REFERRAL PRACTICES OF RURAL PRIMARY CARE PHYSICIANS FOR PATIENTS WITH DEPRESSION

by

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ABSTRACT

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This research characterizes the treatment and referral practices of rural primary care physicians for their patients with depression. A mailed survey was sent to all practicing physicians in rural Jackson County, Wisconsin and surrounding areas. Results indicate that physicians spend a significant amount of time treating patients with depression. They have high confidence in their ability to provide several different types of treatment for depression, but low confidence in providing psychotherapy and providing all of the necessary care for patients with depression. Physicians reported not having enough time to treat their patients with depression. They reported high levels of confidence in mental health providers' ability to provide treatment for patients with depression. Physicians reported referring to a range of mental health providers but most often to psychologists, psychiatrists and mental health counselors. AODA counselors, however, were identified as underutilized. The results suggest that physicians can accurately predict the

percentage of adults who have diagnosable levels of depression in the community. The need for more research on rural/urban differences in prevalence of depression, treatment for depression and referral practices for patients with depression is also discussed.

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Referral Practices of Primary Care Physicians for Patients with Depression

It has been estimated that thirty percent of all primary care patients may have significant psychosocial or psychological morbidity (Craven, Cohen, Campbell, Williams & Kates, 1997). This figure is alarming considering the fact that many psychosocial and psychological conditions are treatable or reversible with proper care. Treatment for these patients is often done exclusively in primary care medical settings (Craven et al., 1997). This practice is problematic because research suggests that optimal treatment for psychosocial and psychological conditions should include both primary care physicians and mental health specialists. Effective referral and/or collaborative treatment would provide benefits to providers and patients such as decreased cost of care, ability to focus treatment on areas of expertise, increased interest in providing care, more efficient use of time, and increased communication between providers.

Depression: Prevalent, Expensive, Debilitating

Primary care physicians can expect to see patients with depression, anxiety, stress-related disorders, psychosomatic illnesses, drug and alcohol abuse, domestic violence and adjustment problems related to chronic and traumatic illnesses (Brody & Larson, 1992 cited by Pace, Chaney, Mullins & Olson, 1995). Of the above psychosocial and psychological conditions, research has consistently cited depression as the most common psychiatric condition in primary care (Barrett, Barrett, Oxman & Gerber, 1988; Clayer et al., 1995; Sears, Danda & Evans, 1999). Studies using inventories to screen for depression have reported prevalence rates for depression in primary care as high as 48% (Barrett et al, 1988). In 1994, it was estimated that as many as one in eight people in the population will require treatment for depression in their lifetime (Millard, 1994). In

1992, it was determined that major depression occurs in 2-4% of people in the community, 5-10% in primary care medical patients and 10-14% of medical inpatients. Katon and Schulberg (1992) also reported an additional two to three times as many people with depressive symptoms in each of these categories.

Not only is depression prevalent, but major depressive disorder is associated with high medical utilization and high cost. In 1994, the annual cost for mood disorders was reported as $16 billion in one study and as $43.7 billion in another study (Millard, 1994). The expense includes hospitalization, visits to physicians and mental health care professionals, pharmaceutical treatment, and lost productivity (Millard, 1994). This cost, however, does not include the significant number of people who are not treated for their psychological and psychosocial symptoms. It has been estimated that greater than sixty percent of people with major depressive disorder are not treated for it (Robins & Regier, 1991, cited by Clayer et al., 1995). With medical costs increasing significantly faster than inflation and the cost of living, the annual cost for mood disorders has likely increased since 1994.

Major depression results in considerable life disruption and financial cost. In fact, depression is linked with more functional disability than most chronic medical illnesses (Wells, Stewart & Hayes, 1989, cited by Katon & Schulberg, 1994). Seriously depressed individuals have been estimated to utilize health care services three times more often than non-depressed individuals (Katon & Schulberg, 1992). Depressed individuals have up to five times as many disability days, more activity restriction and more accidental deaths than non-depressed individuals. At least 60% of suicides can be attributed to major depressive disorder (Millard, 1994). Up to 43% of people with major depressive disorder also have other psychiatric and/or non-psychiatric medical disorders (Millard, 1994).

The high numbers of people with major depression or with depressive symptoms, the cost of depression to society and the debilitating effects of depression are disconcerting because depression is usually treatable or reversible with proper care (Millard, 1994).

When treated for depression, research has indicated that depressive symptoms improve. Patients who are treated for depression report lower scores on the Beck depression inventory, decreases in patient reported psychological symptoms, and increases in self-reported satisfaction. Physician care, medication, cognitive behavior therapy, non-directive therapy and self-help books have been demonstrated as efficacious treatments for depression. Improvement with treatment has been shown to continue for at least 12 months following treatment (Briggs et al., 2000). Specifically, Brody et al. (1995) report that 60-80% of patients who are treated with antidepressants will recover from depression. A meta-analysis reveals that patients with depressive symptoms who receive cognitive-behavioral therapy report lower scores on the Beck depression inventory immediately following treatment than patients receiving no treatment, behavior therapy or pharmacotherapy (Dobson, 1989). Additionally, when used as the primary form of treatment, self-help books have been shown to improve symptoms of mild and moderate depression for up to two years (Brody et al., 1995).

Treatment

Primary care physicians play a significant role in the diagnosis and treatment of patients with depression. Primary care physicians are often the first and only health professionals that treat patients with depression (Boerma & Verhaak, 1999). In fact, more than half of all patients with psychiatric diagnoses are treated only in the primary care medical setting (Craven et al., 1997). As evidence of this fact, primary care physicians often see more patients for mental health issues such as depression than do

other mental health professionals (Craven et al., 1997; Pace, Chaney, Mullins & Olson, 1995). For example, pediatricians alone see more patients for mental health problems than psychologists and psychiatrists combined. As such, primary care physicians are important sources of referral to mental health professionals. Primary care physicians can therefore provide a gatekeeper role for referral to the most effective treatments for mental health problems such as depression.

Treatment by a primary care physician may include any combination of: prescribing psychotropic drugs, "passive counseling" (encouraging, comforting, listening), "active counseling" (exploring, giving insight), referral and/or advice (Verhaak & Wennink, 1990, p 153). In 1990, primary care physicians often restricted their treatment to counseling and prescribing drugs, and psychotherapy was uncommon. Counseling by primary care physicians included consolation, comfort and reassurance (Verhaak & Wennick, 1990). More recently, research has indicated that physicians feel comfortable prescribing antidepressants and that they schedule an average of three to five thirty minute counseling sessions per week (Craven et al., 1997). These counseling sessions are described by physicians as "supportive counseling" rather than "formal psychotherapy" (Craven et al, 1997, p 946). Definitions given by physicians for counseling and for psychotherapy were inconsistent, therefore formal definitions of these terms are unavailable. Patients who receive treatment for depression by primary care physicians alone, therefore, can expect to receive medication and counseling but not formal psychotherapy.

Benefits of Collaboration

Research has shown that treatment by a physician alone is not enough. Optimal treatment involves collaboration between primary care physicians and mental health

specialists. Collaborative treatment has several benefits to physicians, mental health specialists and patients. Treatment by both primary care physicians and mental health specialists would reduce the financial cost of treatment and it would allow physicians to focus on treatment based on physical symptoms and mental health specialists to focus treatment based on psychological and social factors. Additionally, collaboration may increase physicians' interest in providing mental health care, it would allow physicians to spend more time seeing other patients, and it would increase communication between physicians and mental health specialists. Collaboration would increase the likelihood that physical, psychological and psychosocial causes of depression would be effectively addressed.

Financial Cost

Involvement of both physicians and psychologists in mental health care has been demonstrated to be cheaper than restricting care to physicians alone (Pace et al., 1995; Wright & Burns, 1986; Rosen & Wiens, 1979). Psychotherapy, in addition to medical care, has been shown to reduce medical services by about 20% (Mumford, Schlesinger, Glass, Patrick & Cuerdon, 1984). In fact, even limited use of psychologists as consultants has been shown to reduce the number of subsequent outpatient and inpatient medical visits, emergency room visits, days of hospitalization, diagnostic services and pharmaceutical prescriptions (Degood, 1983; Mumford, et al., 1984; Rosen & Wiens, 1979).

Treatment focus

Besides saving money, this collaborative treatment would allow for both physicians and mental health specialists to focus their treatment. Medical training focuses primarily on treatment and assessment based on physical symptoms (Pace et al.,

1995; Pray, 1991). Physicians, therefore, are best prepared to provide diagnosis and pharmacological treatment for patients with depression. Mental health care providers, on the other hand, receive training in the cognitive, affective, social and environmental factors affecting symptoms and treatment; and, as such, may be better prepared to provide psychotherapy (Block, 1988). If physicians were able to work collaboratively with psychologists, social workers, AODA treatment specialists, counselors or other health care providers, patients would receive treatment that includes attention to physical symptoms, psychological issues and social factors.

