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## Abstract

**Objective:** The goal of this study was to test the degree to which client clinical characteristics and environmental context and social workers' practice values and experience influenced support for client's autonomy and willingness to engage in shared decision making (SDM), and whether willingness to engage in SDM was mediated by support for autonomy.

**Method:** A randomized factorial survey of social workers working with adults with severe mental illness was employed. Eighty-seven social workers responded yielding 435 vignettes.

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**Conclusion:** Helping social workers avoid bias in decision making is critical to the goal of supporting clients' autonomy, building their capacity, minimizing disempowerment, and promoting recovery.

## Keywords

shared decision making, decision-making theory, ethics, severe mental illness

## Disciplines

Medicine and Health Sciences | Social Work

## Comments

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## Shared Decision Making for Clients with Mental Illness: A Randomized Factorial Survey

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### Abstract

**Objectives:** The goal of this study was to test the degree to which client clinical characteristics and environmental context and social workers' practice values and experience influenced support for client's autonomy and willingness to engage in shared decision making, and whether willingness to engage in shared decision making was mediated by support for autonomy.

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## **Introduction**

For decades, advocating for a client's right to self-determination has been integral to social work values (Reamer, 1998, 2006). It is now a central feature of the recovery movement which in turn has had a significant impact on federal mental health policy (President's New Freedom Commission on Mental Health, 2003). Social workers and other mental health professionals are challenged to employ interventions that promote recovery values, engage clients in making important life decisions, and that lead to improved outcomes; these improved outcomes include not just a reduction in the severity of psychiatric symptoms, but also greater stability in housing, family relationships, work, and community life. Shared decision making (SDM) is an intervention developed in clinical medicine that is now being applied with mental health clients where persons with severe mental illness are encouraged to take charge of their own recovery. SDM forges a decisional partnership between professionals and clients ensuring that the values, goals, and perspectives of all parties are heard and respected (Substance Abuse and Mental Health Services Administration, 2008). Social workers are expected to use SDM because it is in line with social work's emphasis on respect for persons and because increased client engagement in treatment planning and decision making has been linked to improved treatment outcomes (Joosten et al, 2009).

Despite its importance as part of recovery oriented services, SDM has not yet been widely utilized with persons with severe mental illness (SMI), i.e. schizophrenia spectrum disorders and major affective disorders. This may be due in part to practitioners' concerns regarding the client's decisional capacity as well as fears over being held transitively responsible for a client's "bad choices." Given that SDM was designed in part to assuage those concerns, and that it is clearly consistent with the values of both mental health recovery and the professional

values of the social work profession, it is important to understand factors that influence whether or not social workers are willing to implement SDM in practice settings. The theory of “bounded rationality” argues that within the constraints of limited information and computational capacity, decision makers resort to making choices based on a ranking of significant cues; that is, rather than intensive calculation aimed at broad outcome optimization, social workers (and other decision makers) likely work from a narrow field of cues or indicators when making choices. For social workers, these cues include the clinical and environmental context of a client. How those cues are ranked or prioritized may be predicated on characteristics unique to each clinician. This paper reports on a study that examined the extent to which client’s clinical characteristics, client environmental context, and social worker characteristics explained a social worker’s support for client autonomy and willingness to engage in shared decision making with clients with severe mental illness.

## **Background**

### *Decision Making Theory*

Social workers must make decisions, often based on limited information. In the Enlightenment view of decision-making, humans make inferences based on the collection and analysis of data and take actions that are governed by probabilistic reasoning (Gigerenzer & Goldstein, 1996). This enlightened, Laplacean understanding attributes to humans a broad capacity to assimilate and process data, thus making inductive inferences that optimize benefits or utility. Such a view of decision-making as optimization of outcome is still prevalent in the study of economics (McCloskey, 1985; Gigerenzer & Selten, 2001).

The Enlightenment view has been criticized as unrealistic, and a contrary position forwarded as the heuristics and biases program argues that human judgments are prone to bias and error. The inferential process that humans generally utilize is based on heuristics applied to

uncertain situations, and that humans are inadequately equipped for the task of accurately assessing probabilities, especially within situations where information and time are limited. This is not necessarily a pessimistic view of a person's computational capacity, but rather, argues that faced with uncertainty and complex situations, decision makers are likely to "rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations" (Tversky & Kahneman, 1974, p. 185). The problem, as observed by proponents of the heuristics and biases approach is that though often useful, heuristics may sometimes lead to "severe and systematic error" in judgments. Though seemingly disparate in understanding of decision-making, both the classical view and the heuristics and biases approach cleave to "the laws of probability and statistics as normative, but they disagree about whether humans can stand up to these norms" (Gigerenzer & Goldstein, 1996, pg. 650).

A third view of inference—bounded rationality—offers a critique of both the Enlightenment and the heuristics and biases views by calling into question the validity of classical rationality as a first principle, favoring instead decision-making models that incorporate psychology and context in addition to rationality. Satisficing is the term used by Simon (1982) as an alternative to optimizing to describe what he views as the real function of information processing. Given the limits of a context—for instance, a clinical setting where immediate decisions must be made on limited or incomplete data—a clinician will make choices based on what satisfies immediate need or aspiration. In such a context, satisficing is the algorithm of choice rather than attempts at assessing all possible clinical choices, their potential outcomes and their respective utilities.

Put another way, a clinician will choose, based on a limited set of available facts—including his or her own experience and education-- the choice that is most likely to be successful; this is satisficing. To assess total net utility of all possible decisions is simply beyond the computational abilities of the vast majority of decision makers, and often requires information and time unavailable in a given situation: “in the majority of field settings, there is no way to determine if a decision choice is optimal owing to time pressure, uncertainty, ill-defined goals, and so forth” (Klein, 2001, p.103). Thus, Simon (1990) argues that human behavior is best understood as being shaped by a pair of scissors whose blades are the ecological structures of the decision environment and the decision maker’s computational capacity. Rational decision-making exists, but is constrained by the ecological context and the processing abilities of the decision maker. Drawn back to social work practice, it is likely that social workers are making decisions based not on optimization, but rather, are satisficing—making decisions that are “good enough”—based on cues that are ranked or prioritized in terms of categorizing clients as “safe” or “high risk” or “competent” or “impaired.” These cues—often limited clinical or contextual information-- are then used to determine whether autonomous choice should be supported or if a client is capable of engaging in shared decision-making. The importance of decision making theory to understanding clinical decisions is in its recognition that choice is not simply a calculus that seeks to optimize outcomes, but rather, is likely the result of a rapid assessment of a limited number of cues that an actor prioritizes. Bounded rationality indicates that we should focus on a discrete number of variables in order to delineate those cues which contribute most to a decision making process.

