an *ASPD* article, five authored an article in the “mixed” diagnosis category and nine researchers authored an article in the “other” category. For the *Psychopathy* authors, one authored an article about *AAB* and the other researcher authored an article in the “mixed” category.

## DISCUSSION

*Antisocial Personality Disorder* and *Psychopathy* are disorders that attempt to define the behavior of, and provide a diagnosis for, those people in our society who are impulsive, irresponsible, have little or no remorse and empathy, and who may frequently engage in antisocial, or criminal, activities. The histories of these two disorders have been intertwined since the *DSM-I* and research in the field has, at times, appeared inconsistent regarding its views about the individuality of *ASPD* and *Psychopathy*. Some researchers have stated their opinions that *ASPD* and *Psychopathy* are, in fact, two distinctly different concepts, whereas others have challenged that these are simply two different measurement systems of the same construct. The main goal of this study was to examine and catalog the possible differences existing in the research literatures between *Antisocial Personality Disorder* and *Psychopathy*. The primary expectation of this study was to find

separate literatures for these two disorders. If *ASPD* and *Psychopathy* are separate, individual disorders, then it would follow that the research literatures for each should be distinctly separate from one another. In addition, it was predicted that the distribution of these literatures across time were to be different from one another, as well. The *Psychopathy* literature was expected to show a consistent pattern of a small number of articles published each year with a steady increase over time, whereas the research literature for *ASPD* was expected to peak after the publication of the *DSM-III* and begin its decline after 1980.

Another expected finding of this study was that the articles for *ASPD* would mainly be found within the four primarily American journals: the *American Journal of Psychiatry*, the *Archives of General Psychiatry*, the *Journal of Abnormal Psychology*, and the *Journal of Consulting and Clinical Psychology*. On the other hand, the *Psychopathy* articles were predicted to be concentrated mainly in the International journals: the *British Journal of Psychiatry*, the *British Journal of Clinical Psychology*, *Psychological Medicine*, and the *Journal of Personality Disorders*. Following this line of thinking, *ASPD* was considered a mostly “American” concept. That is, *ASPD* was thought to be associated mainly with the *DSM* and authors researching *ASPD* would be mostly American, have conducted studies in the U.S., and published their articles in “American” journals. Conversely, *Psychopathy* would be considered mainly an International disorder, or would be more researched by International authors, publishing in “International” journals. This alignment was expected because of the nature of the manuals used. As previously detailed, the current definition of *ASPD* in the *DSM-IV* is behaviorally based and the criteria require specific behaviors to be present in order to diagnose the disorder.

On the other hand, *Psychopathy* has a trait-based definition that provides the characteristics that are typical of the psychopath. This definition is closer to the concept of *Dyssocial Personality Disorder*, as defined by the *ICD-10*, which also uses descriptions of traits to be exhibited as criteria for diagnosis. Therefore, it was expected that *ASPD* would be more aligned with American entities, such as authors, journals, etc..., and *Psychopathy* would be represented by the International community.

This study mainly produced results gained from careful observations and detailed research of the articles individually as well as a group. While there were no statistical analyses presented, these results do provide a stepping stone for future research in this area. This study provided a big picture look at the research literature and, although the results were not proven statistically significant, there were still some important facts to note.

First, the research literature was not split down the middle, so to speak. In the sample of articles for this study, there were not completely separate literatures for *ASPD* and *Psychopathy*. Immediately noticeable was the fact that only a little more than half the articles were categorized as entirely about *ASPD* or *Psychopathy*. The presence of those thirty-three articles, nearly half the sample, that necessitated the creation of new categories, would indicate that researchers were not studying only *ASPD* and *Psychopathy*. Some of them were studying *Sociopathy* and others were studying *Adult Antisocial Behavior*, an *ASPD* sub-type it is argued. There were several articles in this study that used more than one diagnoses in the same article, thereby implying that they felt the disorders, or at least the names, were interchangeable. And sometimes these

researchers, having authored more than one article, worked on studies that focused on contradicting areas and ideas.

