The Influence of Profession and Therapy Type for the Cost Effective Treatment of Sexual Dysfunction

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The Influence of Profession and Therapy Type
for the Cost Effective Treatment of Sexual Dysfunctions

David Fawcett

A thesis submitted to the faculty of Brigham Young University
In partial fulfillment of the requirements for the degree of Master of Science

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ABSTRACT

The Influence of Profession and Therapy Type for the Cost Effective Treatment of Sexual Dysfunctions

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Sexual dysfunctions are serious mental health issues that impact an estimated one in three Americans. Due to the complex, relational nature of most sexual dysfunctions, mental health professionals trained to work with couples and their relationship interactions are likely to have better outcomes when treating clients with sexual dysfunction. Data from CIGNA Health Solutions was analyzed to explore differences in therapy outcome for various types of mental health professions when treating clients with sexual dysfunctions. The current research is a retrospective analysis of administrative data that explores whether or not type of profession (i.e. psychologists, Masters of social work, marriage and family therapist, or professional counselor) influences the outcome of mental health treatment. This study also explores whether therapy modality (i.e. individual, conjoint, or mixed mode, a combination of individual and conjoint therapy) influences therapy outcome. Treatment outcome was measured by recidivism rates, client dropout from therapy, the total number of sessions, and cost of treatment. Participants included 230 males and 189 females ages 18 to 101 (\(M = 38.9, SD = 11.4\)) who received treatment for sexual disorders from 2001 to 2006. Participants were from all regions of the United States. Results indicate that overall, psychotherapeutic treatment for sexual dysfunctions is relatively brief, averaging about seven sessions across all professions. Results suggest that marriage and family therapists treat sexual dysfunctions using a conjoint and mixed mode approach more frequently than therapists with other licenses. Results also suggest that mixed mode therapy has drastically lower dropout rates and longer retention than individual or conjoint therapy. These results suggest that utilizing a combination of relational and individual sessions is beneficial to the treatment of sexual dysfunctions.

Key words: Sexual dysfunction treatment outcomes, mental health license type, therapy modality, conjoint therapy, family therapy, dropout, recidivism, mixed therapy, retrospective analysis, CIGNA, cost, cost effectiveness.
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The Influence of Profession and Therapy Type for the Cost Effective Treatment of Sexual Dysfunctions

Sexual dysfunction is a general classification for a wide variety of disorders that manifest as disturbances in the human sexual response cycle. Masters and Johnson (1970) describe sexual dysfunctions as individuals and couples experiencing personal and relational distress due to unsatisfactory experiences with sexual intercourse. They estimated that approximately 50% of couples suffered from some form of sexual dysfunction. Some reports indicate that sexual dysfunction and gender identity disorders are the second most prevalent group of mental disorders in America, affecting one in four adults (Maxmen & Ward, 1995). As such, sexual dysfunctions disrupt the lives of millions of people on a daily basis. Research suggests that sexual dysfunctions for men, women, and couples have prevalence rates from 10% to 95% over the lifetime (see Metz & McCarthy, 2010). Also, sexual dysfunctions occur in relationships regardless of sexual orientation. Research indicates that sexual dysfunction rates are similar for heterosexual and homosexual couples (Mathews, Hughes, & Tartaro, 2006). A study by Laumann, Paik, and Rosen (1999) indicates that roughly 40% of women and 35% of men are living with some form of psychosexual dysfunction. Additionally, roughly 1/3 of females in the United States (ages 18 to 65) reported low libido, difficulty achieving orgasm, or problems with lubrication. Other studies have reported that as many as 17% of women report never having experienced an orgasm and less than one third of women report having an orgasm at least 50% of the time (Hawton, Gath, & Day, 1994). Even when a sexual dysfunction is not present, nearly 80% of couples have reported forms of non-function difficulties such as preferences, styles, and conflict related to frequency (Frank, Anderson, & Rubenstein, 1978). As sexual dysfunction typically occurs in the context of a sexual relationship, the effects of sexual dysfunction will
almost always have an influence on both members of the couple, which nearly doubles its impact on society.

Because sexual dysfunction is typically shaped by multiple influences, it is frequently discussed within a biopsychosocial paradigm. There is a clear co-morbidity with other mental health disorders such as depression, anxiety, and relationship stress (Angst, 1998; Barlow, Sakheim, & Beck, 1983; Feldman, Goldstein, Hatzichristou, Krane, & MacKinlay; 1994; Kotler et al., 2000). Studies have also explored the impact of sexual dysfunction on social aspects of life. For example, younger men experiencing erectile dysfunction report lower relationship satisfaction, more negative reactions from partners, higher depression, and lower job satisfaction than older men with erectile dysfunction (Moore, Strauss, Herman, & Donatucci, 2003). Some men have also reported that premature ejaculation can cause them to be more hesitant in forming relationships and often leads to lower self-esteem (Symonds, Roblin, Hart, & Althof, 2003).