Interest

An additional benefit to collaboration is that it may increase physicians' interest in providing mental health care. Research has shown that physicians' interest in providing mental health care has decreased in the 1970's to the early 1980's (Wright & Burns, 1986). Recently, Mashta (2000) has reported that physicians in England and Wales saw no point in looking for "incurable" mental health conditions, yet such conditions such as depression are highly treatable. Although little research has been conducted in recent years concerning physicians' interest in providing mental health care, it remains possible that this decrease in interest has continued through the 1990's. This trend is problematic because a positive association has been described between low interest and low recognition of mental illness (Wright & Burns, 1986).

It is possible that this decrease in interest may stem from the pressure on physicians to provide both the pharmacologic and psychotherapeutic care for depression. Primary care physicians may be frustrated by the fact that patients with mental health issues take more of their time than other patients. As a result, physicians may feel that such patients take time away from patients with non-mental health needs that they are

better trained to effectively work with. Collaboration would take the pressure off of physicians as the only providers of mental health care and reduce the amount of time needed for mental health patients. Consequently, collaboration may increase physicians' interest in providing mental health care.

Time

As mentioned above, collaborative treatment would give physicians more time to see other patients. In addition, collaboration would allow for patients to have longer psychotherapy sessions with mental health specialists than they would with primary care physicians. Physicians often do not have the time nor the training to provide psychotherapy. The majority of physicians allocate six to ten minutes per patient (Boerma & Verhaak, 1999). Although this time may be adequate for diagnosis and pharmacologic treatment, it is clearly inadequate for providing psychotherapy. Another time factor is that it may take one to six weeks to get an appointment to see a physician (Craven et al., 1997). In fact, when physicians do not have time to give an in-depth explanation of the patient's condition or to do informal counseling, they often schedule a follow-up appointment for several weeks later, or they never give an in-depth explanation. As a result, patients may be lead to believe that their condition is untreatable rather than simply inappropriate for physical medicine intervention alone.

Communication

Without efficient referral practices there is little communication between physicians and other health care providers. This lack of communication has resulted in physicians not being familiar with the role of specialty providers such as psychologists, social workers and psychiatrists (Pace et al., 1995; Pray, 1991; Schindler & Berren, 1981). This communication barrier may limit physicians' understanding of the kinds of

health care providers that can be helpful in providing mental health services, and may limit physicians' understanding of differential kinds of help they can provide in treatment.

Aside from referral, physicians may communicate with other health care providers if such specialists work in the same facility as the physicians, and they cross paths with each other on a regular basis. Therefore, physicians who regularly work with psychiatrists, psychologists, social workers and/or counselors may have a greater understanding of the roles that these providers can play in treatment than physicians who do not regularly work with other providers. This greater understanding, in turn, may result in more confidence in the ability of other health care providers to provide help and in consistent referrals by physicians who work with other health care providers. It would be interesting to note, however, if physicians who work with other health care providers refer only to providers in their facility with whom they are familiar, or, if their confidence in the ability of specialty providers extends beyond professionals within their facility.

The purpose of this research is to investigate referral practices of family practice physicians for their patients with depression. Specifically, physicians' confidence in their own ability to provide mental health treatment and in other health care providers' ability to provide mental health treatment, barriers to referral, factors influencing a physician's decision to refer, and specific health care providers to whom physicians refer will be explored.

Method

Participants

Participants were chosen from selecting all primary care physicians at 14 medical facilities in Jackson County, WI and surrounding areas, with the exception of two facilities that could not provide adequate contact information. These facilities were identified through a comprehensive internet search and they represented a blanket coverage of the health care facilities serving the geographic region surveyed by Milanesi et al. (unpublished). All names and addresses of the primary care physicians at each of these facilities were identified through one of two means, either the information was available on-line or it was available by contacting the medical records department at each of the facilities by telephone.

A total of 89 surveys were sent to primary care physicians at medical facilities in the following cities in Wisconsin: Arcadia, Black River Falls, Galesvile, Holmen, Friendship, LaCrosse, Mauston, Neilsville, Onalaska, Sparta, Tomah, and West Salem. The number of primary care physicians at the two clinics that were not included in the sample is unknown. Therefore, it is not possible to make comparisons of the number of physicians who received surveys to the total number of primary care physicians in the area. Nine physicians no longer worked at the facility and five physicians were in private practice for an adjusted sample size of 75. Of the 75 sampled, 15 physicians returned surveys indicating that they chose not to participate, and 42 surveys were returned completed for a total return rate of 76% and a response rate of 56%.

Materials

All participants were sent a survey asking questions about primary care physicians' referral practices for their patients with depression (See Appendix A). The

survey included questions concerning physicians' confidence in their own ability to provide mental health treatment and in other health care providers' ability to provide treatment. An example of the former was to rate the following statement on a scale of one to seven with one being strongly disagree and seven being strongly agree: "I feel comfortable providing psychotherapy for my patients with depression." An example of the latter was: "which of the following health care providers do you feel could be helpful in providing treatment to your patients with depression?" Physicians were asked to indicate which providers could be helpful from the following list: marriage and family therapist, mental health counselor, psychiatrist, psychologist, social worker, substance abuse counselor or other.

Also included on the survey were questions concerning barriers to referral, factors influencing a physicians' decision to refer, and specific health care providers to whom physicians refer. The following questions are examples of the above: "What barriers do you perceive might limit your likelihood to refer?" Physicians were asked to choose from a list of possible barriers including patient insurance, referral practices of your clinic, lack of efficacy of psychological intervention, limited knowledge of available referral sources, patient resistance to counseling or psychological intervention or other. Physicians were asked the following question concerning factors influencing referral decisions: "considering all of the patients that you have seen in the past 12 months with depression, what criteria do you use when determining when to refer?" The following list of possible criteria was given: level of subjective distress, patient's ability to function, availability of resources in the community, psychological assessment, level of risk, patient's support system, treatment history or other. The specific health care providers to whom physicians' refer was assessed with the following question: "of those patients that

you referred to another mental health provider in the past 12 months, please rank the following providers from "1" as the most often referred to, to "2" as the next most often referred to, and so on. For providers that you did not refer to in the past 12 months, enter "0."" Physicians were given the same list of mental health providers as mentioned above.

Procedure

A total of eighty-nine surveys were sent by mail to primary care physicians in Jackson County, WI and adjacent communities in January, 2001. No names were identified on the surveys; however, each physician was assigned a code number. The code numbers were used to track which physicians returned the surveys so that follow-up reminders could be sent to those who did not return the surveys. Physicians were given the option to indicate if they chose not to complete the survey and to return the survey blank. One month later, physicians who did not complete the survey and did not return the survey indicating that they did not wish to participate were sent a follow-up reminder by mail (see Appendix B). Three weeks later, physicians who did not respond to the second mailing were given a follow-up telephone call. Data was entered into SPSS for descriptive and inferential analysis. An alpha level of .05 was used for all analyses.

Results

The current research describes several central issues regarding the treatment of depression in rural areas. For example, physicians have high confidence in their ability to prescribe medications and in their referral practices, however they have low confidence in treatment issues regarding psychotherapy. Physicians also have high confidence in other mental health providers' ability to provide treatment for patients with depression. Physicians referred patients to a range of mental health providers, but most often to mental health counselors, psychologists and psychiatrists. Several key areas were identified as factors influencing the referral practices including the patient's level of risk, treatment history, ability to function, and support system. Patient resistance and insurance were cited as the largest barriers to referral.

Prevalence of Depression

Physicians' estimated that a mean of 13.9% of their adult patients have diagnosable levels of major depressive disorder (See Figure 1). Of these patients with major depressive disorder, greater than two-thirds were female (M=68.3%). Individual physician's estimates of the percentage of patients with diagnosable levels of depression that were female ranged from 7% to 95%. Physicians indicated that the percentage of patients that they see with depression is fairly representative of the percentage of adults with diagnosable levels of depression in the community (M=3.88 on a seven-point scale).

Physicians' indicated that approximately 14.8% of their time is spent treating depression and they reported high levels of interest in treating patients with depression (M=5.71 on a seven-point likert scale). However, physicians reported a low mean response of 3.08 on a seven-point likert scale to having enough time to adequately treat

depression. There was a significant positive correlation (r=0.441, p<.01) between being interested in treating patients with depression and having enough time to treat patients with depression.

Physicians' confidence in themselves

Physicians' confidence in their ability to provide treatment for depression was measured by six likert-type statements measured on a seven-point scale. High levels of confidence were reported for three of these questions: knowing when to refer to another health care professional (M=6.17), being comfortable prescribing medications (M=6.12), and knowing to whom to refer (M=5.71) (See Figure 2). Fully 38 physicians out of 42 (90%) chose a response of six or seven in feeling confident that they know when to refer their patients with depression to another health care provider.