In fact, not many of the results produced by this study turned out to be as expected. Of those articles that were classified as *ASPD* or *Psychopathy*, there were two findings that turned out as expected. First, as we hypothesized, Lee Robins and J.P. Feighner, whose research contributed to the evolution of *ASPD* as a diagnosis, were referenced solely by the *ASPD* articles, whereas Cleckley and Hare were referenced less often. None of the *Psychopathy* articles, on the other hand, referenced Robins or Feighner. And Cleckley and Hare, two of the recognized main contributors to the *Psychopathy* literature, were frequently referenced.

References to the individual diagnostic manuals were another area found to be consistent with our expectations. The *ASPD* articles had a number of references to the various editions of the *DSM*, with the *DSM-III* and *DSM-III-R* receiving the most. Given that the *DSM* is the American manual for diagnosis and *ASPD*, a disorder listed within this manual, the emphasis on the *DSM* s was expected. The *Psychopathy* articles, however, did not reference the *ICD* as much as was predicted. In fact, there were more references to the *DSM* in the *Psychopathy* articles than there were to the *ICD*. But this finding is not as surprising as it may seem. The construct of *Psychopathy* is largely based upon the research of Hare and mainly uses his instruments, the PCL and the PCL-R, for example, in order to diagnose *Psychopathy*. And although *Psychopathy* was considered to be more of an internationally-studied disorder, the *ICD* does not include *Psychopathy* as a diagnosis, but as a variation or alternative name for *Dyssocial Personality Disorder*.

Therefore, the study hypothesized that Hare would be prominently referenced in this category of articles and the *ICD* would not be largely referenced.

From here, the literature deviated from the expected. Of immediate importance to the study, as previously mentioned, was the presence of several articles that forced two new categories to be created. The articles that were placed in the “other” and “mixed” groups impacted the study significantly. It was initially hypothesized that the literatures of *ASPD* and *Psychopathy* would be easily separable and categorized by disorder. However, the presence of the aforementioned 33 articles significantly affected the results. The study was no longer just a comparison of the *ASPD* and *Psychopathy* literatures, but also a study of similarities and differences for those articles with alternative diagnoses. But first, there were some unexpected findings relating to the “pure” categories of *ASPD* and *Psychopathy*.

The first unexpected result was the distribution of the literature across the years selected. Based on research conducted by Blashfield and Intoccia (2000), it was hypothesized that the *ASPD* literature would show an upward trend, peak after the publication of the *DSM-III*, and would then begin a steady decline after 1980. The *Psychopathy* literature, while being substantially smaller than the *ASPD* numbers, was hypothesized to show a small, steady increase over this same period of time. This, however, was not the case in this study. *ASPD* actually showed an increase in the number of articles instead of a steady decline as was predicted. *Psychopathy* showed more up and down numbers. This was somewhat consistent with the hypothesis as it does show a small increase over time, but the increase in 1982 to a fall in 1992 went directly against

the steady increase that was expected. It was difficult to find a cause for this variation from what previous research had shown should have occurred.

The numbers, though, were only for the articles used in this study. In order to see if this pattern existed in the literature as a whole, it was necessary to look at the numbers of articles published when all journals were included in the literature search. When we examined the numbers of articles published in all journals across the four years, similar patterns were still evident and, in fact, were more pronounced. When we used the terms ‘antisocial,’ ‘psychopathy,’ and ‘sociopathy’ in the initial searches using MEDLINE and PsychINFO, there was an increase in numbers of articles for each of the disorders. Also, 2002 showed the highest number of articles published for each of the disorders by a large number in some cases. Some misinterpretation of the numbers was possible as there was a strong likelihood of overlap between the search terms. As has already been discussed, there was a small subset of articles that used two or more terms within the paper (*Psychopathy with ASPD, Sociopathy, etc...*). Also, there were several articles where ‘antisocial’ was used more as a descriptive term and not in reference to the disorder of *ASPD*. However, even considering the possibilities of overlap as well as articles that did not focus on *ASPD* or *Psychopathy*, it still did not account for the pattern that was noticed within the literature.