Despite these negative psychological and social impacts, patients often struggle with sexual disorders for three to twelve years before seeking help, and then usually only after years in a sustained sexual relationship (Maxmen & Ward, 1995). This suggests that clients may be uninformed about normal sexual functioning, are unfamiliar with available treatment options or resources, or are hesitant to seek treatment due to embarrassment or fear of ridicule. Continually exploring and evaluating clinically effective treatment is paramount to providing the best care possible to clients. Because sexual dysfunction is complex, many different psychotherapy approaches to treatment are commonly used including: psychoanalytic, cognitive behavioral, pharmacological, conjoint couple therapy, and combined or mixed mode therapies.

Given the various treatment options available for sexual dysfunction, there is a need to identify treatment approaches and modalities that are effective. The current study explores
differences in treatment outcomes for sexual dysfunction by the modality of treatment, including individual therapy, conjoint therapy, or a combination of both individual and conjoint therapy. It also explores differences in outcomes by practitioner license type to identify if there are differences in treatment outcomes by general approaches to therapeutic treatment for sexual dysfunction. Different license types are involved different training procedures and theoretical and clinical emphases. Identifying differences between license types may help to identify strengths and limitations of current mental health types for treating sexual dysfunctions. The current study also explores differences in treatment outcomes by type of diagnosis and gender. The purpose of the current study is to help inform practitioners about effective treatment approaches for sexual dysfunction.

Review of Literature

Prior to 1970, the most widely used therapeutic approach to sexual dysfunction treatment was individual psychoanalytic counseling. From a psychoanalytic lens, the sexual problem is viewed as a manifestation of unresolved internal conflict that is often unconscious. The goal of therapy is to resolve the individual’s internal conflict with the “object,” or fantasies about the object that the perceiver experiences. Psychoanalytic therapy typically focuses on individual symptomology, not on the couple or the relationship.

In the late 1960’s and early 1970’s behavioral therapists began documenting the success of classical conditioning techniques for the treatment of sexual disorders. Cognitive behavioral therapy received a great deal of attention and acceptance as a useful treatment for sexual dysfunction. Master’s and Johnson’s (1970) work incorporated new approaches for sex therapy such as including both partners in the treatment process, and assigning responsibility for the dysfunction to the couple rather than the individual. The focus of therapy was on changing
beliefs and behaviors related to social influences and interpersonal interactions rather than intra-psychic causes.

Important contributions from the bio-medical field also commenced in the 1970’s. Urologists developed inflatable prostheses and vacuum erection pumps. Alprostadil intracorporal injections were introduced in the 1980s. In 1998, the introduction of sildenafil (Viagra) as an effective oral treatment to male erectile dysfunction dramatically influenced the field of sexual dysfunction therapy (Rowland, 2007; Segraves & Balon, 2005). With the success of sildenafil, pharmaceutical companies began looking for other effective pharmacological treatments for sexual disorders, particularly for women. The FDA approved a clitoral vacuum erection device (Bilups, Berman, Berman, Metz, Glennon, & Goldstein, 2001), and other solutions for women are still being tested. Medical researchers are looking for treatment of hypoactive sexual desire disorder in women, but no general solution has been found yet. Despite the advances that have been made on the biomedical side of sexual dysfunction treatment, there remain some unaddressed areas of research on the psychotherapy side of treatment.

Another important issue refers to the type of classification that should be assigned to sexual dysfunction. Are they mental, biological, psychological, social, religious, or a combination of two or more factors? It is likely that sexual dysfunction generally stems from a complex integration of many of these aspects. While there are a wide variety of theories related to human sexuality that span a multidisciplinary view of treatment and research including: theological, feminist, sociobiological, phenomenological, developmental, anthropological, behavioral, cognitive, psychoanalytic, and physiological, some have argued that there is no general theory that adequately describes sexual normalcy or dysfunction (Geer & O’Donohue, 1987; Money, 1973; Sugrue & Whipple, 2001). An exploration of differences between treating
sexual dysfunction from an individual versus a relational approach may help provide additional insight into the classification of the disorders by exploring the interpersonal and relationship influences on the outcome of treatment.

**Sex differences.** There are general presuppositions related to sexual dysfunction that may hinder treatment and warrant further discussion by researchers in this field. One assumption is that sexual function is essentially the same for males and females because both experience the same sexual response cycle. A different assumption is that, though there are physiological similarities for men and women, the perceptual experience of the sexual response cycle can be very different for males and females (Sugrue & Whipple, 2001; Robinson, 1976). If sexual function is fundamentally different for males and females then treatment approaches should be specific to the sex of the client. The biomedical model of sexual dysfunction treatment highly favors men. It is possible that similar trends could be found with psychotherapeutic treatments. An important question to be addressed is whether men and women experience different treatment outcomes associated with a particular model, type of therapy (individual, family, or mixed), or profession type. An exploration of differences by gender may help develop more effective treatment options.

**Couple interaction/relationship.** Sexual function/ dysfunction usually occurs within the context of a relationship. As such, interventions that involve a couple are likely to be more successful. In fact, although the origin of some sexual problems may be singularly biological in nature, the subsequent psychological and relationship problems that can ensue also require an effective treatment approach. Because the couple’s relationship is a critical aspect of the treatment process, therapists who have been trained to work with couples are likely to have better outcomes that those practitioners who treat only the individual. Therefore, it is important to
explore the effects of treating the relationship and not just the individual. It is likely that there will be difference in terms of treatment outcomes and exploring these differences would add insight into effective treatment options for sexual dysfunctions.