Physicians reported low levels of confidence that they could provide all of the necessary care for their patients with depression (M=3.24) and moderate levels of confidence that they could provide sufficient care for their patients with depression (M=4.93). Low levels of confidence were reported for being comfortable providing psychotherapy (M=3.10). In fact, only six physicians out of 42 (14%) chose a high response of five, six or seven for this statement.

There were significant correlations among two-thirds of the statements regarding physicians' confidence with their ability to provide treatment for depression (see Table 1). Confidence with prescribing medications was significantly positively correlated with three of the five additional confidence statements. In comparison, there was only one significant positive correlation with being comfortable providing psychotherapy and no significant correlations with confidence in knowing to whom to refer.

Psychotherapy

Physicians self-assessed their comfort and efficacy in providing psychotherapy on two seven-point likert statements (See Figure 3). Low ratings were reported for being comfortable providing psychotherapy (M=3.10), and for receiving adequate training in providing psychotherapy (M=3.07). In comparison, a high rating was reported for finding psychotherapy beneficial (M=5.69). There was a significant positive correlation (r=.797, p<.001) between feeling comfortable providing psychotherapy and receiving adequate training in providing psychotherapy (See Table 2). There was no significant correlation, however, between being comfortable providing psychotherapy and finding psychotherapy beneficial.

Physicians' confidence in other health care providers

Physicians' confidence in other health care providers was evaluated by indicating which mental health providers could be helpful in providing treatment for depression. On the average, physicians checked five of the six different mental health providers as helpful (See Figure 4). Mental health counselors were checked as helpful most often (M=95.2%). However, each of the six mental health providers was chosen as helpful by at least 80% of all physicians. An additional five physicians (11.9%) wrote in clergy members as helpful.

When making a referral for a patient with depression, nearly all physicians reported making referrals to a psychologist, psychiatrist or mental health counselor within the past 12 months (See Figure 5). There was nearly a 20% drop in referrals between the above three providers and the alcohol and drug abuse counselors, social workers and marriage and family therapists.

Mental health counselors and psychologists, respectively, were most often ranked the number one choice for referrals (See Figure 6). Psychiatrists, social workers, marriage and family therapists and alcohol and drug abuse counselors were each ranked as the number one choice one-third as often, or less, than mental health counselors or psychologists.

Physicians' referred their patients with depression to mental health providers more often (M=38.9%) than they received patients referred from mental health providers (M=12.6%) (See Figure 7). Physicians most often indicated that none of their patients with depression in the past 12 months were referred to them by a mental health provider. Physicians referred approximately 21.0% of patients with depression to providers outside of the health care facility. Responses to this statement ranged from 2% to 100%.

Factors influencing referral decisions

Physicians most frequently reported patient's level of risk, treatment history, patient's ability to function and patient's support system, respectively, as factors influencing their decision to refer (See Figure 8). There was a 10% drop or more between these frequently reported factors and the other factors listed. Five physicians (11.9%) wrote in that response to or comfort level with treatment was a factor that influenced their decision to refer. Behavioral issues such as suicidal ideation, personality disorders, and psychotic features were written in by six physicians (14.3%).

Barriers to referral

Patient resistance and insurance were most frequently cited as barriers to referral for patients with depression (See Figure 9). There was a 50% drop or greater between these two factors and the other factors listed. Availability of services and/or mental health providers was written in as a barrier by an additional nine physicians (21.4%).

Discussion

The current study provides evidence that primary care physicians spend a significant amount of time treating patients with depression. They have high confidence in their own ability to provide treatment for depression in several areas and they have high confidence in mental health providers' ability to provide treatment for depression. This study also provides support for the fact that physicians in Jackson County, Wisconsin are able to accurately predict the percentage of adults in the population with diagnosable levels of depression in the community. Physicians in this study reported referring to a range of mental health providers, but most often to psychologists, psychiatrists and mental health counselors. The current research also suggests that there are certain characteristics of rural areas that lead to rural/urban differences in barriers to referral and in prevalence of depression.

Physicians' Confidence in Themselves

Physicians reported moderate to high levels of confidence in their ability to prescribe medications, in their referral practices and in their ability to provide sufficient care for patients with depression. However, they reported low levels of confidence with providing all of the necessary care for patients with depression and for providing psychotherapy. These findings are consistent with previous research. Craven et al. (1997) report that physicians feel comfortable dealing with major depression and prescribing antidepressants. Although there is little previous research on physicians' confidence with providing psychotherapy, there is evidence that physicians often do not provide formal psychotherapy for their patients with depression (Craven et al., 1997). It is possible that physicians do not provide formal psychotherapy because they have low confidence in their ability to provide this type of treatment.

Not only did physicians report low confidence with providing psychotherapy, but they also reported not receiving adequate training in providing psychotherapy. In fact, research has indicated that medical doctors often receive training in the biomedical model that focuses on the physical aspects of illness rather than the psychological and social factors. As such, they may not receive training in psychotherapy. In comparison, physicians reported that psychotherapy could be beneficial for patients with depression in the current study. This discrepancy between ability to provide psychotherapy and the need for psychotherapy suggests that physicians need to refer their patients with depression to persons who are trained to provide psychotherapy. Indeed, research shows that optimal treatment for depression should include physicians who are competent in providing biological assessments, diagnosis and medication management and mental health providers who are trained to provide psychotherapy, counseling and testing (Pray, 1991; Schindler, Berren, & Beigel, 1994; Pace, Chaney, Mullins & Olson, 1995).

Referral Practices

In the current study, physicians reported that they referred 39% of their patients with depression to a mental health provider. Of those patients that physicians referred to a mental health provider, there was a large range in the percentage that was referred outside the health care facility. This large range of responses may be explained by the fact that there are few mental health specialty providers available in many rural areas (Hartley, Korsen, Bird & Agger, 1998; Rost, Humphrey, Kelleher, 1994). In fact, availability of services and/or mental health providers in rural areas was suggested as a barrier to referral in the current study. Physicians at facilities where there are few, if any, mental health providers would need to refer all, or almost all, of their patients to providers outside of the facility. On the other hand, physicians at facilities where mental

health providers are available may be more likely to refer within the facility due to familiarity with the providers. An additional incentive for physicians to refer within their facility is the finding that patients are more likely to follow through if the mental health provider is in a traditional medical facility rather than a mental health clinic (Degood, 1983).

This referral rate of 39% was much higher than the percentage of patient referrals that physicians reported receiving from mental health providers. This finding suggests that physicians are making more referrals than mental health providers, and/or that physicians are the first contacted health professional for patients with depression and/or that patients often fail to follow through with referrals to physicians. In support of this notion, previous research has reported that many patients that receive mental health care are seen only by primary care physicians (Boerma & Verhaak, 1999; Sears, Danda & Evans, 1999; Olfson, 1991). Additionally, although previous research has indicated that patients often do not follow through with referrals to a mental health provider, no research to this author's knowledge has considered patient non-compliance with referral to a physician.

In the current study, physicians reported referring most often to psychologists, psychiatrists and mental health counselors. However, there was a discrepancy between perceived helpfulness and actual referral practices for AODA counselors and marriage and family therapists. AODA counselors were rated second highest of the mental health providers on helpfulness, yet these professionals were never ranked as most often referred to. Additionally, none of the physicians wrote in alcohol and drug issues as a factor influencing their decision to refer. This discrepancy suggests that AODA counselors are underutilized. In fact, Mehrabian's (2001) review of the literature on the

relationship between depression and alcohol abuse indicates a strong positive relationship between depression and alcohol abuse or dependence. It is possible that there are few AODA counselors available in rural areas or that they are available, but physicians are unaware of them.

Factors Influencing Referral Decisions

Physicians most often indicated that serious and high risk mental health issues were factors influencing their decision to refer. Specifically, patient's level of risk, treatment history, patient's ability to function and patient's support system were the factors most often chosen. Additional factors associated with high risk mental health issues included suicidal ideation, personality disorder and psychotic features.

Barriers to Referral

Several barriers to referral have been suggested to explain why the referral rate is less than 100%. In the current research, patient resistance and patient insurance were most frequently cited as barriers to referral. It would be interesting to note what percentage of those patients who were referred in the current study actually followed through with a mental health provider. In previous research, patient resistance to treatment is often identified as a barrier to referral (Hartley et al., 1998; Rost, Humphrey, & Kelleher, 1994). In psychiatric emergency departments, rates of non-compliance were found to range from 30% to 74% (Blouin, Perez & Minoletti, 1985 cited by Olfson, 1991). This problem is exacerbated by the fact that patient resistance has been suggested to be an even larger problem in rural areas. Many residents of rural areas are unwilling to see mental health providers due to concerns of confidentiality (Hartley et al., 1998). Olfson (1991) suggests that a physician's decision to refer a patient to a mental health

provider is often influenced by the patient's willingness to be treated by a mental health specialist.

