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Exploring the Relationship Between Treatment Satisfaction, Perceived Improvements in Functioning and Well-Being and Gambling Harm Reduction Among Clients of Pathological Gambling Treatment Programs

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Abstract

The objective of this study was to evaluate the relationship between treatment service quality, perceived improvement in social, functional, and material well-being and reduction in gambling behaviors among clients of Nevada state-funded pathological gambling treatment programs. Utilizing survey data from 361 clients from 2009 to 2010, analyses revealed that client satisfaction with treatment services is positively associated with perceived improvements in social, functional, and material well-being, abstinence from gambling, reduction in gambling thoughts and reduction in problems associated with gambling, even after controlling for various respondent characteristics. These findings can be useful to treatment program staff in managing program development and allocating resources.

Keywords

Pathological gambling; Addiction; Satisfaction; Gambling abstinence; Harm reduction

Introduction

Researchers have long recognized that client satisfaction is an important evaluative consideration when assessing the efficacy of mental health (Campbell 1998; Herman 1997; Holcomb et al. 1998; Kalman 1983; Perreault et al. 1993; Teague et al. 1997) and substance abuse (Carlson and Gabriel 2001) treatment. Satisfaction surveys align with the recovery oriented approach of increasing consumer voice, input, and engagement with services (Garland et al. 2007; Kessler and Mroczek 1995; Sowers 2005). Reflecting this focus upon client satisfaction, researchers have examined mental health clients' evaluations of general satisfaction, service accessibility, the quality of the client-therapist relationship, staff competence, information about services, and intervention quality and effectiveness (Damkot et al. 1983; Edlund et al. 2003; Gerber and Prince 1999; Greenfield and Attkisson 1989; Larsen et al. 1979; Leavey et al. 1997; Love et al. 1979; Perreault et al. 2001; Ruggeri and Dall'Agnola 1993; Tanner 1982). Some studies have even directly linked client satisfaction and clinical outcomes, finding significant relationships between perceived improvement and satisfaction level (Carlson and Gabriel 2001; Garland et al. 2003; Holcomb et al. 1997, 1998; Meredith et al. 2001; Perreault et al. 1993, 2010).

Despite the plethora of research on treatment satisfaction among clients of substance abuse treatment programs (Carlson and Gabriel 2001; Perreault et al. 2010), family support programs (Herman 1997), and inpatient (Holcomb et al. 1998; Howard et al. 2003; Minsky et al. 1995) and outpatient psychiatric services (Berghofer et al. 2010; Cho and Kim 2012; Edlund et al. 2003; Garland et al. 2003; Leavey et al. 1997; Perreault et al. 1993, 2001; Turchik et al. 2010), to our knowledge no research has examined the relationship between treatment satisfaction and subjective measures of improvement among clients of pathological gambling treatment programs. Outcome research on problem gambling treatment itself is quite limited (Lesieur and Rosenthal 1991; Sylvain et al. 1997; Walker 1993). Most problem gambling treatment research suggests that gamblers respond well to and experience benefits from treatment (Breen et al. 2001; Dowling et al. 2009; Hodgins et al. 2001; Palleson et al. 2005; Walker 1992). The legalization and increased availability of gambling in the US, other Western countries and Asia and the corresponding increase in problem gambling behaviors (Gambino et al. 1993; Lesieur and Blume 1990; Mobilia 1993) points to the need to develop effective treatments for individuals with gambling addictions.

Until recently, the assessment of client outcomes in pathological gambling programs suffered from a lack of consensus on the best methods of evaluating success (Walker et al. 2006). Although treatment programs and outcomes studies for pathological gambling historically viewed total abstinence as the only acceptable criterion for success (Ladouceur 2005; Rosecrance 1989), more recent problem gambling scholars have been moving away from pure abstinence based models toward a broader spectrum of post-treatment maintenance, including an emphasis on reducing levels of gambling (Dowling et al. 2009;

Robson et al. 2002) and minimizing the harms associated with gambling (Dickerson et al. 1997). The Banff Consensus further indicates that reduction in gambling behaviors and reduction in problems caused by gambling are key elements in evaluating the effectiveness of pathological gambling treatment (Walker et al. 2006). In addition, the prevalence of non-gambling specific problems among pathological gamblers, such as financial difficulties, problems at work and in relationships, and emotional distress (Lorenz and Yaffee 1986) suggests the need to examine whether satisfaction with treatment services is associated with improvements in everyday functioning, social relationships, and financial well-being. Accordingly, the objective of the present study was to examine whether a relationship exists between clients' assessments of the quality of treatment services received and their perceived improvements in social and daily functioning, material well-being, abstinence from gambling, and minimization of problems associated with gambling.

Methods

Sample

The research team solicited lists of clients discharged from six Nevada state-funded outpatient gambling treatment programs. A list of all clients who received problem gambling services was obtained from each program along with informed consent documents for each client who agreed to be contacted for a treatment follow-up evaluation. The lists included clients who were discharged for various reasons, including both successful and unsuccessful completion of the treatment programs. Trained researchers attempted to contact (by telephone) 794 clients from these six programs approximately 3 months after the client exited the treatment program. Of the 794, we were missing correct contact information for 266 (i.e. phone number did not work or incorrect information was received from the clinic). Out of the remaining 528 clients for whom we had complete and correct contact information, we completed telephone interviews with 416 respondents, representing a response rate of 78.8 %. Interviews were conducted in accordance with university Institutional Review Board policies and procedures, including informed and voluntary consent. Treatment modalities varied across programs and included individual, family and group counseling, cognitive-behavioral therapy, self-help groups, and psycho-education. The treatment programs did not provide information about specific reasons for discharge or information about the specific treatments received by each client. The research team attempted to contact every client a minimum of 12 times at varying times of day. All clients who completed an interview were compensated with a \$25 gift card from a major retail outlet. After the elimination of cases with missing information on any of the client demographic items, we were left with 361 respondents for this analysis.