The current project. In contrast to the vast body of research on treatment modality (i.e. medical, psychotherapy, pharmacological, etc.), very little attention has been directed at exploring the influence of profession type on therapy outcome for sexual dysfunction treatment. The differences in training, approach, and theoretical foundations for the various mental health profession types will likely produce differences in treatment outcomes. Crane and Payne (2009) recently conducted a study that found significant differences in mental health treatment outcomes for different types of mental health professions. Their study looked at the general treatment of mental health disorders and did not specifically explore differences for sexual dysfunction treatment.

The current research explores whether or not license type (i.e. psychologist, MSW, MFT, professional counselor) influences the outcome of sexual dysfunctions, which is measured by length of therapy in number of sessions, dropout rates, cost, and recidivism. As different license types have unique approaches to therapy and different training requirements it is likely that there will be differences in terms of therapy outcome. The comparison between license types is not intended to show that one profession or approach is superior to another, rather, it is intended to identify whether there may be advantages related to a type of training when treating sexual dysfunctions. If differences in treatment outcome exist between license types then it may be advantageous to discover what specific aspects of the training are specifically useful to treating sexual dysfunction. This article also explores whether the type of therapy (i.e., individual, family/couple, or mixed mode) influences therapy outcome. The following research questions
were evaluated in relation to the treatment of sexual dysfunctions: Question 1. Is there a difference across type of profession in the number of sessions, cost, dropout rates, and recidivism for the first episode of care (treatment time prior to termination)? Because different professions incorporate different training and theoretical background, it is hypothesized that profession type will influence treatment outcome. As sexual dysfunctions typically exist in the context of relationships, it is also hypothesized that professions which tend to use a systemic approach to therapy will have lower dropout and recidivism rates. Question 2. Is there a difference across type of therapy (individual, conjoint, or mixed) in the number of sessions, cost, dropout rates, and recidivism for the first episode of care? Because sexual dysfunction typically occurs in the context of relationships, it is hypothesized that conjoint and mixed therapy will have lower dropout and recidivism rates. Question 3. Are there differences between professions in terms of the proportion of individual, conjoint therapy, and mixed therapy types used for treating sexual dysfunction? It is hypothesized that professions which tend to take a systemic approach (MFT, MSW) will incorporate conjoint and mixed therapy approaches more frequently. Question 4. Is there a difference in the number of sessions, cost, dropout rates, and recidivism by participant gender? There is literature that suggests that males and females have different experiences with the human sexual response cycle (Sugrue & Whipple, 2001). If gender differences exist, it is likely that there would be differences in treatment outcomes. Question 5. Is there a difference in treatment outcome by diagnosis? If differences do exist it may be related to the severity or complexity of a specific type of dysfunction.

Method

A data set from CIGNA Health Solutions, the behavioral health division of a large U.S. health insurance company with several million participants, was utilized in the current project. Data were available for 419 participants who received treatment for sexual disorders from 2001
to 2006. A power analysis using G*Power 3.0.10 (Erdfelder, Faul, & Buchner, 1996) revealed that an N of 220 would be sufficient to find a medium effect size using a Chi square analysis and that an N of 280 would be sufficient to find a medium effect size using ANOVA. Power analysis suggested that the data set was large enough to find statistically significant effects.

Participant ages ranged from 18 to 101 ($M = 38.9, SD = 11.4$). Participants were comprised of 230 males (55%) and 189 females (45%). Participants were from all regions of the United States, with 39 (9.3%) from the Midwest (IL, IN, IA, KS, MI, MN, MO, ND, NE, OH, OK, SD, WI), 121 (28.9%) from the Northeast (CT, DE, MA, ME, NH, NJ, NY, PA, RI, VT), 58 (13.8%) from the Pacific region (AK, CA, HI, OR, WA), 100 (23.9%) from the South (AL, AR, DC, FL, GA, KY, LA, MD, MS, NC, SC, TN, VA, WV), and 101 (24.1%) from the West (AZ, CO, ID, MT, NB, NV, TX, UT, WY). In accordance with a research contract with CIGNA Health Solutions, no information on participant race, ethnicity, or socioeconomic status was available for analysis.

The CIGNA network has diverse provider options with nearly 66,000 mental health providers. At any one time they have about 12,133 (18%) psychiatrists, 13,145 (20%), psychologists, 2,203 nurse practitioners (3%), 32,385 (49%) MA-level providers, 3,221 (5%) Mental Health (HM)/Substance Abuse (SA) clinics, 2,483 (4%) MH/SA facility locations, and 17,925 (21%) Employee Assistance Program (EAP) affiliate locations.

The current study is a retrospective analysis of administrative data, which is allowed by the Health Insurance Portability and Accountability Act of 1996 (HIPPA). The data did not contain any participant names or other identifying information. A unique, non-identifiable participant identification number was annotated to each case prior to the data becoming
available. It was not possible to identify any unique subscriber information from the provided data.