*Shared Decision Making*

Promoting recovery values while also attending to professional responsibilities such as client safety, competency, and forwarding treatment goals means utilizing interventions that merge client experience and the professional expertise of the social worker. Shared decision making has been developed as a means of integrating the sometimes competing claims of client autonomy and the social worker's professional duty to act in the best interest of the client. The decision to pursue a course of treatment or therapeutic goal is made on behalf of clients. In this paternalistic model, the concern of service providers is largely whether or not a client remained treatment "compliant." Implicit in this model is the assumption that the decision to not adhere to a treatment plan is merely a function of recalcitrance (perhaps an expression of the illness) rather than a free and informed choice. In contrast, contemporary research has shown that treatment decisions by clients are a dynamic process that change as clients adapt to illness management over the course of the illness (Deegan & Drake, 2006). Treatment decisions are often a complex decisional process that weighs the relative costs and benefits of when and to what degree to utilize specific interventions. Deegan and Drake (2006) argue that the use of shared decision making implies moving from mere treatment compliance (that is, abiding by clinician orders) to treatment alliance, or working collaboratively toward a shared goal.

Shared decision making was developed to promote "an interactive and collaborative process between individuals and their health care practitioners about decisions pertinent to the individual's treatment, services, and ultimately their personal recovery" (Substance Abuse and Mental Health Services Administration, 2008). SDM is conducted through the use of decision aides—often in the form of worksheets or interactive computer programs—that incorporate client perspectives and provider expertise. SDM is not new to the healthcare field, and has been



shown to be an effective intervention when people are facing difficult treatment choices (O'Connor, Stacey, & Rovner et al., 2001), but has not yet been broadly employed in mental health services despite being endorsed by clients (Adams, Drake, & Wolford 2007). A recent systematic review by Duncan, Best, and Hagan (2010) concluded that there is an urgent need for more research in this area.

Like other chronic illnesses, serious mental illness requires on-going care and planning, and for this reason is appropriately managed utilizing shared decision making. In their research on diabetes management, Montori and colleagues (2006) found that shared decision making was particularly suited to the treatment of chronic conditions. Acute care situations tend to favor decision making that is more clinician directed, especially in emergency or critical situation in which outcomes may be severe and irreversible. However, success in long-term care is contingent upon active client participation as it is the client and not the clinician who is most responsible for carrying out the decision. Continuous care planning offers the opportunity to revisit and change treatment choices based on client and clinician feedback regarding treatment side effects, perceived efficacy, and adherence challenges, or the ability to continue with treatments according to shared choices and goals.

#### *Willingness to Engage in Shared Decision Making*

Two primary reasons why social workers engage in shared decision making are that it is in line with social work's emphasis on upholding client autonomy as well as recovery's promotion of client choice. In addition, clients have endorsed a desire for greater information regarding treatment choices (Beisecker & Beisecker, 1990) and engagement in shared decision making (Benbassat, Pilpel, & Tidhar, 1998). However, practitioners across disciplines—social workers, psychiatrists, and psychologists-- have expressed some reservations about the ability of

clients with SMI to exercise choice. These concerns are based in reservations about the ability of these clients to engage in autonomous choice in a socially responsible manner (Auerbach, 2000). Although SDM was pioneered in part as a way of assuaging the concerns of clinical care providers who feared adverse outcomes among clients with poor decision making skills, its application is still impacted by the social worker's support for the client's right to autonomous decision making.

#### *Support for client autonomy*

This study was precipitated by a need to examine the degree to which a social worker will *support autonomy*, that is, actively facilitate a therapeutic relationship in which the client can exercise autonomous choice. Support for autonomy is predicated on two factors: The first is the degree of confidence that a social worker has in the client's *competence* or *capacity*. The second is the degree to which the social worker accepts *autonomy as a practice value*, that is, the emphasis that they place on client autonomy as a principle value that informs practice decisions and facilitates a therapeutic alliance that results in maximizing client options and participation in choice. Belief in autonomy as a practice value is a function of the social worker's individual values, while the degree of confidence in client competency is largely predicated on individual client characteristics.

#### *Client's Clinical Characteristics*

Bounded rationality indicates the significance of key indicators in making rapid decisions. Among practitioners, diagnosis may be predictive of the willingness of a social worker to support autonomy or to engage in shared decision making. Monahan and colleagues (2005) found that severity of symptoms was predictive of the use of leverage by mental health workers to gain treatment adherence. Poor reality testing—expressed as psychotic symptoms such as

paranoia, fixed delusions, or hearing voices—may undermine a social worker’s confidence in the client’s ability to make sound choices.

Poor treatment adherence—regardless of the patient’s reasons—was also viewed by both psychiatrists and nurses as an indicator of diminished capacity and the need for directive interventions. The inability to recognize one’s illness or the benefits of treatment may manifest itself as poor treatment adherence (Appelbaum & Grisso 1995, Grisso & Appelbaum 1995). For instance, Scheyette and colleagues (2009) found that practitioners were often reticent to uphold autonomy as a primary value when clients were non-adherent with treatment plans. Furthermore, social workers who are engaged with clients with a history of substance abuse may be more paternalistic out of fears that clients may relapse or engage in criminal activities. Increased risk of jail or prison recidivism has been associated with poor family relationships and inadequate social supports, as well as alcohol and/or substance abuse (Bonta, Law, & Hanson, 1998). As these negative indicators accumulate, the social worker’s confidence in the ability of the client to exercise choice in a responsible manner may decline, thus resulting in diminished support for the client’s autonomy.