Participant Characteristics—The majority of respondents (77 %) received services from gambling centers that specialize in pathological gambling treatment, while the remainder received services from community mental health treatment programs providing a range of mental health and addiction treatment services. 55 % (N = 200) of respondents were women. The average age at follow-up was 47.24 years (SD = 11.9). At the time of survey completion, almost half (48.3 %) were attending Gamblers Anonymous (GA) or GamAnon programs. Just over a quarter of respondents (26.6 %) reported that they had

gambled while actively participating in the gambling treatment program. A significant percentage (42.9 %) reported that they had other addictions besides gambling (e.g. alcohol, drugs, etc.) that were problematic for them prior to attending the gambling treatment program. However, only 19.1 % of respondents reported that they had other addictions besides gambling that were problematic for them after receiving pathological gambling treatment. Nearly 80 % of respondents indicated that they now spend less time thinking about gambling and have minimized most of their problems related to gambling since completing treatment.

Measures

Satisfaction—In an effort to detect specific determinants of service satisfaction, mental health treatment studies increasingly administer multidimensional, rather than global, measures of client satisfaction (Greenfield and Attkisson 1989; Perreault et al. 2001; Tanner 1982). Indeed, multidimensional scales have been found to present less skewed distributions than one-dimensional measures of satisfaction (Pascoe 1983). Accordingly, we evaluated clients' assessments of pathological gambling treatment services using items from the Mental Health Statistics Improvement Program (MHSIP) Adult Consumer Survey (Mental Health Statistics Improvement Program (MHSIP) Task Force 1996; Ganju 1999). The survey was designed for the MHISP Mental Health Report Card by the MHSIP Task Force to assess clients' subjective satisfaction with treatment, access to services, appropriateness of treatment, and outcomes of care. A five-point Likert scale, ranging from 'Strongly Disagree' to 'Strongly Agree' was used to anchor each question. Psychometric analyses of the instrument have confirmed good internal consistency, moderate test-retest reliability, and good convergent validity with clients' perceptions of other aspects of the care they receive (Ganju et al. 1996; Jerrell 2006; Monnat 2008). Several versions of the instrument have been used with different target audiences, including adults with severe mental illness and managed care clients (Ganju 1999). The MHSIP Consumer Survey is currently in use in Arizona, Nebraska, and Nevada for problem gambling program evaluation.

We used a total of 13 items from the MHSIP to create a treatment satisfaction scale (Cronbach's $\alpha = 0.925$). The items were as follows: (1) I like the services I received from this provider; (2) I would recommend this agency to a friend or family member; (3) Services were available at times that were good for me; (4) I was able to get all the services I thought I needed; (5) When I called for an appointment with my counselor, I was scheduled within a reasonable time frame; (6) I felt comfortable sharing my problems with my counselor; (7) Staff encouraged me to take responsibility for how I lived my life; (8) Staff were sensitive to my cultural background (race, religion, language, etc.); (9) The distance and travel time required to meet with my counselor were reasonable; (10) The treatment services were provided at a cost I could afford; (11) Group counseling was helpful; (12) Individual counseling was helpful; and (13) Overall, I was pleased with the results of my treatment program.

Most items on the survey had less than 5 % missing data, and all had less than 30 % missing data. Missing values were replaced using the valid means substitution (VMS) method, based on participants' responses to other items in the scale. Nie et al. (1975) recommend this

procedure when constructing scales, and Raaijmakers (1999) found VSM to be as efficient as other imputation procedures when the percentage of missing values is moderate (i.e. 30 %). This procedure was also successfully used by Perreault et al. (2010) for analyses on the relationship between perceived improvement and treatment satisfaction among clients of a methadone maintenance program. The overall treatment satisfaction scale had a mean of 58.99 (SD = 7.5). Respondents' scores ranged from a low of 15 to a high of 65 with higher scores indicating higher levels of satisfaction.

Perceived Improvement—Respondents' perceived improvement in functioning and well-being was measured using additional items from the MHSIP, anchored by a 5-point 'Strongly Disagree' to 'Strongly Agree' Likert scale. Respondents were asked to measure their level of agreement with 11 statements. Each statement began with "As a direct result of services received," which enables us to make the case that perceptions of positive changes are a direct result of the therapies received. Missing values were replaced using the same VMS method discussed above. Three domain scales were created from the 11 items. The first scale included six items that measure perceived improvement in *daily functioning*: (1) I deal more effectively with daily problems; (2) I am better able to control my life; (3) I am better able to deal with crisis; (4) My symptoms are not bothering me as much; (5) I spend less time thinking about gambling; and (6) I have minimized most of my problems related to gambling (Cronbach's $\alpha = 0.941$). Respondents' scale scores ranged from a minimum of 6 to a maximum of 30 with a mean of 25.10 (SD = 5.6). The second scale included three items that measure perceived improvement in *social functioning*: (1) I am getting along better with my family; (2) I do better in social situations; and (3) I do better in school and/or work (Cronbach's $\alpha = 0.862$). Scale scores ranged from a minimum of 3 to a maximum of 15 with a mean of 12.61 (SD = 2.5). The third scale included two items that measure perceived improvement in *material well-being*: (1) My housing situation has improved; and (2) My financial situation has improved (Cronbach's $\alpha = 0.805$). Respondents' scale scores ranged from a minimum of 2 to a maximum of 10 with a mean of 7.99 (SD = 2.1). The overall improvement scale that included all 11 items (Cronbach's $\alpha = 0.954$) had a mean of 45.69 (SD = 9.6) and ranged from a minimum of 11 to a maximum of 55.