The journals in which the articles for this study were published also produced unexpected findings. As previously detailed, it was expected that *ASPD* would be published more in the “American” journals whereas *Psychopathy* would be concentrated mostly in the “International” journals. This did not happen. Most of the *Psychopathy* articles were published in the *Journal of Abnormal Psychology*, an “American” journal.

In addition, the *ASPD* articles were not mostly published in “American” journals, as expected. There was a significant number published in the *Journal of Personality Disorders*, an “International” journal. This was tied with the *American Journal of Psychiatry* for the most number of articles published from a journal within the *ASPD* category. Overall, there were many *ASPD* articles published in “International” journals, in fact, more than half of the total number of *ASPD* articles in the study.

This trend was also noticed regarding the country in which the studies were actually conducted. It was believed that this variable would closely resemble the journals of publication results as it was hypothesized that if a study was conducted in the U.S., it would be published in an “American” journal and so on for the International studies. This, however, also produced an expected result. For the *Psychopathy* articles, half of the studies were actually conducted in the United States. The rest were completed in England and in other countries. The *ASPD* articles, on the other hand, were not as closely matched. Most of the *ASPD* articles were conducted in the U.S. with the remaining articles being conducted in varying countries, such as England, Australia, Sweden, and Belgium.

The “mixed” and “other” categories of articles used in this study were evidence that the literatures for *ASPD* and *Psychopathy* were not as easily separable as hypothesized. Articles in the “mixed” category used either some combination of these disorders or intermingled one with another disorder, such as *Sociopathy*. For instance, there were several articles that used one term in the title of the article, like *Psychopathy*, yet a different diagnosis was actually made during the research therein, such as *ASPD*. Again, some of the research literature to date would seem to present the view that *ASPD*

and *Psychopathy* are separate disorders with different criteria, although they do have some similarities. Articles like the ones that were placed in this category would add some confusion to this view. Being separate, distinct disorders, they should not be used in manner that would imply an interchangeable, or synonymous, nature. If past research is correct, then these disorders are not synonymous and are, in fact, two very different constructs, as Hare has repeatedly stated. Therefore, the argument would be that there should not be any researcher who could confuse these terms, most especially in the context of an empirical article that presents research on the diagnosis of one or the other.

Also, there was the group of several articles in the “other” category. These articles used disorders that were neither *ASPD* nor *Psychopathy*, yet were related in some manner, for example, about half the articles used *Sociopathy* as a diagnosis. Most of these articles were published in 1972 or 1982 and used Lee Robins’ research, and her description of a “sociopath,” as the basis for their work. As detailed earlier in this paper, Robins’ research was one of the main contributors to the development of *Antisocial Personality Disorder* so it was not completely unexpected to find some articles focusing on *Sociopathy*, especially before the publication of the *DSM-III*, when *ASPD* was introduced as a new diagnosis. However, not all of the *Sociopathy* articles fit this description. There were two published after the *DSM-III*, which did not seem to fit into the research literature given that *Sociopathy* is not a diagnosis in either the *DSM* or *ICD*.

One half of the “other” category was comprised of articles that were also unexpected. These articles focused on the creation of a new disorder; *Adult Antisocial Behavior (AAB)*, which uses only criterion A of *ASPD* for diagnosis. The proponents of *AAB* argued in these articles that there are adults who displayed the characteristics listed

in criterion A in the *DSM-IV* and would qualify for a diagnosis of *ASPD*, yet because they did not exhibit the childhood component of conduct disorder, they were not given that diagnosis. The researchers stated that the creation of a new diagnosis in the *DSM*, *Adult Antisocial Behavior*, as a sub-type of *ASPD* would allow these individuals with an *ASPD*-related disorder to receive the same benefits of treatment, focus of research, and attention that they would otherwise not get because of the lack of a valid diagnosis. It was not expected to find a set of articles within this literature that researched an *ASPD*-like disorder in the hopes for its inclusion as a sub-type. The addition of a new diagnosis, even one related to *ASPD*, creates more possibilities for confusion within the research field as a distinction would then exist; those with the conduct disorder in childhood component and those without.