There are clear cases where state law has dictated that certain actions must be taken; when a client articulates intent to harm his or herself, or intent to harm another person. In most states, these are the only criteria that may justify involuntary treatment. But even this criteria for abridging autonomous choice may not be entirely clear--absence of explicit statements regarding a plan and intent, social workers often struggle to determine just how seriously to treat threats and just what steps they should take in reporting potential harm. When the threat of harm to self or others emerges, it is incumbent upon a social worker to weigh more heavily the safety and needs of the community and the individual client, often at the expense of supporting shared

decision making and client choice. Gender may also be a factor influencing assessment of risk and decision making capacity; it is understood by most practitioners that there are gender differences in suicidal ideation and behaviors. Although women are more likely to have suicidal ideation or demonstrate suicidal behaviors, men are more likely to actually commit suicide (Canetto, 2008). The client's race may impact social worker judgment; research indicates that there are racial disparities in psychiatric diagnoses and symptom attribution with African Americans more likely to be diagnosed with psychotic disorders and to be involuntary hospitalized than are whites (Neighbors, Teirweiler, Ford, & Muroff, 2003; Garb, 1997, Thoits, 2005).

#### *Client's Environmental Context*

Social workers are focused on broad environmental factors as indicators of the ability of the client to make sound decisions. These environmental factors include housing status, as persons with mental illness are at high risk for both homelessness and criminal involvement (Nooe & Patterson, 2010).

Persons with mental illness are more likely to experience family conflicts as family members are often charged with serving as informal caregivers (Lefley, 1996; Solomon, Cavanaugh, & Gelles, 2000); previous research has shown that coercion has been used to defuse conflicts in a client's environment even when client competency was not in question (Solomon, 1981). Client conflicts with family caregivers may prompt a step up to more coercive treatment and away from autonomous decision making.

#### *Social Worker Characteristics*

There are characteristics that are unique to individual social workers which may influence their support for client autonomy and willingness to engage clients in shared decision making.

For instance, the degree to which a practitioner believes that support for autonomy is an important practice value likely influences the practitioner's willingness to engage the client in such a way as to maximize client choice. Assimilation of autonomy as a practice value may be related to the years of practitioner experience and level of education (Shaw, 1997). Greater experience may bring greater social worker confidence in his or her own clinical skills, capacity for forging a strong working alliance with the client, and ability to understand and manage risk. The gender of the social worker may be important as well. Gilligan (1982) argues that women's moral reasoning tend to be situational and focus more on interpersonal relationships in contrast to men's reasoning that focuses primarily on how an action accords with established rules or principles.

#### *Decision process*

The willingness of a social worker to engage a client in shared decision making may be dependent on the social worker's support for autonomy. The structure of SDM is such that the social worker recognizes the expertise of the client, and is willing to support the client's decision making even though the social worker may disagree with the client's choices. The willingness to share risk and responsibility and to support choices with which the social worker may disagree is influenced by support for autonomy. Therefore, the relationship between the client's clinical characteristics, the client's environmental factors, and the social worker's characteristics and the willingness to engage in shared decision making is mediated by the social worker's support for client autonomy (see Figure 1).

Bounded rationality posits that social workers will make decisions that satisfy immediate concerns (satisficing) based on a limited number of cues, and will prioritize certain cues over others. Based on the model presented in Figure 1, this study tested the following hypotheses:

1. Social worker characteristics such as holding autonomy as a core practice value, and more years of practice experience will be associated with greater support for a client's autonomy, and clinician support for a client's autonomy will be negatively associated with diagnosis, the presence of a mental illness with psychotic symptoms, threats of harm to self or others, and history of poor treatment adherence; active substance use by the client, conflict in client/caregiver relationships, and instability in housing will be negatively associated with clinician support for the client's autonomy
2. Support for client autonomy as a core practice value, and more years of practice will be associated with a greater willingness to engage in shared decision making; a client's history of poor treatment adherence, diagnosis, presence of a mental illness with psychotic symptoms, threats of harm, active substance use, and conflict in caregiver relationships and instability in housing will be associated with a diminished likelihood of engaging in shared decision making with the client.
3. Greater support for a client's autonomy will be associated with a greater willingness of the social worker to engage in shared decision making with the client.
4. The relationship between the social worker's and client's characteristics and the willingness of the clinician to engage the client in shared decision making will be mediated by the clinician's degree of support for the client's autonomy.

\*\*\*\*\***Figure 1**\*\*\*\*\*

## **Methods**

### *Randomized Factorial Survey*

This study utilized a randomized factorial survey. Factorial surveys use vignettes that are generated randomly from a list of vignette characteristics; in the present study, the randomly assigned characteristics are those of the client's clinical features and factors associated with the

client's environmental context, thus creating a picture of an individual client. Factorial surveys have been applied to the study of clinical judgments in medicine, nursing, psychology and are finding increased use in social welfare research (Killick & Taylor 2012; Taylor 2006; Taylor & Zeller 2007; Ross et al., 1999; O'Toole et al., 1999; Healy, 1998; Healy, 1999). Software developed by the Qualtrics Corporation was used to generate each vignette in a web based survey instrument. After each vignette, the respondent answered a series of questions designed to ascertain the kinds of judgments they made (support for autonomy and willingness to engage in shared decision making) for each individual client represented in the vignette.

Each survey contained a brief description of shared decision making and introduced each social worker to the following scenario: "You are a social worker at a community mental health center, working with adults diagnosed with mental illness. The following client has been assigned to you, and you are responsible for developing a treatment plan and coordinating care." Following the introduction, five cases were presented. An example of a case vignette follows, with italicized text indicating the randomized text input used to vary the factor level. The multiple levels of each factor are illustrated in Table 1. The randomization process ensured that all factors were evenly presented across all vignettes.