Gambling Specific Outcomes—In addition to perceived improvement in functioning and well-being, we also examined the relationship between treatment satisfaction and abstinence from gambling, time spent thinking about gambling, and minimization of problems related to gambling. In terms of abstinence, respondents were asked if they had gambled at all since completing treatment. 55 % (N = 198) of respondents reported that they had not gambled at all (*abstinent*) since completing treatment. A question asking respondents if they had reduced gambling since completing treatment was also included on the questionnaire. However, there was not enough variability in that item to include it in statistical analysis. Indeed, 96 % of respondents reported that they had reduced their gambling since the period of time when they gambled most heavily, suggesting a strong association between treatment participation and overall reduction in gambling.

In addition to abstinence, we also examined whether treatment satisfaction is associated with gambling harm reduction. Two items that were included in the overall improvement scale

and daily functioning sub-scale described above can also be used to assess harm reduction. These two items are: “I spend less time thinking about gambling,” and “I have minimized most of my problems related to gambling.” Although these items were included in two of our scales, researchers have indicated the need for examining gambling treatment outcomes specifically related to harm minimization (Dickerson et al. 1997; Dowling et al. 2009). We converted these two items from their original 5-point Likert response scale to binary variables where ‘Strongly Agree’ and ‘Agree’ were recoded to ‘1’, and ‘Neither Agree nor Disagree’, ‘Disagree’, and ‘Strongly Disagree’ were recoded to ‘0’. Just over 79 % of respondents indicated that, “As a direct result of the services received”...they “spend less time thinking about gambling.” The same percentage (79 %) indicated that, “As a direct result of the services received”...they “have minimized most of [their] problems related to gambling.”

Analyses

Preliminary correlation analyses were conducted to examine the patterns and strengths of relationships between treatment satisfaction, perceived improvement in functioning and well-being, abstinence from gambling, and gambling harm reduction. We then conducted ordinary least squares (OLS) regression analysis to assess the relationship between treatment satisfaction and perceived improvement, while controlling for respondent age, gender, whether they received their treatment in a specialized gambling treatment program versus a generalized mental health program, whether they gambled at all while participating in treatment, whether they were attending GA or GamAnon, whether they had problematic addictions other than gambling prior to participating in treatment, and whether they have current problematic addictions other than gambling. Finally, we conducted Binary Logistic Regression analyses to examine the relationship between treatment satisfaction, abstinence from gambling, and gambling harm reduction since completing treatment, while controlling for the same respondent characteristics identified above. All analyses were conducted using SAS 9.2 for Windows.

Results

Pearson correlation coefficients revealed strong positive bivariate relationships between treatment satisfaction and perceived overall improvement ($r = 0.719$; $p < 0.001$) perceived improvement in daily functioning ($r = 0.701$; $p < 0.001$) and perceived improvement in social functioning ($r = 0.699$; $p < 0.001$). There were also moderate positive relationships between treatment satisfaction and perceived improvement in material well-being ($r = 0.552$; $p < 0.001$), abstinence from gambling since completing treatment ($r = 0.353$; $p < 0.001$), reduction in time spent thinking about gambling ($r = 0.498$; $p < 0.001$) and minimization of problems related to gambling ($r = 0.493$; $p < 0.001$).

Ordinary least squares regression analyses were conducted to examine the relationships between respondent treatment satisfaction and overall improvement, improvement in daily functioning, improvement in social functioning, and improvement in material well-being, net of controls for age, gender, location of treatment, gambling status while receiving treatment, attendance at GA or GamAnon, and other problematic additions both pre- and

post-treatment. Results indicated that treatment satisfaction was significantly associated with all four improvement scales. Net of controls, there were positive associations between treatment satisfaction and perceived overall improvement ($\beta = 0.903$; $SE = 0.047$; $p < 0.001$), improvement in daily functioning ($\beta = 0.513$; $SE = 0.028$; $p < 0.001$), improvement in social functioning ($\beta = 0.235$; $SE = 0.013$; $p < 0.001$), and improvement in material well-being ($\beta = 0.155$; $SE = 0.013$; $p < 0.001$). In terms of respondent characteristics, neither age nor gender was significantly associated with improvement scores. Respondents who received their treatment at specialized gambling treatment programs versus programs that provide a range of mental health services reported significantly lower improvement scores. Respondents who reported gambling at all while participating in treatment had significantly lower overall improvement and lower daily functioning scores. Having a current problematic non-gambling addiction was significantly and negatively associated with overall improvement, improvement in daily functioning, and improvement in material well-being.