**Procedure**

**Providers.** The raw data contained 93 different types of therapist licenses. License types were truncated into professional groups. Professional categories that are not nationally recognized as independently licensed health care practitioners, including bachelor’s level nurses, bachelor’s level social workers, EAPs, master’s psychologists, physician assistants, and SAPs, were not included in the analysis. Any claim that listed an unknown provider type was excluded from the analysis. When claims listed providers with multiple licenses only the license identified as “primary” was considered. The groups that were included in the current analysis were: 75 (17.9%) professional counselors, 140 (33.4%) masters of social work (MSW), 151 (36%) clinical psychologists, and 53 (12.5%) marriage and family therapists (MFTs). This aggregation of license type allows for analysis of therapist delivery practice and for cost comparisons.

**Episodes of Care (EoC).** CIGNA defines EoC as a series of continuous services for the same patient. An EoC begins with the first psychotherapy session and ends 90 days after psychotherapy claims end. The number of sessions in the first EoC ranged from 1 to 105 (M = 8.1, SD = 10.6).

Recidivism is defined as a patient returning to therapy for additional EoC(s) with the same type of provider. Recidivism was calculated for each EoC. Dropout was defined as any patient who did not return to treatment after a first session of treatment. Because mixed mode therapy is defined as participating in both individual therapy and conjoint therapy for treatment of the same diagnosis during a single episode of care the definition for drop out for mixed mode cases was altered. A drop out for mixed mode cases was defined as any patient who did not
return to therapy after completing at least one individual therapy session and one conjoint therapy session, a total of two sessions. In order to avoid confounds, dropout for therapy modality was adjusted; it is defined as not returning to treatment following only two sessions of therapy.

Diagnoses from the *Diagnostic and Statistical Manual of Mental Disorders-IV-TR* (American Psychiatric Association, 2000) were provided for each claim. The *DSM-IV-TR* sexual dysfunction diagnoses in the current study include: 302.71 hypoactive sexual desire disorder, 302.72 female sexual arousal disorder, 302.72 male erectile disorder, 302.73 female orgasmic disorder, 302.74 male orgasmic disorder, 302.75 premature ejaculation, 302.76 dyspareunia, 302.79 sexual aversion disorder, and 306.51 vaginismus. When claims contained multiple diagnoses for a single EoC, the first diagnosis given was considered primary.

**Cost.** The cost variable represents the dollar amount paid by CIGNA for each therapy service. Cost per session is the total cost for a single participant in a single EoC divided by the total number of sessions attended during that EoC. An estimation of cost effectiveness was computed as: Estimated cost effectiveness = 1st EoC average cost + (average number of sessions in the 1st EoC * recidivism rate) (Crane & Payne, 2009). This formula addresses the cost of psychotherapy per patient while considering the treatment length and recidivism rates.

**Analysis.**

As dropout and recidivism are dichotomous variables, a Chi square analysis will be used to analyze the variables. Analysis of variance (ANOVA) will be used to explore differences between continuous ratio variables such as cost and cost effectiveness. Post hoc analyses will also be conducted to identify differences between specific groups.
Results

The first research question addressed the differences in the number of sessions, cost, dropout, and recidivism for the first EoC by type of profession. Analyses showed that the data for number of sessions and total cost were positively skewed. To meet the assumptions of normality, a log transformed variable was created for total cost and total number of sessions prior to analyzing differences across groups. ANOVA analyses revealed no significant difference for the total number of sessions by profession type for the first EoC, $F(3, 415) = .864, p > .05$, or for the cost effectiveness by profession $F(3, 415) = .710, p > .05$. Because doctorate and master’s level practitioners are reimbursed at different rates within the CIGNA system, the degree held by the practitioner was used as a control variable for analyses related to cost. An analysis of covariance did not identify a statistically significant difference in the mean total cost of treatment by profession, $F(3, 414) = 0.79, p > .05$. ANCOVA did show a significant difference in the mean cost per session by profession $F(3, 414) = 16.61, p < .001$. Post hoc analyses showed Psychologists ($M = $56.15, $SD = $10.20) average cost per session to be significantly higher than MSWs ($M = $46.66, $SD = $13.60), professional counselors ($M = $43.94, $SD = $13.03), and MFTs ($M = $43.93, $SD = $11.70). Professional counselors, MSWs, and MFTs were not significantly different in terms of mean cost per session. Additionally, ANCOVA results indicated that practitioner degree did not contribute to the difference in cost per session across profession $F(1, 414) = 0.048, p > .05$. Table 1 shows the mean number of sessions and cost per session by type of profession.
Table 1 – Cost per session, total number of sessions, and log transformed total number of sessions by practitioner license type and therapy modality.