*J.L. is a middle-aged African-American female with a diagnosis of major depression, and currently exhibits no psychotic symptoms. J.L. has passing thoughts of self-harm, but no thoughts of harm to others. J.L. has a history of poor treatment adherence. J.L. has no history of drug and alcohol abuse. J.L. lives in a group home and has a history of episodic homelessness. J.L. has verbal conflicts with caregivers several times per month.*

Given the number of question that followed each vignette and the length of the Professional Opinion Scale (POS), the researchers decided that presenting participants with more than five vignettes would likely result in respondent fatigue and more incomplete responses.

### *Participants*

Social workers were recruited from mental health agencies within Philadelphia and its surrounding area. Key informants within agencies were asked to help recruit fellow social workers to participate. To participate, the prospective respondents had to be a social worker with an MSW degree and be employed providing mental health services to adults. Following the IRB decision that the study was exempt from review, a total of 237 recruitment emails were sent to prospective participants over the course of three months; 117 (49%) recipients consented to participate and started the survey yielding 87 completed surveys which contained 5 vignettes (435 individual vignettes).

### *Sample*

All of the 87 social workers in the final sample were masters-level social workers with experience working with persons with a major mental illness, i.e. schizophrenia spectrum disorders and major affective disorders. Of the completed surveys, 86.2% of the social workers (n=75) were female; the average age of the social workers was 29.6 years, with a mean of 4.7 years in practice. However, there was a broad range for these factors: the youngest social worker was 23 and the oldest was 68 (median age was 27 years); the newest social worker had just .5 years of experience, and the most experienced had 25 years with a median of 3 years. Of those practitioners who held a state license (71%, n=62), 12.6% (n=11) possessed an advanced clinical license (such as the LCSW).



### *Power*

In a factorial survey, the unit of analysis is the vignette. An a priori power calculation was conducted using the G\*Power software based on the use of logistic regression and cross tabulation in the analysis. Utilizing conservative estimates of differences in proportions (10% difference, thus requiring a larger sample to detect) an analysis of 375 vignettes resulted in a power of .8. After pilot testing the survey instrument, it was determined that each social worker could respond to 5 vignettes and the Professional Opinion Scale within about 15 minutes. Accordingly, a sample of 75 social workers was sought ( $75 \times 5=375$ ). A post hoc power calculation was conducted based on the sample that was actually obtained (435 vignettes) and the use of logistic regression in the data analysis. The analysis of 435 vignettes (and considering a modest odds ratio of 1.40) resulted in a power of .8.

### *Measures*

The questionnaire consisted of three parts. The first was the social worker characteristics survey which ascertained the number of years they were in practice, age, and whether or not they maintained a state and/or advanced clinical license. Part two of the questionnaire was a series of five clinical vignettes, each followed by questions that measured support for client autonomy and the willingness to engage in shared decision making. These questions were patterned on the Autonomy Preference Index or API (Ende, Kazis, Ash, & Moskowitz, 1989). The adapted measures for support for autonomy and for the willingness to engage in shared decision making had a Cronbach's alpha of .64 and .67, respectively.

The third section of the questionnaire assessed the social workers' commitment to social work values as measured by the 40-item Professional Opinion Scale (POS) (Abbott, 1988). The POS was utilized in this study to measure the degree to which a practitioner incorporated autonomy as a practice value. The scale has been widely used, and since its initial publication

Abbott (2003) has conducted a confirmatory factor analysis of the measure. Subsequent work by Green and colleagues (2007) supported the reliability and validity of the scale with a Cronbach's alpha of .86. In the present study, a Cronbach's alpha of .42 was obtained. The scale has a maximum score of 100 points (greatest agreement with social work values) and a minimum of 0.

### *Analyses*

Logistic regression was used to test the four hypotheses, that is, to determine differences in proportions (or probability of an event) in a given dichotomous outcome variable (i.e. willing or not willing to support shared decision making) for a given independent variable (i.e. psychotic features versus no psychotic features). The levels for each of the vignette factors (independent variables) were categorical, and those factors that had three levels were transformed into two variables with two levels, each indicating either the presence or absence of a particular trait. This transformation was done to aid in interpretation since the variables were categorical yet unranked. Because of the nested design--that is, each social worker responded to five vignettes, so that each of their observations were not independent-- the robust cluster option (by respondent ID) was utilized in STATA (Rogers, 1993; Williams, 2000). Sobel testing was used to assess for the indirect effects of the mediator (Baron & Kenny, 1986; Sobel, 1982). Because the mediator (support for autonomy) and outcome (willingness to engage in shared decision making) were both dichotomous, a modified form of Sobel testing (Herr, 2009; MacKinnon and Dwyer, 1993; MacKinnon, Warsi, and Dwyer, 1995; Matejkowski, 2010) was employed.

It is common practice to utilize an adjusted p-level in order to avoid Type I errors when making multiple comparisons. This is especially true when analyzing large data sets (Rothman, 1990). The Bonferroni correction is often employed for this purpose (Abdi, 2007). This gives a more conservative p-level, and therefore reduces the likelihood of Type I errors. However there

is an increased chance that one will commit Type II errors. A correction has not been used in the present data analysis. In weighing the relative risks of Type I and Type II errors, this study and future research like it is likely to be undermined by Type II errors. Because this study will have implications for further research (discussed in the next section) there is a higher price to be paid for dismissing variables or factors which may influence clinical decision making, and which may merit important future research. Rothman (1990) argues “scientists should not be so reluctant to explore leads that may turn out to be wrong that they penalize themselves by missing possibly important findings” (p.43) and that “no adjustments are needed for multiple comparisons” (p. 43). The problem of using an adjusted p-level and committing a Type II error is further exacerbated by the relatively small sample in this study.

## **Results**

In 50% of the vignettes, clinicians were supportive of client autonomy, that is, they believed they were capable of responsibly exercising choice regarding medications, treatment, housing, or were not an imminent threat to themselves or others. Furthermore, in 70% of the vignettes, the clinician was willing to engage the client in the process of shared decision making. Scores on the POS varied widely. Total POS scores were from 16 to 74, with an average score of 43, a standard deviation of 13.6, and a median score of 42.

