

THE RELATIONSHIP BETWEEN SKEPTICISM AND KNOWLEDGE AND
ACCURATE DIAGNOSIS OF DISSOCIATIVE IDENTITY DISORDER
BY LICENSED CLINICAL SOCIAL WORKERS

by

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A Capstone Project Submitted to the Faculty of
Phyllis and Harvey Sandler School of Social Work
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Doctor of Social Work

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This capstone research study/project was prepared under the direction of the candidate's advisor, Dr. Manny J. Gonzalez, Phyllis and Harvey Sandler School of Social Work, and has been approved by the members of the supervisory committee. It was submitted to the faculty of the Phyllis and Harvey Sandler School of Social Work and was accepted in partial fulfillment of the requirements for the degree of Doctor of Social Work.

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ABSTRACT

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This study aimed to examine the relationship between licensed clinical social workers' (LCSWs) skepticism and knowledge about dissociative identity disorder (DID) and their accurate diagnosis of the disorder as moderated by specialized training about DID and/or postmaster's experience with diagnosis and treatment of the disorder.

The following research questions guided the study.

- RQ1a. Is there a relationship between LCSWs' level of skepticism and level of knowledge about DID.
- RQ1b. Is there a relationship between LCSWs' level of skepticism and accurate diagnosis of the disorder?
- RQ1c. Is there a relationship between LCSWs' level of knowledge about DID and accurate diagnosis of the disorder?

- RQ2a. Does specialized training about DID affect the diagnostic accuracy of the disorder?
- RQ2b. Does post-master's clinical experience with diagnosing and treating DID affect the diagnostic accuracy of the disorder?

Using a cross-sectional research design and informed by philosophical underpinnings of epistemology and skepticism and Kahneman's model of diagnostic reasoning (Kahneman, 2011), the data for this study were collected via an online survey of randomly selected LCSWs ($N=85$) in Florida. The survey consisted of a diagnostic vignette with a very short answer (VSA) response, the Skepticism and Knowledge Scales (SKS) comprising 11 items that assess skepticism, six items that assess knowledge, and 13 distractor items (Hayes & Mitchell, 1994), and a demographic questionnaire with 12 items, two of which quantified specialized training about and clinical experience with DID.

In this study, greater skepticism about DID was found to be associated with less knowledge about the disorder, and as skepticism about DID increased, inaccurate diagnoses of the disorder also increased. Incorrect diagnosis of the vignette was also associated with a lack of specialized training about DID. Clinical experience with DID, on the other hand, was positively associated with both specialized training and knowledge about the disorder. The study further found that skepticism increased the odds of making an inaccurate diagnosis of DID, while specialized training about DID decreased the odds of making an inaccurate diagnosis of the disorder. In addition, specialized training about DID interacted with knowledge to decrease the odds of incorrect diagnosis.

The findings of this study seem to suggest that specialized training is needed in graduate schools to increase practical knowledge and bring DID from the shadows of mythology. A generalist curriculum at the graduate level may pose challenges for clinical social work students to gain clinical competence given the brevity of graduate social work programs, and new findings illuminate that specialized training is influential on the relationship between knowledge and diagnosis, which gives treatment a starting point. Therefore, graduate social work education needs to consider teaching diagnostic reasoning skills that are vital for the provision of mental health treatment.

This study closes an almost 30-year gap to show that LCSWs' skepticism about DID has decreased over time, while diagnostic accuracy of the disorder has remained relatively unchanged. It sheds light on the reluctance of LCSWs to diagnose and raises questions about how knowledge is conceptualized in graduate clinical social work education.

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CHAPTER 1

Problem and Justification

Mental disorders are experienced by over twenty percent of U. S. residents ($n = 51,495,000$), aged 18 years and older. Any mental illness (AMI) is defined by the Center for Behavioral Health Statistics and Quality (2020, p. A-43) as a diagnosable *Diagnostic and Statistical Manual of Mental Disorders IV (DSM IV)* “mental, behavioral, or emotional disorder (excluding developmental and substance use disorders)” regardless of level of impairment in daily functioning. For the purposes of research, the mental disorders included as AMI are major depressive disorder (including major depressive episode), dysthymic disorder, bipolar I disorder, specific phobia, social phobia, generalized anxiety disorder, panic disorder (with and without agoraphobia), agoraphobia (without history of panic disorder), obsessive-compulsive disorder, posttraumatic stress disorder, anorexia nervosa, bulimia nervosa, adjustment disorder, and psychotic symptoms (i.e., hallucinations or delusions). The prevalence of AMI is higher amongst females (24.5%) than males (16.3%). More young adults aged 18–25 (29.4%) than adults, aged 26–49 years (25%), or aged 50 and above (14.1%) were found to have AMI. It is most prevalent amongst bi- and multiracial adults (31.7%), followed by white adults (22.2%). The lowest prevalence of AMI was noted among Asian adults (14.4%). Serious mental illness is distinguished by the severity of its impact on daily functioning.

Serious Mental Illness (SMI)

Of these 51.5 million U.S. residents with AMI, 25%, or 13,115,000 persons has a serious mental illness (SMI), defined as any mental illness (AMI) that markedly impairs daily functioning in one or more areas (Center for Behavioral Health Statistics and Quality, 2020). Like AMI, the prevalence of SMI is higher among females (6.5%) than males (3.9%) and young adults aged 18-25 years (8.6%), followed by adults aged 26-49 years (6.8%) and those aged 50 and older (2.9%). The prevalence of SMI is highest among the adults reporting two or more races (9.3%), followed by American Indian and Alaskan Native (6.7%). The lowest prevalence of SMI is among Native Hawaiian and other Pacific Islanders (2.6%). Although the above mental disorders are considered major, other mental disorders may also be significantly impactful. Amongst these is dissociative identity disorder (DID), which due to frequent comorbidity with other mental disorders, diagnostic complexity, and misunderstanding of the condition, may be underdiagnosed. It has been suggested that DID meets criteria for SMI when severity factors including lifetime suicide attempts, self-harm, psychiatric emergencies, psychiatric hospitalizations, number of prescribed psychotropic medications, health, social problems, and global assessment of functioning (GAF) are compared with the accepted major mental disorders (Mueller-Pfeiffer et al., 2012; Vazquez et al., 2020). Consequently, dissociative identity disorder needs to be understood and considered when assessing for mental disorders and diagnosing patients.

Diagnostic Criteria for DID

Dissociative disorders are characterized by a disturbance in the integration of awareness, recall, identity, emotion, perception, body image, motor control, and behavior

(American Psychiatric Association, 2013). Notable amongst these is dissociative identity disorder (DID) which is diagnosed based on the following criteria.

- A.** A disruption of identity characterized by two or more distinct personality states, which may be described in some cultures as an experience of possession. The disruption in identity involves marked discontinuity in sense of self and sense of agency, accompanied by related alterations in affect, behavior, consciousness, memory, perception, cognition, and/or sensory-motor functioning. These signs and symptoms may be observed by others or reported by the individual.
- B.** Recurrent gaps in the recall of everyday events, important personal information, and/or traumatic events that are inconsistent with ordinary forgetting.
- C.** The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- D.** The disturbance is not a normal part of a broadly accepted cultural or religious practice. Note: In children, the symptoms are not better explained by imaginary playmates or other fantasy play.
- E.** The symptoms are not attributable to the physiological effects of a substance (e.g., blackouts or chaotic behavior during alcohol intoxication) or another medical condition (e.g., complex partial seizures). (American Psychiatric Association, 2013, p.292).

Biopsychosocial Etiological Basis of DID

Mental disorders have complex etiologies that can be attributed to a combination of biological, psychological, and environmental factors (American Psychiatric Association, 2013; Şar et al., 2017; Tikovsky, 2017; Vonderlin et al., 2018), and DID is no exception. An estimated 0.8%–1.5% of adults in the United States meet the criteria for a diagnosis of DID (American Psychiatric Association, 2013; Kate et al., 2020). Research has consistently traced the etiology to a traumatic developmental history related to disturbed biopsychosocial factors (Şar et al., 2017; Vonderlin et al., 2018; Wildschut et al., 2018), and recent evidence clearly illustrates neurological differences between patients with DID and healthy control participants (American Psychiatric Association, 2013; Kate et al., 2020). Although unique to DID is the prevalence of childhood abuse and neglect amongst 90% of patients with the disorder, other traumatizing experiences, including childhood invasive medical procedures, childhood prostitution, warfare, and terrorism have also been reported (American Psychiatric Association, 2013).

Diagnostic Complexity of DID and Professional Skepticism

The diagnostic overlap, symptomatic complexity, and frequently concomitant multiple diagnoses are sources of professional skepticism about DID. Patients with DID may be misdiagnosed with schizophrenia due to their experiences of multi-sensory hallucinations that are baffling and usually distressing. They may be misdiagnosed with borderline personality disorder due to shared features, including a trauma history. However, the key symptoms of identity confusion, identity alteration and amnesia that distinguish DID may be missed (International Society for the Study of Trauma and Dissociation, 2011; Kluft, 2005).

Often, major mental disorders such as depression, eating disorders, substance abuse and obsessive-compulsive disorders are comorbid with DID. Adding to the intricacy of accurate diagnosis of DID are somatic symptoms from dissociated trauma memories that may resemble physical illnesses. Patients with DID experience varied somatoform symptoms that can include pain in the abdomen, pelvis, joints, face, head, and back. Among others, a lump in the throat, non-epileptic seizures, and pseudo-asthma are also common (Ginzberg et al., 2010; International Society for the Study of Trauma and Dissociation, 2011; Leonard & Tiller, 2016).

Typically, a patient with DID presents a symptomatically complex assortment of dissociative and posttraumatic stress disorder (PTSD) symptoms that are obscured by seemingly non-trauma-related symptoms. The highly familiar and prominent symptoms of depression, panic attacks, substance abuse, and eating disorders often lead mental health professionals to diagnose only the comorbid conditions. (International Society for the Study of Trauma and Dissociation, 2011). To extrapolate a diagnosis of DID, the mental health professional must ask about the symptoms of dissociation, and they must grasp the similarities and differences between the symptoms of DID and other frequently observed disorders (International Society for the Study of Trauma and Dissociation, 2011; Kluft, 2005). Bipolar, depressive, psychotic, seizure, and borderline personality disorders are common misdiagnoses of patients with DID, but treatment of only the recognized comorbid disorder is costly, ineffective, and can be detrimental (Blewis, 2018; International Society for the Study of Trauma and Dissociation, 2011; Kluft, 2005; Leonard et al., 2005; Leonard & Tiller, 2016; Perniciaro, 2014; Somer, 2000).

Understanding the Function of DID

As previously stated, the etiology of DID is based in biopsychosocial factors, but it is most associated with early childhood abuse, trauma, and emotional neglect (Sar et al., 2017). Dissociation can be defined as a psychodynamic coping defense in which there is a mind-body disconnection that isolates cognition, affect, sensation, and behavior (Braun, 1988). DID may be understood as emerging from repetitive dissociation that is created in response to repeated breaches of an individual's capacity to contend with overwhelm. Dissociative identity disorder creates alternate interior realities, the purpose of which is to maintain the external façade of a normal life when coping with the actual realities has shown to be futile (Kluft, 2005). These separate and somewhat autonomous self-states may be unknown by one another and have their own memories, skills, and talents sequestered by vertical rather than horizontal splits and continue to affect adult survivors of early childhood trauma, abuse, and emotional neglect long after childhood has ended (Kate et al., 2021; Vonderlin et al., 2018; Wildschut et al., 2019). Dissociative vertical divisions foster a discontinuity of consciousness by maintaining separate, but concomitant modules of consciousness whereas horizontal divisions are structures of repression and separate the conscious from the unconscious (Hilgard, 1974; Kluft, 2022; Kohut & Wolf, 1978; Ross, 2022). It is these dissociated self-states, the defining feature of DID, with their conflicting motivations that produce incoherence and incongruities in behavior, affect, sensation, and knowledge that are easily misunderstood (Braun, 1988). However, these incongruities are clues that dissociative self-states are active, and without at least a working understanding of dissociative disorders and etiology, clinical features and diagnostic criteria, timely, accurate diagnosis and effective treatment is improbable

(Brand et al., 2019). Furthermore, it explains how people with DID spend approximately 6.7 years in the mental health system and receive on average, 7.3 comorbid lifetime diagnoses before receiving an accurate diagnosis and effective treatment (Galbraith & Neubauer, 2000; Ross et al., 1989)

Mental Health Practitioners

Since most mental health providers are licensed clinical social workers (LCSW), it is likely that persons seeking mental health care will receive mental health services from an LCSW. As confirmed by the 2017 summary of occupational employment statistics, most mental health professionals are clinical social workers ($N = 112,040$), followed in descending order by clinical, counseling, or school psychologists ($N = 108,060$), marriage and family therapists ($N = 42,880$), psychiatrists ($N = 25,520$), and advanced practice psychiatric nurses ($N = 15,911$). However, it was noted that mental health professionals in private practice were excluded from the count, underestimating the total number of working mental health professionals (Heisler, 2018).

The Master of Social Work curriculum terminates with a degree that enables graduates, once they have secured clinical licensure, to provide psychotherapy for children, adults, and families, and their views about DID may have been informed by their graduate education, general attitudes about persons with mental disorders, previous interaction with persons with dissociative disorders, lack thereof, or exposure to inaccurate and purposely dramatic portrayals of DID in the media (Maio et al., 2003; Probst et al., 2015). It has also been suggested that skepticism might explain why DID may or may not receive adequate attention in MSW psychopathology coursework (Postmus et al., 2011), possibly limiting and distorting these future mental health

professionals' understanding of dissociative disorders (Brand et al., 2019; Wilgus et al., 2016). Because social workers dominate the field of mental health professionals, it is critical to know whether LCSWs recognize clues that dissociative self-states may be operating to accurately diagnose DID.

Problem Statement

While not a blanket finding, patients who have DID typically also have abuse and/or other trauma early in their developmental history (Kate et al., 2021; Şar et al., 2017; Vonderlin et al., 2018; Wildschut et al., 2018). Whether patients are asked by mental health professionals about childhood abuse or trauma history (Coyle et al, 2019; Nagar et al., 2020), or DID is considered as a diagnostic possibility, is possibly related to years of post-licensure practice experience with DID, knowledge, and level of skepticism about DID as a diagnosis (Blewis, 2018; Dorahy et al., 2006; Dorahy et al., 2017; Hayes & Mitchell, 1994; Leonard et al., 2005; Leonard & Tiller, 2016; Perniciaro, 2014; Somer, 2000), and as a result, patients may receive inadequate care. As previously stated, mental disorders are costly (Trautmann, 2016). Patients with DID have significantly higher rates of suicide, self-harm, psychiatric emergencies, hospitalizations, and prescribed medications than unipolar depression or bipolar disorder resulting in even more sizable direct economic and indirect costs to the individual and society (Langeland et al., 2020; Myrick et al., 2017; Vazquez et al., 2020).