Logistic regression analyses were conducted to examine the relationship between treatment satisfaction and abstinence from gambling, reduced time thinking about gambling, and minimized problems related to gambling. Results showed that, net of controls, treatment satisfaction was positively associated with abstinence from gambling (odds ratio, or $OR = 1.09$; $p < 0.001$), reduced time spent thinking about gambling ($OR = 1.18$; $p < 0.001$), and minimized problems related to gambling ($OR = 1.20$; $p < 0.001$). In terms of other respondent characteristics, older respondents were more likely to abstain from gambling after completing treatment. Individuals who gambled at all during treatment or who had current problematic non-gambling addictions were less likely to abstain from gambling after treatment. Individuals who were attending GA or GamAnon at the time of the interview were significantly more likely to abstain from gambling after treatment and report minimized problems related to gambling.

Discussion

Results from this sample of individuals who participated in pathological gambling treatment in Nevada indicate that there are significant positive associations between satisfaction with treatment services and perceived improvements in daily and social functioning, material well-being, abstinence from gambling, reduced time spent thinking about gambling, and minimized problems related to gambling. Although mental health treatment outcomes are typically assessed through measures of hospitalization, relapse, and symptomology (Anthony et al. 2003), our study contributes to a growing body of literature that emphasizes the importance of links between treatment satisfaction and perceived improvement in well-being (Carlson and Gabriel 2001; Mercier et al. 2004; Perreault et al. 2010; Zhang et al. 2008). While these types of studies have become more prevalent in the substance abuse literature, this is the first study to examine satisfaction and perceived improvement links among clients of pathological gambling treatment programs.

A number of important findings from this study may be useful to treatment program staff as they fine-tune existing programs and develop future gambling treatment programs. Our finding that treatment satisfaction is positively related to non-gambling specific outcomes is important given the correlation between problem gambling and difficulties associated with

relationships, employment, finances and emotional health (Lorenz and Yaffee 1986). Prior mental health treatment research indicates that satisfaction with treatment services is related not only to the quality of those services, but also to the effect of services on physical and emotional health and relationships with social networks (Donovan et al. 2002; Holcomb et al. 1997). Indeed, enhanced feelings of self-efficacy in dealing with daily problems, controlling one's life, and improving one's position at the job or in the family may motivate readiness for change and facilitate abstinence or gambling minimization (Gomes and Pascual-Leone 2009).

Although many gambling treatment outcome studies focus on abstinence as the benchmark of treatment success, there is growing endorsement for gambling minimization as an alternative goal of pathological gambling treatment (Dickerson et al. 1990; Dickerson and Weeks 1979; Dowling et al. 2009; Ladouceur 2005; Rankin 1982; Robson et al. 2002). We found that treatment satisfaction is a significant predictor of both abstinence and gambling harm reduction. Step-based self-help programs modeled on alcoholics anonymous, such as GA and GamAnon, are currently the most popular and widespread treatments for problem gambling (Gomes and Pascual-Leone 2009). Consistent with previous studies, we found that GA attendance is significantly associated with abstinence from gambling (Hodgins et al. 2005; Petry 2005b; Petry et al. 2006). However, we also found that GA attendance is associated with minimization of problems related to gambling. Therefore, although it advocates an abstinence-only model, GA attendance may also be useful in promoting gambling harm minimization. Studies in the alcohol dependence treatment literature suggest that abstinence and non-abstinence based treatments are equally effective (Adamson and Sellman 2001; Booth et al. 1984, 1992; Ojehagen and Berglund 1989; Orford and Keddle 1986; Sanchez-Craig and Lei 1986). Although limited, research on pathological gambling treatment provides support for controlled gambling as an alternative treatment goal (Dowling et al. 2009; Toneatto and Dragonetti 2008). Future research should examine the effectiveness of non-abstinence based treatments on pathological gambling addictions.

Despite the contributions of this study to the growing body of research on pathological gambling treatment evaluation and satisfaction, there are some limitations that should be considered when interpreting the results. First, the findings may be difficult to generalize to all problem gamblers because respondents were recruited from lists provided by treatment programs in Nevada. These particular problem gamblers may not be representative of the population of gamblers, especially since as Nathan (2005) has observed, relatively few pathological gamblers actually seek out treatment and even fewer participate in outcome studies. Selection bias is a possibility given the reluctance of some problem gamblers to answer the phone for fear of having to speak with bill collectors and other creditors (Błaszczynski 2005). If it is the case that individuals with more severe gambling problems are less likely to answer the phone than those who have minimized their gambling or abstained from gambling altogether, then our study likely under-represents individuals for whom treatment was least effective.

Similarly, our data do not include information about specific types of services received while in treatment or the stage of treatment at discharge. Clients who attended fewer treatment sessions or who did not successfully complete the program likely have lower

levels of satisfaction and worse outcomes than those who completed all stages of treatment (Toneatto and Dragonetti 2008). Future research should collect information about the stage of addiction treatment for respondents, as it is possible that acceptability of the addiction (which often comes with more treatment) is the pathway to positive treatment outcomes. Although we do not have information on the frequency and types of services received by specific clients, we can conjecture on a potential link between acceptance and outcomes based upon our data on participation in GA and GamAnon. We found that respondents who were attending GA or GamAnon were more likely to report improvements in daily functioning, abstinence from gambling, and minimized problems related to gambling. Given that the first step of these programs is for participants to admit that they are powerless over gambling and that their lives have become unmanageable (i.e., acceptance of the addiction), we can speculate that acceptance of the problem is positively associated with improved outcomes.

