

## A comparative study of the outcomes of individual psychotherapy alone and that in conjunction with group psychotherapy for gambling disorder

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**Objective:** This study was a comparative analysis of the outcomes of patients with gambling disorder who received either individual psychotherapy ("individual therapy group") or group therapy in conjunction with individual psychotherapy ("group therapy group").

**Methods:** Fifty-one patients with gambling disorder, who visited our hospital between July 2014 and March 2019, were divided into individual therapy or group therapy groups and were compared based on their basic attributes, status after the first visit, and therapeutic outcomes.

**Results:** No significant differences were noted between the 2 groups in terms of basic attributes and status after the first visit. At 3 months, after the first examination, the group therapy group had significantly reduced their gambling behavior compared to that in the individual therapy group; however, at 6 months, there was no significant difference between the 2 groups. The interruptions rate in this study was 8.0% in the individual therapy group and 11.5% in the group therapy group, which was significantly lower than the 31% of that reported in a multinational study of 5 countries. Both groups had fewer treatment interruptions compared to previous studies world wide.

**Conclusion:** It was speculated that these results were affected by the therapists' understanding of gambling as a behavioral characteristic and their noncritical attitude toward patients afflicted with gambling disorder.

**Key words:** gambling disorder, behavioral therapy, individual therapy, group cognitive-behavioral therapy

### Introduction

In 2017, an interview survey conducted by the Kurihama Medical and Addiction Center with 4685 residents across Japan showed that 3.6% of them had been suspected of having gambling disorder (GD) at some point in their lives.<sup>1</sup> The same estimates in other countries ranged from approximately 0.2% – 1.9%,<sup>1</sup> suggesting that the lifetime prevalence of a GD is higher in Japan than in other countries. Thus, in Japan, the Basic Act on Countermeasures for Gambling Addiction came into effect in 2018, which states the need to provide appropriate medical care for GD patients.

Cognitive-behavioral therapy has become the most

commonly used treatment for gambling disorders.<sup>2</sup> Among cognitive-behavioral therapies, relapse prevention has been shown to be effective in reducing gambling behavior by analyzing "risk situations" in which patients are likely to repeat their gambling behavior, and then providing them with strategies to avoid these situations or to control them when they encounter them. A meta-analysis has shown that relapse prevention is effective in reducing gambling behavior.

In Japan, Tanabe<sup>3</sup> reported on group psychotherapy to share problems and distress caused by gambling, and Yokomitsu et al.<sup>4</sup> and Nomura et al.<sup>5</sup> reported on the results of a text-based group cognitive-behavioral therapy program for gambling disorder. Kurihama Medical

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Center requested 35 hospitals across Japan, including Kitasato University East Hospital (hereinafter referred to as "Kitasato hospital"), to conduct therapeutic interventions for patients with gambling disorder from 2016 through 2018 using a text-based group cognitive-behavioral therapy program developed in a multicenter collaboration including Kitasato hospital. As a result, they reported to the Ministry of Health, Labour and Welfare of Japan (MHLW) that there were superior results in the rate of abstinence and frequency of gambling; however, the details of the results have not been disclosed<sup>6</sup> nor were they made public.

In 2014, Kitasato hospital became the first university hospital in Japan to launch an outpatient clinic for GD.

It has been reported that proximity from home to gambling facilities is correlated with the incidence of GD.<sup>7</sup> In Japan, there are 10,986 pachinko parlors,<sup>8</sup> and many people play pachinko close to home.<sup>9</sup> Thus, people in Japan live in an environment with easy access to gambling; therefore, the outcomes of the same treatment modality used in and outside Japan are not necessarily equivalent. Likewise, in Japan, some medical institutions only provide individual therapy, while others provide individual therapy in combination with group therapy. To our knowledge, no studies have compared the two treatment modalities in Japan. Therefore, the objective of this study was to compare individual therapy alone and group therapy in conjunction with individual therapy for treatment outcomes and to examine the various current requirements and modalities of GD treatments.