Purpose of the Study and Research Questions

The purpose of this study was to examine the relationship between LCSWs' level of skepticism and knowledge about DID and their accurate diagnosis of the disorder and the moderating influence of specialized training about DID and post-master's clinical

experience on accurate diagnosis of the disorder. The proposed study was directed by two central research questions:

1. Is there a relationship between LCSW's level of knowledge and level of skepticism about DID and accurate diagnosis of the disorder?
2. Does specialized training in and post-master's clinical experience with diagnosing and treating DID affect the diagnostic accuracy of the disorder?

Significance of the Study

Patients who are eventually diagnosed with DID were frequently first diagnosed with associated comorbid conditions, while dissociation was missed or dismissed as a diagnostic possibility (Leonard & Tiller, 2016; Şar, 2011). Missed diagnoses of DID may result in hospitalization and other treatment modalities that are ill-advised and ineffective such as electroconvulsive therapy, or in no treatment at all (Langeland et al., 2020; Myrick et al., 2017). According to the Social Security Administration (2020), of 8,378,374 disabled workers, 2,466,025 received social security disability (SSD) benefits due to mental disorders. Among disabled workers, mental disorders accounted for 29.4% of SSD benefits. This amounted to an annual disbursement of \$3,393,000,000 to 2,466,025 disabled workers with mental disorders.

Patients with DID significantly tax the mental health system with more psychiatric emergencies, hospitalizations, and prescribed medications than either unipolar depression or bipolar disorder. The direct impact to the economy is seen in sizable personal and government spending and speaks to the importance of whether LCSWs accurately diagnose DID when evaluating patients (Langeland et al., 2020; Myrick et al., 2017; Vazquez et al., 2020).

Mueller-Pfeiffer et al. (2012) examined GAF scores in psychiatric patients ($N = 160$) and found that patients with DID ($n = 22$) had GAF scores ($M = 41$) that were 14% lower than psychiatric patients ($n = 130$), who did not have comorbid DID. Subsequently, Myrick et al. (2017) found in their six-year longitudinal study of patients with DID, who were in DID targeted treatment, GAF scores had improved significantly from the first measurement after baseline, to the fifth GAF score collected in year six, $F(1) = 77.85, p < .001, \eta^2 = .42$. The implication is that treatment that is specific to an accurate diagnosis of DID can contribute to improved functioning.

As previously stated, LCSWs are the major providers of mental health services, and it is ethically and legally incumbent upon them to provide patients with competent care. Competent mental health treatment requires accurate diagnosis, and early intervention is a gold standard that applies to all mental disorders. Although the diagnostic complexity of DID is undeniable, if patients with DID are misdiagnosed because there is skepticism and/or deficient knowledge about the disorder, they may be receiving treatment but not competent care.

CHAPTER 2

Literature Review

The following review of the literature is organized according to the variables under study. The independent variables include LCSWs' skepticism and knowledge about DID. Moderating variables include professional training and clinical experience in relation to DID which will be examined for their influence on the dependent variable, accurate diagnosis of DID. Research that has investigated the relationship between mitigating factors and mental health professionals' accurate diagnosis of DID is limited. The studies conducted have examined mental health professionals' knowledge, skepticism, professional experience, training, and theoretical orientation in relation to DID in isolation and in association with accurate diagnosis of DID with mixed findings (Blewis, 2018; Cormier & Thelen, 1998; Dorahy & Lewis, 2002; Dorahy et al., 2006; Dorahy et al., 2017; Dell, 1988; Dunn et al., 1994; Hayes & Mitchell, 1994; Husted, 2000; Leonard & Tiller, 2005; Perniciaro, 2014; Somer, 2000; Vlahakes, 2017). Dell's seminal study on the subject (1988) considered only the impact of professional skepticism about multiple personality disorder on the treating provider and treatment. The most recent study (Blewis, 2018) examined mental health professionals' knowledge, beliefs, and experiences with DID. A comprehensive review of the literature found that most studies quantified the above-mentioned independent variables and the relationships with the accurate diagnosis using researcher-designed surveys that lacked reliability or validity psychometrics. In addition, no studies to date have focused specifically on

licensed clinical social workers (LCSW), their levels of skepticism and knowledge about DID in relation to accurate diagnosis of the disorder, or the moderating effects of specialized training and professional experience on diagnosing this disorder.

Independent Variables

Skepticism about DID

Skepticism can be defined as doubt (Hayes & Mitchell, 1994), and although DID (originally multiple personality disorder, MPD) has been included in the *DSM* since the 3rd edition, published in 1980, this disorder continues to be shrouded in controversy and skepticism. Studies have shown that stigmatizing attitudes held by mental health professionals contribute to delayed disclosure of childhood abuse, especially sexual abuse, impede treatment, and demoralize the patient (Blewis, 2018; Brand, 2016; Perniciaro, 2014.).

In what appears to be the first attempt to quantify professional skepticism about MPD (DID), Dell (1988) surveyed randomly selected U.S. members ($N = 120$) of the International Society for the Study of Multiple Personality and Dissociation and queried about their experience with skepticism expressed by other mental health professionals about the existence of MPD, and how patients' treatment had been impacted by their experience with that skepticism. From a 52% return rate ($N = 62$), it was found that 98% ($n = 61$) had been the frequent recipient of professional skepticism, and 83.2 % of those experiences had been judged to be moderate to severe in quality. From those experiences, 50% of the participants stated that skepticism had adversely affected treatment.

Dunn et. al (1994) conducted one of the first studies to directly examine mental health professionals' belief in MPD. This survey of 1,160 psychiatrists and psychologists

employed by the Veteran's Administration found that while 97% of participants believed in dissociative disorders categorically as a diagnostic entity, only 80% believed that MPD was diagnostically viable, and belief in MPD was significantly associated with younger professionals with less years of experience who were psychologists rather than psychiatrists. Most interesting was the finding that 9.6% of participants who indicated having worked with a patient diagnosed with MPD expressed skepticism of the diagnosis, while 5% were ambivalent.

Hayes and Mitchell (1994) conducted a dyad of studies to extend Dell's study about mental health professionals' skepticism about MPD to a larger and more representative sample. The first study surveyed U.S mental health professionals ($N = 207$) from division 29 of the American Psychological Association, the National Association of Social Workers, and the American Psychiatric Association with an instrument they developed to examine the extent of skepticism within the sample and the relationship between skepticism and knowledge. This study found an inverse relationship between skepticism and knowledge that was stronger among psychiatrists ($r = -.58, p < .01$) than psychologists ($r = -.33, p < .01$) or social workers ($r = -.20, p < .05$). The second study used a different sample drawn from the same sources and compared participants' diagnostic accuracy of MPD (21.9% accurate) with that of schizophrenia (54.2% accurate). Aside from the significant difference in accuracy, they also found that misdiagnosis of MPD was predicted by skepticism of the disorder.

Cormier and Thelen (1998) surveyed 1000 randomly selected doctoral level psychologists from the American Psychological Association to explore their beliefs about MPD. Of the 43% ($N = 425$) who responded, only 8% did not believe that MPD existed.

However, 59% of respondents indicated the belief that MPD was seen in 0.1% to 0.5% of the general population. Etiologically, 84% believed MPD originates in childhood, and 85% believed it results from severe child abuse. From the 16-item survey, a strong positive correlation ($r(423) = .73$) was found between the 14 items that measured attitudes about MPD and skepticism about the disorder.

Somer (2000) surveyed Israeli mental health professionals ($N = 211$) to explore their beliefs about the diagnostic validity of dissociative disorders and DID, the number of patients these clinicians had on their caseload, and the most frequently adjudicated diagnoses. He found that 8% of the sample participants endorsed having treated a patient with DID at some point in their career, and while more than 40% of participants professed moderate to no belief in DID as a diagnosable mental disorder, no significant correlation was found between the degree of validity attributed to DID and the number of patients they diagnosed.

Husted (2000) examined predictive factors of skepticism about the existence of DID in a sample of mental health professionals ($N = 800$), whose education ranged from undergraduate to doctoral level, including medical doctors. However, only 95 surveys (11.8%) were completed. The three basic variables investigated were professional training, beliefs about the prevalence of sexual abuse, and views about repressed memory. It was found that while trauma specialists were more likely to believe that DID was a valid diagnosis, only the credence given to repressed memory was predictive of that belief.

Dorahy and Lewis (2002) surveyed psychologists ($N = 28$) and psychiatrists ($N = 58$) in Northern Ireland to examine their attitudes and experiences with diagnosing and

treating DID. Their findings were consistent with other studies (Dunn et al. 1994; Hayes & Mitchell, 1994), and most participants (55.8%) tended to believe that DID was a diagnosable condition. However, while psychologists expressed less skepticism than psychiatrists, most participants in both groups indicated the belief that DID was a rare occurrence.

Madden (2004) intended to replicate Hayes and Mitchell's (1994) study to examine skepticism and knowledge about DID with a convenience sample of doctoral level psychologists ($n = 34$) who specialized in evaluating and treating adolescents. However, the small sample size precluded confident support for the hypotheses that skepticism and knowledge were inversely related to each other, skepticism was negatively related to accurate diagnosis of DID, and knowledge was positively related to accurate diagnosis of DID. In this instance, most participants' responses indicated knowledge about DID, and less than 15% of them expressed moderate to extreme skepticism, but consistent with Hayes and Mitchell's findings, DID (17.6% correct) was correctly diagnosed less often than schizophrenia (41.2% correct).

Consolati (2005) studied the relationship between skepticism and knowledge about DID amongst forensic social workers ($N = 196$) and how these were affected by demographic and professional practice variables. In this study, the Hayes and Mitchell Skepticism and Knowledge Scales, or SKS (1994) was updated for compatibility with the DSM-IV-TR diagnostic criteria and adapted for use with forensic social workers. In doing so, the Knowledge scale was reduced to four items resulting in a Cronbach's α of .412, and the Skepticism scale, which was utilized as in the original study (Hayes & Mitchell, 1994) yielded a Cronbach's α of .770. A significantly negative relationship

between skepticism and knowledge about DID was replicated ($r = -.26, p = .00$), but no significant relationships were found between age or years in practice and knowledge or skepticism about DID.

Perniciaro (2014) examined whether licensed mental health clinicians in the United States ($N = 91$) were able to correctly choose a DID diagnosis in a vignette that included *DSM-5* diagnostic criteria and whether this was influenced by skepticism and/or clinical experience with patients who had DID using the “survey of attitudes and experience among clinical psychologists and psychiatrists” (Dorahy & Lewis, 2002). She found that most participants (60.4%) did correctly diagnosis DID in the vignette. Using a one-way between-group analysis of variance (ANOVA), a significant relationship between skepticism and clinical experience with DID was also found, $F(6, 82) = 5.74, p = .000$. Additionally, a Pearson’s Chi Square analysis found a significant relationship between clinical experience with DID and correct diagnostic choice, $\chi^2(1, N = 89) = 4.85, p = .028$. The sample’s professional composition was differentiated by master’s or doctoral level, but not by profession, so licensed master’s degree-level clinicians could be clinical social workers, mental health counselors or marriage and family therapists.

Vlahakes (2017) sought to identify sources of clinical diagnostic error but found no significant relationship between theoretical orientation and accurate diagnosis or between knowledge and accurate diagnosis of DID in her sample of a variety of mental health clinicians ($n = 99$). However, she did find a positive relationship between professional experience with patients diagnosed with DID and accurate diagnosis ($n = 10, 60\%$ accurate).

In a mixed-methods study, Blewis (2018) collected quantitative and qualitative data that described the self-reported knowledge, beliefs, and training about DID of U.S. psychologists ($n = 58$), social workers ($n = 22$), and psychiatrists ($n = 1$). Due to inadequate sample size and variances in the participants' completion of the survey, the groups could not be compared. However, descriptive statistics revealed that most participants (73.5%) endorsed DID as a valid and distinct diagnosis and approximately half of the participants (50.6%) rated themselves as at least "moderately familiar" with the literature about DID. An acknowledged major limitation of this study was self-selection bias of the participants, which may have been related to the absolute transparency of the specific purpose of the study, enticing participants with more specialization in trauma and dissociation. In addition, although 12 organizations were requested to advertise the study, only 66.7% agreed, thereby limiting the diversity of professions and theoretical orientations.

Knowledge about DID

Knowledge can be understood in various ways. It can be understood as empirical or objective information or as implicitly or explicitly acquired data. Knowledge can be understood as contextualized or universal. The studies that examined knowledge in conjunction with skepticism about DID (Consolati, 2005; Hayes & Mitchell, 1994; Madden, 2004; Vlahakes, 2017) evidenced mixed findings about the relationship. Blewis (2018) explored mental health professionals' self-perception of how much knowledge about etiology and symptomatic presentation of DID they possessed, and the number of professional and training experiences reported. The knowledge scale developed by Hayes

and Mitchell (1994), when increased from three items ($\alpha = .52$) to six items had a Cronbach's α of .62.

Dependent Variable

Accurate Diagnosis of DID

The literature that examines whether mental health professionals accurately diagnose DID is sparse. As previously reported, Hayes and Mitchell (1994) found that mental health professionals misdiagnosed MPD at a significantly higher rate than schizophrenia.

Dorahy et al. (2006) studied North Irish clinicians' diagnostic accuracy in detecting DID from a series of vignettes. The first case presented no dissociative symptoms, nor specific indicators of a dissociative disorder. They adapted the second case vignette from existing published case presentations. This vignette provided few distinguishing dissociative symptoms, but many typical symptoms and features seen with DID. The third vignette was adapted from another case presentation of a patient with DID and presented clear distinctive and illustrative symptoms of DID. In vignette 1, only three participants identified a dissociative disorder as a possible diagnosis. As predicted, neither the clinical psychologists nor psychiatrists from North Ireland were successful in detecting DID in vignette 2. While vignette 3 yielded greater recognition of DID, less than a quarter (23.2%) chose DID as the most likely diagnosis and rebutted the prediction that Northern Irish clinicians would successfully identify DID when presented with clear symptomatology.

Ginzberg et al. (2010) examined whether there were missed diagnoses of dissociative disorders among inpatients ($N = 96$) at two Israeli psychiatric hospitals.