Previous research has also indicated that physicians often give counseling provision a low priority, especially in rural areas. In fact, some doctors have reported concerns that counseling does not have clear goals, and they have reservations about the training, selection and supervision of counselors (Radley & Cramer, 1997). The current research, however, refutes these findings. Only 14.3% of physicians indicated that lack of efficacy of psychological intervention was a barrier to referral. Additionally, in contrast with previous research, physicians reported high confidence in health care providers' ability to provide treatment for depression. Physicians often checked five out of a list of six mental health providers as being helpful in providing treatment for patients with depression.

Time spent treating major depressive disorder

Physicians reported nearly an equal percentage of their time treating major depressive disorder as they had patients with the disorder. This finding is inconsistent with previous research. It has been suggested that patients with mental health issues such as major depressive disorder are high users of medical services in general (Millard, 1994; Rost, Humphrey & Kelleher, 1994, Shapiro et al., 1984). This discrepancy between the current research and previous research can be partially explained by the fact that physicians report not having enough time to treat their patients with depression. If physicians had more time to treat patients, they may spend proportionally more time treating their patients with depression. In support of this hypothesis, time constraints were mentioned as an important factor for family physicians in determining if they should pursue any psychological problems (Craven et al., 1997).

These time constraints may also be responsible for previous reports of decreases in physicians' interest to respond to psychological issues such as depression (Wright & Burns, 1986). However, in contrast to previous research, physicians reported high levels of interest in treating depression in the current study. The current survey did not assess interest in the specific types of treatment for depression. It is possible, therefore, that physicians' interest in providing treatment for depression is restricted to providing biological assessment, diagnosis and medication management rather than providing psychotherapy. Further research is needed to investigate this possibility.

Prevalence of Depression

Physicians reported a mean of 13.9% of their adult patients as having diagnosable levels of major depressive disorder. Physicians also indicated that this percentage is fairly representative of the percentage of adults with diagnosable levels of depression in the community. Comparative data is difficult to locate due to the fact that prevalence rates for depression tend to fluctuate based on geographic region (rural vs. urban), criteria and method for diagnosing depression (ex: physician diagnosis vs. self-report), and population sampled (clinical vs. non-clinical).

Several characteristics of rural areas suggest that prevalence rates for depression may differ in rural vs. urban areas. In comparison to people in urban areas, rural inhabitants tend to have lower socioeconomic status and are three times more likely to live in substandard housing (Murray & Keller, 1991; Templeman, Condor, Starr & Haxard, 1989). In addition, rural populations tend to have a lower median educational attainment, and substantially lower median family incomes than people in urban populations (Murray & Keller, 1991; Rost, Humphrey & Kelleher, 1994). Rural inhabitants usually have greater rates of unemployment than their urban counterparts

(Philbrick, Connelly & Wofford, 1994; Murray & Keller, 1991). These factors contribute to economic hardships for individuals in rural areas, and research has suggested that a direct relationship exists between economic hardship and mental illness (Templeman et al., 1989).

Given this potential difference in prevalence between rural and urban areas, it would be inappropriate to compare the current study with studies using an urban population. However, previous research using the same rural sampling area as the current research has yielded similar findings to the current study. Milanesi et al. (unpublished) reported that 14.1% of residents in Jackson County, Wisconsin had experienced a major depressive episode in the previous year. There were no significant differences using a one-sample t-test between the 13.9% reported here and the 14.1% reported by Milanesi et al. (unpublished). This finding suggests that physicians in this rural area can accurately predict the percentage of adults with major depressive disorder in the community. It also suggests that it is possible to compare data from research that uses different methods for diagnosing depression (physician diagnosis vs. self-report) and different sample populations (clinical vs. non-clinical).

Gender Differences

In the current study, physicians estimated that 68.3% of their patients with depression were women. This finding suggests that there are gender differences in prevalence of depression. However, there have been mixed reports in the literature as to if there are true gender differences in depression or if women are simply more likely to report depressive symptoms to their physician.

It has been suggested that men and women differ in how they get support for health problems, in help seeking behaviors and in barriers to seeking medical attention.

Tudiver and Talbot (1999) report that male patients often present to their physicians with no complaints or with general complaints of their health. In addition, men need to feel very vulnerable before seeking help, as compared to women. Tudiver and Talbot (1999) also report that men believe that seeking help is not an acceptable behavior. These factors may result in discrepancies between the percentage of men that physicians estimate to have major depression and the percentage of men who actually have major depression. The current study, therefore, may inflate any real gender differences in major depressive disorder.

Some researchers, however, have suggested that there are real gender differences in major depressive disorder. Hauenstein and Boyd (1994) report that women experience depression two times as often as men in every age category. Reasons cited for this finding include gender differences in vulnerability due to biological and psychosocial phenomena, and exposure of women to specific life stresses that may contribute to depressive disorder. Additionally, the risk factors for depression may be different in women versus men (Hauenstein & Boyd, 1994; Hoyt, Conger & Valde, 1997; Kovess, Murphy & Tousignant, 1987). Women who were formerly married are at greater risk than presently and never married women. Low socioeconomic status and women's perceptions of poor mental health were also cited as risk factors for women (Hauenstein & Boyd, 1994). Further research is needed to determine if the reported prevalence rates of depression by gender accurately reflect the percentage of men and women who actually experience depression.

The current research characterizes the treatment and referral practices of physicians for patients with depression. It suggests that if optimal treatment for depression involves physicians who are trained in the biomedical aspects of treatment and

mental health providers who are trained in the biopsychosocial aspects of treatment, then both physicians and mental health providers need to refer to one another in order for patients to receive the most efficacious treatment possible. The need for referral is supported by three findings. First, physicians report being uncomfortable providing psychotherapy, but they report that psychotherapy can be beneficial for patients with depression. Second, physicians report low confidence with their ability to provide all of the necessary care for patients with depression. Third, physicians report not having enough time to treat their patients with depression.

More efficient referral practices would allow for both physicians and mental health professionals to be able to focus their treatment in the areas that they received training. Additionally, physicians would be able to spend more time treating their non-depressed patients. However, in order to be able to improve the referral practices of both physicians and mental health providers, further research is needed to assess current referral practices. Specifically, research is needed on potential rural/urban differences in treatment and referral practices. The current research suggests that there are certain characteristics of rural areas that lead to rural/urban differences in barriers to referral and in prevalence of depression. Previous research supports these findings. These characteristics also imply that there may be additional rural/urban differences in treatment and referral practices, although research is needed to investigate this possibility.

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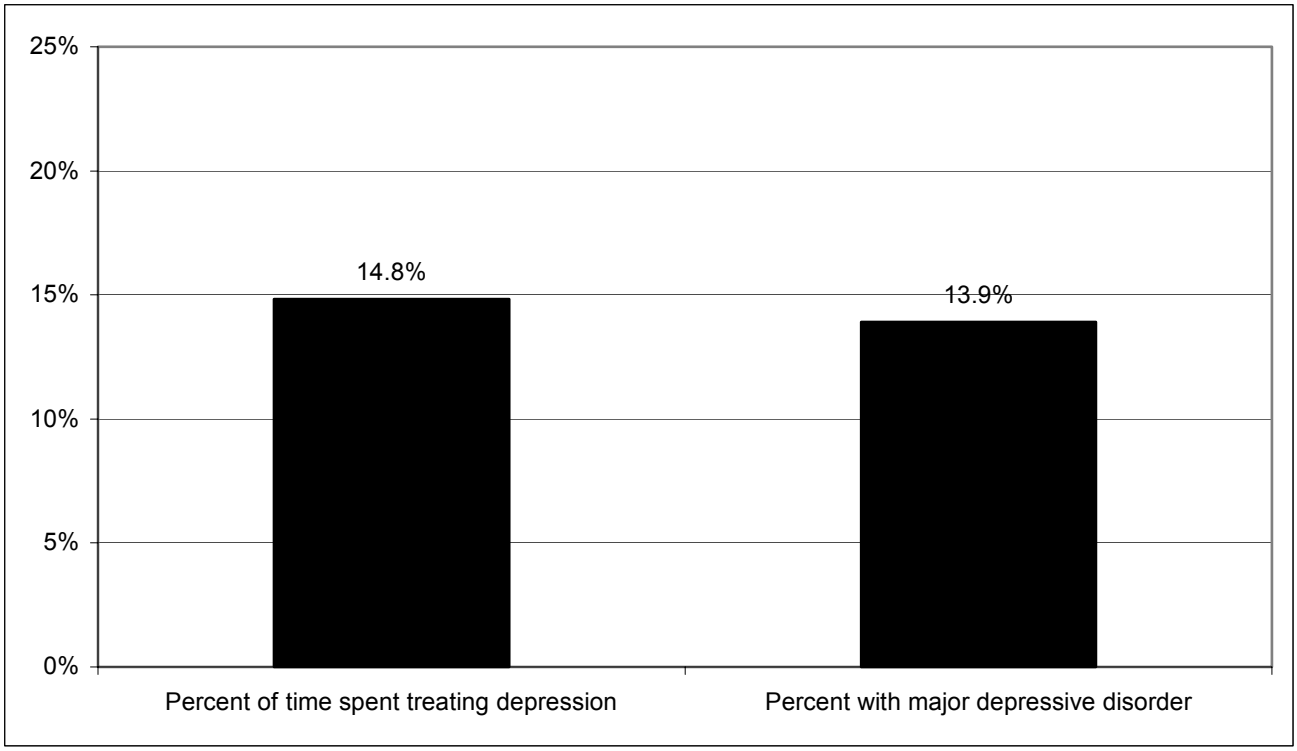