<table>
<thead>
<tr>
<th>License Type</th>
<th>Cost Per Session</th>
<th>Total Sessions</th>
<th>LN Total Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Psychologist</td>
<td>56.15*</td>
<td>13.62</td>
<td>7.94</td>
</tr>
<tr>
<td>MSW</td>
<td>46.66</td>
<td>13.60</td>
<td>8.79</td>
</tr>
<tr>
<td>MFT</td>
<td>43.93</td>
<td>11.70</td>
<td>8.15</td>
</tr>
<tr>
<td>LPC</td>
<td>43.94</td>
<td>13.03</td>
<td>7.23</td>
</tr>
<tr>
<td>Therapy Modality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>51.4</td>
<td>16.10</td>
<td>7.52</td>
</tr>
<tr>
<td>Conjoint</td>
<td>45.9*</td>
<td>16.12</td>
<td>4.27</td>
</tr>
<tr>
<td>Mixed</td>
<td>51.8</td>
<td>16.90</td>
<td>13.91*</td>
</tr>
</tbody>
</table>

* p < .01

Across profession types, no significant differences were found in recidivism rates, $\chi^2 (3, 419) = 3.78$, p > .05, or dropout rates, $\chi^2 (3, 419) = 0.56$, p > .05. Table 2 shows the recidivism and dropout rates by profession.

Table 2 – Recidivism and dropout rates by practitioner license type and therapy modality.

<table>
<thead>
<tr>
<th>License Type</th>
<th>Recidivism</th>
<th>Dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychologist</td>
<td>18.5%</td>
<td>17.2%</td>
</tr>
<tr>
<td>MSW</td>
<td>22.9%</td>
<td>15.0%</td>
</tr>
<tr>
<td>MFT</td>
<td>18.9%</td>
<td>18.9%</td>
</tr>
<tr>
<td>LPC</td>
<td>12.0%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Total</td>
<td>18.9%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Therapy Modality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>17.4%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Conjoint</td>
<td>8.1%</td>
<td>44.3%</td>
</tr>
<tr>
<td>Mixed</td>
<td>34.1%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

The second research question in this study addressed differences in the number of sessions, cost, dropout, and recidivism for the first EoC by therapy modality (individual, conjoint, mixed mode). Table 2 shows the mean number of sessions by type of therapy.

ANOVA analyses revealed a significant difference for number of sessions by therapy modality, $F (2, 416) = 13.74$, p < .001. Post hoc analyses showed that mixed mode therapy ($M = 13.4$, $SD = $
15.6) lasted longer than individual ($M = 7.66$, $SD = 9.35$) and conjoint ($M = 4.3$, $SD = 4.2$) therapy approaches.

Analysis of covariance showed a significant difference in total cost of treatment by therapy modality $F (2, 415) = 23.6$, $p < .001$. Post hoc analyses showed that conjoint therapy had the lowest total cost ($M = $194.2, $SD = 201.4$), individual was in the middle ($M = $389.8, $SD = 542.7$), and mixed mode had the highest total cost ($M = $681.5, $SD = 1031.7$). A significant difference was found for the mean cost per session by therapy modality for the first EoC, $F (2, 415) = 15.8$, $p < .001$. Results suggest that practitioner degree did not influence differences in the mean cost per session $F (1, 415) = 0.46$, $p > .05$.

A chi square analysis found a significant difference in recidivism by therapy modality, $\chi^2 (2, 419) = 11.9$, $p < .01$. There was also a significant difference in dropout rate by therapy modality, $\chi^2 (2, 419) = 28.03$, $p < .001$. Individual therapy showed a 28.5% dropout rate, conjoint therapy showed a 44.3% dropout rate, while mixed mode had a 4.3% dropout rate.

Question three explored the proportion of individual, conjoint therapy, and mixed therapy types by profession. A Chi square analysis revealed significant differences for profession and type of therapy $\chi^2 (4, 419) = 23.6$, $p < .01$. Table 3 shows the percentage of participants treated with each therapy modality by profession.

Table 3 – Percentage of cases seen for each license type by therapy modality.

<table>
<thead>
<tr>
<th>Therapy Type</th>
<th>Psychologists</th>
<th>MSWs</th>
<th>MFTs</th>
<th>Counselors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual only</td>
<td>78.1%</td>
<td>68.6%</td>
<td>52.8%</td>
<td>61.3%</td>
</tr>
<tr>
<td>Conjoint only</td>
<td>7.3%</td>
<td>12.1%</td>
<td>26.4%</td>
<td>25.3%</td>
</tr>
<tr>
<td>Mixed mode</td>
<td>14.6%</td>
<td>19.3%</td>
<td>20.8%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

The fourth research question addressed the issue of whether there is a difference in the number of sessions, cost, dropout, and recidivism for the first EoC by participant gender.
Because gender was a dichotomous variable, a t-test was used; analysis showed no significant differences for number of sessions between males ($M = 8.1, SD = 11.3$) and females ($M = 8.2, SD = 9.6$), $t(419) = -0.13, p > .05$. Differences in cost per session between males ($M = 49.7, SD = 12.7$) and females ($M = 48.7, SD = 16.0$) were not significant, $t(419) = .757, p > .05$. Differences in cost effectiveness were not significant, $t(419) = .213, p > .05$. Chi square analyses showed no significant difference in recidivism rates between males ($n = 44, 19.1\%$) and females ($n = 35, 18.5\%$), $\chi^2(1, 419) = 0.03, p > .05$. Differences in dropout rates between males ($n = 41, 17.8\%$) and females ($n = 33, 17.5.0\%$) were not significant, $\chi^2(1, 419) = 0.01, p > .05$.