Consent was obtained by 84% of the sample who were deemed competent to give consent and were screened for DDs using the Multidimensional Inventory of Dissociation – Hebrew version. Out of 81 participants, more than 50% screened positive for low ($n = 26$) or high ($n = 22$) levels of dissociation. The 23 participants who consented to participate further in a *Structured Clinical Interview for DSM – Dissociative Disorders – Revised* (H-SCID-D-R) included 10 patients, who had evidenced low levels of dissociation (H-MID scores ≤ 10) and 13, who had high levels of dissociation (H-MID scores ≥ 30). They found that while none of the patients identified with low dissociation during screening met criteria for a dissociative disorder, 77% ($n = 10$) of participants with high levels of dissociation were identified with the H-SCID-D-R as having a dissociative disorder including one patient with DID, yet according to their psychiatric records, none of these patients had been previously identified as having a dissociative disorder.

Finally, as previously stated, Perniciaro (2014) found that mental health professionals who had prior experience with patients diagnosed with DID were more accurate in their diagnosis of the disorder. A Pearson's Chi Square analysis found a significant relationship between clinical experience with DID and correct diagnostic choice, $X^2 (1, N = 89) = 4.85, p = .028$.

Moderating Variables

Specialized Training about DID

Consolati (2005) found a strong positive correlation between training about DID and clinical experience with diagnosing ($r = .67, p < .01$) and with treating the disorder ($r = .67, p < .01$), so clinicians with more training about DID tended also to have more experience diagnosing and treating the disorder. However, the relationship to accurate

diagnosis was not examined in this study. Additionally, training about DID was qualitatively explored by Blewis (2018), who found 30% of her sample ($N = 81$) had heard about DID in graduate school, but there was no examination of the relationship to accurate diagnosis of the disorder.

Deficient education about dissociation and the associated clinical features, results in deficient knowledge, failure to identify main symptoms, and ultimately in possible misdiagnose of DID. Many patients with dissociation receive ineffective treatment or no treatment at all (Brand, 2016; Dorahy et al., 2006), despite some evidence that relates trauma-related training to increased inquiry about trauma history and therefore, uncovering of trauma history.

Clinical Experience Diagnosing and Treating DID

As previously stated, Perniciaro (2014) examined whether clinical experience with patients who had DID influenced accurate diagnosis of DID in a vignette that included *DSM-5* diagnostic criteria. Using a one-way between-group analysis of variance (ANOVA), a significant relationship between skepticism and clinical experience with DID was also found, $F(6, 82) = 5.74, p = .000$, and a Pearson's Chi Square analysis found a significant relationship between clinical experience with DID and correct diagnostic choice, $X^2(1, N = 89) = 4.85, p = .028$.

Vlahakes (2017) also examined the influence of professional experience with patients diagnosed with DID and accurate diagnosis and used the same "survey of attitudes and experience among clinical psychologists and psychiatrists" (Dorahy & Lewis, 2002) as Perniciaro (2014). It was first found, that of her sample ($N = 99$), only 10% ($n = 10$) indicated having clinical experience with DID. However, despite reporting

a positive relationship ($n = 10$, 60% accurate), notably absent were the methods used to calculate professional experience.

Summary

This review focused on the influence of the independent variables of skepticism and knowledge on accurate diagnosis of DID and moderating factors, including professional training about DID and experience with diagnosis and treatment of DID. However, the findings in the literature are inconclusive. Some studies found more years of practice experience to be associated with more skepticism (Dunn et al., 1994; Hayes & Mitchell, 1994), whereas another study found inexperience to be associated with skepticism (Vlahakes, 2017). Vlahakes (2017) also found no relationship between knowledge and skepticism and accurate diagnosis of DID. Hayes and Mitchell (1994) found that misdiagnosis of MPD was significantly greater than that of schizophrenia and predicted by skepticism of the disorder. Perniciaro (2014) and Vlahakes (2017) concurred in their finding of a positive influence of clinical experience with DID on accurate diagnosis of the disorder. Although practitioners' training about DID has been explored (Consolati, 2005; Blewis, 2018), to date, this variable has not been examined for its influence on the accurate diagnosis of DID.

Although some of the research to date has included social workers, it has not always been clear whether these were LCSWs. Vlahakes (2017) studied mental health practitioners' theoretical orientation as it related to accurate diagnosis of DID and included 13 LCSWs in her sample of 99 mental health professionals. Perniciaro (2014) studied skepticism and clinical experience related to recognition of DID and included master's level practitioners in her sample, but the demographic breakdown of results did

not elucidate either the number of LCSW participants or her findings about LCSWs. Dorahy et al. (2006) studied psychologists and psychiatrists' ability to detect DID in vignettes. Madden (2004) examined skepticism and knowledge about DID in adolescents in a sample of psychologists. Somer (2000) enumerated 63 (30.9%) clinical social workers in his sample studying mental health professionals' attitudes about dissociative disorders and the most frequent alternate diagnostic considerations. Hayes and Mitchell (1994) conducted three studies in which they included in their sample 83 NASW social workers who identified as practicing individual psychotherapy. First, they developed and normed the SKS, an instrument for measuring knowledge and skepticism about DID. Next, they studied the relationship between skepticism and knowledge, and lastly, associated skepticism and knowledge with the accurate diagnosis of DID. The time-lapse since 1994 is a tremendous gap that if filled could elucidate whether there have been changes in LCSWs' knowledge and levels of skepticism about DID and whether they are currently making accurate diagnoses of this mental disorder. LCSWs are most of the mental health professionals in the United States, yet to date, there has not been a single study dedicated to revealing this population's knowledge and skepticism about DID and the relationship to accurately diagnosing the disorder.

Philosophical and Theoretical Framework

This study is conceptually grounded in the philosophy of knowledge. However, a theoretical model of diagnostic reasoning will also be addressed. Epistemology and skepticism which are closely linked but in opposition are philosophically central to this study. Where epistemology seeks to explain how knowledge is possible, skepticism refutes attempts to know as exercises in futility. To address diagnostic accuracy,

Kahneman's dual-process model for understanding diagnostic reasoning will also be presented to complete the framework.

Epistemology

Epistemology is the branch of philosophy that is concerned with what constitutes knowledge, how one knows, the reliability of our senses, and the role of reason in knowing. It originated with the Greek Sophists and asked questions about the relationship between appearance and reality (Kohl, 1992). Some questions that are central to epistemology include: What does it mean to know? What sorts of things can be known, and can beliefs about the inner experiences of others or past events be justified without sensory evidence? The basic sources of knowledge have been widely thought to be perception, memory, self-examination, and reflective reasoning (Audi, 2006).

A priori knowledge is true by semantic definition, such as, "all mammals have warm blood". By definition, a mammal is warm-blooded, so there is no need for empirical investigation to be certain this is true. However, a posteriori knowledge can be accepted or rejected as true upon investigation if there is no deviation from the proposition, as in "all medications help all people". In this instance, it may be true for many, but not necessarily for all, so it is necessary to investigate to confirm or contradict the statement. Empirical evidence in the form of symptom reduction or amelioration of infection, may confirm the helpfulness of medications for some persons, but not for others, and a life-threatening allergic reaction clearly contradicts that all medications are helpful to every person. Therefore, it can be said that there are three ways of knowing.

First person knowing is about "I" and is restricted to one's own experience, as in "I am sad," or "I am cold." It cannot be argued by anyone else as it is uniquely personal.

Third person knowing is of those things that are outside of “I” such as, “It is raining outside, or “There is a squirrel in the tree.” This would be considered objective or empirical knowing that is also observable by others who can confirm a common experience. Second person knowing is how we know one another. It is the intersubjective understanding of another’s first-person experience through our own personal lens of experiences and beliefs (Gupta et al., 2019). This intersubjectivity is a meeting of individual minds and an inevitable element of diagnostic reasoning in mental health.

In epistemology, knowledge has been traditionally analyzed as requiring a combination of truth, belief, and justification. To have factual knowledge, what is known must be a fact and therefore true, and the person must consider it to be true (belief). Finally, the person must have good enough support (sufficient justification) for believing it. Given these required conditions, knowledge can be defined as a true belief that is sufficiently justified (Conee & Feldman, 2006).

Typically, a belief is justified because it is coherently bolstered by other beliefs. In the view of foundational epistemology, because our minds are not limitless, some basic beliefs are justified without supplementary supporting convictions (a priori). Alternately, in coherentism, there are no basic beliefs. Instead, our beliefs knit together, each belief supporting the others. According to classic foundationalism, justified beliefs about the external world are inferred from self-examination of justified beliefs about our own states. This is the distinction between empirical and non-empirical knowledge. Empirical knowledge has observable and measurable evidentiary support, which some foundationalists contend is required for the claim of knowledge (Conee & Feldman, 2006). On the other hand, non-empirical knowledge is inferred from basic beliefs that are

sufficiently justified to be considered true (Kern & Smith, 2017). These epistemological questions about belief and sufficient justification are at the core of skepticism.

Skepticism

The ancient Greeks associated skepticism with belief, deferral of judgement, standards of veracity, appearances, and investigation. However, it is in modern skepticism that knowledge, certainty, justified belief, and doubt are key. The primary focus in contemporary skepticism is on belief, and the ways that belief translates into speech and action (Vogt, 2021). The central contest in epistemological skepticism is what constitutes sufficient support to justify a supposition of knowledge. In other words, is sensory perception reliable enough to know that what is seen, heard, smelled, tasted, or felt is accurate? And can our experiences, memories, and beliefs be relied upon to make inferential connections that can be considered knowledge? Most importantly, must these basic beliefs be foolproof, or can basic sensory perceptions, such as seeing a tree be an autonomous justified belief (Conee & Feldman, 2006).

Skepticism can be thought of as either systematic or methodological. Systematic skepticism is the radical belief that we can never know anything. Whereas methodological skepticism, entails a suspension of judgement until there is justification to either reject or accept the extraordinary as knowledge. The skeptic is wary of unusual sensory experiences, thoughts, and reports and wants empirical evidence before believing things like psychoanalysis is a valid treatment, and the unconscious mind does exist. (Bunge, 1991).

In contemplating what we know, being mistaken was a considered possibility long before Descartes. The ancient Greek philosophers, Plato, Socrates, and Aristotle started

with questions about knowledge. However, with Descartes and the advent of modern skepticism, that possibility of error became the foundation of skeptical doubt. The conundrum of perceptual knowledge, according to the skeptic, is the incongruity of knowledge being defined as being both factual and fallible (Kern & Smith, 2017).

Apart from uncertainty that we can know anything, skepticism doubts what can be considered a body of knowledge. Traditional foundationalists, like Descartes insist upon clear and manifest evidence to accept an assertion of knowledge. However, since at least the 1950s, most foundationalists have been willing to accept that a body of knowledge may contain basic aspects that can be inferred as sufficiently justified true beliefs (Audi, 2006). Skeptics tend to doubt based on the possibility of error. It is feared that since there is the possibility of deception or misperception, our most confident beliefs about the external world can be wrong. Skepticism is doubt, not merely of the external world, but of one's own ability to make reasonable connections between perceptions and beliefs that sufficiently justifies acceptance of knowing (Conee & Feldman, 2006).

Kahneman's Model of Diagnostic Reasoning

Diagnostic reasoning is a complex cognitive process used for excavating the medical condition with which the presenting constellation of symptoms resonate. It entails gathering information about a patient's symptoms, using prior knowledge and experience to identify the problem, formulating a diagnosis, testing the hypothesis, and revisiting the evidence to provide timely and competent treatment. A diagnosis is accurate only if it is complete, precise and reflects the actual condition the patient has. (National Academies of Sciences, Engineering, and Medicine, 2015).

Diagnostic reasoning can be understood as a two-system process. "System 1"

is fast, intuitive, and requires little effort, whereas “system 2” is slow, deliberately analytical, and energetically intensive (Kahneman, 2011). Both systems contribute to good diagnostic reasoning and are invariably infused with intersubjective knowing regardless of whether that dynamic is acknowledged (Gupta et al., 2019). This dual model of processing information is initiated in “system 1” which is emotionally and experientially driven, and an initial diagnostic impression is formed intuitively based on specialized knowledge, prior experience, beliefs, and preconceived ideas about a particular patient. The automaticity of these heuristics, or mental shortcuts contributes to the speed of “system 1” and expedites decision making (National Academies of Sciences, Engineering, and Medicine, 2015). However, when atypical symptoms are in evidence, these mental shortcuts can also be the basis for cognitive biases that may blind the practitioner from evidence as well as blind them to their inability to see (Kahneman, 2011). Symptoms or contextual clues that are incongruent with an initial heuristically derived impression do not guarantee that the analytical “system 2” will be activated to override automatic miscues. With a tentative conclusion in hand, “system 2” of the process should be activated to consciously analyze the symptoms in the context of other observations, but “system 2” requires deliberate activation and the capacity to hold knowledge as being both factual and fallible. Investment in affect-driven and intuitive initial conclusions may propel the use of idiosyncratic analyses to make assessments of evidence that are congruent with the clinician’s identity rather than the diagnostic landscape (Kahan, 2017).

Application to the Study

Mental health professionals may accept that the body of knowledge about

DID sufficiently supports their clinical experience that DID is a real mental health disorder, or they may doubt the existence of this disorder. In the field of mental health, as contrasted with physical medicine, there is no imaging or testing that can confirm an initial diagnostic suspicion. Instead, in mental health, the signs and reported symptoms may be obscured by complications of presentation, clarity of the patient's report, and breadth of professional reasoning. In mental health treatment, diagnostic reasoning requires a suspension of disbelief for therapists to use their lens to know their patient. This intersubjective knowing is central to diagnostic reasoning about mental disorders. However, if mental health professionals doubt that a disorder, like DID is real, and doubt their own observations about a patient, then consideration of alternate diagnoses, such as DID, may be preempted by skepticism. The consequence becomes reliance only on System 1 intuition for diagnosis or a biased view of observations that narrows the field of diagnostic possibilities to exclude DID from consideration.

CHAPTER 3

Methods

The purpose of this study was to examine the relationship between licensed clinical social workers' (LCSW) level of skepticism and knowledge about DID and their accurate diagnosis of the disorder as moderated by specialized training about DID or postmaster's experience with diagnosis and treatment of the disorder.

Research Questions

Two central, multi-faceted research questions directed this study. Research question 1 examined skepticism and knowledge in relation to each other and the accurate diagnosis of DID. Research question 2 examined the moderating influence of specialized training or clinical experience with the disorder.