## Patients and Methods

### *Patients*

A total of 51 patients were retrospectively surveyed from their medical records, which included 25 patients who visited the Kitasato hospital GD outpatient clinic twice or more from July 2014 through March 2016 (Phase I, the "individual therapy group") and 26 patients who visited the Kitasato hospital GD outpatient clinic twice or more from December 2017 through March 2019 (Phase II) and received group therapy in conjunction with individual therapy (the "group therapy group"). No patients repeated from Phase I to Phase II.

### *Treatment program*

In Phase I, approximately 15–50 minutes of individual therapy was provided by a physician. A therapist helped patients to analyze situations before and after the act of gambling, understand the function of gambling, form and maintain alternative behavior to the act of gambling,

and avoid situations that trigger the act of gambling, based on the understanding that pathological gambling is a behavior. Subsequently, in Phase II, in addition to the approximately 10-minute individual therapy session conducted by a physician, if the patient agreed, group therapy was provided by a multidisciplinary team that included physicians, psychologists, nurses, occupational therapists, and mental health welfare professionals. Each session of this group therapy took 90 minutes, and not only GD patients but also patients with substance use disorder (alcohol and/or drugs) were enrolled in this group therapy program. The KIPP (Kitasato Izon/shiheki Prevention Program), a collective cognitive-behavioral therapy program developed by Kitasato staff psychiatrists in 2017, was used for group therapy. Two to three medical professionals implemented this program, which was attended by one or two peer therapists who took the roles of advisors to the patients. In addition, a staff meeting was held before and after each session of the program. Staff meetings were attended by the professionals in charge of the group therapy or individual therapy program to share patients' information, and to explain the details of the therapeutic situation, and to review and discuss treatment policies.

### *Survey items*

Patients' basic attributes that were examined included: age at first visit, education, comorbidities, marital status, previous divorce, whether receiving welfare benefits or not, and employment status. To check gambling status at the first hospital visit, the main gambling games played by patients, the amount of debt, age at initial debt, and the time from the initial debt to the visit were examined. Additionally, treatment outcomes were assessed regarding: continuation of hospital visits, termination of hospital visits without notification of the attending physician ("treatment interruption"), monthly gambling frequency ("gambling frequency"), no gambling for the first month of treatment ("gambling abstinence"), decrease in gambling frequency for the first month of treatment compared to the month prior to the first visit ("decreased gambling frequency"), and sample size of the attendance in the self-help group.

### *Statistical analyses*

Basic statistics of all patients for each survey item were calculated. Then, based on the form of treatment received, the Phase I patients (individual therapy) and the Phase II patients made up the group therapy group. Next, basic statistics for each survey item were aggregated for both groups and compared with respect to condition after the

first visit as well as post-treatment outcomes. To compare between the two groups, the  $\chi^2$  test was used for nominal scales, while the Mann-Whitney U test was used for items on ordinal scales. Because this was an exploratory study, corrections for multiple testing were not made. SPSS ver. 22 (IBM SPSS Inc., 2013) was used for the statistical analyses.

#### *Ethical considerations*

This study was conducted with the approval of the observation and epidemiological research review board established by the Kitasato University School of Medicine and University Hospital (B19-143).

## Results

#### *Basic attributes and living conditions*

No significant differences were noted between the individual therapy and group therapy groups in terms of basic attributes and living conditions (Table 1).

#### *Gambling status and debt*

Among the major gambling games, pachinko and slot

games were the most common in both groups. The amount of debt was significantly higher for the group therapy group (mean  $5.85 \pm 6.225$  million yen) compared to the individual therapy group (mean  $2.59 \pm 3.323$  million yen;  $U = 205$ ,  $P = 0.023$ ; Table 2). However, there were no significant differences in age at initial debt and time from initial debt to first hospital visit.