Figure 1. Time Spent Treating Major Depressive Disorder

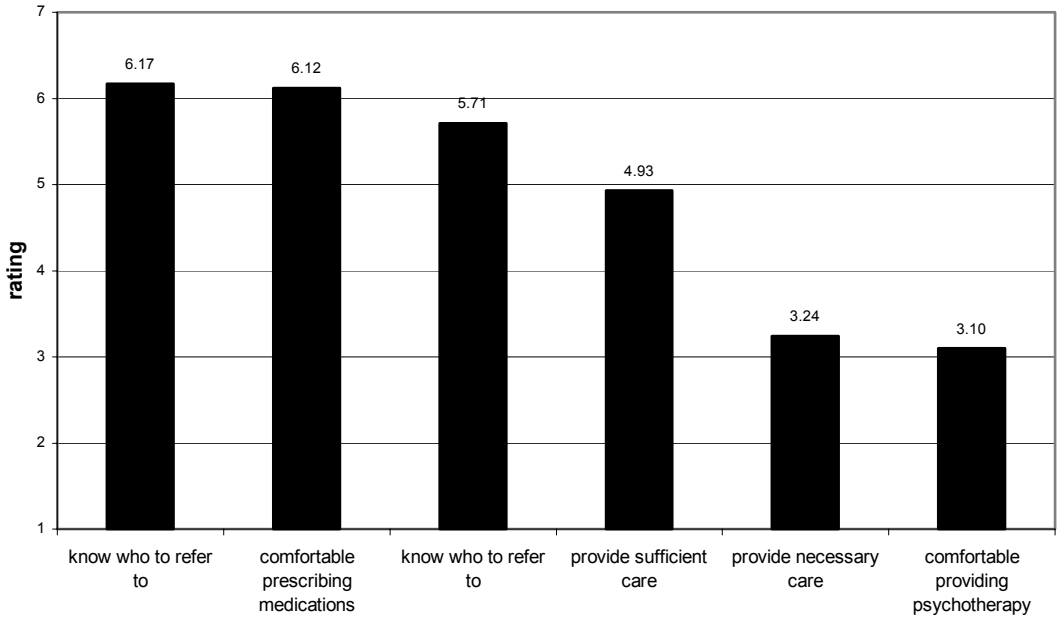

Figure 2. Physicians' Confidence in their Ability to Provide Treatment for Depression

Table 1.

Physicians' Confidence in their Ability to Provide Treatment Correlations

	Comfortable Providing Psychotherapy	**Receive Necessary Care**	**Receive Sufficient Care**	**Confident When to Refer**	**Confident Who to Refer to**
Comfortable Prescribing Meds	.24	.35*	.34*	.65***	.12
Comfortable Providing Psychotherapy	--	.36*	.28	.13	-.15
Receive Necessary Care		--	.47**	.26	.04
Receive Sufficient Care			--	.33*	.09
Confident When to Refer				--	.03

* statistically significant at .05 level
** statistically significant at .01 level
***statistically significant at .001 level

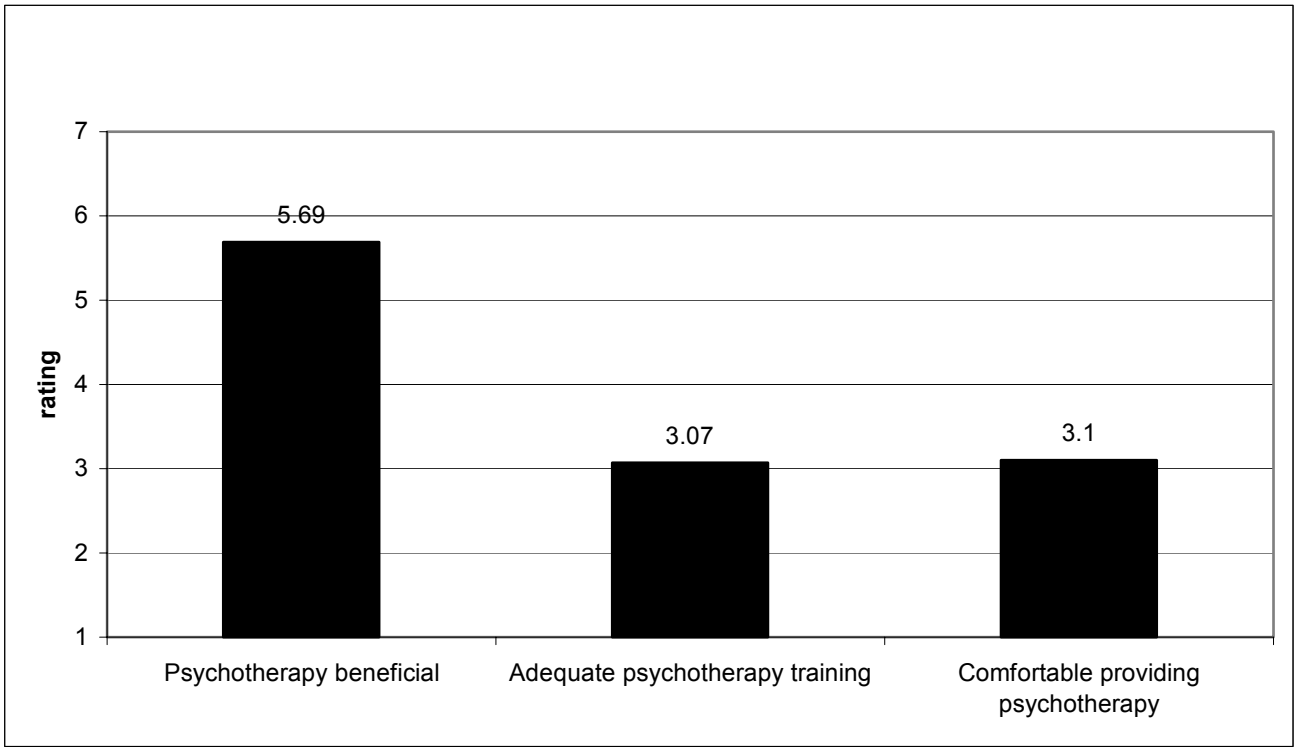

Figure 3. Psychotherapy treatment for depression

Table 2.

Feelings Concerning Psychotherapy Correlations

	Received Adequate Training in Psychotherapy	**Comfortable Providing Psychotherapy**
Psychotherapy Beneficial	-.02	-.13
Received Adequate Training in Psychotherapy	--	.80***