- RQ1a. Is there a relationship between LCSWs' level of skepticism and level of knowledge about DID.
- RQ1b. Is there a relationship between LCSWs' level of skepticism and accurate diagnosis of the disorder?
- RQ1c. Is there a relationship between LCSWs' level of knowledge about DID and accurate diagnosis of the disorder?
- RQ2a. Does specialized training about DID affect the diagnostic accuracy of the disorder?
- RQ2b. Does post-master's clinical experience with diagnosing and treating DID affect the diagnostic accuracy of the disorder?

Research Aims

This study aimed to:

1. Examine the relationship between LCSWs' level of skepticism and level of knowledge about DID.
2. Examine whether skepticism or knowledge are related to accurate diagnosis of the disorder.
3. Explore whether specialized training about DID or post-master's clinical experience with DID influences the diagnostic accuracy of the disorder by LCSWs.

Research Design

This study was predicated on a cross-sectional research design. In a cross-sectional design research study, data, specific to selected variables were collected and analyzed at one given point in time across a sample population (Rubin & Babbie, 2017). Due to the single point of observation, there are limitations to the generalizability of findings and there can be no assumptions of causality (Mann, 2003; Rubin & Babbie, 2017). Cross-sectional research designs have been used in all previous studies noted in the literature review of this research proposal examining skepticism, knowledge, and diagnostic accuracy of DID (Consolati, 2005; Dorahy et al., 2006; Dunn, Hayes & Mitchell, 1994; Madden, 2004; Perniciaro, 2014; Vlahakes, 2017), except for Blewis (2018), who used a mixed-methods research design.

Sample and Sampling Procedures

Sample

The population under study was clinical social workers who were licensed and

practicing in the state of Florida. To be included in the study, participants must have had an active license as an LCSW in the state of Florida during the licensure renewal period of March 31, 2021 – March 31, 2023, or March 31, 2023 – March 31, 2025, a practice address within the state of Florida, and an email address on file with the Florida Department of Health (FL-DOH). The sample for this study was randomly selected from the FL-DOH roster of LCSWs with active licenses who practice in Florida which is available to the public on the FL-DOH website.

Sampling Procedures

First, the master list was reviewed for duplicate licensees. Then, it was reviewed to exclude any inactive licenses. Additional reviews of the roster were conducted to also exclude LCSWs licensed in Florida, but who practice exclusively elsewhere in the United States, as well as those who were either not practicing or did not have an available email address. Simple random sampling using a random number generator was used to select participants. Hayes and Mitchell (1994) utilized randomized samples of mental health professionals in each of their consecutive studies, of which ($N = 83$, $N = 37$) were members of the National Association of Social Workers. In a later study, Consolati (2005) obtained her sample ($N = 196$) by recruiting the entire membership of the National Organization of Forensic Social Workers.

Sample Size Calculation

A minimum sample size for the *Pearson's r* was calculated using the power analysis (G*Power, 3.1; Faul, Erdfelder, Lang, & Buchner, 2007). The minimum sample size was 82 participants, with the recommended power of 80%, a medium effect size of .3, and significance level of .05 (Cohen, 1988). A medium effect size was used for

Pearson's r, which is Cohen's proposed convention (Effect size[ES] = .3; Cohen, 1988). Increasing the power would have increased the required minimum sample. To allow for attrition and ensure that the sample size was obtained, this study sought a total sample of 85 – 100, which exceeded the minimum sample size calculated using the power analysis.

A minimum sample size for the linear multiple regression was calculated using the power analysis (G*Power, 3.1; Faul, Erdfelder, Lang, & Buchner, 2007). The minimum sample size was 85 participants, with a recommended power of 80%, a medium effect size of .15, and significance level of .05 (Cohen, 1988). A medium effect size was decided upon for the linear multiple regression, which is Cohen's proposed convention (Effect size[ES] = .15; Cohen, 1988). Increasing the power would have increased the required minimum sample. This study obtained the minimal sample size of 85 calculated for linear multiple regression using the power analysis. However, due to the observed occurrence of dichotomous diagnostic responses to the vignette that were either incorrect or correct, a change in statistics from linear multiple regression to binary logistic regression was necessary to analyze the dichotomous dependent variable. To achieve the same power, a higher minimal sample size for logistic regression was recommended but not obtained, thereby decreasing the power of the study.

Definitions of Major Variables

The following are conceptual definitions of the major variables with a rationale for their inclusion in the study. See Table 1 for the operational definitions of the major variables.

Independent Variables

The following independent variables were examined to obtain a current view of

LCSWs' comprehension of DID as a diagnostic entity since the most recent prior study to examine LCSWs' knowledge and skepticism about DID was almost 30 years ago (Hayes and Mitchell, 1994).

- Knowledge was conceptualized as the justified acceptance of information.
- Skepticism was conceptualized as doubt about a phenomenon, entity, or object.

Moderating Variables

Post-master's clinical experience had been previously related to accurate diagnosis (Perniciaro, 2014; Vlahakes, 2017), so to confirm previous findings, this moderating variable was included. Specialized training was also included as a moderating variable because it has not been previously studied in relation to its influence on accurate diagnosis of DID. It was therefore hoped that new insight would be gained regarding the influence of this factor on the relationship between the independent variables, skepticism and knowledge, and diagnosis of DID. The moderating variables were conceptualized as follows.

- Specialized training was conceptualized as education related specifically to the understanding of, diagnosis, and treatment of a disorder.
- Post-master's clinical experience was conceptualized as post-licensure experience diagnosing and treating patients with a given disorder.

Dependent Variable

Accurate diagnosis was conceptualized as correctly identifying a presenting DSM-5 mental disorder based on diagnostic reasoning of the constellation of signs and symptoms observed by the practitioner.

Table 1*Operational Definitions of Major Variables*

Variable	Operational Definition
Skepticism	Continuous scale measure using 11 items from the Skepticism and Knowledge Scales (SKS) that is greater than or equal to the theoretical midpoint of 33, range 11 – 55.
Knowledge	Continuous scale measure using 6 items from the SKS, range = 6 – 30, theoretical midpoint = 18.
Specialized Training about DID	Nominal variable endorsement of having had specialized training, scored as one (1) and no training, scored as zero (0) measured by books read, conferences, seminars, or workshops attended, and/or graduate courses or professional training programs completed that specifically addressed etiology, epidemiology, diagnostic indicators, and treatment of patients with DID within the last five years. (Q11 demographic questionnaire).
Clinical Experience with DID	Continuous level variable measured by number of patients diagnosed with DID or treated for this disorder. (Q12 demographic questionnaire)
Post-Licensure Practice Experience	Continuous level variable measured in years since license was first obtained. (Q2 demographic questionnaire)
Age	Continuous level variable measured in years. (Q4 demographic questionnaire)
Gender	Nominal variable with 1 = female, 2 = male, 3 = transgender, 4 = other, 5 = Prefer not to say (Q5 demographic questionnaire)
Ethnicity	Nominal variable with the following choices: American Indian or Alaska Native (01), Asian (02), Black, not of Hispanic origin (03), Hispanic/Latino-a-x (04), Native Hawaiian or Other Pacific Islander (05), White, not of Hispanic origin (06), Multiracial (07), Other (08) (Q6 demographic questionnaire)
Primary Practice Setting	Nominal variable with the following choices: Community mental health agency (01), Crisis center (02), Government (03), Intensive Outpatient Program (04), Medical facility (hospital, clinic, or medical office) (05), Military treatment facility (06), Nonprofit organization (07), Nursing home and assisted living facility (08), Partial Hospitalization Program (09), Private practice (10), School (Elementary/Secondary) (11), University/College (12), Other (13) (Q7 demographic questionnaire)

Table 1 (continues)

Table 1 (continued)

Variable	Operational Definition	
Theoretical Orientation	Nominal variable with the following choices: Humanistic (01), Learning (02), Psychodynamic (03), Other (04) (Q10 demographic questionnaire)	
Accurate Diagnosis	Nominal level variable where accurate diagnosis of DID was scored as zero (0) and inaccurate diagnosis was scored as one (1) (Vignette Appendix C)	
Independent Variables	Moderating Variables	Dependent Variable
Skepticism	Specialized Training	Accurate Diagnosis
Knowledge	Clinical Experience	

Data Collection Methods and Measurements

Data Collection Methods

The data for this study were collected via an online survey using Qualtrics. Surveys are considered excellent tools to measure beliefs and inclinations in large populations (Rubin & Babbie, 2017). Utilizing online surveys for data collection has become common practice for this type of research and was feasible from both a fiscal and temporal standpoint. Also, it was minimally invasive with low risk to participants since it was an observational research design (Nayak & Narayan, 2019). The online survey consisted of three parts in this order.

- 1.) Diagnostic vignette with a very short answer (VSA) response
(see Appendix C).
- 2.) The SKS, comprising 11 items that assess skepticism, six items that assess knowledge, and 13 distractor items (Hayes & Mitchell, 1994)
(see Appendix D).
- 3.) Demographic questionnaire with 12 items (see Appendix E)

The diagnostic vignette used a VSA response rather than a single best answer (SBA) response from a multiple-choice list to assess the participants' competency with diagnosing DID rather than their ability to detect positive cues from an answer menu. In the largest and only multiple-setting study comparing VSA and SBA testing, Sam et al. (2019) found in a sample of medical students (N=1417) that the positive cue rate for SBAs was 42.7% (95% CI 36.8% to 48.6%) indicating that SBA testing may provide a false positive impression of competence. The survey sections were completed in the presented order, and sections were locked once each was completed, so previously completed sections could not be revisited.

Measurements

A single vignette depicting a patient who warrants a diagnosis of DID (Hayes & Mitchell, 1994) was used to assess competency to diagnose the disorder (Appendix C). Informed by Hayes and Mitchell (1994), accurate diagnosis was intended to be scored as an ordinal level of measurement. A maximum score of three (3) would indicate a lack of recognition of the constellation of symptoms as indicating a diagnosis of DID, and a minimum score of one (1) indicating recognition of DID as the indicated diagnosis. Partial credit of two (2) would have been assigned for a *DSM-5* diagnosis of other specified dissociative disorder, with chronic and recurrent syndromes of mixed dissociative symptoms (Hayes & Mitchell, 1994). However, the observed responses were specifically either correct or incorrect, yielding a dichotomous nominal measurement, where a correct diagnosis of DID was coded as 0, and all other diagnoses were coded as incorrect, or 1. Hayes and Mitchell's second study (1994) compared mental health professionals' knowledge and skepticism with how accurately they diagnosed either DID

or schizophrenia and compared the accuracy of diagnosis of these two mental disorders. This study did not compare diagnostic accuracy between DID and schizophrenia.

The SKS was used to measure knowledge and skepticism, (Hayes and Mitchell, 1994) after it was updated to reflect the *DSM-5* nomenclature (Appendix D). Hayes and Mitchell's first study (1994) measured knowledge and skepticism about what was then termed multiple personality disorder, now DID. The SKS was designed by Hayes and Mitchell (1994) to obtain measures for use in their dyad of studies and has generally acceptable psychometric properties. The Skepticism scale with 11 items, had a reported Cronbach's α of .85 and an unequal length Spearman-Brown split-half reliability coefficient of .84. Alternately, the Knowledge scale had a Cronbach's α of .52 which increased to .62 with the addition of three items, for a total of six items (Hayes & Mitchell, 1994). In the present study, the Skepticism scale had a Cronbach's α of .72, and .278 for the Knowledge scale. To increase the reliability of the Knowledge scale, items 12, 20, and 31 were deleted which increased the Cronbach's α to .547 which is not optimal for research purposes. Because Cronbach's α was improved, but still subpar, all measurements involving knowledge were calculated with both the full scale (F) and the parsimonious scale (P). Cronbach's α was still acceptable for the Skepticism scale, so no adjustments were made. The SKS uses a five-point Likert-type scale to assess knowledge and skepticism.

Finally, a demographic questionnaire (Appendix E) with 12 items provided a profile of the participants and data regarding the participants' specialized training about DID and post-master's clinical experience with diagnosing and treating DID and more.

Data Analysis

Prior to analyzing the data, the raw survey responses were exported directly from Qualtrics^{XM} into the researcher's SPSS v. 27 program, then cleaned and checked for missing values and outliers. Outliers were found in both scales of the Skepticism and Knowledge Scales (SKS) and specialized training about DID and deleted. Because RQ2 examined whether having specialized training moderated the relationships between the independent variables, skepticism and knowledge, and the dependent variable, accurate diagnosis, and rather than the amount of specialized training, specialized training about DID was treated as a dichotomous nominal variable and coded as one (1) for having specialized training about DID and zero (0) for no specialized training about DID. Because responses to specialized training and clinical experience were strings, some responses were deleted because they were not indicated numerically and could not be quantified. The missing data from specialized training was 7.1%, and the missing data about clinical experience was less than 5%. Additionally, to accommodate the observed dichotomous responses to the vignette diagnosis, multiple linear regression was no longer an appropriate statistical choice, and a series of simple binary logistic regressions were calculated in its place.

From the 3300 randomly selected LCSWs in Florida invited to participate in this study, there was an 8.3% response rate ($N=274$). Of these, 45% ($N=124$) began the survey but did not complete it. An additional 23.6% ($N=64$) completed the survey but did not diagnose the provided vignette. One participant, who was tabulated as finishing the survey had failed to complete critical aspects of the SKS, rendering that data unusable. As a result, data provided by 2.5% of the randomly selected LCSWs ($N=85$) was analyzed, exceeding the G*Power recommendation of 82 participants for Pearson's r .

Descriptive statistics

Descriptive statistics provide a profile of the LCSW population in Florida based on the demographic data provided (Gender, race, age, degree, years of post-licensure practice, theoretical orientation, specialized training, number of patients diagnosed with DID and referred out, number of patients diagnosed with DID and treated, number of patients treated after outside diagnosis of DID). The individual variables underwent univariate descriptive analysis and included frequency counts, means, ranges, and standard deviations to encompass measures of central tendency and distribution.

Inferential Statistics

Bivariate analyses of the relationships between each of the independent variables (skepticism and knowledge), moderating variables (specialized training about DID and professional experience with DID), and the dependent variable (accurate diagnosis of DID) were undertaken using Pearson's correlation coefficient (*Pearson's r*) and point-biserial correlation coefficient as appropriate to the level of measurement. Chi-square was calculated to examine the relationship between the two dichotomous nominal variables, specialized training as a moderating variable and the dependent variable, accurate diagnosis.

Subsequently, simple binary logistic regressions were individually calculated to examine whether the independent variables, skepticism and knowledge or moderating variables, specialized training and clinical experience predicted the dichotomous dependent variable, inaccurate diagnosis of DID, and whether either of the moderating variables influenced the relationships between the independent variables, skepticism and knowledge, and the dichotomous dependent variable, inaccurate diagnosis of DID. A *p*

value equal to or less than .05 was considered statistically significant for the bivariate and multivariate analyses.