The last area that was examined in these articles was the authors themselves. A closer look was taken at the authors, specifically, those researchers who authored more than one article. Thirty-three authored more than one article with one of these listed as an author for four different articles. Only eleven of these authored papers in which the same diagnosis was used for each. The other seventeen authors each authored at least two papers where there was a different diagnosis used, for example, one article focusing on *ASPD* and one on *Psychopathy* or were, possibly, an author of an article that was placed in one of the two alternative groups, the “other” or the “mixed.” This was important as it demonstrated that some researchers did not necessarily stick to the same research area, which likely could have contributed to the hypothesis of this study that there is some intermingling of the literatures for *ASPD* and *Psychopathy* causing some confusion over their relationship.

## Limitations

This study was broad in its scope and examined many aspects of these articles in order to find some differences or similarities between the *ASPD* and *Psychopathy* literatures. Before discussing the meaning of all the results this study generated, it is important to describe some of its main limitations. There was a relatively small sample of articles used in this study, especially for the *Psychopathy* category. Given the size of the personality disorder literature, it was decided that certain restrictions needed to be placed on the articles that were included in the study. This study was focused specifically on the research literatures for *ASPD* and *Psychopathy*, particularly empirical research, and not on the personality disorder literature as a whole. Therefore, three different strategies were used to focus this study on what it felt would be a manageable amount of articles for examination. Although there were necessary reasons for restricting the number of articles, it did result in a low number of articles to use for analysis, thereby making the results difficult to interpret.

First, the search was restricted to articles that were published in one of the eight journals listed in the Method section. These journals were selected because they had been shown to have the most impact in the field (Blashfield and Wells, 1996). In other words, previous research had shown that articles appearing in these eight journals would likely have the most impact on the field at large. It was reasoned, therefore, that *ASPD* and *Psychopathy* articles selected from these journals would likely have been more meaningful to the research arena than articles that could have been found in lesser-known journals. During the initial database searches, however, there were several other journals noted in which many articles focusing on *ASPD* and *Psychopathy* appeared. Some of

those journals included: *Drug & Alcohol Dependence*, *Assessment*, *Criminal Justice & Behavior*, *International Journal of Forensic Mental Health*, *Alcoholism: Clinical & Experimental Research*, and the *International Journal of Offender Therapy & Comparative Criminology* to name a few. There were many empirical articles found during the database search that focused directly on *ASPD* and *Psychopathy* within several forensic journals that appeared regularly in the search. It is likely that because *ASPD* and *Psychopathy* are frequently found within a criminal population, then there may be more articles within those forensic and criminology journals than were found through our searches. Although, typically, articles appearing in the journals used in this study may be more notable, because of the association with criminal behavior, it is likely that more articles would have been found had we selected from a wider range of journals. In order to get a sample that more realistically represents the field and these specific research topics, the articles should be selected from more journals than the ones used in the present study.

Furthermore, another limitation of this study was that the articles were restricted to a specific time frame. Only articles published in the four years listed previously were used. Again, this restriction was used because it was believed that using including articles from every year would have resulted in too large of a sample to be able to conduct this study. The years that were used were chosen because they represented time frames near the occurrence of a major event in the research field. For example, 1982 was chosen because the *DSM-III* was recently published and it was supposed that a large number of articles about the new diagnosis of *ASPD* would be published shortly thereafter. It was

also thought that choosing one year from each of decades beginning with 1970 would provide a window into the pattern of publication numbers over the past 35 years.