The final research question addressed differences in number of total sessions, cost, dropout, and recidivism by sexual dysfunction diagnosis. Results indicate no significant difference in total cost by diagnosis when controlling for degree of practitioner $F(7, 411) = 1.33, p > .05$, cost effectiveness $F(7, 411) = 1.31, p > .05$, or total number of sessions by diagnosis $F(7, 411) = 1.49, p > .05$. Chi square analyses did not show differences between treatment modality by diagnosis $\chi^2(14, 419) = 9.0, p > .05$, dropout by diagnosis $\chi^2(7, N = 49) = 7.28, p > .05$, or recidivism by diagnosis $\chi^2(7, 419) = 11.3, p > .05$. Table 4 shows the frequency of claims in the data set by gender, provider license, therapy modality, and diagnosis.
Table 4 – Frequency of claims by gender, license type, therapy modality, and diagnosis.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>230</td>
<td>54.9%</td>
</tr>
<tr>
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<tr>
<td>302.74 – Male orgasmic disorder</td>
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Discussion

The first research question in this study explored the differences in length of therapy (number of sessions), cost, dropout, and recidivism variables for different professions who provided treatment to clients diagnosed with a type of sexual dysfunction. The results suggest that in general, psychotherapy for sexual dysfunction treatment is relatively brief, with the average length of the first episode of care at 8.1 sessions. This is consistent with recent research which shows the average number of sessions for the first EoC for all types of mental disorders to be $M = 6.95$ (Crane & Payne, 2009). Additionally, though psychologists tend to cost more per session than MFTs MSWs and professional counselors, psychotherapeutic treatment of sexual disorders ($M = 50.72$) costs about the same as psychotherapeutic treatment for other mental health issues ($M = 48.93$). These results suggest that psychotherapy treatment for sexual
dysfunctions lasts about as long and costs about the same as treating other mental health disorders.

The second research question in this study looked at the differences in number of sessions, cost, and outcome variables for different types of treatment modalities (individual only, conjoint, and mixed mode). Results indicate that when seeking treatment for sexual dysfunction clients stay in therapy nearly twice as long when a mixed therapy modality is used. Additionally, the dropout rate for mixed mode therapy is drastically lower than the dropout rates for individual and conjoint therapy. It is interesting that people in mixed mode therapy attended more sessions and had very little drop out. Sexual dysfunctions involve individual and relational issues that may be best addressed by a mixed therapy modality. It may be that working on relationship factors in a conjoint session of therapy and allowing the client with sexual dysfunction to work on specific aspects of the dysfunction in an individual session can reduce the risk of embarrassment and increase confidence in the therapeutic relationship. For example, Crowe and Ridley (2000) have suggested that individual treatment may be advantageous for people who have deviant sexual fantasies, an aversion to sex, or a history of sexual abuse. There are numerous possible situations where one partner may want to work on an issue but would be unwilling to do so in the presence of their partner. Utilizing a combination of individual and conjoint sessions would help create an opportunity for the couple to work on relational aspects while also making opportunities for the individuals to express personal concerns in a more private setting. Providing a safe environment to explore personal or private aspects of the dysfunction, while also having an opportunity to work on the relationship, may be the most beneficial approach for therapists who see clients for sexual dysfunction.
Additionally, literature suggests that there are both individual and relationship aspects to sexual dysfunction (Crowe, 1995). A treatment approach that addresses both aspects of the dysfunction is likely to have improved outcomes to an approach that only addresses individual or relational aspects alone. Despite the advantages of addressing the dysfunction in the context of a sexual relationship, there is research that suggests that an individual approach to sexual dysfunction treatment has clear advantages (Anson, 1995). Some have suggested that conjoint therapy may increase stress on the identified patient during treatment for sexual dysfunctions (Catalan, Hawton, & Day, 1991). They also suggest that an emphasis on conjoint therapy may mean that the individual may be receiving less attention and that some of their therapeutic needs are being neglected. Others have identified groups who may benefit from individual work related to sex therapy including: those who lack sufficient sexual education, those with genital phobia, and individuals with limited fantasizing ability (Gillan, 1987). This evidence suggests that there are times when an individual approach may be advantageous for addressing specific concerns and special situations. As it is rarely possible to know about potential special circumstances prior to therapy, providing opportunities for individuals to address these issues during treatment would likely be advantageous. It may be that utilizing a mixed mode approach for the treatment of sexual dysfunctions helps to provide the advantages of both individual and conjoint therapy. This would help to explain the drastically lower dropout rates found for mixed mode approach in the current study.

Literature suggests that utilizing a conjoint approach to therapy has been the primary approach for sex therapists since Masters and Johnson pioneering work in the early 1970s (Crowe, 1995). It was noted, however, that the emphasis on a conjoint approach has generally not involved diagnostic criteria. Dropout rates for conjoint therapy may be higher for the
treatment of sexual dysfunction because the identified patient does not feel safe discussing every aspect of the disorder with their partner in the room. It may also be that those practitioners who do not commonly provide conjoint therapy are experiencing less success when offering treatment for a multifaceted, relational disorder, such as sexual dysfunction.