### *Support for client autonomy*

Several clinical, environmental, and clinician characteristics predicted clinician’s support for the client’s autonomy; the adjusted odds ratio (AOR) for individual factors are shown in Table 1. Clinicians were more likely to support autonomy for those clients with major depression (AOR=2.08) and bipolar disorder (AOR=1.87) as compared to clients with schizophrenia. Social workers were more likely to support the autonomy of a client without psychotic symptoms

(AOR=2.91) as compared to clients with psychotic symptoms. Only one client demographic characteristic predicted support for autonomy; social workers were more likely to support autonomy for male clients than for females (AOR=1.54).

The odds that clinicians supported the autonomy of clients without thoughts of self-harm were almost 2.5 times as large (AOR 2.49) as the odds for those who admit intent to self-harm. For clients with a history of good treatment adherence, there was just over a twofold increase in the odds that the clinician would support clients' autonomy (AOR=2.12). If a client was abstinent from drugs and alcohol, the odds that social workers would support autonomy were 78% higher (AOR=1.78) than if the client was indicated as actively using substances. Support for autonomy for male clients was 1.5 times that of female clients. Lastly, the predicted odds that clinicians supported the autonomy of clients who lived independently were 1.83 times the odds of support for clients who lived in group homes. The total explained variance for all client and clinician characteristics was 16%.

**\*\*\*\*\*Table 1\*\*\*\*\***

Few clinician characteristics were predictive of support for client autonomy. Having greater than five years of practice experience predicted nearly a fivefold increase in the odds (AOR=4.48) that social workers would support client autonomy as compared to those who had less than two years of practice experience. It is noteworthy that support for autonomy declined as practitioner age increased; this appeared incompatible with the fact that more years of experience were predictive of greater support. Further analysis indicated that this effect was the result of outliers in the high end of the age range; when these outliers were removed from the analysis, age ceased to be a significant predictor.

*Willingness to engage in shared decision making*

Social workers were twice as likely to support the use of shared decision making with persons with major depression than for clients with schizophrenia; for clients with a diagnosis of bipolar disorder, the adjusted odds ratios were 2.31 (see Table 2). Absence of thoughts of self-harm was associated with a 2.27 fold increase in the adjusted odds that clinicians would support the use of shared decision making; those adjusted odds dropped to 1.77 when passing thoughts of self-harm were present. Threats to harm others were associated with diminished willingness to utilize shared decision making--for clients without ideation regarding harm to others, social workers were 1.85 times more likely to indicate a willingness to utilize shared decision making. When clients were abstinent from drugs and alcohol, clinicians were 1.88 times more likely to engage in SDM. Environmental factors were not significantly associated with the willingness to utilize shared decision making.

Few clinician characteristics were predictive of the willingness to utilize SDM. Having between two and five years of practice experience was marginally significant in predicting an increased willingness to utilize shared decision making (AOR=2.03). Having more than five years practice experience was associated with over a fivefold (AOR= 5.21) increase in the odds that one endorsed the use of SDM. In addition, for each one point increase in the score on the POS there was a 1.03 times greater likelihood of utilizing SDM. A one point increase in the score on the POS predicted the odds of the willingness to engage in SDM increased by 1.02 times. Client and clinician characteristics accounted for 18% of the variance in the willingness to engage in shared decision making.

\*\*\*\*\*Table 2\*\*\*\*\*

*Support for autonomy predicts shared decision making*

Support for autonomy and the willingness to engage in shared decision making were correlated. Persons who supported client autonomy were 10.3 times more likely to endorse the use of SDM ( $p < .001$ ) compared to those who did not support client autonomy.

*Mediating effects of support for autonomy*

There were several factors whose impact on SDM was mediated by support for autonomy, though the indirect effects were modest (see Table 2). Diagnosis, symptomology, and drug and alcohol use were mediated by support for autonomy. When controlling for support for autonomy, the adjusted odds ratios for major depression and bipolar disorder was reduced from 2.02 to 1.60 and 2.31 to 1.96, respectively. The adjusted odds ratio indicated the willingness to engage in SDM for persons without psychotic symptoms shifted from 1.84 to 1.26. For clients who were abstinent from drugs and alcohol, there was a reduction in the odds that social workers supported the use of SDM by .26 (from AOR of 1.88 to 1.62) when controlling for support for autonomy.

**Discussion and Application to Social Work Practice**

Several client factors were associated with an increased likelihood that clinicians would support client autonomy including a diagnosis of major depression (as opposed to schizophrenia), the absence of psychotic symptoms, no threat of self-harm, treatment adherence, abstinence from substance use, and living independently. For social workers, years of practice experience were associated with a greater likelihood of supporting clients' autonomy. Having five or more years of practice experience was associated with greater support for SDM. The mediating effects of support for autonomy on the willingness to engage in SDM were modest.

Social workers saw schizophrenia as an indicator of compromised decisional capacity or ability to exercise responsible choice. Support for autonomy and shared decision making for persons with either major depression or bipolar disorder were substantially higher than for persons diagnosed with schizophrenia. Accordingly, and in keeping with bounded rationality, faced with limited information from which to draw conclusions some workers may utilize the diagnosis of schizophrenia as a highly predictive factor in making a decision in a complex and high-risk environment. This appears to be particularly true for practitioners who are relatively new to the field; social workers with more than five (vs. less than two) years of experience were substantially more supportive of client autonomy and more willing to share decision-making. A diagnosis of schizophrenia is not itself grounds for determining that a person lacks decisional capacity (Appelbaum and Grisso, 1995). However, for the purposes of satisficing within complex environments, it remains an important factor.