Strengths and Limitations of the Study and Human Subject Protection

Strengths

One strength of this study was that it was the first to examine LCSWs, as a focal population, for their diagnostic accuracy of DID. Secondly, the sample of LCSWs exceeded the number of randomly selected clinical social workers in any other study to date that has examined the relationships and impact of skepticism and knowledge on accurate diagnosis of DID. While Hayes and Mitchell (1994) included members of the National Association of Social Workers in their sample, the most recent study in which social workers were clearly included was by Consolati (2005), and in this study, the population was forensic social workers. This study provides insight into how knowledge and skepticism have evolved over the past 28 years and whether there have been changes in the clinical diagnostic competence of DID.

Limitations

One limitation was that the study was limited to LCSWs, who were licensed, and practicing in the state of Florida, so it may not be generalizable to a national population. Another limitation was that while the Skepticism scale of the SKS has consistently shown adequate reliability, the Knowledge scale of the instrument has shown relatively lower reliability since inception with the original reported Cronbach's α of .52, which was increased to .62 after the addition of three items (Hayes & Mitchell, 1994). The lower Cronbach's α of the Knowledge scale may have multifactorial influences, including the low number of items that make up the scale, definition of knowledge, how it is

conceptualized, and how it is measured (Field, 2018). However, this instrument has been used in other master's level and doctoral research (Consolati, 2005; Madden, 2004) with convenience samples, and it was thought that the sample sizes utilized in the previous studies may have negatively impacted the reliability findings of the instrument. An additional limitation of this study was the unexpected need to pivot from the planned linear multiple regression to logistic regression. This complicated the recommendation for sample size, which was calculated and obtained based on the anticipated linear multiple regression. However, while the sample size ($N=85$) was adequate a priori for linear multiple regression, a post hoc analysis of the actual power of logistic regression with this sample ($N=85$) found a reduction from the planned power of 80%. Finally, although the cross-sectional design is widely used in research and can provide valuable information, it provides a brief impression of a single moment in time, so causality cannot be inferred (Rubin & Babbie, 2017).

Human Subject Protection

First, this proposal was submitted to the Florida Atlantic University Institutional Review Board (IRB) after it was successfully defended. Once approved by the IRB on February 1, 2023 (IRB# 1997600-1), an introductory email (Appendix A) which included a link to the electronic survey on Qualtrics^{XM} (Appendix B) was sent to the randomly selected sample. To begin, participants were welcomed by the informed consent form, which required a positive response, to enter the electronic survey on Qualtrics^{XM}. Both the introductory email and informed consent form stated the following as the rationale for the study, "Since LCSWs are the majority of mental health providers, it is important to examine the accuracy of LCSWs' diagnosis of mental disorders." Although this was not

the explicit purpose of the study, the more general presentation was intended to control for participant bias, either positive or negative about DID.

This study was approved with exempt status since the survey presented minimal risk to the participants, and the email provided an incentivizing invitation to choose one out of five provided charity options (Appendix F) upon verification of a completed survey for the researcher to make a \$5.00 donation, and to receive a copy of the completed study if desired.

Qualtrics^{XM} was used to distribute the electronic surveys and to send automatically encrypted raw data directly into the researcher's SPSS 27 program on the University's secure server which restricts password-protected access to the raw data to approved users and was limited to the researcher and committee chair. The Qualtrics^{XM} program permitted the researcher to ensure the anonymity of the survey responses even with automatic reminder emails to the participants who had not yet completed the survey. Qualtrics^{XM} did not collect IP addresses or attach any personally identifying information to the raw data. The researcher was able to see if a respondent completed the survey, but not any individual's raw data, and raw data was not linked to any individual participant. Participants were informed that responses would be kept strictly anonymous by the Qualtrics^{XM} Survey program and that participation was voluntary. Participants were also informed that the Florida Department of Health was not involved with any aspect of the creation of the study's research question, purpose, or survey design, and would not have access to any data collected for this study. It was estimated that the questionnaire would take 20 minutes or less to complete.

Conclusion

This study was formulated using a model that links philosophical concepts of knowledge and skepticism to scrutinize this interplay and the effects on diagnosing DID by LCSWs with theoretical considerations of diagnostic reasoning as a two-system process of intuition and analysis. The moderating effects of specialized training about DID and clinical experience in diagnosing and treating this disorder were examined for their impact on the relationships between the independent variables, skepticism and knowledge, and diagnostic accuracy. It was hoped that the findings from this study would add to the existing literature, contribute to understanding the current state of diagnostic competence amongst LCSWs regarding DID, and provide insights that can inform clinical practice, clinical social work education, and future research.

CHAPTER 4

Findings

This study aimed to examine the relationship between licensed clinical social workers' (LCSW) skepticism and knowledge about DID and their accurate diagnosis of the disorder as moderated by specialized training about DID or postmaster's clinical experience with diagnosis and treatment of the disorder. Two central, multi-faceted research questions guided the study. Research question 1 examined skepticism and knowledge in relation to each other and the accurate diagnosis of DID. Research question 2 examined the moderating influence of specialized training or clinical experience with the disorder.

- RQ1a. Is there a relationship between LCSWs' level of skepticism and level of knowledge about DID.
- RQ1b. Is there a relationship between LCSWs' level of skepticism and accurate diagnosis of the disorder?
- RQ1c. Is there a relationship between LCSWs' level of knowledge about DID and accurate diagnosis of the disorder?
- RQ2a. Does specialized training about DID affect the diagnostic accuracy of the disorder?
- RQ2b. Does post-master's clinical experience with diagnosing and treating DID affect the diagnostic accuracy of the disorder.

The findings are reported as follows. First, the sample's characteristics are described using univariate descriptive analyses of gender, race, age, education, years of post-licensure practice, and theoretical orientation. As appropriate, frequency counts, means, medians, modes, ranges, and standard deviations to encompass measures of central tendency and distribution are included. Next, univariate analyses describe the independent variables, skepticism and knowledge, the moderating variables, specialized training about DID and clinical experience with DID, and the dependent variable, accurate diagnosis. Then, bivariate analyses between each of the predictor variables (skepticism and knowledge), moderating variables (specialized training about DID and professional experience with DID), and the dependent variable (accurate diagnosis of DID) are reported using Pearson's correlation coefficient (*Pearson's r*), point-biserial correlation coefficient, and Pearson's Chi-Square as appropriate to the level of measurement. These analyses are followed by the results of the individually computed logistic regressions.

Descriptive Statistics

Sociodemographic characteristics

As depicted in Table 2 of demographic variables, the study sample ($N=85$) consisted of 70 female-identified participants (82.4%), 13 male-identified participants (15.3%), one who preferred not to say (1.2%), and one who did not respond (1.2%). The participants, with one missing response, ranged in age from 27 to 86 years (Mean[M] = 48.70, Standard Deviation [SD] = 12.86). The mode age was 53, and the median age was 48. Participants ranged in post-licensure practice experience from 2 to 46 years

($M=14.21$, $SD=10.73$). The mode number of practice years was 4, and the median number of post-licensure practice years was 12.

Relevant to the level of education, 91.8% of the participants ($n=78$) reported their highest graduate degree was a Master of Social Work (MSW), 3.5% ($n=3$) earned a Doctor of Social Work (DSW), 3.5% ($n=3$) earned a Doctor of Philosophy (Ph.D.), and 1.2% ($n=1$) earned a Doctor of Psychology (PsyD). PhDs were in clinical sexology ($n=1$), clinical social work ($n=1$), and one undisclosed discipline.

Concerning racial/ethnic background, 78.8% of participants ($n=67$) identified as Non-Hispanic White, 7.1% ($n=6$) Hispanic or Latino-a-x, 5.9% ($n=5$) of the participants identified as Black or African American, 4.7% ($n=4$) indicated other racial/ethnic background which included Caucasian, Caucasian-Jewish, Middle East North African, and White Hispanic, 2.4% ($n=2$) identified as Multiracial, and 1.2% ($n=1$) did not respond.

As relates to the current practice setting, 48.2% of participants ($n=41$) were employed in private practice, 18.8% ($n=16$), in a medical facility, 5.9% ($n=5$), in elementary or secondary education, 5.9% ($n=5$), in a community mental health agency, 3.5% ($n=3$) in an intensive outpatient program, 3.5% ($n=3$) in a university or college setting, 2.4% ($n=2$) in a crisis center, 2.4% ($n=2$) in government, 1.2% ($n=1$) in a military treatment center, 1.2% ($n=1$) in a nonprofit organization, and 7.1% ($n=6$) endorsed other settings which included 1.2% ($n=1$) for-profit mental health service corporation, 1.2% ($n=1$) private practice off-site grant through university, 2.4% ($n=2$) residential treatment center, 1.2% ($n=1$) substance abuse outpatient, and 1.2% ($n=1$) teletherapy.

The inquiry about current and primary practice roles found 74.1% of participants ($n=63$) were clinicians, 7.1% ($n=6$) case managers, 7.1% ($n=6$) educators, two of which worked in elementary or secondary schools, 5.9% ($n=5$) supervisors, 2.4% ($n=2$) administrators, 2.4% ($n=2$) reported other practice roles identified as intake assessor and hybrid clinician-case manager, and 1.2% ($n=1$) was a manager.

As relates to the participants' current caseload, the number of cases ranged from 0 to 200 ($M=36.85$, $SD=39.03$). The mode number of cases was 30 and the median number of cases was 26.

Regarding professional theoretical orientation, 60% of participants ($n=51$) identified with learning theory, 15.3% ($n=13$) a humanistic orientation, 12.9% ($n=11$) psychodynamic theory, and 11.8% ($n=10$) identified other theoretical orientations, which included 4.7% ($n=4$) combined orientations, 2.4% ($n=2$) person/client-centered and trauma-informed, 1.2% ($n=1$) family systems, 1.2% ($n=1$) hypnotherapy, 1.2% ($n=1$) rapid resolution therapy, and 1.2% ($n=1$) somatic.

In summary, participants were predominantly middle-aged, white non-Hispanic females, with an MSW as their highest educational degree who endorsed a learning theory orientation in their roles as clinicians in private practice with an average of 14 years of practice experience.

Table 2

Frequency Table of Demographic Variables (N=85)

Demographic variables	<i>N</i>	%
Gender		
Female	70	82.4
Male	13	15.3

Table 2 (continues)

Table 2 (*continued*)

Demographic variables	<i>N</i>	%
Missing	1	1.2
Post-licensure Practice Years		
2 Years	4	4.7
3 Years	5	5.9
4 Years	7	8.3
5 Years	4	4.7
6 Years	6	7.1
7 Years	5	5.9
8 Years	3	3.5
9 Years	3	3.5
10 Years	5	5.9
12 Years	5	5.9
13 Years	6	7.1
15 Years	4	4.7
18 Years	1	1.2
20 Years	5	5.9
21 Years	1	1.2
22 Years	1	1.2
23 Years	1	1.2
24 Years	1	1.2
25 Years	6	7.1
28 Years	2	2.4
30 Years	4	4.7
33 Years	1	1.2
23 Years	2	2.4
42 Years	1	1.2
43 Years	1	1.2
46 Years	1	1.2
Level of Education		
Master of Social Work	78	91.8
Doctor of Social Work	3	3.5
Doctor of Philosophy	3	3.5
Doctor of Psychology	1	1.2
Racial/ethnic background		
White, not of Hispanic origin	67	78.8
Hispanic/Latino-a-x	6	7.1
Black or African American	5	5.9

Table 2 (*continues*)

Table 2 (*continued*)

Demographic variables	<i>N</i>	%
Other	4	4.7
Multiracial	2	2.4
American Indian/Alaskan Native	0	0
Asian	0	0
Native Hawaiian/Other Pacific Islander	0	0
Missing	1	1.2
Current Practice Setting		
Private practice	41	48.2
Medical facility	16	18.8
Primary or secondary education	5	5.9
Community mental health agency	5	5.9
Intensive outpatient program	3	3.5
Higher education	3	3.5
Crisis center	2	2.4
Government	2	2.4
Military treatment center	1	1.2
Nonprofit organization	1	1.2
Other	6	7.1
Primary practice role		
Clinician	63	74.1
Case manager	6	7.1
Educator	6	7.1
Primary/Secondary School	(2)	(33)
College/University	(3)	(50)
Other	(1)	(12)
Supervisor	5	5.9
Administrator	2	2.4
Other	2	2.4
Manager	1	1.2
Theoretical Orientation		
Learning	51	60
Humanistic	13	15.3
Psychodynamic	11	12.9
Other	10	11.8

Independent Variables

The independent variables under investigation were skepticism and knowledge. The total score on the *Skepticism scale* ($N=83$) ranged from 14 to 36. In this sample, the mean total score of the *Skepticism scale* was 25.64 ($SD = 4.74$), and the mode and median were both 26. Surpassing the theoretical midpoint of a score of 33 indicated moderate to

extreme skepticism in 4.76% ($n=4$). The total score of the full (F) *Knowledge scale* ($N=84$) ranged from 16 to 25, with a mean total score of 20.14 ($SD = 2.13$), and the mode and the median were 20. The total score of the parsimonious (P) *Knowledge scale* ($N=84$) ranged from 9 to 15, with a mean total score of 11.63 ($SD = 2.12$) whereas, the mode was 11, and the median was 12.

Moderating Variables

The moderating variables, specialized training about DID and clinical experience with diagnosing and/or treating patients with DID, were examined for their influence on the relationships between the independent variables, skepticism and knowledge, and the dependent variable, inaccurate diagnosis of DID. Regarding specialized training related to DID in the last five years ($N=85$), 50.6% ($n= 43$) of participants reported having training, 42.4% ($n=36$) had no specialized training related to DID, with 7.1% ($n=6$) missing responses. Overall, the number of postgraduate specialized training experiences related to DID ranged from 0 to 51 ($M=3.18$, $SD=6.89$). The mode number of specialized training experiences was zero and the median was one. See Table 3 for specific descriptive statistics of each category of explored specialized training, that clearly indicate outliers on the high end of the range, especially in the number of books read, graduate-level courses, professional training programs, and seminars attended.