*** statistically significant at .001

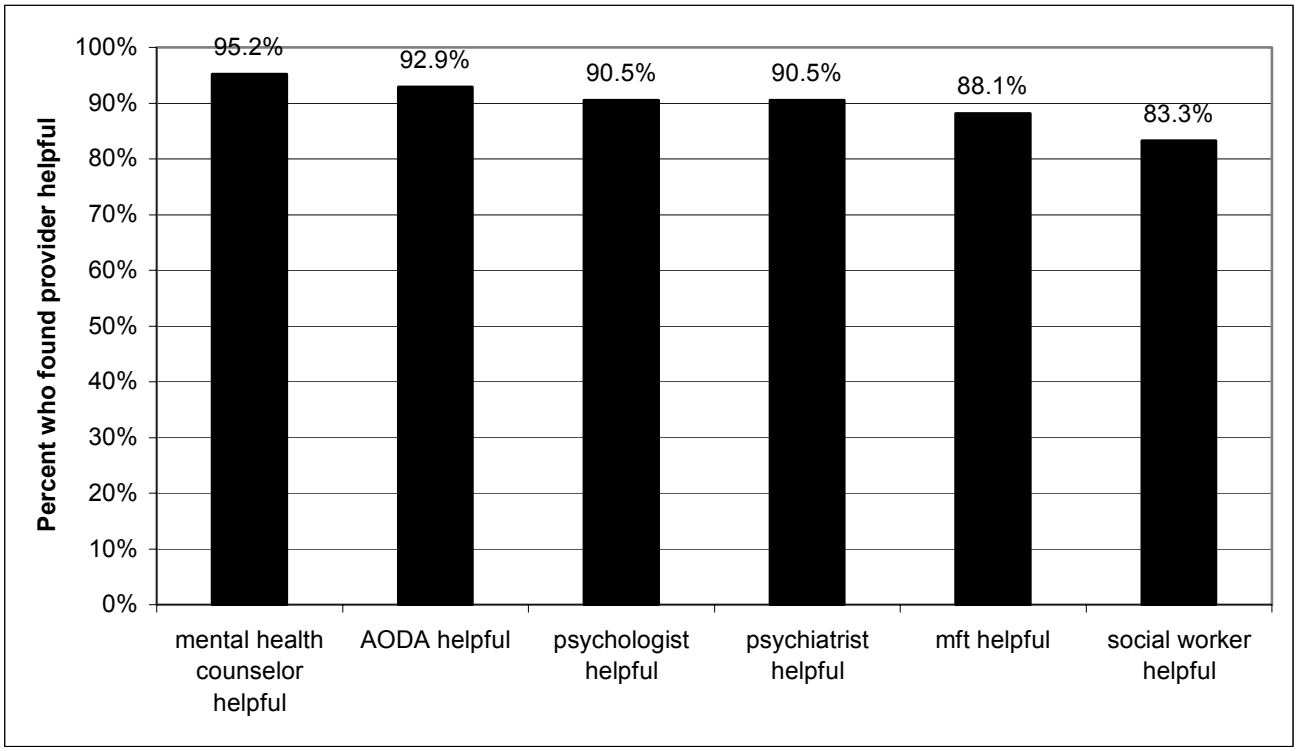

Figure 4. Physicians' Confidence in Mental Health Providers' Ability to Provide Treatment