#### *Post-treatment outcomes*

Regarding attendance in the self-help group, there was no change in the sample size. For the other survey items, the sample size changed over time because treatment was terminated or interrupted. The sample sizes in each group were: before the first visit, individual therapy group,  $n = 25$ ; group therapy group,  $n = 26$ ; 1 month after the first visit, individual therapy group,  $n = 24$ ; group therapy group,  $n = 26$ ; 3 months after the first visit, individual therapy group,  $n = 23$ ; group therapy group,  $n = 24$ ; and 6 months after the first visit, individual therapy group,  $n = 14$ ; group therapy group,  $n = 22$ . A significantly greater decrease in gambling was found in the group therapy group compared to the individual therapy group 3 months after the first visit only ( $\chi^2 = 7.527$ ,  $P = 0.006$ ; Table 3).

**Table 1.** Basic attributes and living conditions

Attribute	Category	Individual therapy	Group therapy	$\chi^2$	U	P
Mean age (yrs) (SD)		41 (13.0)	42 (12.1)		290.5	0.515
Education	High school graduate	25 (100.0%)	26 (100.0%)			
Marital status	Married	13 (52.0%)	12 (46.0%)	0.174		0.676
	Single	12 (48.0%)	14 (53.8%)			
Previous divorce	Yes	20 (80.0%)	17 (65.4%)	1.367		0.242
	No	5 (20.0%)	9 (34.6%)			
Welfare benefits	Receiving	2 (8.0%)	2 (7.7%)	0.002		0.967
	Not receiving	23 (92.0%)	24 (92.3%)			
Employment status	Employed	18 (72.0%)	19 (73.1%)	0.007		0.900
	Unemployed	7 (28.0%)	7 (26.9%)			
Comorbidities	Yes	10 (40.0%)	12 (46.2%)	0.450		0.075
	No	15 (60.0%)	14 (53.8%)			

\*Mann-Whitney U-test; Pearson's  $\chi^2$  test; SD, standard deviation

**Table 2.** Gambling status and debt

Category	Individual therapy	Group therapy	U	P
Amount of debt (¥10,000/unit), mean (SD)	258.8 (332.3)	585.19 (622.5)	205.0	0.023
Mean age (yrs) at initial debt (SD)	31.71 (11.8)	28.31 (11.6)	262.5	0.238
Initial debt – 1st visit (yrs), mean (SD)	9.208 (6.8)	8.4 (6.8)	273.5	0.330

No significant differences were noted between the groups in the decrease in gambling activities 1 month and 6 months after the first visit. Other than gambling reduction, there were no significant differences between the individual therapy and group therapy groups (Table 3).

## Discussion

### Treatment interruption

In the present study, no significant differences were noted between the individual therapy and group therapy groups regarding treatment outcomes. Furthermore, the rate of treatment interruption was 8.0% for the individual therapy group and 11.5% for the group therapy group, which

were significantly lower for both forms of treatment than the 31% of those reported by Nomura et al.<sup>5</sup> and 31.8% as reported by Melville et al.<sup>10</sup> Patients with GD are often criticized by those around them for problems associated with gambling,<sup>11</sup> and patients who experience a host of criticisms tend to sidestep treatment opportunities as they think they will be criticized by therapists as well. Such treatment avoidance behavior would have a direct impact on the rate of treatment interruption. Furthermore, GD patients tend to object to being lumped together in terms of "symptoms" being their reason for excessive gambling. Additionally, therapists often see this objection as "denial," leading to confrontation with the patient. Matsumoto<sup>12</sup> suggested that therapists' understanding of