Further, a number of researchers have noted that comorbidity is a common problem among pathological gamblers who often exhibit a high incidence of substance abuse, depression, and other affective disorders (Gambino et al. 1993; Lesieur 1988; Lesieur and Blume 1990; Linden et al. 1986). Besides previous and current substance abuse addictions, we were unable to control for other illnesses that may affect a client's satisfaction with treatment received and perception of treatment effectiveness. Although an examination of co-occurring addictions was beyond the scope of this paper, we did find that the percentage of respondents reporting addictions other than gambling dropped from 43 % prior to treatment participation to 19 % at the time of follow-up. Future research should examine clients' perceptions of treatment and treatment outcomes across different types of treatment facilities and whether problem gambling treatment is effective at reducing co-occurring addictive disorders, such as alcohol dependence and drug abuse.

In addition, most researchers in the pathological gambling field agree that the ideal research format is one that allows for an experimental/control group design (Błaszczynski 2005; Toneatto and Dragonetti 2008; Toneatto and Ladouceur 2003; Walker 2005). For many reasons, including ethical considerations, it is not always possible to achieve this ideal. However, as suggested by Shaffer et al. (2005), important lessons can be learned from non-experimental gambling research. Although we cannot unequivocally determine that better functioning and well-being resulted from higher quality services, the wording of the self-evaluation questions allows us to tentatively argue that consumer improvement was a function of services received (i.e., "As a direct result of the services you received, please rate the following..."). While this was not intended to be a study of causality, it is possible that outcomes themselves may shape satisfaction with services. That is, respondents who perceived improvements in daily functioning, well-being, and gambling harm reduction may retrospectively view the services they received while in treatment more positively than respondents who did not perceive any improvements since leaving treatment. We also cannot comment on the relationship between treatment satisfaction and clinically meaningful changes over time. Ultimately, the relationship between service satisfaction and client outcomes can be best examined through longitudinal data that allow researchers to control for the general attitude, outlook, socioeconomic, and contextual characteristics of consumers.

Finally, a reasonable question arises whenever researchers rely upon self-reported information: can we trust the participants? This concern is perhaps especially important when interviewing pathological gamblers, given their notoriously poor recall (Blaszczynski et al. 1997). However, with appropriate methodological care, researchers have found that self-reports from gamblers who participate in outcome research tend to agree reasonably well with reports obtained from family, friends, or other “collateral” sources (Echeburua et al. 1996; Hodgins and Makarchuk 2003).

Conclusion

The increased legalization and availability of gambling in the U.S. and overseas suggests that there may be increased demand for problem gambling treatment services in the near future (Petry 2005a; Shaffer et al. 1997; Toneatto and Ladouceur 2003). Consumer satisfaction information can be useful to gambling treatment program staff in managing program development and allocating resources. While most available satisfaction surveys elicit clients’ assessments of quality and availability of treatment services, they tend to neglect clients’ perceptions of improvement in outcomes (Perreault et al. 2010). The MHSIP appears to be a good tool for assessing client satisfaction with gambling treatment services and perceived outcomes of those services.

In addition to asking for information about current substance use, future research should also ask respondents if they have been diagnosed with other mental illnesses or disorders, as this may affect their satisfaction with treatment services and their perceptions of improvement in well-being and other outcomes. In addition, it would be useful for programs to administer these satisfaction questionnaires at varying stages in the treatment process. By assessing satisfaction and perceptions of improvement at the beginning, middle and end of a treatment program, evaluators may be better able to determine whether there are particular components of treatment that are working most effectively and tailor their services based on client assessment. However, directly linking clients’ perceptions of quality of care to treatment outcomes will likely require longitudinal research designs across diverse groups of pathological gamblers.

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References

- Adamson SJ, Sellman JD. Drinking goal selection and treatment outcomes in out-patients with mild-moderate alcohol dependence. *Drug and Alcohol Review*. 2001; 20:351–359.
- Anthony W, Rogers ES, Farkas M. Research on evidence-based practices: Future directions in an era of recovery. *Community Mental Health Journal*. 2003; 39(2):101–114. [PubMed: 12723845]
- Berghofer G, Castille DM, Link B. Evaluation of client services (ECS): A measure of treatment satisfaction for people with chronic mental illness. *Community Mental Health Journal*. 2010; 47:399–407. [PubMed: 20582570]