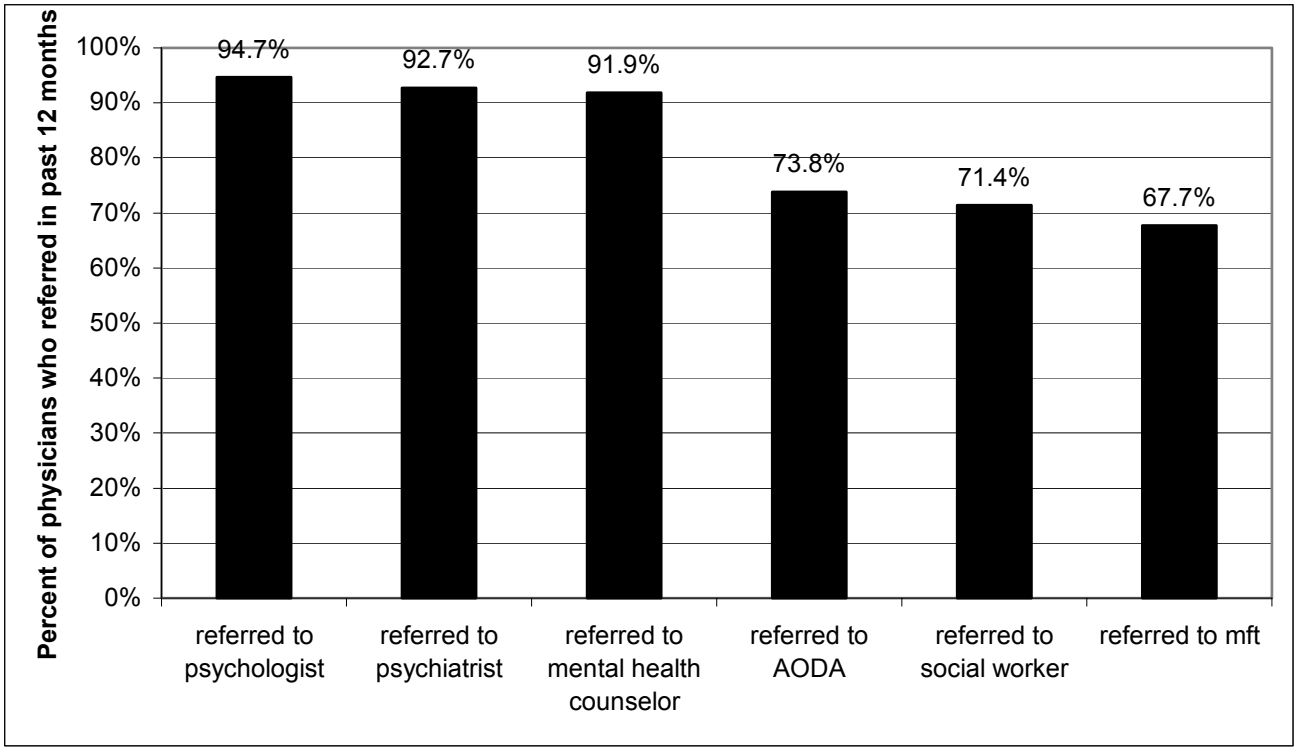

Figure 5. Physicians' Referral Practices

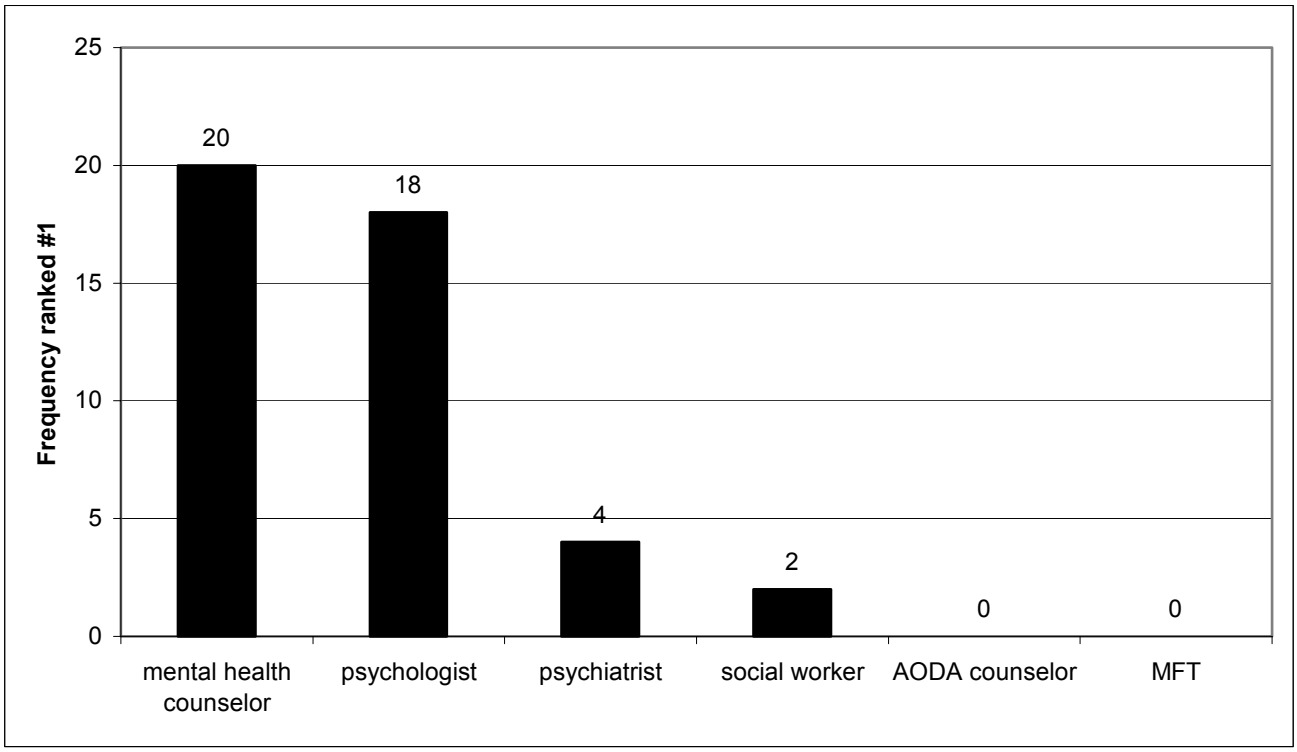

Figure 6. Mental Health Providers Ranked as most often Referred to

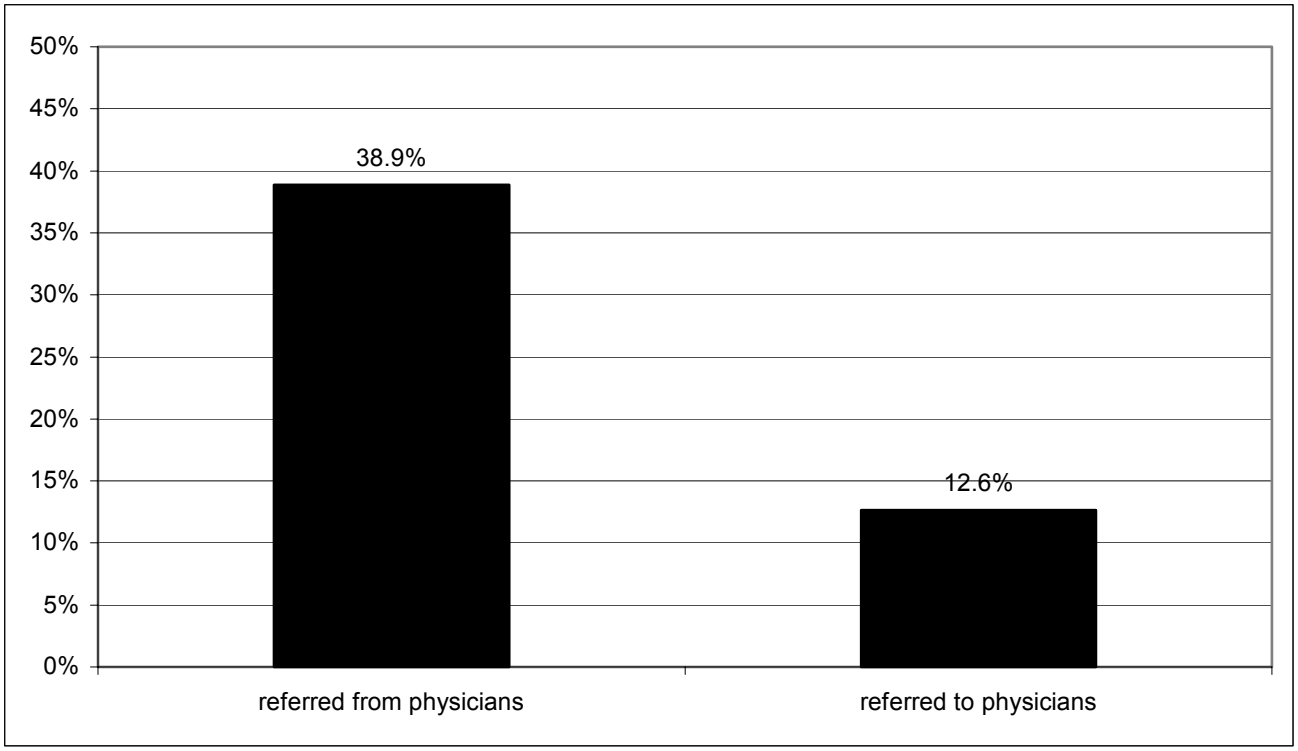

Figure 7. Mental Health Referral Practices

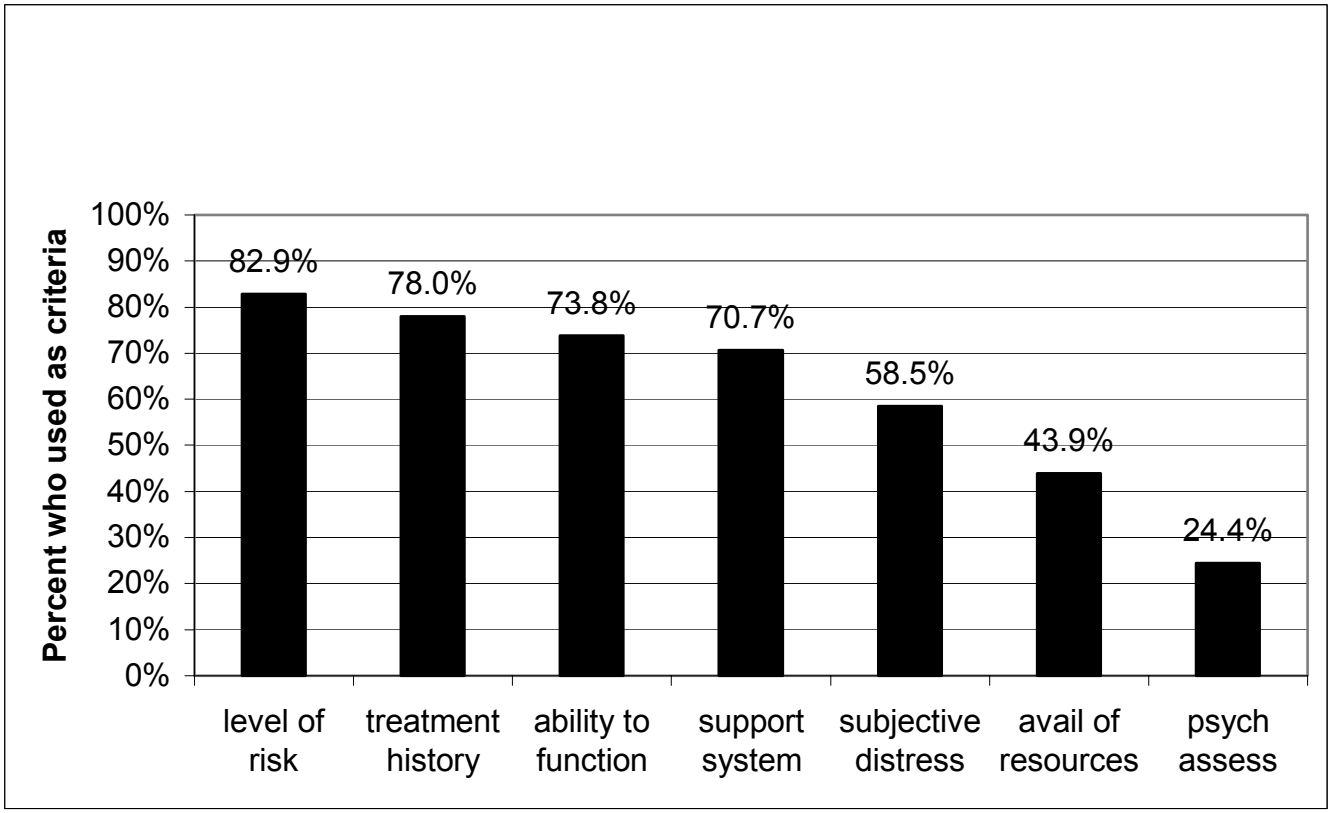

Figure 8. Factors that Influence a Physician's decision to Refer

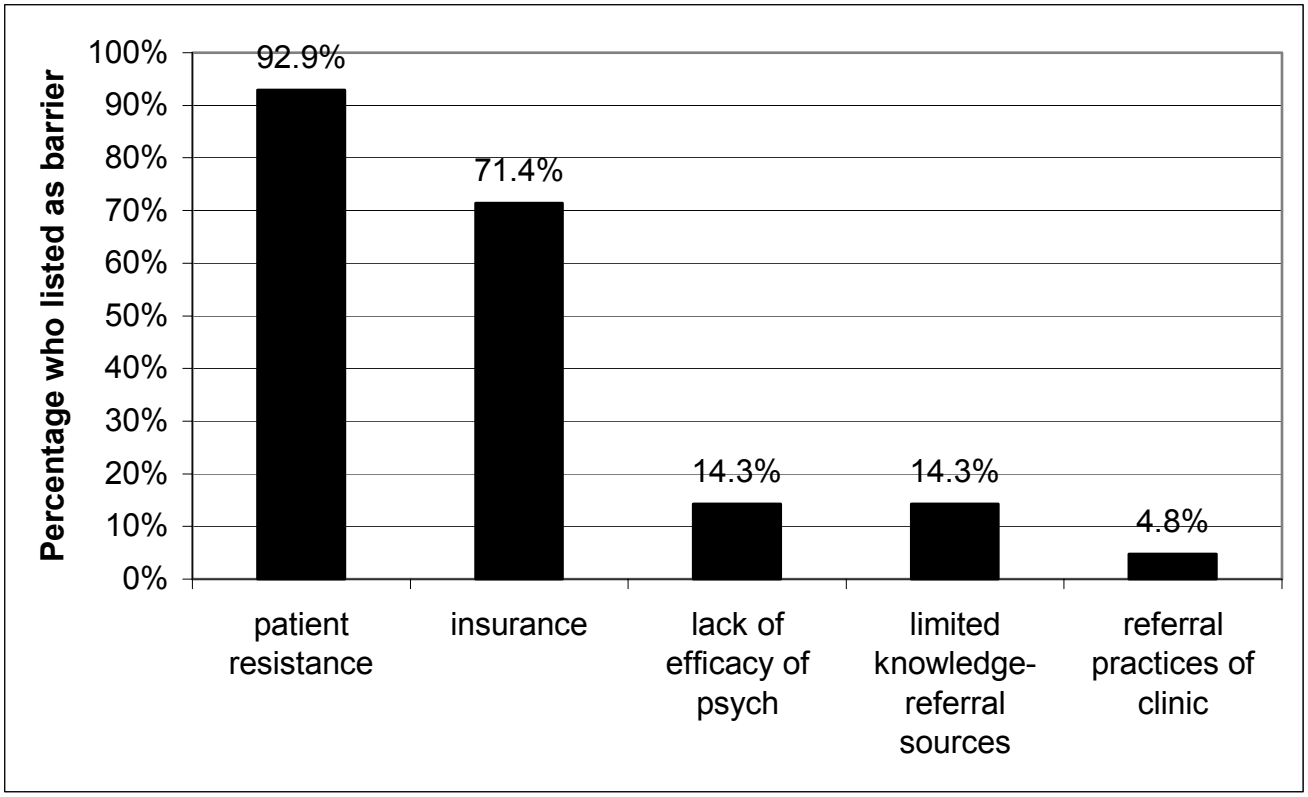

Figure 9. Barriers to Referral

APPENDIX A

The following survey is part of a Master's thesis being conducted by Meridith Wentz at the University of Wisconsin-Stout, in conjunction with Lou Milanesi, Ph.D., Joseph Tobin, M.D., and Don Baughman, Ph.D. We need your help in collecting information about your referral practices for your patients with depression. This study is part of a larger epidemiological study of depression in Jackson County and adjacent communities, conducted by Dr. Lou Milanesi in collaboration with Dr. Ron Kessler of the Harvard Medical School, Department of Health Care Policy.

If you are interested in participating, please fill out the following survey concerning primary care physicians' referral practices for their patients with depression and return it in the enclosed, self-addressed envelope to the University of Wisconsin-Stout by **February 26, 2001**. By signing the consent form that follows and returning this questionnaire you are indicating your informed consent to participate as a volunteer in this study.

If you choose not to participate, please check the box located at the bottom of the consent form next to "I choose not to participate" and return the survey in the enclosed self-addressed envelope. If we do not receive your completed consent form and survey by February 26, or you do not indicate that you do not wish to participate, we will be contacting you again by mail.

You will notice that an identification number is included on each page of this survey. The purpose of this number is to keep track of who returns the survey and of who is not interested in participating. Only a single list will link your names with your identification numbers, and this list will be destroyed before any data are analyzed. No names will be identified in any research reports.

The survey will take approximately 10 minutes to complete. Thank you for your time.

Consent Form

I understand that my participation in this study is strictly voluntary and I may discontinue my participation at any time without any prejudice. I understand that the purpose of this study is to investigate referral practices of primary care physicians for patients with depression. The goal of the study is understanding and enhancing effective depression treatment. I understand that there is minimal risk associated with participating in this study and that there is no individual benefit for participating in this study. I further understand that any information about me that is collected during this study will be held in the strictest confidence. I understand that at the conclusion of this study all records that identify individual participants will be destroyed. I further understand that any reports of this data will be made in the aggregate, and that no individual names will be identified.

Signature _____
Date _____

NOTE: Questions or concerns about participation in this research should be addressed to first to Meridith Wentz, UW-Stout, 715-232-2667, or to Dr. Lou Milanesi, Associate Professor, Psychology Department, 305 EHS Bldg, UW-Stout, Menomonie, WI 54751, 715-232-2659, and second to Dr. Ted Knous, Chair, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 11 HH, UW-Stout, Menomonie, WI, 54751, 715-232-1126.

We are interested in gathering some information from you about the patients you treat that have diagnosable levels of major depressive disorder.

1. Considering all of the adult patients you have seen in the past 12 months:

   a. Approximately what percentage of them do you believe have diagnosable levels of major depressive disorder? _____%

   b. Approximately what percentage of the above have been female? _____%

   c. In your opinion, how does the percentage that you indicated in 1a compare to the percentage of adults with diagnosable levels of depression in the community? (please circle the appropriate response)

Significantly lower than			*Representative of*			*Significantly higher than*
1	2	3	4	5	6	7

2. Considering all of the time you have spent seeing patients in the past 12 months, approximately what percentage of your time has been spent treating patients with depression? _____%

Next, we are interested in collecting some information from you concerning your feelings about treating your patients with major depressive disorder.

Please circle the number that best describes your reaction to the following statements:

Strongly Disagree			*Neutral*			*Strongly Agree*
1	2	3	4	5	6	7

3. I am interested in treating patients with depression.

1	2	3	4	5	6	7

4. I feel comfortable prescribing medications for my patients with depression.

1	2	3	4	5	6	7

5. I feel comfortable providing psychotherapy for my patients with depression.

1	2	3	4	5	6	7

Strongly Disagree *Neutral* *Strongly Agree*