It was noted, however, during the database searches that there were many articles published in years other than the ones targeted for this study. Widening the time span for publication of the articles would yield a greater number of articles with which to work and lead to more significant results as a larger sample size would be necessary if any statistical analyses were performed on this data in the future. Obviously, by using only four individual years, each ten years apart, the sample was going to be smaller than if a period of 2 to 3 years, ten years apart were used. From what the researcher observed, using this method, taking articles from a 2 to 3 year period, ten years apart, would significantly increase the number of available articles to start. Also, it would be beneficial to examine the literatures in general over the past 35 years in order to determine exactly when the highest number of articles was being published, then perhaps sampling from those years. The individual years used in the present study were selected because it was believed that they represented a time frame after the publication of a new edition of a manual, either the *DSM* or *ICD*, when it was hypothesized the most articles would be published due to the impact of the new manual. But, a general search of the numbers of articles published for each year since 1970 was not conducted; therefore, it was not correct to assume that those years would yield the greatest numbers of articles.

Lastly, the database searches were restricted by the words used to conduct those searches. As described in the Results section, the database searches were conducted using certain terms as keywords, such as “antisocial” and “psychopathy.” Those terms were first used in searches for articles that contained the exact phrase or word listed. Once

these searches had been conducted, these terms were used as Keywords, which would provide references to articles that listed those terms as key words and did not necessarily have to contain the exact name. Due to the size of the literature on personality disorders, it was reasoned that there was a need to limit the searches to a narrow focus in order to exclude those articles that were not specifically about *ASPD* and/or *Psychopathy*. Again, this strategy proved to be insufficient as not all the articles used in this study were obtained from the database searches. Many of the articles were found by scanning journal volumes for each of the four years to find those that the database had not identified. Future studies should also consider broadening their search definitions in order to have a larger base from which to select articles.

Prescribing any meaning to the results found in this study was still possible despite the limitations of the sampling and the low number of articles used. While reading several research articles and textbooks about *ASPD* and *Psychopathy*, it seemed that there was confusion about the relationship between *ASPD* and *Psychopathy*. Several researchers appeared to believe that these were very different, separate disorders, whereas others implied that in many ways, these concepts were actually the same; that these two disorders were two sides of the same coin, or different criteria measuring the same construct. The main goal of this study was to provide some evidence that there existed more than just differing opinions, but that there was real confusion among researchers over this issue and that it would be noticeable in the research literature.

### Summary

To summarize, the main goal of this study was to catalogue the differences noted between the research literatures for *ASPD* and *Psychopathy*. Hare and others over the past

several years had forwarded the viewpoint that *ASPD* measures a different domain than does the construct of *Psychopathy*. Hare has stated that "...the distinction between *Psychopathy* and *ASPD* is of considerable significance to the mental health and criminal justice systems," (Hare, 1996). He has also iterated that "...most psychopaths...meet the criteria for *ASPD*, but most individuals with *ASPD* are not psychopaths," (Hare, 1996). One of his biggest criticisms of *ASPD* has been that it has relatively little usefulness for the prediction of future behavior, specifically in the areas of criminality, violence, and recidivism (Hare, 1991). Other research has highlighted even more differences between those diagnosed with *ASPD* and those with *Psychopathy*. In past studies, it has been shown that psychopaths differ dramatically from others in their performance in a variety of cognitive tasks, such as in the processing or use of deep semantic meanings of language and in recognizing the emotional significance of certain events (Patrick, 1994; Williamson et al., 1991). All of these findings have contributed to the idea that *ASPD* and *Psychopathy* are separate disorders or, at least, that the constructs as they are defined are descriptions of different aspects of an individual. One, *ASPD*, focuses on the actions of the individual or on the committal of certain behaviors as the criteria for diagnosis. The other, *Psychopathy*, focuses on the interpersonal and affective components of an individual's personality to describe and diagnose. And, as Hare has said, these areas may overlap or intersect, as psychopaths may often be diagnosed with *ASPD*, but that the converse, that *ASPD*-diagnosed individuals are psychopaths, is definitively not true.