- Blaszczynski A. Conceptual and methodological issues in treatment outcome research. *Journal of Gambling Studies*. 2005; 25:5–11. [PubMed: 15789184]
- Blaszczynski AP, Dulao V, Lange M. How much do you spend gambling? Ambiguities in survey questionnaire items. *Journal of Gambling Studies*. 1997; 13:237–252. [PubMed: 12913388]
- Booth PG, Dale B, Ansari J. Problem drinking goal choice and treatment outcome: A preliminary study. *Addictive Behaviors*. 1984; 9:357–364. [PubMed: 6532142]
- Booth PG, Dale B, Slade BD, Dewey ME. A follow-up study of problem drinkers offered a goal choice option. *Journal of Studies on Alcohol*. 1992; 53:594–600. [PubMed: 1331616]
- Breen RB, Zuckerman NG, Walker HI. Cognitive changes in pathological gamblers following a 28-day inpatient program. *Psychology of Addictive Behaviors*. 2001; 15:246–248. [PubMed: 11563802]
- Campbell, J. Consumerism, outcomes, and satisfaction: A review of the literature. In: Manderscheid, RW.; Henderson, MJ., editors. *Mental health, United States, 1998*. Washington, DC: Center for Mental Health Services; 1998.
- Carlson MJ, Gabriel RM. Patient satisfaction, use of services, and one-year outcomes in publicly funded substance abuse treatment. *Psychiatric Services*. 2001; 52:1230–1236. [PubMed: 11533398]
- Cho H, Kim WJ. Racial differences in satisfaction with mental health services among victims of intimate partner violence. *Community Mental Health Journal*. 2012; 48:84–90. [PubMed: 21380766]
- Damkot DK, Pandiani JA, Gordon LR. Development, implementation and findings of a continuing client satisfaction survey. *Community Mental Health Journal*. 1983; 16:265–278. [PubMed: 6671371]
- Dickerson M, Hinchey J, England SL. Minimal treatments and problem gamblers: A preliminary investigation. *Journal of Gambling Studies*. 1990; 6:87–101. [PubMed: 24242796]
- Dickerson, M.; McMillen, J.; Hallebone, E.; Volberg, R.; Wooley, R. *Definition and incidence of problem gambling, including the socio-economic distribution of gamblers*. Melbourne: Victoria Casino and Gambling Authority; 1997.
- Dickerson MG, Weeks D. Controlled gambling as a therapeutic technique for compulsive gamblers. *Journal of Behavior Therapy and Experimental Psychiatry*. 1979; 10:139–141.
- Donovan DM, Kadden RM, DiClemente CC, Carroll KM. Client satisfaction with three therapies in the treatment of alcohol dependence: Results from project MATCH. *American Journal on Addictions*. 2002; 11(4):291–307. [PubMed: 12584872]
- Dowling N, Smith D, Thomas T. A preliminary investigation of abstinence and controlled gambling as self-selected goals of treatment for female pathological gambling. *Journal of Gambling Studies*. 2009; 29:201–214. [PubMed: 19199009]
- Echeburua E, Baez C, Fernandez-Montalvo J. Comparative effectiveness of three therapeutic modalities in the psychological treatment of pathological gambling. *Behavioral and Cognitive Psychotherapy*. 1996; 24:51–72.
- Edlund MJ, Young AS, Kung FY, Sherbourne CD, Wells KB. Does satisfaction reflect the technical quality of mental health care? *Health Services Research*. 2003; 38:631–645. [PubMed: 12785565]
- Gambino B, Fitzgerald R, Shaffer H. Perceived family history of problem gambling and scores on SOGS. *Journal of Gambling Studies*. 1993; 9:169–184.
- Ganju, V. *The MHSIP consumer survey*. Arlington, VA: National Association of State Mental Health Program Directors Research Institute; 1999.
- Ganju, V.; Beall, MA.; Callahan, N.; Dailey, W.; Dumont Hornik, JA.; Johnson, JR., et al. *The MHSIP consumer-oriented mental health report card*. Washington, DC: Center for Mental Health Services (SAMHSA DHHS); 1996.
- Garland AF, Aarons GA, Hawley KM, Hough RL. Relationship of youth satisfaction with mental health services and changes in symptoms and functioning. *Psychiatric Services*. 2003; 54:1544–1546. [PubMed: 14600318]
- Garland AF, Haine RA, Boxmeyer CL. Determinates of youth and parent satisfaction in usual care psychotherapy. *Evaluation and Program Planning*. 2007; 21:31–45.