1 2 3 4 5 6 7

6. I feel that psychotherapy can be beneficial for patients with depression.

1 2 3 4 5 6 7

7. I feel that I have received adequate training in providing psychotherapy for patients with depression.

1 2 3 4 5 6 7

8. I feel that I have enough time to adequately treat my patients with depression.

1 2 3 4 5 6 7

9. I feel that my patients with depression can receive all of their necessary care from me.

1 2 3 4 5 6 7

10. I feel that my patients with depression can receive sufficient care from me.

1 2 3 4 5 6 7

11. I feel confident that I know when to refer my patients with depression to another health care professional.

1 2 3 4 5 6 7

12. When I have to make a referral for my patients with depression, I feel confident that I know who to refer to.

1 2 3 4 5 6 7

Next, we are interested in gathering some information about your referral practices for patients with major depressive disorder.

13. Considering all of the patients that you have seen in the past 12 months with depression, approximately what percentage of those patients were **referred to you** by a mental health provider? _____%

14. Considering all of the patients that you have seen in the past 12 months with depression, approximately what percentage of those patients did you **refer to another** mental health provider? _____%

15. Of those patients that you referred to another mental health provider in the past 12 months, please **rank** the following providers from "1" as most often referred to, to "2" as the next most often referred to, and so on. For providers that you did not refer to in the past 12 months, enter "0."

___ Marriage and Family Therapist
___ Mental Health Counselor
___ Psychiatrist
___ Psychologist
___ Social Worker
___ Substance Abuse Counselor
___Other, specify _____
___Other, specify _____

16. Which of the following health care providers do you feel **could** be helpful in providing treatment to your patients with depression **(check all that apply):**

□ Marriage and Family Therapist
□ Mental Health Counselor
□ Psychiatrist
□ Psychologist
□ Social Worker
□ Substance Abuse Counselor
□ Other, specify _____
□ Other, specify _____

17. Of those patients that you referred to another health care provider in the past 12 months, approximately what percentage of those patients did you refer **outside** of your health care facility? _____%

18. Considering all of the patients that you have seen in the past 12 months with depression, what criteria do you use when determining when to refer **(check all that apply):**

□ level of subjective distress
□ patient's ability to function
□ availability of resources in the community
□ psychological assessment (e.g. Beck Depression Inventory)
□ level of risk
□ patient's support system
□ treatment history
□ Other, specify _____
□ Other, specify _____

19. What barriers do you perceive might limit your likelihood to refer **(check all that apply):**

□ patient insurance
□ referral practices of your clinic
□ lack of efficacy of psychological intervention
□ Other, specify _____
□ limited knowledge of available referral sources
□ patient resistance to counseling or psychological intervention
□ Other, specify _____

Thank you for your time

APPENDIX B

Recently you were mailed a survey and asked to provide valuable data for research being conducted by Meridith Wentz at the University of Wisconsin-Stout, in conjunction with Lou Milanesi, Ph.D., Joseph Tobin, M.D. and Don Baughman, Ph.D. This study is part of a larger epidemiological study of depression in Jackson County and adjacent communities, conducted by Dr. Milanesi in collaboration with Dr. Ron Kessler, Harvard Medical School, Department of Health Care Policy.

We are forwarding this letter as a reminder to please return the survey concerning your referral practices for your patients with depression that you were sent on January 26, 2001. For your convenience, we have included a copy of the survey with this letter.

If you are interested in participating, please fill out the following survey and return it in the enclosed, self-addressed envelope to the University of Wisconsin-Stout by **March 13, 2001**. By signing the consent form that follows and returning this questionnaire, you are indicating your informed consent to participate as a volunteer in this study.

If you choose not to participate, please check the box located at the bottom of the consent form next to "I choose not to participate" and return it in the enclosed, self-addressed envelope. If we do not receive your completed consent form and survey by March 13, or you do not indicate that you do not wish to participate, we will be contacting you again by telephone.

You will notice that an identification number is included on each page of this survey. The purpose of this number is to keep track of who returns the survey and of who is not interested in participating. Only a single list will link your names with your identification numbers, and this list will be destroyed before any data are analyzed. No names will be identified in any research reports.

This survey will take approximately 10 minutes to complete. Thank you for your time.