As noted by Appelbaum and Grisso (1995) “The evaluation of competence does not ordinarily lead to unambiguous ratings of ‘no ability’ or ‘full ability’ on all dimensions. On the spectrum of functional impairment, most patients fall somewhere in the middle” (p. 1637). Shared decision making and its focus on information sharing, engagement, and mutual respect is an important tool for working with this population and ensuring that autonomy and choice are respected while simultaneously ensuring that clients comprehend the information that is relevant to making treatment, housing, or employment choices. Faced with a few salient factors with which to reach a decision, clinicians saw psychotic features as an important indicator. The absence of psychotic symptoms substantially increased odds that the clinician would support autonomy and be willing to engage in shared decision making.

Failure to adhere to prescribed treatments and medication is often taken as a sign that a client is too impaired to make good choices. This attitude is a feature of paternalism--failure to follow the clinician's orders is a sign of worsening pathology, cognitive deficits or recalcitrance. However, clients have many reasons for not wanting to adhere to treatments. Drug therapies may have side effects, some quite severe (Ruscher, de Wit, & Mazmanian, 1997). Clients may cease accessing services due to conflicts with service providers and poor therapeutic alliance. In many cases, clients simply believe that they no longer need services. In other words, for any decision regarding whether or not to continue a treatment plan, there exists a myriad of factors that influence the client's decision that are not necessarily a function of impaired judgment or recalcitrance. In the present study, a history of treatment adherence (vs. nonadherence) increased clinician willingness to support client autonomy and to utilize shared decision making.

Active drug and alcohol use by clients predicted less support for autonomy and shared decision making. MacMaster (2004) has argued that although an abstinence model had previously dominated substance abuse treatment, and complete abstinence was often a prerequisite for participation in many programs (such as supported housing), current research recognizes that harm reduction is a more efficacious approach and is more effective at engaging users in treatment. Harm reduction approaches recognize that substance users may be in various stages of change (Prochaska & DiClemente, 1982). Nevertheless, substance abusing clients present a unique challenge, and though the effect was modest, active use is a ranking indicator workers relied upon to make quick decisions.

Suicidal ideation was a significant warning sign for social workers. Absence of suicidal ideation predicted greater support for autonomy. Similarly, clinicians were more likely to endorse shared decision making for persons without suicidal ideation. Where results are less



clear is when the issue turned from self-harm to harm to others; it is on this issue that social workers may have difficulty in understanding exactly what their responsibilities are to the client and to the community (Watkins, 1989; Weil & Sanchez 1983; Wilson, 1978). Predicting whether someone will act on thoughts of self-harm or harm to others remains a daunting task for service providers. In the absence of a clear statement of intent to harm, social workers struggle to determine how serious thoughts of harm may be.

While social work has embraced the principles of gender equality (Reamer, 2006), client gender was nevertheless predictive of support for autonomy. This is in keeping with research on gender stereotyping by Broverman and colleagues (1970) who found “clinicians are more likely to suggest that healthy women differ from healthy men by being more submissive, less independent, less adventurous, more easily influenced” (pg. 4). This result is also in keeping with the general perception of males having a greater capacity for leadership and autonomy (Koenig, Eagly, Mitchell, & Ristikari, 2011).

A small amount of the effect of the independent variables on the willingness to engage in shared decision making was explained by support for autonomy. That the effect found was modest may be due to a couple of factors. First, the POS used as part of the measure of support for autonomy was not shown to be highly reliable; this limitation will be discussed shortly. A second reason may be that this study did not fully capture the factors that explain the social workers decisional process. Given that a small but significant mediating effect was found, it is reasonable to deduce that support for autonomy is a relevant mediating factor, though its measurement needs to be improved. The data also show a bias against certain symptoms and disorders; this bias is most pronounced among less experienced practitioners. It appears that the stigma surrounding certain disorders and symptoms may be mediating the relationship between

clinical characteristics, social worker characteristics, and the willingness to engage in shared decision making.

Poor reliability in the POS may be one reason why stronger mediating effects were not found. Analysis of the scale found that only modest improvements in reliability would be obtained by dropping items. Furthermore, the scale was produced prior to the redrafting of the NASW code in the mid 1990s, and does not accurately reflect the current codified values of social work.

Because a convenience sample was employed, the sample has somewhat limited generalizability. The sample was fairly homogeneous--social workers who were mostly Caucasian, mostly female, and mostly in their mid to late twenties. A sample with greater diversity in terms of age and culture may have yielded different results.

This study has several implications for social work practice and future research. Kaplan (2006) found that social workers in general, were “stuck” in a mode of moral reasoning that was rote and attached to strict rules rather than applying general concepts to particular cases and utilizing contextual clues to draw a moral conclusion. Such a mode of problem solving tends to be limiting—with practitioners having great difficulty in extending moral concepts or applying moral principles to cases beyond those that were specifically taught. However, the inclusion of decision-making theory in the larger ethics debate may shed new light on how values influence—or do not influence—choice.

While not discounting the role of ethical orientation in the complexities of decision making, decision theory--and bounded rationality in particular-- present an alternative explanation for how choices are made. Rather than choice being a function of an over attachment to rules, bounded rationality suggests that choices are more likely made utilizing a few

significant clinical and environmental cues. We may consider the principle of the optimization of outcomes that bounded rationality critiques. Rather than seeking to balance and promote a broad array of values through the intensive analysis of potential ethical conundrums and outcomes, it may be that social workers are satisficing by meeting more immediate ethical goals (protecting safety, for instance, or being concerned with issues of liability). The implication of decision theory for ethics education in social work then is in determining the most salient cues used to make these “good enough” decisions, and ensuring that they are not prioritized at the expense of other important factors or creating an unwanted pattern of bias in decision making.

Mere attention to the rules is not sufficient for responsibly promoting values like autonomy and self-determination. Working within a recovery context, applying shared decision making, and balancing autonomy and risk require a nuanced approach to moral reasoning. However, such a nuanced approach necessitates uncovering factors that most influence choice. Increased attention *should* be paid to ethics education and how general moral concepts are applied to practice situations. However, we must understand that ethical decision making is limited by the dual constraints of context and computational capacity.