This study hypothesized that the literatures for *ASPD* and *Psychopathy* would be separate, reflecting the separateness of the disorders as Hare has implied. It was expected that there would be no overlap between the two if these constructs truly measured

different aspects of an individual; that researchers would fall completely within one camp or the other and that this division would be noted along the lines of American versus International entities. But, based on the results of this study, there was evidence of some crossover between the research literatures. There were not separate literatures for *ASPD* and *Psychopathy*. The presence of those thirty-three articles, nearly half the sample, that were divided into new categories, would indicate that researchers were not studying only *ASPD* and/or *Psychopathy*.

These two extra categories of articles shared characteristics in this study that were very similar to the “pure” categories of *ASPD* and *Psychopathy*. Their reference patterns to the *DSM*, *ICD*, or to individual researchers, such as Hare and Robins, were remarkably similar as was the trend in publication numbers to the pure categories of *ASPD* and *Psychopathy*. Also, the average numbers of authors and total references per article were notably similar for the groups. The “other” group comprised of articles researching *Adult Antisocial Behavior* or *Sociopathy*, two *ASPD*-related concepts, exhibited patterns very like the *ASPD* literature. And the “mixed” group, which consisted of articles using more than diagnosis, most often *Psychopathy* with one other, was closely similar to the *Psychopathy* literature. So even within the literature, researchers were not devoted to just the diagnoses of *ASPD* and *Psychopathy*, but they were also researching other disorders related to those concepts.

As expected, *ASPD* articles often referenced Robins and the *DSM*. Likewise, the *Psychopathy* literature often referenced Hare and, to a lesser degree, Cleckley, its two main supporters. Studies conducted in America were not always published in a U.S. journal and the same pattern was noted for *Psychopathy* articles. Most of those studies

focusing on *Psychopathy* were conducted in England, yet published in an American journal. And it appeared that there has been an increasing amount of interest in the areas as evidenced by the growing numbers of articles in the literature. Instead of declining, as was hypothesized, the number of *ASPD* articles has increased dramatically over the past 30 years as has the *Psychopathy* literature. Another important point to note is the similarities between the “other” group and the *ASPD* articles, and the same for the “mixed” group to the *Psychopathy* articles. When examined closely, all of these seemingly independent characteristics, like the similarity in publication numbers or average number of authors, result in a general conclusion that there does exist some blurring of the boundaries between *ASPD* and *Psychopathy*. Although many researchers would have us believe that these disorders are distinct and separate, these findings presented evidence that a few researchers, at least, have a different view. There are those who view the disorders as being synonymous and that they are measuring the same general concept. There are others who have implied that one is a sub-type of the other or that *ASPD* is a gender-specific diagnosis for those with *Psychopathy*. And it was also shown in this study that these varying opinions were not separated by country. As the results showed, *ASPD* was not a distinctly American diagnosis nor was *Psychopathy* entirely the province of the International researchers and journals. The increasing amount of articles published about these disorders is evidence that there is a growing interest in *ASPD* and *Psychopathy*. This increase combined with the other details that were listed, like differences in reference patterns, and the presence of those articles that actually interchange the terms during their research are enough to conclude that this issue is not clear-cut. At the very least, it is evidence that there needs to be more research and

attention devoted to distinguishing between the concepts of *ASPD* and *Psychopathy* in a deliberate and concrete manner.

Future research could widen the sampling size of this study to include more articles and test the findings presented herein. There were several analyses not performed during this study that could be very useful in proving further evidence of the level of disagreement in the field about the distinctiveness of these two disorders. One could investigate the level of agreement between reported diagnosis used and the stated criteria for diagnosis as well as the instrument used for measurement. Another worthwhile study could be to examine the connections between the authors of the articles and those who are cited most frequently in them. It was noted that the several authors appeared consistently in the reference sections of the different groups. Much like Hare is cited mostly by articles focusing on *Psychopathy* because that is his main area of research, there could be other authors whose connections to certain fields might lead them to be more referenced than other authors, or for their work to be more prominent and, therefore, followed or replicated more so than other, more obscure studies. In conclusion, more research is needed in order to obtain, hopefully, significant results and empirical data to provide some clarity to this issue.