Results of the current study found no significant differences in mean cost per session by type of therapy. It does not cost more for providers to offer conjoint or mixed mode therapy to clients than for individual therapy only. On average, clients stayed in therapy longer with a mixed mode approach. Considering the general complexity of sexual dysfunction and considering the low rates of client dropout, it may be that the cases require a more intensive and flexible treatment approach to achieve the changes necessary for successful treatment. It may also be that clients in mixed mode therapy experienced greater and longer lasting benefits than those in individual only or conjoint only modalities.

Sexual dysfunctions typically occur in the context of relationships. They are also often attributed to one partner. Thus, it is logical to encourage a treatment modality which specifically addresses the complex couple interaction aspects of the dysfunction, as well as the individual psychopathology of the dysfunction. A mixed mode approach that includes individual and conjoint therapy helps to address the diverse factors that contribute to sexual disorders. Several authors have written about the utility of integrated pharmacological and psychological interventions (Althof, 2003, 2005, 2007; McCarthy & Fucito, 2005; Rosen & Leiblum, 1995). The current study provides evidence to suggest that offering integrated modes of therapy (individual and conjoint) in clinical settings can have a strong positive influence on treatment outcomes for sexual dysfunction.
One paradox of sexuality in relationships is that when it is functional and satisfying it plays a small positive role in the relationship. It enhances vitality and satisfaction. However, when there is sexual dysfunction or conflict it can cause disproportionate amounts of distress in the relationship (McCarthy & Thstrup, 2008). Many couples view their sexual interactions as a metaphor for their relationship, thus practitioners who integrate couple therapy with sex therapy are likely to fully engage the couple and experience the most success in treating the disorder (Atwood, 1989). For some couples, the sexual dysfunction may play the role of a functional symptomatic behavior. It provides a means for the couple to avoid intimacy or other issues that arise in the relationship. Some couples may be more comfortable admitting that they are experiencing sexual dysfunction than they are admitting to relationship dysfunction. This may be related to a belief that sexual problems have solutions that require less emotional involvement, or that there is simply an established set of procedures that needs to be followed to overcome the sexual dysfunction. When couples discover that their sexual issues are more complex and embedded in the relationship they may resist therapy because they are unwilling to accept the possibility of a larger problem. This may help explain the high dropout rates for conjoint therapy in the current study. It may be that the couples did not want to face the possibility of a larger issue in their current relationship and did not continue treatment. Also, given the high recidivism rates for a mixed mode approach, it is possible that couples were returning for additional treatment upon the discovery of additional issues in their relationship.

The third research question in this study explored differences in the therapy modality utilized by different professions when treating sexual dysfunctions. Marriage and family therapists incorporated a relational approach to treating sexual dysfunction nearly half of the time. Social workers, LPCs, and psychologists used mixed or conjoint modes with about one
fourth of their clients. These findings are not surprising when considering the training backgrounds for the different professions. Marriage and family therapists, for example are trained in systemic approaches and are typically encouraged to incorporate additional family members in therapy session (Crane, Shaw, Christenson, Larson, Harper, & Feinauer, 2010). Because sexual dysfunctions typically manifest themselves in the context of relationships and considering the lack of client drop out for mixed mode therapy, mental health professionals from all backgrounds would likely benefit their clients by incorporating aspects of individual and couple therapy in the treatment of sexual disorders.

The final research questions addressed in this study examined differences in outcome by client gender and diagnosis type. No differences were found when comparing males and females or sexual dysfunction diagnosis on total number of sessions, cost of therapy, or outcome variables. These findings suggest that it may not be the sex of the client or the diagnosis which predicts the length of treatment or the probability of dropout. Rather, findings from the current study suggest that the treatment modality may be able to predict the length of treatment and the probability of dropout from treatment. Given the complexity of sexual dysfunction, it is likely that sexual disorders have various contributing factors that influence the individual and the couple during treatment. These may include motivation to make relevant changes, willingness to complete clinical assignments, a goodness of fit with the therapist and quality of therapeutic relationship, the overall relationship quality, individual and couple sexual histories, values and beliefs related to sexual issues, and others. Additional research, that includes measures of relationship and treatment satisfaction, may help address differences in treatment outcomes between males and females and specific diagnoses. Such research would likely benefit by
including a comparison of therapy modality to further explore the benefits of a mixed mode approach on sexual dysfunction treatment.