Social workers play a large and important role in mental health service delivery systems (Substance Abuse and Mental Health Services Administration, 2001). Clinical supervision can help to assuage uncertainties regarding client capacity and the sharing of risk associated with practicing within a recovery oriented program (Eack & Newhill, 2008). This is especially true if we are aware of the cues that significantly affect decision-making. Study findings indicate that clinical supervision is most critical in early practice when new clinicians are gaining vital experience in working with this challenging population, and experiencing the frustrations that often accompany clinical work. That practice experience is positively associated with an

increased support for autonomy and shared decision making is not surprising--as people gain more experience with persons with severe mental illness and the social distance closes, confidence in the clients' capacity increases (Mann & Himelein, 2004), and clinicians become more adept at reading and incorporating significant clinical and environmental cues into decision-making.

The results of this study point to several areas of future research. Although all social workers had a Master of Social Work degree, this study did not assess whether or not there were features of the social worker's education and clinical experience that made them more or less likely to support client autonomy. Identification and exploration of these features may be best carried out through a qualitative assessment of social worker meta-cognition, or how they think about thinking about problem solving. Responses to whether or not a client expressed harm to self or to others were mixed. Though overt threats clearly predicted diminished support, responses to vignettes where the client admits passing thoughts of harm to self or others were less definitive. When threats are less definite, clinicians struggle to determine what, if any action should be taken. Future research should focus on deciphering the factors or clues specific to self-harm or harm to others that most influence support for client decision making. The modest mediating effects found in this study indicate that other potential mediators need to be included in future models.

Research on clinical decision-making is somewhat hampered by inadequate measures such as the POS. In addition, most scales that assess preferences for shared decision making do so from the point of view of the client or patient rather than from the perspective of the clinician. There is need for the development of measures to accurately gauge the degree to which mental health professionals are willing and able to utilize a formal process of shared decision making.

Future models that seek to explain social work decisions should include an assessment of how the social worker perceives liability. Fear that one may be held transitively responsible for the actions of one's clients may exert an even greater effect on the willingness to engage in shared decision making. When considering satisficing in lieu of optimization, it may be helpful for us to assess exactly what the more immediate concerns are that clinicians are attempting to address.

### **Conclusion**

The utilization of collaborative approaches to treatment planning are integral to mental health recovery by ensuring that the concerns and expertise of both clients and clinicians are part of the decision making process. Collaborative approaches to care that uphold client autonomy are commensurate with social work values. However, for SDM to be implemented, practitioners must be willing to engage clients in the process. The present study demonstrates that especially among novice practitioners, the willingness of practitioners to support client autonomy and utilize shared decision making is predicated on a handful of key indicators in keeping with the principles of bounded rationality. These findings reinforce the importance of ongoing clinical education and supervision, especially for early career social workers in order to explicate these indicators and avoid negative bias in decision making.

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*Figure 1: A model of decision making regarding support for a client's autonomy and the willingness to engage in shared decision making (on the basis of Baron & Kenny, 1986).*

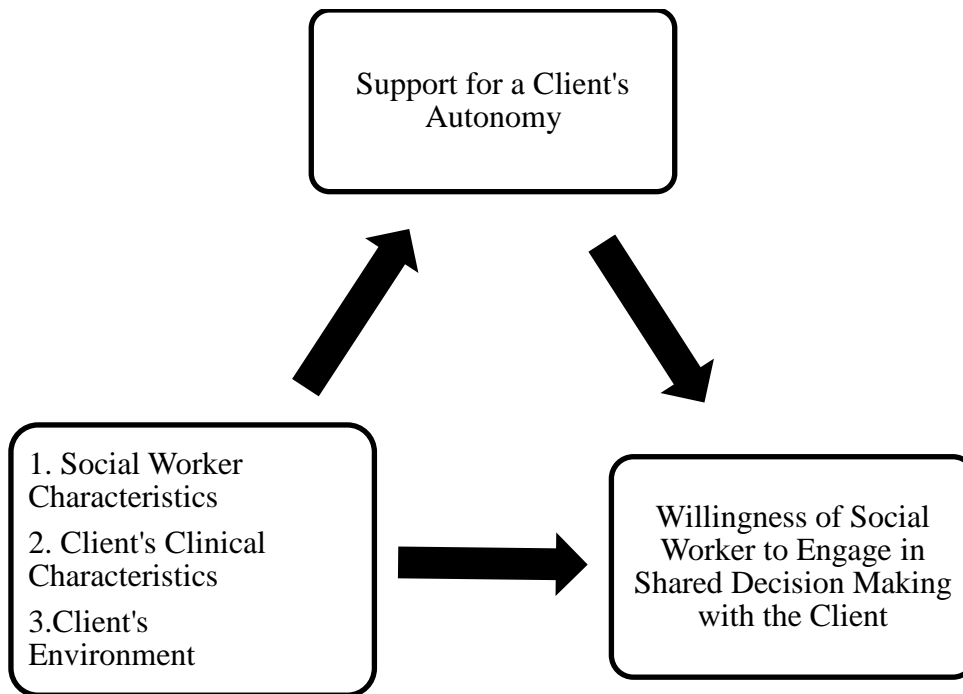


Table 1. Main effects of client and clinician characteristics on support for autonomy and support for shared decision making.