**Table 3.** Post-treatment outcomes

Category	Individual therapy	Group therapy	$\chi^2$	U	P
Hospital visits, n (%)					
1 month post-1st	Yes	24 (95.8%)	26 (100.0%)	1.061	0.303
	No	1 (4.2%)	0 (0.0%)		
3 months post-1st	Yes	22 (88.0%)	24 (92.3%)	0.267	0.605
	No	3 (12.0%)	2 (7.7%)		
6 months post-1st	Yes	14 (56.0%)	22 (84.6%)	2.511	0.113
	No	11 (44.0%)	4 (15.4%)		
Treatment interruption	Yes	2 (8.0%)	3 (11.5%)	0.588	0.671
	No	23 (92.0%)	23 (88.5%)		
Gambling frequency (times/months), mean (SD)					
3 months post-1st – 1st		10.1 (9.1)	10.4 (6.6)	284.0	0.438
1st – 1 month post-1st		0.12 (5.7)	0.04 (2.3)	321.0	0.925
1 – 3 months post-1st		0.26 (5.6)	0 (3.1)	239.5	0.261
3 – 6 months post-1st		0.08 (5.7)	0.4 (2.0)	136.5	0.410
Gambling abstinence, n (%)					
1 month post-1st	Yes	18 (75.0%)	18 (69.2%)	0.206	0.650
	No	6 (25.0%)	8 (30.8%)		
3 months post-1st	Yes	13 (59.0%)	16 (66.7%)	0.283	0.595
	No	9 (41.0%)	8 (33.3%)		
6 months post-1st	Yes	10 (71.4%)	19 (82.6%)	0.642	0.423
	No	4 (28.6%)	4 (17.4%)		
Decrease in gambling, n (%)					
1 month post-1st	Yes	21 (87.5%)	25 (96.2%)	1.27	0.260
	No	3 (12.5%)	1 (4.8%)		
3 months post-1st	Yes	17 (77.2%)	24 (100.0%)	7.527	0.006
	No	5 (22.7%)	0 (0.0%)		
6 months post-1st	Yes	13 (92.9%)	22 (95.7%)	0.177	0.674
	No	1 (7.1%)	1 (43.5%)		
Participation in self-help group, n (%)					
Pre-1st	Yes	5 (20.0%)	1 (3.8%)	3.410	0.075
	No	20 (80.0%)	25 (96.1%)		
1 month post-1st	Yes	12 (46.2%)	16 (61.5%)	0.674	0.412
	No	12 (46.2%)	10 (38.5%)		
	Unknown	1 (7.7%)	0 (0.0%)		

patients' reactions as "denial" and confrontation with them give rise to interruptions in the treatment of addictive disorder. In the Kitasato hospital GD outpatient clinic, therapists perceived gambling activities of GD patients not as symptoms but as behaviors, and did not criticize patients for these behaviors. Gambling-related behaviors, such as lying and concealment, were also treated in the same fashion. Additionally, throughout the course of therapy, when patients confessed to their own problems of gambling, including lying and concealment, our therapists tried to praise them while empathizing with their anguish to help the patient analyze their own behavior. It was surmised that this attitude may have resulted in the avoidance of confrontation between the patient and the therapist and the lower rate of treatment interruption in this study. This attitude was considered an important element in the treatment of GD.

#### *Benefits of individual therapy vs. group therapy for GD*

In the treatment of GD, a solution to the problem can be developed by asking the patient to honestly confess his or her own problem and accurately analyzing it. By so doing, therapists can help the patient achieve the therapeutic value of confession. "Lying" is what hampers this process. However, lying is the central problem in GD,<sup>13</sup> and instead of lying, honest behavior involving confession must be reinforced. The difficulty of confessions also varies depending on the treatment environment. In group therapy, participants must confess their own problems to a large number of other patients who are enrolled in the same program, whereas in individual therapy, the patient only has to confess his or her problem to the therapist. Thus, if only one therapist is able to show how "safe" the treatment site is, the patient's resistance to confessions is reduced. This is one of the major advantages of individual therapy. However, in group therapy, the therapist ensures the patient's "safety" in a way that allows the patient to confess his or her problems to a number of other patients and to experience a sense of acceptance. Although there is a risk of relapse for GD-related problems,<sup>9</sup> it is difficult to expect the patient to spend the rest of his or her life periodically and/or continually visiting medical institutions because of cost and time constraints. Therefore, a self-help group is a place that offers long-term support without financial burden.<sup>14</sup> A self-help group requires the participant to have the courage to confess his or her problem to many people who are not therapists but have similar issues. The advantage of group therapy is that it allows the participant to first be accustomed to confessing his or her problems to many other people in a

setting in which anonymity and safety are guaranteed by the therapist, and in doing so, allows the patient to have the experience of acceptance and to gain the courage to confess to many people.