Additionally, despite research which shows that psychotherapeutic treatments are efficacious (Heiman, 2002), the introduction of effective biological treatments (i.e. sildenafil) has created an unbalanced emphasis on biological treatments for sexual dysfunction (Bach, Wincze, & Barlow, 2001; Rowland, 2007). Whereas the treatment of erectile dysfunction (ED) was once shared by physicians, urologists, and sex therapists, current pharmacological solutions are the exclusive domain of the medical profession and typically exclude psychological treatments. While part of the shift to a biological model of treatment is beneficial and welcome, it can inadvertently encourage patients to ignore important psychological and social factors that influence sexual function, factors which can also be a maintaining influence on sexual dysfunction. In fact, despite the value of rectifying the biological symptoms of sexual dysfunction, reports indicate that up to 50% of men do not refill prescriptions for sildenafil (Segraves & Balon, 2005). It is suggested that the low refill rates may indicate that utilizing the drug by itself is not a sufficient treatment for the sexual dysfunction. Achieving an erection does not necessarily equate to a fulfilling sexual experience; often relational problems also need to be addressed. The purely medical model treats a symptom of ED but does not address the disorder in the context of the sexual relationship.

Thus, pharmacotherapy alone is not always sufficient for the treatment of sexual disorders. It is likely that patients benefit from a combined model of treatment that addresses both the physiological as well as the psychological aspects of the dysfunction. Several articles suggest that utilizing a combined treatment approach is more effective than using pharmacotherapy alone or psychotherapy alone (Keller et al., 2000; Lottman, Hendriks,
Vrugnik, & Meulman, 1998; Melnik & Abdo, 2005, Phelps, Jain, & Monga, 2004; Wylie, Hallam-Hones, & Walters, 2003). Though the results of the current study suggest that utilizing a combination of individual and conjoint psychotherapy sessions may be beneficial for treating sexual dysfunctions, additional research is needed to explore the effectiveness of combining medical approaches in conjunction with individual and conjoint psychotherapy treatment approaches to see if there is an ideal combination to help maximize benefits for those who struggle with sexual dysfunctions.

Limitations and Future Directions

Because this study utilized retrospective administrative data and did not incorporate a true experimental design, caution should be used with the interpretation of results. Participants were not randomly assigned to type of profession (professional counselor, MSW, MFT, psychologist) or type of treatment (individual, conjoint, mixed mode). The design of the current study is limited in its internal validity and the results should thus be interpreted as associations and relationships and not causal. Participants likely self-selected or were selectively referred to providers who in turn selected the type of therapy. Also, clients are not evenly distributed across provider types. Participants may not have had equal access to different types of providers in all treatment locations. Additional research incorporating random assignment to type of profession and type of therapy would be informative. However, such a study would be highly resource intensive and complex.

Availability of resources to participants is another potential limitation to the interpretation of the results. Because some demographic information was not available, it was not possible to control for SES, support systems, and other resources. It is possible that some individuals who sought treatment were not currently involved in a partnered relationship and
were therefore unable to participate in conjoint or mixed mode therapy. Lack of resources may have also influenced the duration of therapy as measured by the number of sessions. Future research would likely benefit from a statistical model that is able to control for SES, ethnicity, race, and other resources.

There are some limitations related to the outcome variables used in the current study. Due to the nature of the data, therapy success was measured by drop out and recidivism. It is possible that some of the participants received a sufficient amount of treatment during one session of therapy and did not require further therapeutic assistance. Clinically, this would be considered successful treatment. However, the definition of drop out that is used in the current study would not identify such successes. Additionally, recidivism cannot fully capture therapeutic success. Some clients may return to therapy because they had a positive, successful outcome during the first EoC. Ideally, success rates for therapeutic treatment would be measured in terms of clinical significance. Further research incorporating a true experimental design would be better equipped to use clinical significance as a measure of successful therapy outcome.

The sample of cases treated for sexual dysfunction in the current study represents only .06% of the total number of cases in the data set. Estimates of lifetime prevalence rates for sexual dysfunction are as high as 95% (see Metz & McCarthy, 2010). The low representation of sexual dysfunction cases in this data set suggests that many people are not seeking treatment for this type of disorder. Research suggests that sexual dysfunction has high comorbidity rates with other mental health disorders such as anxiety and depression. For example, erectile dysfunction is positively correlated with depression (Feldman, Goldstein, Hatzichristou, Krane, & MacKinlay; 1994). Men and women categorized as depressed are nearly three times more likely
to experience sexual dysfunction (Angst, 1998). Sexual dysfunction also occurs concurrently with anxiety disorders (Barlow, Sakheim, & Beck, 1983; Kotler et al., 2000) and schizophrenia (Aizenberg, Zemishlany, Dorfinan-Etrog, & Weizman, 1995; Raja & Azzoni, 2003). People who suffer from panic disorders may respond to sexual activity with anxiety, discomfort, and difficulty becoming aroused (Kaplan, 1988). It is possible that people are more comfortable seeking treatment for sexual dysfunction as a secondary treatment issue. For example, they may seek treatment for depression as the primary disorder and also receive treatment for sexual dysfunction with that therapist. Future research would benefit by exploring if more people receive treatment for sexual dysfunction as a secondary diagnosis rather than a primary issue.

The current study explored differences in type of provider and type of therapy for the treatment of sexual dysfunction. Results indicate that overall, psychotherapeutic treatment is relatively brief and inexpensive. Results also suggest that mixed mode therapy has drastically lower dropout rates when used for sexual dysfunction treatment and that clients stay with treatment longer. Mental health care providers who treat clients with sexual dysfunctions should consider incorporating a mixed mode therapeutic approach in their practice.
References