Variable	Support for Autonomy	Engage in Shared
	AOR (95% CI)	Decision Making AOR (95% CI)
<b><u>Client Characteristics</u></b>		
Age (reference: young adult)		
Middle Age	1.20 (.68, 2.11)	1.01(.55,1.85)
Older Adult	1.08 (.64, 1.84)	1.04 (.54, 2.04)
White (reference: African American)	1.00 (.65, 0.55)	1.40 (.91, 2.14)
Male (reference: female)	1.54* (1.00, 2.36)	1.04 (.66, 1.64)
<b><u>Clinical characteristics</u></b>		
Diagnosis (reference: schizophrenia)		
Major Depression	2.08*(1.13, 3.83)	2.02 (1.10, 3.69)
Bipolar Disorder	1.87** (1.20, 2.91)	2.31** (1.37, 3.90)
No Psychotic Symptoms (reference: psychotic symptoms)	2.91*** (1.77, 4.79)	1.84* (1.12, 3.04)
Self-Harm (reference: admits plan & intent)		
No Self Harm	2.49** (1.30, 4.77)	2.27**(1.20, 4.28)
Passing Thoughts	1.39** (.20, .74)	1.77* (1.02, 3.07)
Harm to Others (reference: admits plan & intent)		
No Harm to Others	1.46 (.85, 2.49)	1.85*(1.07, 3.20)
Passing Thoughts	1.25 (.71, 2.21)	1.01(.56, 1.83)
Treatment Adherence (reference: poor treatment adherence)	2.12** (1.29, 3.49)	1.39 (.76, 2.55)
No Drug Use (reference: active drug & alcohol use)	1.78* (1.09, 2.88)	1.88* (1.12, 3.13)
Housing Status (reference: lives in group home)		
Lives Independently	1.83* (1.11, 3.03)	1.30 (.76, 2.24)
Lives with Family	1.17 (.69, 2.02)	1.23 (.68, 2.25)
Homelessness History (reference: chronic homelessness)		
No History of Homelessness	1.36 (.84, 2.22)	.84 (.49, 1.41)
Episodic Homelessness	.90 (.53, 1.51)	.79 (.42, 1.47)
Low Caregiver Conflict (reference: frequent verbal & physical conflicts)	1.28 (.79, 2.07)	1.34 (.81, 2.25)

**Clinician Characteristics**

Age	.94*(.90, .98)	.93**(.88, .98)
Female (reference: male)	.58 (.25, 1.30)	.73 (.268,1.96)
Practice level (reference: novice practitioner)		
Experienced	1.28 (.670, 2.56)	2.03 (.864, 4.79)
Advanced	4.48**(1.73, 13.50)	5.21**(1.65, 16.50)
State license (reference: not licensed)	.78 (.37, 1.48)	.80 (.35, 1.83)
POS Score	1.02 (.99, 1.04)	1.02*(.99, 1.05)
<b>Pseudo R<sup>2</sup></b>	<b>.16</b>	<b>.18</b>

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*Note.* N=435. CI=confidence interval. AOR=adjusted odds ratio. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



Table 2: Results of Sobel test for mediating effects of support for autonomy

Variable	Shared Decision Making	SDM Controlling for Mediator	Sobel Test
	AOR (95% CI)	AOR (95% CI)	Z(SE <sub>Z</sub> )
<b><u>Client Characteristics</u></b>			
Age (reference: young adult)			
Middle Age	1.01(.55, 1.85)	.936 (.51, 1.72)	2.37 (0.46)
Older Adult	1.04 (.54, 2.04)	1.037 (.51, 2.12)	2.18 (0.50)
White (reference: African American)	1.40 (.91, 2.14)	1.57 (.99, 2.49)	3.11 (.51)
Male (reference: female)	1.04 (.66, 1.64)	1.29 (.78, 2.13)	2.93 (.30)
<b><u>Clinical Characteristics</u></b>			
Diagnosis (reference: schizophrenia)			
Major Depression	2.02* (1.10, 3.69)	1.60 (.94, 2.72)	2.40**(.06)
Bipolar Disorder	2.31**(1.37, 3.90)	1.96*(1.11, 3.44)	2.76**(.07)
No Psychotic Symptoms (reference: psychotic symptoms)	1.84**(1.12, 3.04)	1.26 (.72, 2.20)	2.64**(.07)
Self-Harm (reference: admits plan & intent)			
No Self Harm	2.27** (1.20, 4.28)	1.84 (.945, 3.60)	2.08*(2.28)
Passing Thoughts	1.77 (1.02, 3.07)	1.39 (.80, 1.06)	.71 (.21)
Harm to Others (reference: admits plan & intent)			
No Harm to Others	1.85* (1.07, 3.20)	1.87 (.99, 3.54)	2.38 (1.10)
Passing Thoughts	1.01 (.56, 1.83)	.94 (.51, 1.71)	2.36 (.44)
Treatment Adherence (reference: poor treatment adherence)	1.39 (.76, 2.55)	1.00 (.53, 1.93)	2.39 (.88)
No Drug Use (reference: active drug & alcohol use)	1.88* (1.12, 3.13)	1.62 (.96, 2.76)	2.89**(.05)
Housing Status (reference: lives in group home)			
Lives Independently	1.30 (.76, 2.24)	1.04 (.62, 1.78)	2.74 (.65)
Lives with Family	1.23 (.68, 2.25)	1.28 (.66, 2.51)	2.26 (.66)
Homelessness History (reference: chronic homelessness)			
No History of Homelessness	.84 (.49, 1.41)	.70 (.39, 1.24)	2.58 (.37)
Episodic Homelessness	.79 (.42, 1.47)	.83 (.43, 1.60)	2.31(.32)
Low Caregiver Conflict (reference: frequent verbal & physical conflicts)	1.34 (.81, 2.25)	1.33 (.80, 2.23)	2.77 (.61)

Clinician Characteristics

Age	.93* (.88, .98)	.94* (.89, .99)	26.60 (.03)
Female (reference: male)	.73 (.27, 1.96)	.85 (.31, 2.31)	1.57 (.30)
Practice level (reference: novice practitioner)			
Experienced	2.03 (.86, 4.79)	2.18 (.91, 5.26)	1.80 (1.54)
Advanced	5.21** (1.65, 16.5)	3.40 (.99, 11.74)	1.23 (12.38)
State license (reference: not licensed)	.80 (.35, 1.83)	.885 (.39, 2.03)	1.87 (.37)
POS Score	1.02* (.99, 1.05)	1.02 (4.35, 17.95)	55.08 (.02)
Support for Autonomy		8.84** (4.35, 17.96)	
<b>Pseudo R<sup>2</sup></b>	<b>.18</b>	<b>.25</b>	

*Note.* N=435. CI=confidence interval. AOR= adjusted odds ratio. SE<sub>z</sub>= standard error. \**p*<.05.

\*\**p*<.01. \*\*\**p*<.001