Table 3

Descriptive Statistics for Specialized Training Categories (N=85), Missing values (n=6)

Specialized Training Category	M	SD	Range	Mode	Median
Books Read	.80	1.604	0–10	0	0
Conferences	.30	.822	0–5	0	0
Graduate level courses	.43	2.274	0–20	0	0

Table 3 (*continues*)

Table 3 (continued)

Specialized Training Category	M	SD	Range	Mode	Median
Listserv subscriptions	.05	.273	0–2	0	0
Professional training programs	.53	1.475	0–10	0	0
Seminars	.46	1.376	0–10	0	0
Workshops	.61	1.531	0–10	0	0

Regarding clinical experience with diagnosing and/or treating patients with DID ($N=82$), 54.9% ($n=45$) of participants reported no experience with diagnosing or treating anyone with DID. The remaining 45.1% ($n=37$) reported clinical experience ranging from 1 to 10 patients diagnosed or treated for DID ($M=3$, $SD=2.81$) with mode and median, both equaling 2 for those participants reporting any clinical experience with DID.

Dependent Variable

Regarding diagnostic accuracy of DID, the vignette was diagnosed correctly as a patient having DID by 20% of the sample ($n=17$) and incorrectly by 80% ($n=68$). The most frequent misdiagnosis was post-traumatic stress disorder by 30.6% ($n=26$). Notably, DID was considered a diagnosis to rule out by 5.9% ($n=5$), which includes participants ($n=3$) who listed their primary diagnosis as post-traumatic stress disorder (PTSD). Table 4 displays the frequencies of the vignette diagnoses.

Table 4*Frequency Table of Vignette Diagnoses (N=85)*

Diagnosis	<i>N</i>	%
Acute Stress Disorder	1	1.2
Depression	3	3.5
Derealization/ Depersonalization Disorder	1	1.2
Dissociative Amnesia	4	4.7
Dissociative Disorder	13	15.3

Table 4 (continued)

Table 4 (continued)

Diagnosis	N	%
DID*	17	20.0
PTSD	26	30.6
Psychosis/Psychotic Disorder	5	5.9
Schizoaffective	8	9.4
Schizophrenia	2	2.4
Rule out other disorders	5	5.9

*Accurate Diagnosis

Inferential Statistics***Bivariate*****Pearson's product-moment correlation coefficient (*Pearson's r*).**

As shown in Table 5, *Pearson's r* was calculated to explore the relationships between skepticism and knowledge, skepticism and clinical experience, and knowledge and clinical experience. All calculations involving knowledge used both the full (F) and parsimonious (P) knowledge scales.

Table 5***Pearson's Product-Moment Correlation Coefficient***

		Skepticism	Knowledge (F)	Knowledge (P)	Clinical Experience
Skepticism	Pearson Correlation	1	-.224*	-.187	-.208
	Sig. (2-tailed)		.044	.027	.064
	N		82	82	80
Knowledge (F)	Pearson Correlation	-.224*	1	.600**	.297**
	Sig. (2-tailed)	.044		<.001	<.001
	N	82		83	84
Knowledge (P)	Pearson Correlation	-.271*	.600**	1	.392**
	Sig. (2-tailed)	.027	<.001		<.001
	N	82	83		81
Clinical Experience	Pearson Correlation	-.208	-.013	.371**	1
	Sig. (2-tailed)	.064	.908	<.001	
	N	80	84	81	

* $p < .05$, ** $p < .001$

Pearson's r calculated between skepticism and knowledge scale (F) about DID found a significant, weak, and negative correlation between the variables, $r = -.224, p < 0.05$. *Pearson's r* was calculated using knowledge scale (P) and skepticism found a significant, but slightly stronger negative correlation, $r = -.271, p < .05$. Thus, it could be concluded that, as skepticism about DID increases, knowledge about DID decreases, or as knowledge about DID increases, skepticism about the disorder decreases.

The *Pearson's r* that was calculated between skepticism and clinical experience was nonsignificant ($p < .05$).

Pearson's r calculated between knowledge scale (F) and clinical experience found a significant, strong, and positive correlation, $r = .297, p < .001$, and between knowledge scale (P) and clinical experience, found a stronger significant and positive correlation, $r = .392, p < .001$, so it could be concluded that knowledge increases as clinical experience increases.

Point-biserial correlation coefficient.

Because responses to the diagnostic vignette were dichotomous and categorically either correct or incorrect, point-biserial correlations were calculated between the diagnosis of the diagnostic vignette and skepticism, knowledge (F and P), and clinical experience with DID. Because specialized training was also dichotomous and categorically coded as either endorsed or not, additional point-biserial correlation coefficient calculations explored the relationships between specialized training and skepticism, knowledge (F and P), and clinical experience with DID (See Table 6).

Table 6*Point-Biserial Correlation Analyses*

		Skepticism	Knowledge (F)	Knowledge (P)	Clinical Experience
Inaccurate Diagnosis	Pearson Correlation	.246*	-.082	-.076	-.016
	Sig. (2-tailed)	.025	.459	.493	.885
	N	83	84	84	82
Specialized Training	Pearson Correlation	-.106	-.067	.081	.303**
	Sig. (2-tailed)	.357	.560	.480	.007
	N	77	78	78	77

* $p < .05$, ** $p < .01$

A point-biserial correlation coefficient was calculated to explore the relationship between skepticism and accurate diagnosis of DID. A significant, weak, and positive correlation existed between the variables, $r = .246$, $p < 0.05$. Thus, it could be concluded that, as skepticism about DID increases, inaccurate diagnosis of the disorder also increases.

A point-biserial correlation coefficient was calculated to explore the relationship between knowledge about DID and inaccurate diagnosis of the disorder using both the full and parsimonious knowledge (F and P) scales which were both found to be nonsignificant. Also nonsignificant was the relationship between clinical experience with DID and inaccurate diagnosis of DID.

A point-biserial correlation coefficient, calculated to explore the relationship between skepticism and specialized training about DID, was nonsignificant. Also nonsignificant were the point-biserial correlation coefficients calculated between both knowledge scales (F and P) and specialized training about DID.

The point-biserial correlation coefficient calculated to explore the relationship between clinical experience and specialized training about DID found a significant, strong, and positive correlation, $r=.303, p<.01$. Thus, it could be concluded that as clinical experience with DID increases, specialized training about the disorder also increases or as specialized training about DID, so does clinical experience with the disorder.

Pearson’s Chi-Square.

In the cross-tabulation of specialized training about DID * vignette diagnosis of DID, 88.9% of diagnoses were incorrect by participants without specialized training about DID and 69.8% incorrect by participants with specialized training (See Table 7).

Table 7

*Specialized Training*Vignette Diagnosis Crosstabulation*

		Vignette Diagnosis		Total
		CORRECT DX	INCORRECT DX	
Specialized Training	has training	13	30	43
	no training	4	32	36
Total		17	62	79

As seen in Table 8, the chi-square tests indicated a significant and positive association between not having specialized training about DID and incorrect diagnosis of DID, $\chi^2(1, n = 79) = 4.242, p < .05$.

Table 8*Chi-Square Tests (N=79)*

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.242 ^a	1	0.039		
Continuity Correction ^b	3.186	1	0.074		
Likelihood Ratio	4.460	1	0.035		
Fisher's Exact Test				0.055	0.035
Linear-by-Linear Association	4.189	1	0.041		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.75.

b. Computed only for a 2x2 table

Multivariate Statistics***Binary Logistic Regression***

A series of binary logistic regressions were performed that controlled for all other variables to ascertain how skepticism, knowledge, specialized training about DID, clinical experience with DID, and the interaction of specialized training with skepticism and knowledge predicted participants' diagnosis of the provided vignette. See Table 9 for the summary statistics of each logistic regression analysis.

The logistic regression model examining skepticism was statistically significant, $\chi^2(1) = 5.065$, $p = .024$. The model explained 9.3% (Nagelkerke R²) of the variance in diagnosis and correctly classified 78.3% of cases. The logistic regression model examining specialized training was also statistically significant, $\chi^2(1) = 4.460$, $p = .035$. The model explained 8.5% (Nagelkerke R²) of the variance in diagnosis and correctly classified 78.5% of cases. However, the logistic regression model examining skepticism moderated by specialized training about DID was statistically nonsignificant, $\chi^2(1) =$

2.422, $p = .120$. The model explained 4.7% (Nagelkerke R2) of the variance in diagnosis and correctly classified 77.9% of cases. The logistic regression model examining knowledge (F and P) did not significantly predict whether the vignette was diagnosed inaccurately. However, when the relationship between the full knowledge scale and diagnosis as moderated by specialized training about DID was examined, the equation was statistically significant, $\chi^2(1) = 6.467$, $p = .011$. The model explained 12.5% (Nagelkerke R2) of the variance in diagnosis and correctly classified 79.5% of cases. Consistent with this finding, the relationship between the knowledge scale (P) and diagnosis was also moderated by specialized training and statistically significant, $\chi^2(1) = 4.371$, $p = .037$. This model explained 8.4% (Nagelkerke R2) of the variance in diagnosis and correctly classified 78.2% of cases. As seen in Table 9, neither knowledge (F or P) nor clinical experience in isolation significantly predicted whether the diagnosis of DID was accurate.

Table 9

Summary Statistics for Logistic Regression Analyses

	X2	DF	Sig.	-2 Log Likelihood	Nagelkerke R-Square
Skepticism	5.065	1	.024	79.099 ^a	.093
Knowledge (F)	.561	1	.454	81.240 ^a	.011
Knowledge (P)	.477	1	.490	84.142 ^a	.009
Specialized Training	4.460	1	.035	77.819 ^b	.085
Clinical Experience	.021	1	.884	86.681 ^a	.000
Skepticism*Specialized Training	2.422	1	.120	78.874 ^a	.047
Skepticism*Clinical Experience	.000	1	.996	82.760 ^a	.000
Knowledge (F)*Specialized Training	6.467	1	.011	72.692 ^b	.125

Table 9 (continues)

Table 9 (*continued*)

	X2	DF	Sig.	-2 Log Likelihood	Nagelkerke R-Square
Knowledge (P)*Specialized Training	4.371	1	.037	77.420 ^b	.084
Knowledge (F)*Clinical Experience	.034	1	.854	80.474 ^a	.001
Knowledge (P)*Clinical Experience	.002	1	.963	83.232 ^a	.000

^a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001

^b. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001

Table 10 reports the results of each logistic regression analysis. Controlling for all other variables ($n=83$), as skepticism increases by one unit, participants' odds of incorrectly diagnosing the vignette increase by about 1.142 [Exp(B)] or 14.2%. Controlling for all other variables ($n=79$), for every unit increase in specialized training about DID participants' odds of incorrectly diagnosing the vignette decrease by about .288 [Exp(B)] or 28.8%. Additionally, controlling for all other variables, specialized training about DID moderated the relationship between knowledge (F) and inaccurate diagnosis ($n=78$) by decreasing the odds of incorrect diagnosis by 92.5% (.925 [Exp(B)]) and between knowledge (P) and inaccurate diagnosis by decreasing the odds of incorrect diagnosis by 90.3% (.903 [Exp(B)]).

As indicated in Table 10, controlling for all other variables, neither knowledge ($n=84$), nor clinical experience ($n=82$) significantly predicted the odds of whether a participant would diagnose the vignette incorrectly ($p > .05$). Specialized training did not moderate the relationship between skepticism and inaccurate diagnosis ($n=77$), and clinical experience with DID ($n=80$) did not moderate the relationship between

skepticism and inaccurate diagnosis of DID or the relationship between knowledge (n=81) and inaccurate diagnosis.

Table 10

Logistic Regression Analyses Results

	B	S.E	Wald	Sig.	Exp(B)	95% C.I. for Exp(B)	
						Lower	Upper
Skepticism	.133	.061	4.701	.030*	1.142	1.013	1.288
Knowledge (F)	-.098	.131	.559	.455	.906	.701	1.173
Knowledge (P)	-.145	.209	.480	.489	.865	.574	1.304
Specialized Training	-1.243	.626	3.948	.047*	.288	.085	.983
Clinical Experience	-.016	.108	.022	.883	.984	.796	1.217
Skepticism* Specialized Training	-.034	.022	2.318	.128	.967	.926	1.010
Skepticism* Clinical Experience	.000	.005	.000	.996	1.00	.991	1.009
Knowledge (F)* Specialized Training	-.078	.034	5.342	.021*	.925	.866	.988
Knowledge (P)* Specialized Training	-.102	.051	3.939	.047*	.903	.816	.999
Knowledge (F)* Clinical Experience	-.001	.005	.035	.852	.999	.989	1.009
Knowledge (P)* Clinical Experience	.000	.008	.002	.962	1.00	.983	1.016

* $p < .05$

Summary

As previously stated, the purpose of this study was to examine the relationship between LCSWs' skepticism and knowledge about DID and their accurate diagnosis of the disorder as moderated by specialized training about DID and/or postmaster's clinical experience with diagnosis and treatment of the disorder. There is a paucity of research on LCSWs' diagnostic ability in the field of mental health, and this is the first study to focus

on this population and to examine the moderating effects of specialized training and clinical experience on diagnostic accuracy. Outcomes from this study are meant to fill a gap in the literature about LCSWs' current skepticism and knowledge about DID and the relationship to accurate diagnosis of this mental disorder, contribute to understanding the current state of diagnostic competence amongst LCSWs regarding DID, and provide insights that can inform clinical practice, clinical social work education, and future studies. The following research questions were examined:

- RQ1a. Is there a relationship between LCSWs' level of skepticism and level of knowledge about DID.
- RQ1b. Is there a relationship between LCSWs' level of skepticism and accurate diagnosis of the disorder?
- RQ1c. Is there a relationship between LCSWs' level of knowledge about DID and accurate diagnosis of the disorder?
- RQ2a. Does specialized training about DID affect the diagnostic accuracy of the disorder?
- RQ2b. Does post-master's clinical experience with diagnosing and treating DID affect the diagnostic accuracy of the disorder?

Regarding Research Question 1, while a significant negative correlation was found between skepticism and knowledge (RQ1a), and a significant positive relationship was found between skepticism and incorrect diagnosis of DID (RQ1b), knowledge alone was not significantly correlated with diagnosis (RQ1c). Regarding Research Question 2, it was found that while the relationship between skepticism and inaccurate diagnosis was not moderated by specialized training (RQ2a), specialized training did moderate the

relationship between knowledge and diagnosis to decrease diagnostic inaccuracy (RQ2a).

It was also found that clinical experience did not moderate the relationships between either skepticism or knowledge and diagnostic accuracy of DID (RQ2b).

Significant Findings

Significant Univariate Findings.

- Most participants' highest level of education was a Master of Social Work degree.
- Most participants endorsed learning theory as their theoretical orientation.
- Most participants were clinicians.
- Almost half of the participants were in private practice.

Statistically Significant Bivariate Findings.

- Higher skepticism about DID was associated with lower knowledge about DID;
- As clinical experience with DID increased, knowledge about the disorder also increased;
- As skepticism about DID increased, inaccurate diagnoses of the disorder also increased;
- As clinical experience with DID increased, so did specialized training about the disorder;
- A lack of specialized training about DID was associated with an incorrect diagnosis of DID.