- Gerber JG, Prince PN. Measuring client satisfaction with assertive community treatment. *Psychiatric Services*. 1999; 50:546–550. [PubMed: 10211738]
- Gomes K, Pascual-Leone A. Primed for change: Facilitating factors in problem gambling treatment. *Journal of Gambling Studies*. 2009; 25:1–17. [PubMed: 19015963]
- Greenfield TX, Attkisson CC. Steps toward a multifactorial satisfaction scale for primary care and mental health services. *Evaluation and Program Planning*. 1989; 12:271–278.
- Herman SE. Exploring the link between service quality and outcomes: Parents' assessment of family support programs. *Evaluation Review*. 1997; 21:388–04. [PubMed: 10183292]
- Hodgins DC, Currie SR, el-Guebaly N. Motivational enhancement and self-help treatments for problem gambling. *Journal of Counseling and Clinical Psychology*. 2001; 69:50–57.
- Hodgins DC, Makarchuk K. Trusting problem gamblers: Reliability and validity of self-reported gambling behavior. *Psychology of Addictive Behaviors*. 2003; 17:244–248. [PubMed: 14498819]
- Hodgins DC, Peden N, Cassidy E. The association between comorbidity and outcome in pathological gambling: A prospective follow-up of recent quitters. *Journal of Gambling Studies*. 2005; 21:255–271. [PubMed: 16134008]
- Holcomb WR, Parker JC, Leong GB. Outcomes of inpatients treated on a VA psychiatric unit and a substance abuse treatment unit. *Psychiatric Services*. 1997; 48:669–704.
- Holcomb WR, Parker JC, Leong GB, Thiele J, Higdon J. Customer satisfaction and self-reported treatment outcomes among psychiatric inpatients. *Psychiatric Services*. 1998; 49:929–934. [PubMed: 9661228]
- Howard PB, El-Mallakh P, Rayens MK, Clark JJ. Consumer perspectives on quality of inpatient mental health services. *Archives of Psychiatric Nursing*. 2003; 17:205–217. [PubMed: 14608550]
- Jerrell JM. Psychometrics of the MHSIP adult consumer survey. *Journal of Behavioral Health Services & Research*. 2006; 33:483–188. [PubMed: 16791512]
- Kalman TP. An overview of patient satisfaction with psychiatric treatment. *Hospital & Community Psychiatry*. 1983; 34:48–54. [PubMed: 6826149]
- Kessler RC, Mroczek K. Measuring the effects of medical interventions. *Medical Care*. 1995; 33:109–119.
- Ladouceur R. Controlled gambling for pathological gamblers. *Journal of Gambling Studies*. 2005; 21:51–59.
- Larsen D, Attkisson C, Hargreaves W, Nguyen T. Assessment of client/patient satisfaction: Development of a general scale. *Evaluation and Program Planning*. 1979; 2:197–207. [PubMed: 10245370]
- Leavey G, King M, Cole E, Hoar A, Johnson-Sabine E. First-onset psychotic illness: Patients' and relatives' satisfaction with services. *British Journal of Psychiatry*. 1997; 170:53–57. [PubMed: 9068776]
- Lesieur, HR. Report and Recommendations of the Governor's Advisory Commission on Gambling. Trenton, NJ: Governor's Advisory Commission on Gambling; 1988. Report on pathological gambling in New Jersey; p. 103-165. <https://dspace.njstatelib.org/xmlui/handle/10929/24007>. [Accessed 9 June 2013]
- Lesieur HR, Blume SB. Characteristics of pathological gamblers identified among patients on a psychiatric admissions service. *Hospital & Community Psychiatry*. 1990; 41:1009–1012. [PubMed: 2210694]
- Lesieur HR, Rosenthal RJ. Pathological gambling: A review of the literature. *Journal of Gambling Studies*. 1991; 7:5–39. [PubMed: 24242968]
- Linden RD, Pope HG, Jonas JM. Pathological gambling and major affective disorder: Preliminary findings. *Journal of Clinical Psychiatry*. 1986; 47:201–203. [PubMed: 3957881]
- Lorenz VC, Yaffee RA. Pathological gambling: Psychosomatic, emotional and marital difficulties as reported by the gambler. *Journal of Gambling Behavior*. 1986; 2:40–49.
- Love RE, Caid CD, Davis A. The user satisfaction survey: Consumer evaluation of an inner city community health center. *Evaluation and the Health Professions*. 1979; 1:42–54. [PubMed: 10241087]

- Mental Health Statistics Improvement Program (MHSIP) Task Force. The MHSIP consumer-oriented mental health report card: The final report of the MHSIP Task Force on a consumer-oriented mental health report card. Rockville, MD: Center for Mental Health Services; 1996.
- Mercier, C.; Landry, M.; Corbiere, M.; Perreault, M. Measuring clients' perceptions as outcome measurement. In: Robert, AR.; Yeager, KR., editors. Evidence-based practice manual: Research and outcome measures in health and human services. London: Oxford University Press; 2004. p. 904-909.
- Meredith LS, Orlando M, Humphrey N, Camp P, Sherbourne CD. Are better ratings of the patient-provider relationship associated with higher quality care for depression? *Medical Care*. 2001; 39:349–360. [PubMed: 11329522]
- Minsky J, Riesser G, Duffy M. The eye of the beholder: Housing preferences of inpatients and their treatment teams. *Psychiatric Services*. 1995; 46:173–176. [PubMed: 7712256]
- Mobilia P. Gambling as a rational addiction. *Journal of Gambling Studies*. 1993; 9:121–151.
- Monnat, SM. Predictors of mental health consumer outcomes: A sociodemographic analysis; New York, NY. Proceedings from the Annual Meeting of the Eastern Sociological Society; 2008.
- Nathan P. Methodological problems in research on treatments for pathological gambling. *Journal of Gambling Studies*. 2005; 21:111–116.
- Nie, NH.; Hull, CH.; Jenkins, JG.; Steinbrenner, K.; Bent, DH. Statistical package for the social sciences. 2nd ed. New York: McGraw-Hill; 1975.
- Ojehagen A, Berglund M. Changes of drinking goals in a two-year out-patient alcoholic treatment program. *Addictive Behaviors*. 1989; 14:1–9. [PubMed: 2718819]
- Orford J, Keddle A. Abstinence or controlled drinking in clinical practice: A test of dependence and persuasion hypothesis. *British Journal of Addictions*. 1986; 51:495–504.
- Palleson S, Mitsem M, Kvale G, Johnsen BH, Molde H. Outcome of psychological treatments of pathological gambling: A review and meta-analysis. *Addiction*. 2005; 100:1412–1422. [PubMed: 16185203]
- Pascoe GC. Patient satisfaction in primary health care: A literature review and analysis. *Evaluation and Program Planning*. 1983; 6:299–314. [PubMed: 10267258]
- Perreault M, Katerelos TE, Sabourin S, Leichner P, Desmarais J. Information as a distinct dimension for satisfaction assessment of outpatient psychiatric services. *International Journal of Health Care Quality Assurance*. 2001; 14:111–120.
- Perreault M, Leichner P, Sabourin S, Gendreau P. Patient satisfaction with outpatient psychiatric services: Qualitative and quantitative assessments. *Evaluation and Program Planning*. 1993; 16:109–118.
- Perreault M, White ND, Fabres E, Landry M, Anestin AS, Robouin D. Relationship between perceived improvement and treatment satisfaction among clients of a methadone maintenance program. *Evaluation and Program Planning*. 2010; 33:410–417. [PubMed: 20089307]
- Petry, N. Pathological gambling: Etiology, comorbidity and treatment. Washington, DC: American Psychological Association; 2005a.
- Petry N. Gamblers anonymous and cognitive-behavioral therapies for pathological gamblers. *Journal of Gambling Studies*. 2005b; 21:27–33. [PubMed: 15789187]
- Petry NM, Ammerman Y, Bohl J, Doersch A, Gay H, Kadden R, et al. Cognitive-behavioral therapy for pathological gamblers. *Journal of Consulting and Clinical Psychology*. 2006; 74:555–567. [PubMed: 16822112]
- Raaijmakers QAW. Effectiveness of different missing data treatments in surveys with Likert-type data: Introducing the relative mean substitution approach. *Educational and Psychological Measurement*. 1999; 59:725–748.
- Rankin H. Control rather than abstinence as a goal in the treatment of excessive gambling. *Behavior Research and Therapy*. 1982; 20:185–187.
- Robson E, Edwards J, Smith G, Colman I. Gambling decisions: An early intervention program for problem gamblers. *Journal of Gambling Studies*. 2002; 18:235–255. [PubMed: 12375382]
- Rosecrance, J. Controlled gambling: A promising future. In: Shaffer, HJ.; Stein, SA.; Gambino, B.; Cumming, TN., editors. Compulsive gambling: theory, research, and practice. Lexington, MA: Lexington Books/D/C/Health and Company; 1989. p. 147-160.