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TABLE 1

Number of articles published by year for key word and database

|                    | <b>antisocial</b> | <b>antisocial</b> | <b>psychopathy</b> | <b>psychopathy</b> | <b>sociopathy</b> | <b>sociopathy</b> |
|--------------------|-------------------|-------------------|--------------------|--------------------|-------------------|-------------------|
| <b><u>year</u></b> | <b>PsyINFO</b>    | <b>MEDLINE</b>    | <b>PsyINFO</b>     | <b>MEDLINE</b>     | <b>PsyINFO</b>    | <b>MEDLINE</b>    |
| <b>1972</b>        | 52                | 6                 | 15                 | 7                  | 7                 | 0                 |
| <b>1982</b>        | 88                | 29                | 23                 | 13                 | 6                 | 1                 |
| <b>1992</b>        | 233               | 97                | 36                 | 6                  | 10                | 3                 |
| <b>2002</b>        | 435               | 204               | 114                | 42                 | 12                | 6                 |
| <b>total</b>       | <b>808</b>        | <b>336</b>        | <b>188</b>         | <b>68</b>          | <b>35</b>         | <b>10</b>         |

TABLE 2

Number of articles published by year for key words and database, part II

|              | <b>psychopathic</b> | <b>psychopathic</b> | <b>sociopathic</b> | <b>sociopathic</b> | <b>dissocial</b> | <b>dissocial</b> |
|--------------|---------------------|---------------------|--------------------|--------------------|------------------|------------------|
| <b>Year</b>  | <b>PsyINFO</b>      | <b>MEDLINE</b>      | <b>PsyINFO</b>     | <b>MEDLINE</b>     | <b>PsyINFO</b>   | <b>MEDLINE</b>   |
| <b>1972</b>  | 43                  | 8                   | 11                 | 1                  | 3                | 0                |
| <b>1982</b>  | 40                  | 10                  | 7                  | 3                  | 0                | 0                |
| <b>1992</b>  | 51                  | 20                  | 4                  | 2                  | 7                | 0                |
| <b>2002</b>  | 64                  | 32                  | 4                  | 3                  | 7                | 0                |
| <b>total</b> | <b>198</b>          | <b>70</b>           | <b>26</b>          | <b>9</b>           | <b>17</b>        | <b>0</b>         |

TABLE 3

Number of articles identified for journal by key word term and hand search

|                              | <b>Antisocial/Psychopath</b> | <b>Sociopath/Dyssocial</b> | <b>Hand Search</b> |
|------------------------------|------------------------------|----------------------------|--------------------|
| <b>Archives of GP</b>        | 29/0                         | 1/0                        | 5                  |
| <b>Amer. J of Psy.</b>       | 14/1                         | 1/0                        | 4                  |
| <b>J. of Con &amp; Clin.</b> | 5/5                          | 0/0                        | 2                  |
| <b>J. of Abnor. Psy.</b>     | 6/11                         | 1/0                        | 4                  |
| <b>J. of Pers. Dis.</b>      | 13/3                         | 0/4                        | 0                  |
| <b>Brit. J. of Psy.</b>      | 10/7                         | 5/0                        | 3                  |
| <b>Psych Med.</b>            | 10/1                         | 0/0                        | 0                  |
| <b>Br. J. of Clin Psy.</b>   | 0/1                          | 0/0                        | 0                  |

The first column represents the number of articles found using the first term and the second number identifies the number of articles found using the second term as a keyword. For example, 29/0 means that there were 29 articles found in the *Archives of General Psychiatry* when using “antisocial” as the keyword term and 0 when using “psychopathy” as a keyword. The last column identifies the number of articles found when the researcher searched each journal by hand.

## APPENDIX

### References of articles selected for the study

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