Statistically Significant Binary Logistic Regression Analyses.

- Skepticism increased the odds of making an inaccurate diagnosis of DID;
- Specialized training about DID decreased the odds of making an inaccurate diagnosis of the disorder;

- Specialized training about DID also moderated the relationship between knowledge and diagnosis of DID to decrease the odds of incorrect diagnosis.

A discussion of the findings will be found in Chapter 5.

CHAPTER 5

Discussion of Findings, Implications, and Conclusions

The purpose of this study was three-fold. The primary objective was to examine the relationship between licensed clinical social workers' (LCSW) level of skepticism and knowledge about dissociative identity disorder (DID) and their accurate diagnosis of the disorder. Second, this study aimed to examine whether specialized training about or post-master clinical experience with DID moderated the relationship between skepticism and diagnostic accuracy of DID and whether these variables moderated the relationship between knowledge and an accurate diagnosis of the disorder. Finally, the study sought to elucidate whether there have been changes in LCSWs' levels of skepticism, knowledge about, and diagnostic accuracy of DID since the study by Hayes and Mitchell (1994) upon which the present study is modeled. This study sought to fill a gap in the literature about LCSWs' current skepticism and knowledge about DID and the relationship to accurate diagnosis of this mental disorder. This chapter discusses the findings from this study and its implications for clinical practice, clinical social work education, and research.

Discussion of Findings

Sample

The current study sample shares many characteristics with the sample used in the

Hayes and Mitchell (1994) study. Participants in both studies were predominantly middle-aged, white non-Hispanic female clinicians in private practice, yet the current sample had an average of 14 years of practice experience, while the former study (Hayes & Mitchell, 1994) had an average of 15.8 years of postgraduate experience conducting therapy, so the sociodemographic composition of the samples is comparable. The current study focused on LCSWs, whereas Hayes and Mitchell's (1994) sample included psychiatrists, psychologists, and social workers, but it is the composition of theoretical orientations that is most starkly contrasted. In the Hayes and Mitchell (1994) study, 46.0% of the sample endorsed psychodynamic, 25.1% learning, 18.2% humanistic, and 10.7% other, while 60% of participants in the current study endorsed learning theory, 15.3% humanistic, 12.9% psychodynamic, and 11.8% other orientations. Although the previous study that examined theoretical orientation and accurate diagnosis of DID did not find a relationship (Vlahakes, 2017), it raises the question of how the theoretical orientation of social work education has changed and the impact that change has had on diagnostic reasoning among LCSWs, and by extension the effectiveness of their provision of mental health care.

Skepticism, Knowledge, and Diagnosis of DID

Previous studies found an inverse relationship between skepticism and knowledge about DID (Consolati, 2005; Hayes & Mitchell, 1994; Madden, 2004). Additionally, misdiagnosis of DID was found to be predicted by skepticism about the disorder (Hayes & Mitchell, 1994; Madden, 2004). No previous studies had examined a relationship between knowledge about DID and accurate diagnosis of the disorder.

The analysis of Research Question (RQ)1a, “Is there a relationship between LCSW’s level of skepticism about DID and level of knowledge about DID?” found a significant inverse correlation between skepticism and knowledge about DID in concert with previous studies (Consolati, 2005; Hayes & Mitchell, 1994; Madden, 2004), and skepticism was not only positively correlated with misdiagnosis of the disorder (Hayes & Mitchell, 1994; Madden, 2004); skepticism also increased the odds of misdiagnosing DID which is a new finding (RQ1b). Additionally, there has been a decrease in moderate to extreme skepticism since Hayes and Michell (1994) found that 23.6% of their participants exceeded the theoretical midpoint score of 33 on the skepticism scale. Subsequently, Madden (2004) found that 14.7% of her sample consisting solely of psychologists ($n=34$) surpassed that score, and the current study found moderate to extreme skepticism in only 4.76% ($n=4$) among participants. As previously stated, Hayes and Mitchell (1994) utilized a sample ($N=207$) that included psychiatrists, psychologists, and social workers, and it must be noted that amongst these disciplines, they found different levels of skepticism, the lowest of which was among social workers.

The analysis of RQ1c, “ Is there a relationship between LCSWs’ level of knowledge about DID and accurate diagnosis of the disorder?” found that knowledge, on the other hand, was found to be neither associated with nor predictive of an accurate diagnosis of DID, and indeed, had been previously studied only in relationship to skepticism. Equally interesting is the consistency of the correlation between skepticism and knowledge for social workers. The current study found a weak, but significant inverse relationship between skepticism and knowledge for LCSWs,

$r = -.224, p < .05 (N=82)$, which echoes Hayes and Mitchell (1994), who similarly found a weak, but significant inverse relationship between skepticism and knowledge, $r = -.20, p < .05 (N=78)$ for social workers. It is of interest that while this study found that a lack of specialized training about DID is predictive of misdiagnosis, knowledge, by itself is not. It is equally interesting that specialized training was found to interact with knowledge to improve diagnostic accuracy.

Additionally, where Hayes and Mitchell (1994) found a 21.9% accurate diagnosis of DID, and Madden (2004) found a 17.6% accurate diagnosis, the vignette in the current study was diagnosed correctly by 20% of the participants. Notably, 23.6% of respondents had completed the survey sans the diagnostic vignette, and three emails were received from prospective participants who declined to participate because they “do not diagnose patients.” The reticence of LCSWs to make a diagnosis may be reflective of a generalist social work education and a departure from case formulation as an essential of clinical social work education (González & Gelman, 2019; Turner, 2002).

Influence of Specialized Training about DID or Clinical Experience with DID

A previous study (Consolati, 2005) found a positive correlation between training about DID and clinical experience with the disorder, and other previous studies reported a positive relationship between clinical experience with diagnosing and treating DID and accurate diagnosis (Perniciaro, 2014; Vlahakes, 2017), yet a significant relationship between clinical experience with DID and diagnosis of the disorder was not found in the current study. No previous studies examined the impact of specialized training about DID on clinicians’ diagnostic accuracy of the disorder, so this was a new investigation.

Analysis of RQ2a, “Does specialized training about DID affect the diagnostic accuracy of the disorder?” and RQ2b, “Does post-master’s clinical experience with diagnosing and treating DID affect the diagnostic accuracy of the disorder?” which examined the moderating influence of specialized training or clinical experience on the diagnostic accuracy of DID, uncovered that while clinical experience with DID was positively correlated with specialized training and knowledge about the disorder, clinical experience was not associated with accurately diagnosing DID. It was also found that a lack of specialized training about DID was not only positively associated with misdiagnosis of the disorder but having specialized training decreased the odds of making a misdiagnosis of DID. Furthermore, it was also found that specialized training interacted with knowledge about DID to decrease the odds of an incorrect diagnosis.

The nonsignificant relationship found between clinical experience with DID and accurate diagnosis of the disorder may mean that LCSWs with clinical experience with diagnosing and treating DID have their own heuristics or mental shortcuts that drive diagnostic reasoning, and the details of the vignette used in this study did not resonate with their “system 1” fast and intuitive reasoning about the presentation of DID. As noted in the philosophical/theoretical framework (see Chapter 2), Kahneman (2011) observed that diagnostic reasoning is a complex dual-mode process that initiates in “system 1” where an initial diagnostic impression is formed intuitively based on specialized knowledge, prior experience, beliefs, and preconceived ideas about a particular patient, but when incongruent symptoms or contextual clues are in evidence, these mental shortcuts may hinder activation of “system 2” reasoning which is slow, purposefully critical, cognitively rigorous, and necessary in cases that are abstruse (Kahneman, 2011).

Implications of the Findings

Grounded in a model comprising the philosophical underpinnings of skepticism and epistemology (Audi, 2006; Bunge, 1991; Conee & Feldman, 2006; Kern & Smith, 2017; Vogt, 2021) and Kahneman's theory of diagnostic reasoning (Kahneman, 2011; see also Gupta et al., 2019; Kahan, 2017; National Academies of Sciences, Engineering, and Medicine, 2015), this study was founded on almost three decades of research that examined factors associated with skepticism, knowledge, and the diagnosis of DID (Blewis, 2018; Consolati, 2005; Cormier & Thelen, 1998; Dorahy & Lewis, 2002; Dorahy et al., 2006; Dorahy et al., 2017; Dunn et al., 1994; Ginzburg et al., 2010; Hayes & Mitchell, 1994; Husted, 2000; Leonard & Tiller, 2005; Madden, 2004; Perniciaro, 2014; Somer, 2000; Vlahakes, 2017; see also Dell, 1988). Examining the relationship of skepticism and knowledge, as moderated by specialized training or clinical experience, to the accurate diagnosis of DID in a sample of LCSWs was a new investigation. The findings from this study suggest important implications for clinical practice, clinical social work education, and future research.

Implications for Clinical Practice

That clinical social workers are reluctant to diagnose is a contemporary development inconsistent with the roots of social work in the United States. The advancement of social work from voluntary philanthropic service to a profession can be ascribed to Mary Ellen Richmond, and it is her seminal work, *Social Diagnosis*, published in 1917 that placed diagnosis central to social work, where it remained until the 1990s (Turner, 1994).

Because many modern social workers are prone to equate diagnosis with pejorative labeling, they may focus on normalizing mental health issues to support a social justice cause related to anti-oppression, but in doing so, they are doing a disservice to patients for whom competent treatment depends upon a comprehensive understanding of not only their current functioning in the various aspects of their life but also from where and what circumstances the problems they experience emanate (Turner, 2002). To provide competent care, assessment is incomplete and insufficient if it does not subsume diagnosis. Diagnosis is a dynamic process, rather than a static end that provides a compass rather than an explicit roadmap by which treatment should be guided (González & Gelman, 2019; Turner, 2002). For example, patients with undiagnosed DID, may receive intervention for dysregulated affect, and exaggerated startle response, but they can have no expectation that their symptoms and experience of the world will improve long term without the clinician having a tentative understanding of why. Without a diagnosis, there is no frame for making meaning, and the clinician and patient are left wandering directionless to an unknown destination.

Implications for Clinical Social Work Education

The literature suggests skepticism about DID may explain inadequate exploration of DID in MSW psychopathology coursework (Probst et al., 2015). It has been suggested this neglect may result in limiting clinical understanding of dissociative disorders (Brand et al., 2019; Wilgus et al., 2016). However, the current study finds that although moderate to extreme skepticism about DID predicts inaccurate diagnosis, it occurs in less than 5% of LCSWs. Furthermore, it finds that having knowledge alone is insufficient to recognize

the subtle and covert signs of activated dissociative processes, but factoring in specialized training is influential and reduces the odds of inaccurate diagnosis.

Restricting the definition of knowledge to mean information about a subject is dangerously reductionist as it applies to mental health and clinical social work education. Alternately, knowledge can be conceptualized as multidimensional, encompassing an intersection of breadth and depth, where the breadth of knowledge may be relatively linear and unidimensional (i.e., information), but depth of knowledge is multilayered and relies on increasingly complex cognitive processes such as synthesis and application of information, experience, and intersubjective knowing (Anderson et al., 2001). For knowledge to deepen and be meaningful, it must scaffold on prior learning, and it appears the deepening of knowledge through the exercise of increasingly complex cognitive processes in clinical social work education may be lacking. It is insufficient to acquire a breadth of information without the tools or training with which to create meaning, especially since the field of social work is preeminent in its responsibility for the provision of mental health care. Therefore, expanding the scope of learning to address the dimension of depth more fully in social work education requires a return to its roots that emphasize critical thinking and diagnostic reasoning to intervene with a defined problem (González & Gelman, 2019; Turner, 2002).

Additionally, it is of great importance that graduate clinical social work students are exposed to multiple theories of practice (Howe, 2009). Clinical social work educators are encouraged to examine their own biases about mental disorders and clinical practice given their undeniable influence on the approach and content of instruction, which in turn

influences how students organize their own clinical thought and clinical practice (Probst et al., 2015).

For instance, clinical social work education predominantly emphasizes the cognitive-behavioral treatment of mental health despite empirical support for psychodynamic therapy, concepts, and superior maintenance and advancement of therapeutic gains after treatment has concluded (Shedler, 2010). The complexity of DID is an exemplar of the importance of both teaching diagnostic reasoning and presenting with parity, various theoretical orientations to organize emerging clinical thinking (Howe, 2009). The movement toward adopting a generalist practice model in the field of social work, while valued by many in the discipline, has also diluted essential clinical content necessary for LCSWs, as the principal mental healthcare providers, to provide care with competence. (González & Gelman, 2019; Howe, 2009; Turner, 2002), and a shift in curricular goals is worthy of consideration.

Implications for Future Research

This study was limited to LCSWs, practicing in the state of Florida, so it may not be generalizable to a national population, which would be worthy of future research, particularly to compare the diagnostic accuracy of LCSWs educated as generalists or specialists with other clinical professionals, including psychologists, mental health counselors, marriage and family therapists, and psychiatrists. Therefore, increasing the sample size on a national level should be considered in future research. In addition, it seems that although email is expedient, it may be oversaturated, so researchers may wish to consider alternate avenues for recruitment including utilizing the postal service for recruitment prior to online data collection. Additionally, the Knowledge Scale of the

Skepticism and Knowledge Scales (SKS) has had a consistently lower Cronbach's α , raising the question of what constitutes knowledge and how to best assess it, so it is suggested that future investigations explore the dimensions of clinical knowledge and how to assess it in relation to diagnosis, treatment, and clinical outcomes (Turner, 2002).

This study agrees with the literature and suggests that future research should examine the influence of clinical training on graduate clinical social work students' beliefs and practice regarding psychopathology, diagnosis, and treatment, continuing to use DID as an exemplar (Hayes & Mitchell, 1994; Perniciaro, 2014). Furthermore, to maximize the effectiveness of specialized training, it is suggested that research examine the influential components of specialized training on knowledge to reduce inaccurate diagnoses of mental disorders, including content, instructional approach, and instructor bias. Finally, it is recommended that future research examine the correlation of diagnosis, treatment, and clinical outcomes in additional under-studied diagnostic syndromes such as gender dysphoria, obsessive-compulsive disorder, body dysmorphia, and personality disorders (Stamm et al., 2018; Turner, 2002).