- Ruggeri M, Dal'Agnola R. The development and use of the Verona Expectations and Care Scale (VECS) and the Verona Service Satisfaction Scale (VSSS) for measuring expectations and satisfaction with community based psychiatric services in patients, relatives and professionals. *Psychological Medicine*. 1993; 23:511–523. [PubMed: 8332665]
- Sanchez-Craig M, Lei H. Disadvantages of imposing the goal of abstinence on problem drinkers: An empirical study. *British Journal of Addiction*. 1986; 81:505–512. [PubMed: 3463350]
- Shaffer, HJ.; Hall, MN.; van der Bilt, J. Estimating the prevalence of disordered gambling behavior in the United States and Canada: A meta-analysis. Boston: Harvard Medical School Division on Addictions; 1997.
- Shaffer HJ, LaBrie RA, LaPlante DA, Kidman RC, Donato AN. The Iowa gambling treatment program: Treatment outcomes for a follow-up sample. *Journal of Gambling Studies*. 2005; 21:61–73.
- Sowers W. Transforming systems of care: The American association of community psychiatrists guidelines for recovery oriented services. *Community Mental Health Journal*. 2005; 41:757–774. [PubMed: 16328588]
- Sylvain C, Ladouceur RL, Boisvert JM. Cognitive and behavioral treatment of pathological gambling: A controlled study. *Journal of Counseling and Clinical Psychology*. 1997; 65:727–732.
- Tanner BA. A multi-dimensional client satisfaction instrument. *Evaluation and Program Planning*. 1982; 5:161–167. [PubMed: 10259959]
- Teague GB, Ganju V, Hornik JA, Johnson JR, McKinney J. The MHSIP mental health report card: A consumer-oriented approach to monitoring the quality of mental health plans. *Evaluation Review*. 1997; 21:330–341. [PubMed: 10183285]
- Toneatto T, Dragonetti R. Effectiveness of community-based treatment for problem gambling: A quasi-experimental evaluation of Cognitive-Behavioral vs. Twelve-Step Therapy. *The American Journal on Addictions*. 2008; 17:298–303. [PubMed: 18612885]
- Toneatto T, Ladouceur R. Treatment of pathological gambling: A critical review of the literature. *Psychology of Addictive Behaviors*. 2003; 17:284–292. [PubMed: 14640824]
- Turchik JA, Karoenko V, Ogles BM, Demireva P, Probst DR. Parent and adolescent satisfaction with mental health services: Does it relate to youth diagnosis, age, gender, or treatment outcome? *Community Mental Health Journal*. 2010; 46:282–288. [PubMed: 20135350]
- Walker, MB. *The psychology of gambling*. Oxford: Pergamon Press; 1992.
- Walker, MB. Treatment strategies for problem gambling: A review of effectiveness. In: Eadington, WR.; Cornelius, JA., editors. *Gambling behavior and problem gambling*. Reno, NV: Institute for the Student of Gambling and Commercial Gaming; 1993. p. 533-566.
- Walker MB. Problems in measuring the effectiveness of cognitive therapy for pathological gambling. *Journal of Gambling Studies*. 2005; 21:81–92.
- Walker M, Toneatto T, Potenza MN, Petry N, Ladouceur R, Hodgins DC, et al. A framework for reporting outcomes in problem gambling treatment research: The Banff, Alberta Consensus. *Addiction*. 2006; 101:504–511. [PubMed: 16548930]
- Zhang Z, Gerstein DR, Friedmann PD. Patient satisfaction and sustained outcomes of drug abuse treatment. *Journal of Health Psychology*. 2008; 13(3):388–400. [PubMed: 18420772]