#### *Treatment structure*

Group therapy is superior in terms of cost effectiveness,<sup>15</sup> and because of its high profitability, group therapy tends to be introduced more than individual therapy as a treatment for GD in Japan.<sup>9</sup> In particular, since 2020 in Japan, group therapy for GD has been recognized and is covered by the National Medical Insurance program, so that it is likely that many more medical institutions will consider the introduction of group therapy. In medical institutions, because physicians' instructions are required for the implementation and termination of treatment, it is thought that many institutions will use group therapy in combination with short-term individual therapy. It is noteworthy that 15 years ago in their study in Spain, Echeburua et al.<sup>16</sup> reported that group therapy was less effective than individual therapy in reducing treatment interruptions and gambling frequency, and the combined use of individual and group therapies was less effective than the single use of these therapies. However, the present study revealed no significant differences between the group therapy and individual therapy groups in terms of treatment effect or outcome. One possible explanation for this is that both group and individual therapy conducted in the Kitasato East Hospital outpatient clinic provided care with a focus on behavior. Moreover, therapists in charge of individual and/or group therapy shared information on the characteristics, personality, situation, emotional state, and type of treatment of each patient at the staff meetings held before and after each session of the group therapy program and reviewed and discussed treatment policies. I.e., in group therapy, as in individual therapy, the patient's individuality was not ignored, and treatment consistency was maintained, which may have contributed to treatment effects and outcomes. However, patients who participated in GD group therapy included those with substance use disorders. Moreover, some of the substance abusers had received prison sentences during their participation in the Phase II program and some had suffered severe physical disorders due to substance abuse. Unless the patient engages in illegal gambling, he or she is neither sentenced to prison nor physically affected by the act of gambling. Thus, it was surmised that the way in which GD patients with substance use disorders honestly spoke about their gambling experiences, and the consequences thereof, and the way they were accepted and praised for their behavior

of confessing, reinforced the behavior of their honestly confessing their problems. It was inferred from this, that participation of a variety of patients in the group therapy program, sharing a venue for treatment, led to reduced resistance to confess their problems. And thus, patients may achieve the therapeutic value of confession.

#### Limitations

The Phase I 15–50-minute session was significantly shorter than the Phase II 100-minute session which may have led to a bias. Because there are many forms of GD treatment stress prognoses after the termination of treatment, it will be necessary to conduct a follow-up survey to compare it with the previous survey and verify its effectiveness. In the present study, we compared two forms of treatment, individual therapy only and group therapy in conjunction with individual therapy. In the future, it will be necessary to examine and compare the single use of group therapy with other therapeutic options and review the items discussed in the present study.

#### Conclusions

Characteristics of patients with GD in Japan have been reported by Moriyama<sup>17</sup> and Oota.<sup>18</sup> They are similar to the characteristics of the patients in the present study in terms of the gambling games played, age at first visit, and time to debt. However, there are still very few studies on the characteristics of GD patients in Japan. And, to our knowledge, no details of such have been published with the requisite large-scale survey and report.<sup>2</sup> Although previous research has shown that group psychotherapy in conjunction with individual psychotherapy is inferior to individual therapy alone, in terms of treatment continuity and the patient's reduction in gambling, this problem may be solved by maintaining consistency in treatment and emphasizing the patient's individuality.

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**Conflicts of Interest:** None

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