Conclusion

Dissociative disorders are challenging to diagnose accurately, even with knowledge, complex integrative thinking, and an undefended perspective. Most mental health professionals are social workers who have graduated from a master's level program accredited by the Council on Social Work Education. The assumption is that they graduate with the training and expertise to diagnose and treat a variety of mental health conditions. As relates to DID, insufficient clinical social work training about diagnosis as a process and how it guides treatment, coupled with a contemporary over-

emphasis on partisan theoretical frameworks may lead to undue reliance on automatic mental shortcuts. Symptomatic of deficient and faulty clinical reasoning, dependency on heuristics may fail to identify the main symptoms and associated clinical features, and ultimately, an increased likelihood of misdiagnosing DID (Howe, 2009; Kahneman, 2011; Turner, 2002).

The findings from this study support the need for graduate schools of social work, psychology, and medicine to include training in the recognition of dissociation, diagnosis, and treatment of dissociative identity disorder in course curricula (Courtois & Gold, 2009) and as an integral part of clinical supervision to decrease the time between entrance into the mental health system and accurate diagnosis and treatment of dissociative identity disorder. More fundamentally, the findings support revitalizing foundational clinical social work practice to collect history, make a diagnosis, and provide treatment, not as a finite linear sequence, but as a process that is interlaced to responsively inform the direction of treatment (Turner, 2002).

It would be unreasonable to expect newly graduated clinical social work interns to provide expert treatment of any mental disorder, let alone DID. However, these new clinicians must be able to recognize the various landscapes of mental disorders and make referrals while they obtain further training. Unless graduate clinical social work students advance beyond assessment to grasp diagnostic reasoning, their practices are destined to be directed by biased heuristics, or worse, have no direction at all. The expunging of “diagnosis” from social work textbooks in the 1990s (Turner, 2002) to be replaced by “assessment,” foreshadowed the reluctance of clinical social workers to diagnose.

Assessment is the process of deciding what spheres of the patient's life are germane to a situation, and by itself, insufficient for treating patients with mental disorders. Diagnosis is the reckoning needed to be able to start with a patient. Assessments and diagnoses may change through the course of treatment; neither are static (González & Gelman, 2019; Turner, 2002). Dissociative disorders have many comorbidities with depression, eating disorders, substance use disorders, and obsessive-compulsive disorders, so the clinical presentation of dissociation is common but often overlooked or misdiagnosed. Without a diagnosis, the work of treatment has no beginning, no rationale, and no direction, and the risk of being unhelpful is eclipsed by the danger of causing harm.

This study contributes to the literature by closing an almost 30-year gap to show that LCSWs' skepticism about DID has decreased over time. It adds to the sparse social work literature about DID by focusing on LCSWs' diagnostic accuracy of the disorder, and it sheds light on the reluctance of LCSWs to diagnose. The study raises questions about how knowledge is conceptualized in graduate clinical social work education and illuminates new findings that specialized training is influential on the relationship between knowledge and diagnosis, which gives treatment a starting point.

APPENDICES

Appendix A: Introductory Letter

Dear colleague,

You have been randomly selected from the over 11,000 LCSWs licensed in the state of Florida to voluntarily and anonymously participate in a research study which I am conducting as a doctoral candidate at Florida Atlantic University in Boca Raton, FL. As a Florida LCSW, who has specialized in mental health since my licensure in 2005, I am researching how LCSWs diagnose mental disorders. Since LCSWs are primary among mental health providers in the United States, it is important to examine LCSWs' facility with diagnosing mental disorders.

I would be very honored if you would consider participating in this anonymous voluntary study. No IP addresses or personally identifying information will be attached to your responses to ensure your anonymity.

This electronic survey has three sections with a total 42 items that should take approximately 20 minutes to complete. Your responses will help to illuminate the important work that LCSWs do especially in the field of mental health, and this study will add to the very limited research on this topic in the U.S. You may complete the survey at your leisure, so you may return to the survey to complete subsequent sections later. Upon verification of a completed survey, you may choose one of five charities listed at the end of the survey for a \$5 donation by the researchers and to receive a copy of the completed study if desired. The researchers will make one charitable donation for each completed survey. Of course, all participants are invited to receive a copy of the completed study.

Your responses will help inform social work education, training, and supervision, and highlight the centrality of LCSWs in the field of mental health. Thank you so much for your time and consideration. You are appreciated.

Sincerely,

Rochelle M. Epstein, LCSW

Appendix B: Adult Consent Form

Study Title: The Relationship between Skepticism and Knowledge and Accurate Diagnosis of Mental Disorders by Licensed Clinical Social Workers
Principal Investigator (PI): Manny J. Gonzalez, PhD
Other Investigators: Rochelle Epstein, DSW candidate
FAU IRB# 1997600-1

Contact for Questions about the Study

PI/ Contact name Manny J. Gonzalez Phone Number (561) 297-3781 Email
mannygonzalez@fau.edu

Contact for Questions about your Rights as a Research Participant, concerns or complaints that are not answered by the research team, or if you wish to talk to someone independent of the research.

Florida Atlantic University Research Integrity Office (561) 297-1383
Researchintegrity@fau.edu

You are invited to participate in a research study under the direction of Manny J. Gonzalez, PhD of the Department of Social Work, Florida Atlantic University (FAU). Taking part in this research is entirely voluntary.

The purpose of this study is to examine the relationship between LCSWs' level of skepticism and knowledge about mental disorders and their accurate diagnosis. The results of this study will be reported in a doctoral dissertation and may also be published in journal articles and books.

You might choose to volunteer for this study because although you will not benefit directly from your participation in the study, the findings from this study may help to improve the education, training, and supervision practices of master's level social work students and registered social work interns. The findings from this study may also increase the esteem for licensed clinical social workers as central to the mental health field.

Possible risks or discomforts you could experience during this study include a minor risk for loss of confidentiality.

If you choose to take part in this study,

- You will be asked to complete an online survey which will be distributed to your email address on file with the Florida Department of Health.
 - You can expect the one-time online survey to take 20 minutes or less to complete.
- You may refuse to answer any of the questions, and you may stop your participation in this study at any time.

Every effort will be made to keep your information confidential, however, this cannot be guaranteed. The research team has put safeguards in place to avoid this though, such as

using a secure server at the University to store all the raw data with password protection, limiting the usage of the raw data to only the principal investigator and co-investigator, using an electronic survey delivery system (Qualtrics) that does not record any personal identifying information or IP address with your electronic response, and the research team has no access to any of the names of the participants. If results of this research study are reported in journals or at scientific meetings, the people who participated in this study will not be named or identified.

Your information collected as part of this research will not be distributed or used for future research studies.

Your willingness to participate in this research study is implied if you proceed. *Please keep a copy of this document in case you want to read it again.

By clicking the button below, you acknowledge:

- Your participation in the study is voluntary.
- You are 18 years of age.
- You are aware that you may choose to terminate your participation at any time for any reason.

- I consent, begin the study.
- I do not consent; I do not wish to participate.

Appendix C: Vignette

Please read the following vignette and fill in your diagnosis for Susan in the space provided.

Susan is a 28-year-old female who works at a local bank. This is the first time that she has sought services from a mental health professional. She complains of "lost periods of time." Recently, there have been hours, and even days, that she does not recall. Susan remembers some occurrences of being sexually abused as a child, but many of her childhood memories are gone. She reports that her peers have talked to her about sudden mood changes and have expressed concern about her. She admits to "not feeling like herself" sometimes but cannot explain just how. Susan thinks that she is close to losing her job because of these episodes. Most distressing of all to her are voices that she hears talking to her from inside her head. She does admit to an increase of stress at work, accompanied by bouts of lethargy.



Appendix D: Skepticism and Knowledge Scales (SKS)

This research is designed to not allow a return to the Vignette Section. However, in this section you will be able to move back and forth as you respond to the following statements.

Please choose if you 'Strongly Disagree', 'Disagree', are 'Unsure', 'Agree', or 'Strongly Agree' with each of the following statements. (Choose one for each statement.)

1. The existence of dissociative identity disorder (DID), formerly multiple personality disorder (MPD), as a clinical phenomenon has been demonstrated beyond any reasonable doubt.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

2. Major trauma is a contributing factor to the development of depersonalization-derealization disorder.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

3. Dissociative identity disorder (DID) is under-diagnosed.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

4. Dissociative amnesia is most often a fabrication used to avoid personal responsibility.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

5. Schizophrenia does not exist.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

6. Dissociative identity disorder (DID) can be created in counseling/psychotherapy.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

7. Dissociative identity disorder (DID) is a misdiagnosis of schizophrenia.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

8. Schizoid personality disorder and schizophrenia are related psychotic disorders.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

9. Major trauma is a contributing factor to the development of dissociative identity disorder (DID).

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

10. More funding should be devoted to research on dissociative identity disorder.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

11. I would not diagnose someone as having dissociative amnesia.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

12. Depersonalization-derealization disorder is over-diagnosed.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

13. The symptoms of schizophrenia must be present for at least six months for this to be a viable diagnosis.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

14. The number of documented cases of dissociative identity disorder (DID) has increased over the past two decades.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

15. The existence of dissociative amnesia as a clinical phenomenon has been demonstrated beyond any reasonable doubt.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

16. Dissociative identity disorder (DID) is personality disorder in the DSM 5.

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

17. Schizophrenia is a misdiagnosis of dissociative identity disorder (DID).

Strongly Disagree

Disagree

Unsure

Agree

Strongly Agree

18. Dissociative identity disorder (DID) is largely an excuse used by people to avoid responsibility for personal actions.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

19. I would not diagnose someone as having dissociative identity disorder (DID).

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

20. PTSD is classified as a dissociative disorder in the DSM-5-TR.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

21. Dissociative identity disorder (DID) has been diagnosed more frequently in females than in males.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

22. Dissociative fugue is a diagnosable DSM-5 mental disorder.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

23. Schizophrenia is over-diagnosed.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

24. Dissociative identity disorder (DID) is extremely rare.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

25. People can fake dissociative identity disorder (DID) successfully.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

26. Schizophrenia is often a result of an organic mental disease.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

27. The onset of dissociative identity disorder (DID) is almost invariably in childhood.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

28. All the symptoms related to dissociative identity disorder (DID) can be explained by and accurately diagnosed as another psychological factor.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

29. People can fake schizophrenia successfully.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree

30. Dissociative identity disorder (DID) does not exist.

- Strongly Disagree
- Disagree
- Unsure
- Agree
- Strongly Agree



Appendix E: Demographic Questions

1. Are you a licensed clinical social worker currently practicing in the state of Florida?
 - YES
 - NO (If no, thank you for your time, you may exit the survey.)

2. How many years have you been practicing since being licensed as a clinical social worker?

3. What is the highest graduate degree that you have earned and in what discipline? Please check the applicable box. If PhD, please type in the corresponding discipline.
 - MSW
 - DSW
 - PsyD
 - PhD _____

4. How old were you on your last birthday?

5. How do you identify your gender? (Please check the single best answer. If other, please describe in the space provided.)
 - Female
 - Male
 - Transgender
 - Other: _____
 - Prefer not to say.

6. What is your racial/ethnic background? (Please check the single best answer. If other, please describe in the space provided.)

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic/ Latino-a-x
- Native Hawaiian or Other Pacific Islander
- Non-Hispanic White
- Multiracial
- Other: _____

7. What is your current primary practice setting? (Please check the single best answer. If other, please describe in the space provided.)

- Community mental health agency
- Crisis center
- Government
- Intensive Outpatient Program
- Medical facility (hospital, clinic, or medical office)
- Military treatment facility
- Nonprofit organization
- Nursing home and assisted living facility
- Partial Hospitalization Program
- Private practice
- School (Elementary/Secondary)
- University/College
- Other: _____

8. What is your current and primary practice role (Please check the single best answer. If other, please describe in the space provided.)

Administrative

Advocacy

Case management

Clinical

Education

Management

Organizational

Political

Supervisory

Other: _____

9. Approximately how many clients are on your current caseload?

10. How would you characterize your most dominant professional theoretical orientation?

(Please check the single best answer. If other, please describe in the space provided.)

Psychodynamic (e.g., Psychoanalytic, Ego Psychology; Self Psychology, Object Relations, etc.)

Learning (e.g., Behavioral, Cognitive, Cognitive Behavioral, Social Learning, etc.)

Humanistic (e.g., Rogerian, Existential, Gestalt, etc.)

Other: _____

11. How much post graduate specialized training or professional development related to DID have you completed in the last five years?

Of Books read _____

Of Conferences attended _____

Of Graduate level courses completed _____

Of Listservs subscribed _____

Of Professional training programs _____

Of Seminars attended _____

Of Workshops attended _____

12. How many clients have you either diagnosed with DID or treated for DID?



Appendix F: List of Charities for Donation Incentive

You may now choose one of the following five named charities for the researchers to donate \$5.00.

An Infinite Mind

<https://aninfinitemind.com/>

An Infinite Mind is a 501(c)3 non-profit dedicated to improving the lives of survivors with trauma-based dissociation with a primary focus on dissociative identity disorder.

Beauty After Bruises

<https://www.beautyafterbruises.org/>

We are dedicated to providing survivors of childhood trauma with access to, and funding for, therapeutic and inpatient care, while creating professional and public awareness for Complex PTSD. *Beauty After Bruises* seeks to bridge that gap by providing comprehensive education to clinicians and the public, while connecting survivors to the resources they need.

MaleSurvivor

<https://malesurvivor.org/index.php?fbclid=IwAR3DyHc--TQrgjqXI5czyZTGjGHIdlW13I3nkkDUB576VCZk0Cv9dAVstys>

A goal of MaleSurvivor is to overcome the sexual victimization of boys and men by helping professionals and others to better understand and treat adult male survivors of childhood sexual abuse.

Rape, Abuse & Incest National Network

<http://www.rainn.org/>

The Rape, Abuse & Incest National Network (RAINN) is an anti-sexual assault organization. RAINN operates the National Sexual Assault Hotline (**1.800.656.HOPE**), which provides victims of sexual assault with free, confidential services around the clock, and it carries out programs to prevent sexual assault and to help victims.

Sidran Institute

<https://www.sidran.org/>

The Sidran Institute, a leader in traumatic stress education and advocacy, is a nationally focused nonprofit organization devoted to helping people who have experienced traumatic life events. The Institute promotes improved understanding of the early recognition and treatment of trauma-related stress in children, the long-term effects of trauma on adults, and strategies that lead to the greatest success in self-help recovery for trauma survivors. The Sidran Institute also advocates clinical practices considered successful in aiding trauma victims and the development of public policy initiatives that are responsive to the needs of adult and child survivors of traumatic events.

To receive a copy of the completed study, please provide your email address here.



Appendix G: Disclosure

Thank you for your time and completion of this survey. To control for participant bias about dissociative identity disorder, I did not disclose that this was the explicit focus of the study. Thank you again.

With much respect,

Rochelle Epstein, LCSW

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